

## CHAPTER THREE: WATER AND SCIENCE

### *BUREAU OF RECLAMATION*

#### **Changing Times, New Approaches**

Between 1993 and 2001, the Bureau of Reclamation underwent the most dramatic change in its history. The change resulted from President Clinton's federal government reinvention initiative, as well as in response to the evolving nature of water resources management.

In the seventeen Western states where Reclamation operates, rapid population growth has created greater competition for water among all interests—agricultural and urban areas, recreational and power interests, Native American tribes and the natural environment. There is also a greater awareness that the environmental impacts and financial costs of water development projects must be addressed.

Interior Secretary Bruce Babbitt addressed the need for change in the reclamation program when he took office. "The era of the large reclamation project is winding down to conclusion," he said. "The water supplies that have been developed over the past century of reclamation are truly impressive, and they should be sufficient for the next century . . . the big task of the coming century will be to restore rivers, wetlands and fisheries."

In response to these contemporary challenges, Reclamation changed its primary program focus from water resource *development* to water resource *management*. The evolution was a profound one. Created by the Reclamation Act of 1902, the agency had long focused its formidable engineering skills on building dams and other works to harness the West's rivers and "reclaim" its arid lands through irrigation, to help support settlement and to promote economic development. Over time, Congress authorized Reclamation projects to provide municipal and industrial water, flood control, hydroelectric power generation, recreation, and fish and wildlife enhancement.

The Reclamation program has been very successful. Today, Reclamation projects can store 245 million acre-feet of water, or nearly 80 trillion gallons. The projects deliver 10 trillion gallons of water each year to more than 31 million Westerners, including irrigators, towns and cities, and Indian tribes. One of every five Western farms receives water from a Reclamation project, irrigating about 10 million acres of land that produces 60 percent of the nation's vegetables and 25 percent of its fruits and nuts. Fifty-eight hydroelectric power plants on these projects generate more than 40 billion kilowatt-hours of energy each year, serve six million homes and contribute nearly \$1 billion dollars in revenue to the economy. Reclamation projects also include more than 300 recreation sites, many fully accessible to people with disabilities, which are visited by more than 90 million people a year. In addition to creating recreation opportunities, projects provide water to support wildlife refuges, migratory waterfowl, fish, and threatened and endangered species. Moreover, Reclamation projects have prevented more than \$9 billion in flood damages since 1950, and have reduced the impacts of drought throughout much of the West.

Changing times call for new approaches, and, in 1993, Reclamation began a significant transition toward a new mission. Water conservation, more efficient and flexible project operation, environmental protection and restoration, water transfers and more efficient water use defined the new focus. In addition, efforts were initiated to develop stronger working relationships with all stakeholders, to better meet trust responsibilities to Indian tribes, and to create a more diversified workforce.

### **Reinvention: A Challenge Met**

In March 1993, Vice President Gore challenged federal agencies to reinvent themselves by cutting red tape, putting customers first, empowering employees to get results, and getting back to basics—creating a government that *works better and costs less*. Reclamation accepted the challenge.

In November 1993, Reclamation issued its *Blueprint for Reform*. The *Blueprint* established contemporary program priorities and organization-wide functional realignments, delegated decision-making responsibility to the lowest practical organizational level, reduced the number of organizational layers and supervisors, streamlined regulations, and revised and changed program and budget execution processes.

By October 1994, Reclamation had completed a top-to-bottom reorganization. Prior to this, Reclamation was characterized by top-down, centralized management and an excess of organizational layers. Its operations were governed by extensive, detailed internal regulations and subjected to numerous levels of review and approval. The reorganization simplified these processes, transferred greater program management authority to the field offices, reduced the role of headquarters offices in day-to-day operations and eliminated two layers of management. Most importantly, it empowered managers and employees to develop and implement innovative program improvements and solutions to contemporary water issues.

The reorganization eliminated nearly 6,500 pages (58 percent) of regulatory provisions, and reduced review and approval requirements to the minimum level necessary for effective quality control. It also reduced Reclamation's workforce by approximately 2,000 employees (25 percent), and reduced the agency's annual budget by about \$100 million (12 percent).

For its historic and groundbreaking efforts, Reclamation was recognized as a reinvention leader in the federal government. In 1995, the agency received a "Hammer Award" from the Vice-President and an "Innovation in American Government" award from the Ford Foundation and Harvard University's John F. Kennedy School of Government. Reclamation was recognized for involving its employees in implementing its reinvention initiatives, and received a \$100,000 Ford Foundation grant in conjunction with the award. The grant was used to develop an Innovations Resource Center, and to fund three one-day conferences at which Reclamation disseminated information about its successful initiatives, and shared its experiences with other local, state and federal agencies addressing reform issues.

### *Assessing Evolving Needs*

The reorganization did not end Reclamation's effort to assess its role in helping resolve contemporary water needs and serve the public cost-efficiently and effectively. Reclamation continued to ask itself, as well as its customers and stakeholders, what functions it should or should not perform, what type of employees it needed, and who should perform the work. This questioning led to a staffing increase in environmental specialists, biologists, hydrologists, water contract specialists, negotiation/mediation experts, and management analysts. It also led to a greater emphasis on innovation, communication, coordination, and negotiation skills in all disciplines.

Even though its construction and engineering role would be significantly reduced, Reclamation recognized it needed to maintain a high level of engineering design and construction management expertise to address the needs of an aging infrastructure, as well as accomplish environmental restoration and other programs. As a result, Commissioner Eluid L. Martinez established a Reclamation Design and Construction Coordination Team to ensure this expertise was maintained.

Reclamation also formed a team to develop a process for evaluating its current and future workforce capabilities in various professional technical disciplines, and to match that information with the future workload and mission on a corporate level. A process has been institutionalized whereby each major office will annually analyze its funding needs, potential loss of capability and additional capability needs, and the amount and type of work to be done by others, then implement an action plan to address these needs.

### *Reducing Federal Expenditures*

To help meet the National Performance Review goal of reducing the cost of government, Reclamation initiated a "facilities title transfer" program in 1995. The program goal is to transfer ownership of appropriate facilities from the federal government to qualified non-federal entities such as water districts, states or local governmental entities. Many of these facilities—storage dams and reservoirs, canals and other conveyance and distribution facilities—are already operated and maintained by local water districts, but few districts actually hold title to them. Transferring title to facilities, or parts of facilities, that are not of national significance may allow the projects to be operated more efficiently and cost-effectively. It also relieves these titleholders of administrative obligations such as compliance with the Reclamation Reform Act, federal permits for easements and land crossings and other paperwork, and ongoing administrative requirements that only apply to federal facilities.

Before initiating any title transfer, Reclamation comprehensively analyzed the issues associated with the process, including environmental compliance, and consulted with stakeholders and project beneficiaries. At the end of Fiscal Year (FY) 2000, seven title transfers had been accomplished, with Congress having authorized the transfer of eight more—most of which should be completed in FY 2001. In addition, approximately nine other title transfers were being negotiated.

Reclamation also helped reduce federal costs by negotiating funding agreements with some of the entities that receive power benefits.

In the Pacific Northwest Region, for example, where hydroelectric power in excess of project needs is marketed by the Bonneville Power Administration (BPA), hydroelectric facility repair and maintenance costs were historically funded through Reclamation's budget process, then repaid a year later from BPA revenues.

Because of concerns about the potential vulnerability of appropriations during deficit periods, Reclamation and BPA began exploring alternatives to the budget process, with the objectives of securing greater budget certainty, increasing management flexibility, and providing cost savings for the ratepayers. In 1992, through a Memorandum of Understanding, BPA began advancing funding for additions, replacements and improvement of the Pacific Northwest Region's power facilities. In 1996, BPA and Reclamation signed a Direct Funding Agreement through which BPA directly funds the annual operation and maintenance (O&M) costs allocated to power at the Region's facilities. The agreement significantly changed business practices for both agencies in the budget process and O&M areas, and reduced Reclamation's annual budget request by about \$70 million in FY 2000.

A similar agreement was developed for the Parker-Davis Project on the lower Colorado River. Here, the Bureau of Reclamation, Western Area Power Administration (Western) and project power contractors entered into an Advance of Funds agreement. Through this agreement, each contractor advances to Reclamation and Western, the power marketing agency, its proportionate share of the annual O&M costs and costs of capital improvements to the project's generating facilities.

This agreement, which reduced Reclamation's budget request by about \$8 million in FY 2000, ensures the continued availability, reliability and cost-effectiveness of the project's power. Just as important, it gave the power customers a new voice in the decision-making process for operating, maintaining and improving the facilities, as they work in partnership with Reclamation and Western to develop O&M plans and budgets. This helps all the parties more effectively plan for current and future needs.

#### *Increasing Customer Service/Stakeholder Involvement*

In accordance with President Clinton's Executive Order 12862, "Setting Customer Standards," Reclamation embarked on a systematic, multi-pronged effort to improve its responsiveness to and maintain the confidence of its traditional customers, while earning the respect of new customers.

Following the Administration's lead, Reclamation also began to focus greater attention on its stakeholders, interested parties—such as the Congress, local and national interest groups, taxpayers, states and Indian tribes, who are involved in Reclamation's businesses and services but do not receive direct services.

Patricia Beneke, Assistant Secretary for Water and Science from 1995 to early 2000, explained the approach the Administration and Department of the Interior would use to involve these entities in efforts to resolve natural resource issues:

“[We] have developed a new model for grappling with these issues,” Beneke said, “a model of regional cooperation and consensus among stakeholders, a model styled on bringing all interested parties together. We seek the flexibility to reconcile conflicting regulatory requirements and to achieve consensus, so all affected parties can benefit.”

Reclamation’s stakeholders and customers were involved in development of the agency’s initial Strategic Plan, which covered fiscal years 1997-2002. Developed to meet the requirements of the 1993 Government Performance and Results Act (GPRA), and updated every three years, the Strategic Plan lays out the agency’s mission, long-term goals covering five or more years, and strategies for achieving those goals. GPRA is considered the cornerstone of a series of federal initiatives that are intended to provide a comprehensive framework for integrating program, cost and budget information.

Reclamation’s first Customer Service Plan was published in 1994. It established customer service principles and values, and spelled out the agency’s commitment to work with its customers, employees, partners, and stakeholders in setting service standards. With input from employees and customers, each Reclamation office for its geographic area developed similar plans. Numerous information-gathering processes—questionnaires, comment cards, phone surveys, and focus groups—were established to ensure this process would continue in future years.

One of Reclamation’s first actions was to initiate monthly stakeholder meetings in Washington, D.C., to discuss a variety of topics, including budget requests and appropriations, legislation status, and proposed rules and actions. Through this process, customers and stakeholders became involved in Reclamation’s budget formulation process and in development of the Strategic Plan. Meetings or other communications were held with federal, state and local agencies, water and power users, Indian tribes, conservationists, academics and others. Each person or organization that provided written comments received a letter from the Commissioner and was personally contacted by a Strategic Plan team member to discuss the process used for revising the plan.

In 1998, more than 3,000 customers were surveyed to gauge their satisfaction with Reclamation’s services. (A similar survey of Reclamation employees was conducted in 1999.) The survey helped identify areas that needed improvement, and established a baseline against which improvements and progress could be measured. To address the areas identified as needing the most attention, benchmarking was done with U.S. Department of Agriculture Service Centers in ten western states, the Hoover Dam Engineering and Operations Committee, and two Reclamation area offices. From this, twenty-one recommendations were developed which have been or are being implemented. Reclamation continues to identify potential customer service improvements.

One significant improvement was the development of an Internet-based, multi-user Customer Information System, which consolidated more than forty-five mailing list systems with 35,000

listings into one 20,000-listing database. Incorporated with other business processes, this system will ensure Reclamation has the necessary data, in accordance with applicable laws, to solicit input from its customers, stakeholders, and partners on issues in which they are interested or which affect them.

Reclamation also is using the Internet to strengthen customer relations and create more employee awareness of customer service. An external Web site <<http://www.usbr.gov/custserv/>> includes a point-of-contact access list to Reclamation offices by state, city, office, address, phone or fax. Employees can use a similar, internal site to find a list for Reclamation-wide services; this list, with 214 subject areas, facilitates responses to customer inquiries. Reclamation staffs also have received guidelines for generating customer-friendly documents and "Best in the Business" customer service training.

### *Improving Business Approaches*

Making "government work better" was also a key goal of the National Performance Review. Again, Reclamation was up to the challenge.

In 1994, Reclamation initiated a benchmarking program to measure its performance against that of other federal and private entities, to learn from them, and to measure and improve its own services and performance.

The hydroelectric power program has undergone a major benchmarking effort. Now institutionalized, the benchmarking program has improved the reliability of Reclamation's fifty-eight hydroelectric power plants and provided its customers better financial accountability on plant operation and maintenance costs. The benchmarking program shows that Reclamation is among the best in the nation in producing electric power at the lowest cost. In FY 1999, Reclamation was in the top 25 percent of lowest-cost producers.

Since 1994, the forced outage rate (the percentage of operating time lost to unscheduled shut down of a generating unit or other facility for emergency or other unforeseen reasons) at Reclamation powerplants has been reduced from about 3 percent, the hydroelectric industry average, to about 1.1 percent, significantly lower than the industry average. This improvement results from incorporating various performance data into an electronic database, developing benchmarks that give a trend analysis of power plant performance, making data on generating unit availability and reliability accessible to plant managers, and continuing to upgrade hydroelectric program performance. The success of this effort is demonstrated by the fact that U.S. and international electric utilities use Reclamation's benchmarks, which are incorporated into an annual data book, as a model of how to do hydroelectric benchmarking.

In FY 2000, Reclamation also initiated an effort to benchmark its water resources operation and maintenance costs against state, municipal and private water management organizations. Results from this effort will be used to improve project management effectiveness.

Peer reviews are also used to meet National Performance Review goals and provide more effective and efficient quality control of Reclamation's programs and products.

In May 1996, Commissioner Martinez determined Reclamation should set the standard for responsible dam ownership and stewardship, and he initiated a peer review of the dam safety program, the first since the mid-1970s. The review was conducted by a team from the Association of State Dam Safety Officials, which included state, federal, public utility, private sector, academia, and Department of the Interior staff with expertise and experience in dam safety.

The review determined Reclamation has an effective dam safety program, with state-of-the-art technical standards and expertise throughout the agency, and a competent, dedicated staff committed to the program and capable of responding to emergency situations. It also recommended that Reclamation take a number of specified actions to ensure the continued success and improvement of its program.

As a result, Reclamation now requires each Regional Director to prepare annual reports and establish goals under the Government Performance and Results Act to track performance on dam safety recommendations, completion of facility reviews, and modifications. A Dam Safety Officer was hired to provide program oversight and to ensure continued program emphasis, and, in 1998, an ongoing dam safety peer review process was initiated to reduce the expense and organizational disruption associated with periodic reviews. External peer reviews continue to be conducted when a facility failure could potentially cause flooding or pose a threat to public safety.

#### *Alternative Dispute Resolution (ADR)*

Alternative Dispute Resolution (ADR) involves the use of innovative techniques to more effectively deal with conflict. ADR has been institutionalized as a way for Reclamation to prevent, manage or resolve internal and external disputes and conflicts. As a result of Commissioner Martinez's 1999 Conflict Management and Alternative Dispute Resolution policy directive, ADR is now a standard business practice within Reclamation.

The policy directive established the Conflict Management Service, which focuses on education and training. The use of ADR has reduced the amount of time needed to resolve issues, with greater acceptance from all involved parties, and less litigation. Reclamation has used ADR in about 150 instances, and one or more of the issues in dispute were resolved 75 percent of the time. In 1998, Reclamation's Service Center in Denver received a National Performance Review "Hammer Award" for its partnership activities. Reclamation also received an award from the Office of Personnel Management in 1998 for its ADR program, and for the Conflict Management Guidebook it developed as a reference document for managers and staff.

Reclamation's ADR resources now include a Bureau Dispute Resolution Specialist, an ADR Program Manager, a Natural Resources Dispute Resolution Program Manager, and sixteen collateral-duty ADR advisors who provide agency-wide assistance with dispute resolution. Representing all of Reclamation's offices, and with a diverse set of experiences and areas of expertise, this group helps identify and implement appropriate dispute resolution techniques, serves as a source of mediators and facilitators, and helps select external ADR professionals to assist Reclamation when necessary. Reclamation also established Conflict Resolution (CORE) Specialists to support Department of the Interior programs to mediate and resolve workplace

disputes, and has a comprehensive Internet site and a newsletter that address conflict resolution topics of interest to its employees.

### *A Changing Work Force*

“We are a federal agency serving the American public. It is simply good policy that a public agency’s workforce should strive to reflect the diversity of the citizenry from which it derives support and for which it exists to serve.”

— *Commissioner Eluid Martinez*

Reclamation made substantial strides in its diversity effort during the Clinton Administration.

Between 1993 and 2000, Reclamation established educational partnerships with five Minority Serving Institutions: Southwestern Indian Polytechnic Institute; Langston University; Southern University; New Mexico Highlands University; and California State-San Bernardino. Through assistance agreements, these multi-year partnerships provided an average of \$110,000 per year to each institution to: establish outreach programs designed to attract K-12 students in minority communities to the natural sciences; develop natural resources and water curriculums and accreditation for a targeted engineering program; and support scholarships, internships and student employment opportunities with Reclamation that would introduce minority students to federal careers in water and natural resources. By re-engineering the traditional pipeline to federal employment, Reclamation established a model for other federal land management agencies interested in making a difference in the development and employment of minorities in natural resources management.

Under the leadership of its first Presidentially-appointed Hispanic Commissioner, Reclamation also selected one of the most diverse Senior Executive Service policy management teams ever assembled by the agency and within the Interior Department. More than half of the thirteen permanent SES positions were filled by women and minorities.

Reclamation also developed a Strategic Workforce Diversity Implementation Plan to institutionalize diversity within the agency, and enhanced diversity initiatives by creating Diversity Management Councils within each field office with delegated personnel authority. A policy directive addressing under-representation of African Americans, a directive unique within the Department of the Interior, provides specific guidance and direction for field office implementation of existing recruitment initiatives to improve representation of African Americans within Reclamation’s workforce.

Minority and disabled communities are made aware of the programs and employment opportunities within Reclamation through a corporate approach to outreach and recruitment efforts. Reclamation has established and maintains relationships with more than nineteen organizations in this effort, including the American Indian Science and Engineering Society, Hispanic Association of Colleges and Universities, Society of Mexican American Engineers and Scientists, National Society of Black Engineers, and Society of Women Engineers. Reclamation also supported the Clinton Administration’s efforts to make federal employment more desirable

by actively supporting work-life programs such as family-friendly leave policies, telecommuting, alternative work schedules, wellness programs, and job sharing.

Reclamation is also a recognized leader, within Interior as well as among other federal agencies, for its corporate approach to providing recreational and employment opportunities for people with disabilities. As part of its commitment to serving America's diverse populations, Reclamation has developed an agency-wide plan of action with clear goals and assigned accountability for meeting responsibilities, and an Accessibility Data Management System (ADMS), a computerized system for managing and tracking accessibility actions. A ten-year plan—defining assessment goals, action plans and the long-term scheduling of workplace retrofits—enables Reclamation to carefully plan and manage for accessibility.

Reclamation's system was adopted by Interior as its accessibility management tool, providing other Interior bureaus with a similar means to manage accessibility programs. Reclamation was also recognized by the President's Committee on Employment of People with Disabilities for its use of technology in the workplace, acknowledging the role played by ADMS in improving access for people with disabilities. The National Performance Review's Government Information Technology Committee also recognized ADMS as a significant innovation in technology, providing a sizable grant for continued improvement of the system.

### **Evolving Approaches to Water Resources Management**

Water supply needs have historically been met by building storage dams and delivery facilities. In 1993, Secretary Babbitt outlined a new approach for managing water resources:

“In the coming century, water policy must be made in the context of the entire watershed. Water is a natural resource with no fixed address; any water use inevitably affects many other uses, both upstream and downstream. That means all stakeholders have a stake in every decision, and that in turn requires that they be included in the decision-making process.”

Since 1993, Reclamation has practiced, and institutionalized, a problem-solving approach that involves all interested parties in seeking broad-based, consensus solutions to water resource management issues.

The Snake River Resources Review is but one example of the successful use of this “basin-wide” approach. Changing societal values, a growing population, and listings of threatened and endangered species in the Pacific Northwest have created new and growing pressures on water and other natural resources in the Snake River basin, which extends over 72,000 square miles in Wyoming, Idaho, Utah, Nevada, and Oregon.

In 1995, the Administration initiated the Snake River Resources Review, commonly known as “SR<sup>3</sup>.” It is a comprehensive, first-of-its-kind effort to integrate existing tools, models, customer values and databases to analyze the basin's many complex resource issues. The Review required Reclamation to build relationships, form partnerships, and establish a communications network with customers, stakeholders, state agencies, universities, and Indian tribes to gather information and help identify issues. The result is the Snake River Decision Support System, a computer

modeling program that gives decision makers the information they need to make sound, broadly-based resource decisions.

### **New "Water Holes"**

Secretary Babbitt also suggested more use of existing "water holes," his term for available sources of water that go unused under inefficient or outmoded resource management plans. The Secretary recommended three principal water holes—water conservation, water transfers, and underground storage—as timely and effective devices for accommodating the West's growing water needs without harming the environment or building more dams.

Reclamation has long encouraged water conservation. In 1997, the Administration established the Water Conservation Field Services Program (WCFSP) to encourage the efficient use of water on federal water projects and, in cooperation with states and other entities, to provide a non-regulatory, incentive-based approach to help water districts develop and implement effective water conservation plans.

In July 1998, Reclamation initiated a "Bridging-the-Headgate" conservation partnership with the Department of Agriculture's Natural Resources Conservation Service, the National Association of State Conservation Agencies, and the National Association of Conservation Districts as part of the WCFSP. A headgate is a mechanism for controlling the flow of water from a common source into a local irrigation system. Reclamation's endeavor to "bridge the headgate" encourages local soil and conservation districts to collaborate with local irrigation districts on water conservation planning, thereby creating a synergy between traditional "on-farm" and "off-farm" conservation assistance programs at the local level. "Bridging-the-Headgate" conservation partnerships advance the Administration's broader program of engaging federal, state, and local water agencies and organizations in a concerted effort to promote the sustainable and efficient use of western agricultural water supplies.

Through the WCFSP, water districts receive assistance and non-binding guidance in water management planning, conservation education, conservation technologies, and effective conservation implementation measures. Water districts and other stakeholders see the WCFSP as Reclamation's appropriate vehicle for encouraging water conservation on federal and non-federal water projects, and for fostering improved water management on a watershed, statewide and regional basis. Watershed-based management enables Reclamation and its partners to make the best, most efficient, and most equitable use of the limited water supplies available.

In FY 1999, more than 240 irrigation districts received help in developing plans; more than 250 received assistance with water conservation education efforts; more than 160 received water conservation technology demonstrations; and more than 350 received help to implement fundamental water management measures. Since the WCFSP was initiated, more than 80 percent of the districts required to have water conservation plans either have them in place or have submitted draft plans, and 300 irrigation districts are committed to updating or developing plans. More than four million acres of irrigated agricultural lands are covered by current water conservation plans.

This Administration has also worked to overcome institutional barriers to water transfers, and to facilitate water transfer agreements between willing sellers and willing buyers.

Reclamation has long been and continues to be supportive of voluntary water transfers between established users, and of the conversion of existing resources to new uses. To institutionalize this support, Commissioner Martinez directed that new policy guidelines be developed to supplement existing procedures and to implement a consistent, agency-wide approach to voluntary transfers and conversions. Reclamation worked with its customers and stakeholders to develop the guidelines: (1) Reclamation should facilitate, not mandate, transfers unless required by legislation or judicial decision; (2) transfers of project water would be voluntary transactions between willing buyers and willing sellers; (3) primacy in water allocation and management decisions rests principally with the states; and (4) transfers from one user to another and conversions to new uses must be in accordance with applicable federal laws and contracts.

Under this new policy, water transfer efforts have been very successful. The Department helped facilitate the development of what will be the largest water transfer in western U.S. history—moving up to 200,000 acre-feet of conserved agricultural water from the Imperial Irrigation District in southern California to the San Diego area. With strong Administration support, Reclamation also developed and implemented the December 1999 “Rule for Offstream Storage of Colorado River Water and Development and Release of Intentionally Created Unused Apportionment in the Lower Division States.” For the first time in history, this rule allows Colorado River water to be transferred between the lower basin states of Nevada, California and Arizona to help those states meet growing and changing water needs.

Administration support also helped develop a successful water transfer process that could assure El Paso, TX, a long-term municipal water supply in the face of dwindling groundwater reserves. With a combined population exceeding two million people, both El Paso and Ciudad Juarez, Mexico, are drawing municipal water from the same aquifer, which some estimate will be depleted by 2020. Under an umbrella contract with the El Paso County Water Improvement District No. 1, water from Reclamation’s Rio Grande Project will be converted from agricultural to municipal use to help resolve the groundwater overdraft.

Groundwater storage, a third “water hole”, is being used by several entities to increase their available water supplies. Arizona and Nevada, for example, use surplus Colorado River water to recharge depleted groundwater basins. This stored groundwater can then be used at some future time to help meet their water needs.

### **Stakeholder Partnerships**

During the Clinton Administration, Reclamation made great strides in working with its stakeholders to address and implement new and innovative solutions to water resource management problems.

One innovation involves the use of National Fish and Wildlife Foundation (NFWF) Challenge Grants to promote resource stewardship. Through challenge grants—where recipients match funds from many sources to conduct beneficial, cost-effective, on-the-ground restoration

projects—this program encourages partnerships among federal agencies, tribes, state and/or local governments, non-profit organizations and individual landowners.

Since 1994, grants have been awarded for projects to recover or conserve endangered or sensitive fish, plant and wildlife species; restore riverine, wetland, riparian or upland habitats; improve water quality; and control noxious weeds. All projects receiving Reclamation funds must be connected to the waters or lands Reclamation administers.

In FY 1999, Reclamation and NFWF, along with other partners, awarded thirty-six grants, with matching funds averaging about 3.3 non-federal dollars for every federal dollar.

The Hackberry Flat Wetland Restoration Program is an excellent example of this partnership effort. Heavily used by waterfowl before it was developed in 1903, Hackberry Flat was farmed until 1993, when the State of Oklahoma began acquiring the lands. Through a challenge grant program—involving Reclamation, the Oklahoma Department of Wildlife Conservation, the U.S. Fish and Wildlife Service and other contributors from industry, special interest groups, local governments and municipalities—a pipeline was built to transfer more than 2,500 acre-feet of water to the Flat from Reclamation's Tom Steed Reservoir. This water provides permanent wetland habitat for about 250,000 migratory waterfowl. Shorebirds, bald eagles, peregrine falcons—even whooping cranes—are also expected to use the newly created wetlands as migratory habitat.

### **Addressing Recreation Needs**

Throughout the United States, eleven federal agencies manage 1,782 federally created lakes. These lakes receive more than 900 million visits a year, generating more than \$44 billion in revenue. Use of these lakes is growing by about two percent a year, creating additional pressure for recreation facilities and exposing the shortcomings of an \$800 million maintenance backlog.

In 1996, President Clinton established the National Recreation Lakes Study Commission to review and recommend opportunities to enhance recreation at these lakes. The Commission recommended several actions to help address problems such as inadequate facilities, conflicting uses, and the lakes' compromised health. On July 25, 2000, Vice President Gore signed a charter designating the Federal Lakes Recreation Demonstration Program as a National Performance Review laboratory.

A reinvention laboratory is a government office in which a team of workers develops new and better ways of doing the public's business. Through the Federal Lakes Recreation Demonstration Program, "pilot lakes" are being established to develop and implement innovative ideas to reduce barriers to the public use of lakes, provide better recreation opportunities and improve the safety and condition of existing facilities. The program also will co-sponsor workshops, training sessions and seminars on policies and procedures to improve recreation opportunities at these facilities.

## **Working with Indian Tribes**

Reclamation promulgated several new policies, procedures and other types of guidance to help achieve the Administration's twin goals of supporting self-sufficiency for Indian tribes and improving government-to-government relationships between tribes and the United States.

Key among these was a February 1998 policy that committed Reclamation to comply with both the letter and the spirit of federal laws and policies relating to Indians and to actively seek partnerships with tribes to ensure they have the opportunity to participate fully in Reclamation's program as they develop and manage their water and related resources. The policy also acknowledged and affirmed the special relationship between the United States and federally-recognized tribes.

To support the implementation of Presidential Memoranda and Executive Orders, protocol guidelines for consulting with and maintaining government-to-government relations with tribal governments were issued, and the Indian Self-Determination and Education Assistance Act (PL 93-638) was embraced as one vehicle to improve working relationships, coordination and communication with tribes. In 1996, Reclamation forged the first non-BIA Self-Governance agreement under Title IV of PL 93-638, giving the Gila River Indian Community control of the construction of its \$400 million distribution system for the Central Arizona Water Project.

Reclamation also signed Memoranda of Agreement with the Navajo Nation and the Mni Sose Indian Coalition to provide technical assistance and support for continued water resources management and development; provided \$1.3 million to fund a Water Resources Technology curriculum at the Southwestern Indian Polytechnic Institute in Albuquerque, NM; and provided educational funding assistance to Indian students in Arizona State University's College of Law Indian Legal Program and in Central Washington University's resource management program.

## **Assisting Others**

Long recognized as a worldwide leader in water resources development, Reclamation increased the scope of its international program under President Clinton's administration to include broader water policy and water resource management programs. Reimbursable technical assistance and training programs were provided to Brazil, China, Egypt, Mexico, Saudi Arabia, South Africa, Spain, Taiwan, and Turkey. Reclamation also provided technical assistance to help establish the Middle East Desalination Research Center, assisting the State Department on issues associated with the Middle East peace process.

Under the auspices of the U.S.-South Africa Binational Commission, a series of exchanges focused on water conservation and water law were conducted with the South African Ministry of Water Affairs and Forestry. Senior Interior Department water lawyers also helped the Ministry draft a new national water law, which was enacted in 1998. Water conservation staff members from the Ministry also were trained in how to develop implementing regulations for water conservation guidelines, and were provided an overview of U.S. experiences in river basin management.

A cooperative program with Spain's Centro de Estudios y Experimentacion de Obras Publicas, reinvigorated during the Clinton Administration, is a good example of how water management "lessons learned" can be shared. Spain received assistance in promulgating a new national water law, as well as in addressing several water quality issues in that country.

During this Administration, Reclamation also helped alleviate human suffering and third-world conditions in areas known as "*colonias*" along the U.S.-Mexico border. Rural, unincorporated subdivisions lacking either basic water supply or distribution systems or wastewater collection and treatment systems, the *colonias* emerged haphazardly as landowners subdivided previously irrigated agricultural lands into small housing tracts. Because no basic infrastructure or indoor plumbing exists, sewage from the *colonias* generally empties into agricultural drains.

Through an Administration-supported emergency declaration in 1994, Reclamation installed 2,000 linear feet of buried drainpipe in an agricultural drain adjacent to the Las Pampas *Colonia* to help isolate its residents from the highly contaminated drainage water. Between 1995 and 1998, Reclamation helped local authorities improve an additional twenty-five miles of agricultural drains identified as potentially having a health or safety impact on area residents. Concurrently, Reclamation initiated an aggressive Spanish and English language education program to teach children about the health risks associated with the untreated water, and the hazards of playing around open water delivery systems.

### **Evolving Environmental Issues**

Protecting, preserving or restoring environmental resources is a major challenge facing today's water resource managers. In recent years, Reclamation has successfully addressed several very difficult environmental issues.

#### *Columbia/Snake River Fish Recovery*

The Administration provided significant funding to support Reclamation's efforts to protect salmon and steelhead species during a period when Reclamation was adjusting the operation of many of its projects to continue to fulfill authorized project purposes and contractual obligations in the Pacific Northwest. As a result of Endangered Species Act consultations, Reclamation has, since 1991, augmented annual flows from its upper Snake River projects by 427,000 acre-feet. To do this, Reclamation initiated an unprecedented program to acquire permanent and temporary water from uncontracted supplies and from willing sellers. With Secretary Babbitt's personal commitment, Reclamation also successfully secured the legal authorities required by the State of Idaho to meet the augmentation requirements.

#### *Rio Grande Silvery Minnow*

The Clinton Administration also led an effort to list, study, and preserve the Rio Grande Silvery Minnow, which historically occurred throughout the Rio Grande Basin in New Mexico and Texas, and which has been at risk for many years. Listed as endangered in 1994, the fish is now restricted to about 163 miles of the Middle Rio Grande Valley (less than 10 percent of its former range). In this area located within Reclamation's Middle Rio Grande Project, where water is particularly scarce, it has been a challenge to provide water to comply with the Endangered

Species Act, while concurrently meeting water user's needs and satisfying interstate compact provisions.

In 1992, Reclamation began working with other stakeholders in the Rio Grande Basin on short- and long-term efforts to sustain the minnow's habitat and ensure its survival. Reclamation committed to adopting a more environmentally sensitive approach to maintenance of the Rio Grande channel and associated project features, and to improving the system's ecological health.

In 1997, the year after a reach of the river dried up and numerous minnows were lost, Reclamation began leasing water from San Juan-Chama Project contractors and delivering it to the Middle Rio Grande Conservancy District (MRGCD) as a supplemental irrigation supply. This allows Reclamation to forego tapping natural Rio Grande flows for agricultural uses, thereby benefiting endangered species threatened by low flow, and improving the overall condition of the river. In August 2000, Reclamation committed to continue its leadership efforts to secure water from willing lessors to supplement the Middle Rio Grande Valley water supply for the minnow's benefit, and to expand efforts to pump water into the river channel near Socorro, NM. In addition, structural alternatives to the San Acacia Diversion Dam, which impedes upstream passage of the minnow, are being pursued, in collaboration with the MRGCD and other parties, and potential means of preventing minnows from being entrained in irrigation and conveyance channels are being investigated.

### *Salton Sea*

The Salton Sea is another long-standing environmental challenge the Clinton Administration tackled. Located in extreme south-central California, the Salton Sea was formed in 1905 when Colorado River flood flows were accidentally diverted into the Salton Sink. Since then, the Sea has been largely sustained by agricultural drainage. Through the years, it has been a major recreation area, wildlife refuge, and sport fishery, but deteriorating conditions have adversely affected its migratory birds, fishery and other uses. Because of evaporation, it is 25 percent saltier than the ocean.

In December 1997, Secretary Babbitt designated Reclamation the lead federal agency to work in partnership with the Salton Sea Authority and other entities to conduct environmental, feasibility, and scientific studies for a draft Environmental Impact Statement/Environmental Impact Report. The document was released for public review and comment in January 2000. Following an analysis of the more than 1,700 comments received during this process, the document was revised and supplemented. The supplement reformulates of the initial alternatives, analyzes a number of additional alternatives, and presents a preferred alternative. Some initial restoration efforts—a shoreline cleanup program, a fish harvesting program, and an integrated wildlife disease study—were also initiated, as was a pilot/demonstration project to test enhanced evaporation systems and solar ponds, two methods of reducing salinity.

## **Addressing Mission Critical Issues**

### **Dam Safety**

Although Reclamation's mission focus is now on water resources management, Commissioner Martinez determined the agency must also address activities that will always be critical to the program's successful continuation. These include facility safety and security, protecting the safety and security of employees and residents downstream of Reclamation facilities, and meeting contractual water and power delivery requirements.

The Safety of Dams program ensures the continued structural integrity and operational reliability of Reclamation's water and power facilities, some of which are part of the National Critical Infrastructure and are considered essential to national security.

### **Community Safety**

In early 1995, Reclamation learned that only ten percent of the communities downstream of its dams had dam-specific evacuation plans. An initiative was subsequently launched to help downstream communities develop such plans, which could be implemented in the event of a dam failure or, more likely, in the event of high operational water releases. Through this initiative, Reclamation helped develop 245 emergency action plans. The plans are periodically tested through various exercises that involve all participating agencies in simulated but very realistic disaster scenarios to ensure they will function as designed should a real emergency occur.

### **Site Security**

With Administration support, Reclamation significantly upgraded and improved its site security program. For example, a Security Officer position was established and filled to provide agency-wide direction, and a comprehensive, agency-wide site security assessment was completed. As a result of the assessment, site-specific security improvements were implemented at water and power facilities, communication sites, office buildings and other locations. In addition, Reclamation developed a Crime Witness Program in cooperation with the Bonneville Power Administration.

Reclamation was the first Interior agency to conduct a comprehensive review of its information technology (IT) systems to determine their vulnerability to compromise by external or internal entities. Sandia National Laboratory conducted the assessment to identify potential vulnerabilities and recommend appropriate actions Reclamation could implement to prevent compromise of any of its IT systems. Implementation of several recommendations began in 2000.

Working with the Interior Department, Reclamation sought legislation to clarify its authority to enter into agreements with other federal agencies or with local/state law enforcement agencies to enforce federal laws on its lands and facilities. This authority currently exists only at Hoover Dam. A significant network of contacts with other federal agencies was developed to effectively share information and resources relative to federal security initiatives. Of particular note is the Interagency Forum for Infrastructure Protection, which involves Reclamation, the Corps of

Engineers, Tennessee Valley Authority, Bonneville Power Administration, Federal Bureau of Investigation, and notable national research laboratories in an effort to improve security assessment criteria.

### **Contract Renewal**

Reclamation is required by law to have formal contractual arrangements for delivery of project water and power, and ensuring the delivery of these products to customers who have contracts for them is an especially critical function. Many of Reclamation's water service contracts date from the 1940's and 1950's, and were up for renewal in the 1990s, with more to follow early in the 21<sup>st</sup> century.

This situation provided the Administration an opportunity to review laws and policies to determine if the contracting process could be better managed to support contemporary water resource management needs and objectives. As a result of this review, Reclamation's historic contracting practices were changed. Where repayment and water service contracts were once negotiated primarily between Reclamation and the project beneficiary, the process was expanded to involve interested stakeholders, whose comments are solicited and considered before any contract is executed.

In the 1940's and 1950's, contract issues revolved around providing water, repayment of the appropriate share of capital costs, and recovering project operation and maintenance costs. Today, when renegotiating contracts, Reclamation also must consider potential impacts on the environment, interstate compacts and agreements, and international treaties, while conforming to requirements of general federal regulatory statutes such as the Clean Water Act, National Environmental Policy Act, and Endangered Species Act, as well as to state laws.

To provide more operational flexibility and improved project efficiency, the maximum contract term was reduced from forty to twenty-five years, unless a contractor could commit to measures that would demonstrably improve project efficiency and/or operational flexibility over a longer period. Between 1994 and 2000, eight water contractors received longer-term contracts after committing to terms that provide for water conservation or more operational flexibility. In addition, more than 160 contracts were executed to ensure the continuation of water deliveries, and thirteen contracts were executed for dam safety activities. Contracting authorities also were used to address water needs for endangered species protection in California, Arizona, the Pacific Northwest, and New Mexico.

The Republican River Basin of Nebraska and Kansas is a case study in the use of the new contracting process this Administration implemented. When the Republican River contract renewal process began in the early 1990s, Reclamation began a basin-wide resource management assessment to assemble scientific and biological data for the basin. Because of the scope of the issues, impacts and potential public interest in the renewals, Reclamation also decided to do an Environmental Impact Statement. Since this could not be completed before the contracts expired, the Administration helped pass legislation that extended the existing contracts to the end of 2000.

Because of the intensity and scope of the negotiations, and the widely varying interests of the involved parties, it took nearly eight years to enter new contracts. Negotiations were completed and the contracts signed in July 2000, five months ahead of the completion deadline. The success of this contract renewal process proved that water service contracts can have innovative terms, which protect the rights of water users while providing other important benefits, and thereby help assure a project's long-term integrity.

### **Drought Assistance**

In the past decade, drought impacted most of the United States to one degree or another, causing economic losses estimated in the billions of dollars. During this period, the Administration provided more than \$61 million for emergency assistance and drought planning.

The 1991 Reclamation States Drought Relief Act authorized Reclamation to undertake emergency activities to minimize or mitigate drought damages or losses, and to implement activities to help reduce the impact of future droughts. Before 1992, assistance was primarily provided after the fact; the program now takes a more pro-active, future-oriented approach. Assistance focuses primarily on helping localities develop plans that prepare them to mitigate future drought impacts. Reclamation's program is the only federal program that provides this type of assistance.

From 1992 through 2000, drought assistance was provided in California, Kansas, New Mexico, Idaho, Utah, Nebraska, Montana, Colorado, Oklahoma, Arizona, Texas and Hawaii. Indian tribes receiving drought assistance during this period included the San Carlos Apache, Hopi, Kaibab-Paiute, and Zuni Pueblo Tribes, and the Hualapai and Navajo Nations. The funding was used for drought monitoring and forecasting; pond construction; water purchases; constructing wetland dikes; creating, protecting or restoring habitat; drilling or rehabilitating wells; and helping develop, modify, or update drought contingency plans or water management plans. Many of the projects were for fish and wildlife restoration or mitigation. Reclamation also sponsored seven drought contingency planning workshops between May 1997 and July 1999, including a U.S.-Mexico Border States Drought Workshop in cooperation with the International Boundary and Water Commission and the Western Governors Association.

### **Complex Natural Resource Issues**

"Every natural resources manager faces a host of complex and controversial issues. Every one of us ponders how to deal with them... So what do you do when (you see) no pathway to resolution of even one of the major issues confronting you? My strategy is to maximize the possibility that small problems can be resolved and to see if any progress can be made toward setting the stage for resolution of some of the bigger ones."

— *Betsy Rieke, the Administration's first  
Assistant Secretary for Water and Science*

During the Clinton Administration, the Bureau of Reclamation successfully completed an unparalleled transition in its program focus and scope, and initiated or completed some very successful water resource management efforts. Many of these accomplishments paralleled

Assistant Secretary Rieke's strategy—they were accomplished in steps, they involved the building of relationships and encouraging new leadership, they promoted substantial information sharing, and they sought resolutions that provided gains for everyone.

### **The Lower Colorado River**

Secretary Babbitt has emphasized addressing and resolving long-standing water supply and use issues in the Colorado River Basin. The river is vitally important to the economic health of the entire Southwest, providing water for more than 27 million people and irrigation of more than four million acres of land in the United States and Mexico.

In 1990, the three lower basin states—Arizona, California and Nevada—reached full use of their Colorado River water apportionment. This threatened California's continued use of more than its basic apportionment, and raised concern among the other basin states (Arizona, Nevada, Colorado, New Mexico, Wyoming and Utah) about the availability of their future Colorado River water apportionments. In 1994, Reclamation undertook to address this issue.

In 1996, Secretary Babbitt warned California it could not continue to depend on surplus and unused Colorado River water to meet its needs, and he suggested the State develop a plan by which it could reduce its use to its basic apportionment. Through collaboration and negotiation and the avoidance of litigation, Secretary Babbitt, Deputy Secretary David Hayes and Reclamation staff helped the State develop a draft plan that was released for public review in 1999, and released for final review in 2000.

In concert with and in support of this plan, the Administration took a number of important steps forward by: (1) implementing an offstream storage rule that will allow the voluntary transfer of Colorado River water among Arizona, California and Nevada to help meet future water needs in the lower basin; (2) supporting a plan for the transfer of conserved agricultural water from the Imperial Irrigation District to the San Diego area; and (3), implementing interim surplus guidelines to help California reduce its Colorado River water use while protecting the availability of water for the other basin states.

These accomplishments should ensure more efficient and effective use of the river well into the 21<sup>st</sup> century.

### **Adaptive Management**

Another major Reclamation accomplishment was implementation of the Glen Canyon Adaptive Management Program, which forever changed management of Glen Canyon Dam and the Colorado River through the Grand Canyon.

On October 9, 1996, Secretary Babbitt signed a Record of Decision implementing the program. He called it "a sea-change in the way we view the operation of large dams," noting the program demonstrates that dams can be operated for environmental purposes as well as for water storage and power generation.

Adaptive management of Glen Canyon Dam required instituting a program of long-term monitoring to track the status of natural resources in Glen and Grand Canyons. This careful assembly of data establishes a firm scientific basis for ecologically sound management of the dam. Building on an ever-growing body of research, scientists can design experiments which test the effects of new dam operating procedures on downstream habitats and wildlife, and on the general condition of Grand Canyon National Park.

The Glen Canyon plan is considered a bellwether adaptive management approach to resource management and is being copied around the world. A key component of the plan was the 1996 test of beach/habitat-building flows. With a national television audience watching, Secretary Babbitt triggered a 46,000 cubic-foot-per-second artificial "flood" through Glen and Grand Canyons from Glen Canyon Dam. This flood was designed to test the ability of such operations to move and redeposit sediment and rejuvenate critical backwaters used by endangered fish species. These are the sort of benefits naturally occurring floods provided before the dam was built. The test was deemed a significant success.

A second experiment conducted under the Adaptive Management Plan in FY 2000 was designed to test the benefits of more natural flows for endangered fish, especially during low-water-supply periods. This experiment included brief, very high flows in the spring; low, steady flows in the summer; and a spike flow in the fall. The high spring and fall flows were designed to create specific habitat conditions for the endangered fish, and displace the small-bodied non-native fish that prey on them.

Glen Canyon Dam's monthly, day-to-day, and hour-to-hour operation also changed significantly after Secretary Babbitt signed the Record of Decision. Water release patterns, previously driven by a combination of yearly and seasonal hydrologic conditions coupled with the market demand for hydroelectric power, were changed to better protect natural and cultural resources downstream of the dam.

### **Animas-La Plata and Indian Water Needs**

The Animas-La Plata Project in southwest Colorado has been the subject of public interest and environmental review since it was incorporated into the Colorado Ute Indian Water Rights Settlement Act of 1988. Although the subject of environmental compliance documents in 1980, 1992 and 1996, it continued to generate controversy.

When a new structural and non-structural project alternative—developed through a process convened by then-Colorado Governor Roy Romer and Lt. Governor Gail Schoettler—failed to gather consensus support from either project supporters or opponents, Secretary Babbitt presented Governor Romer, Tribal officials, and non-Indian participants with a proposal to implement the Settlement Act. The proposal called for an off-stream reservoir, as did the original project, but it would be downsized to supply only the project's municipal and industrial requirements. The Colorado Ute tribes would receive most of the water, along with \$40 million to enable them to buy the remaining water rights they were owed. A water supply would also be made available for the Navajo Nation; Durango, CO; and Farmington, NM, areas.

In January 2000, Reclamation released a Draft Supplemental Environmental Impact Statement for the project. This document refined the Administration proposal into a preferred alternative: a slightly larger reservoir to address water quality concerns and the addition of a municipal pipeline to deliver water to the Navajo Nation community of Shiprock. A final Supplemental EIS retaining this preferred alternative was filed with the Environmental Protection Agency in July 2000, and a Record of Decision was signed in September 2000.

### **Upper Colorado Recovery Implementation Program**

This Administration was also an active participant in efforts to develop a long-term funding strategy for the "Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin." This support helped move the program to an unprecedented level of success.

The program was developed in 1988 by federal and state agencies, water and power user groups, and environmental organizations in Colorado, Utah, and Wyoming. One of the oldest basin-wide recovery efforts, the project's purpose is to re-establish self-sustaining populations of the endangered Colorado pikeminnow, humpback chub, bonytail, and razorback sucker, and to allow current and future water development in the Colorado River's upper basin.

As part of the program, Reclamation modified operations at its mainstem dams in the upper basin to re-create more natural flow patterns to improve endangered fish habitat, and, in 1996, constructed a fish ladder at Redlands Diversion Dam on the Gunnison River that has allowed Colorado pikeminnow and other native fish to migrate upstream of the dam for the first time since it was built.

### **Lower Colorado River Multi-Species Conservation Program**

To meet municipal and agricultural water needs in the region, the lower Colorado River has been repeatedly dammed, straightened, deepened, and riprapped, modifications that drastically changed the river's natural ecosystem, threatening numerous species dependent upon the river and its environment. In response to this situation, the Lower Colorado River Multi-Species Conservation Program was initiated in August 1995 through a Memorandum of Agreement between the Department of the Interior and the states of Arizona, Nevada, and California.

The program is a partnership of federal agencies, state and local agencies, Indian tribes, and other non-federal participants. It is a coordinated, comprehensive, fifty-year approach to conserving habitat, recovering threatened and endangered species, reducing the likelihood of additional species listings under the Endangered Species Act, accommodating current water diversions and power production, and optimizing opportunities for future water and power development. The program covers the mainstream of the lower Colorado River from south of Glen Canyon Dam to the southerly international boundary with Mexico, including the 100-year flood plain and area reservoirs to full-pool elevations.

The program will address conservation needs for more than 100 federal- or state-listed, candidate and sensitive species and their associated habitats. While conservation measures will focus on the lower Colorado River from Lake Mead to the international boundary, other cooperative

conservation efforts also may be considered. Interim measures to benefit the endangered razorback sucker, bonytail chub and southwestern willow flycatcher were implemented early in the program's development to address the immediate critical needs of these species.

### **Salinity**

Addressing the Colorado River's high salinity—an effect of agricultural run-off into the river—was one of the most important challenges faced by this Administration. Excessive salinity hurts crops irrigated by river water, and degrades municipal water systems in the region. The river's high salinity causes between \$500 million and \$750 million in damages per year in the United States alone, and could exceed \$1.5 billion per year if future salinity increases are not controlled. Salinity control is also a topic of high interest to the Republic of Mexico.

To provide better program management in a more cost efficient manner, the Administration proposed major changes to the twenty-year old Colorado River Basin Salinity Control Program. In 1995, President Clinton signed PL104-20, which directed Reclamation to conduct a \$75 million test of a pilot program to award grants on a competitive-bid basis for salinity control projects. Twenty-four projects with a total cost of \$109 million were accepted into the program between 1995 and 2000. This was \$200 million less than these programs would have cost prior to 1995.

Central to the success of this program is the concept of local ownership of the proposal and product. New salinity control projects primarily involve installation of pressurized pipelines and sprinkler systems to improve efficiency and reduce salt leaching from irrigated fields. Funded by a one-time grant that is limited to the sponsor's competitive bid, the facilities, once constructed, are owned, operated, maintained, and replaced by the sponsors at their own expense. If a project fails in any way, the sponsor may not be able to deliver water to its customers, so there is a powerful business incentive to build a quality product.

Costs are controlled by the competitive bid and award process. Federal costs are limited by agreement to the amount bid by the project's sponsor. If unforeseen problems do occur, the sponsor can terminate the project, cover any overruns with its own funds, borrow funds from state programs, or reformulate the project costs and re-submit the project for fresh consideration.

### **New Opportunities For the 21<sup>st</sup> Century**

When the Reclamation program was authorized in 1902, the assumption was that Western water resource projects would harness unlimited amounts of water to serve human purposes in a manner uncomplicated by environmental considerations.

Although the program has been very successful, managing water has become an increasingly complicated process. Regulating natural water flow for one purpose often creates an unintended set of new problems, as regulation can affect instream flow needs, water quality, and wetlands, or create drainage problems on the lands the water serves. Water resources program managers must address these changes while also meeting water demands for agricultural and urban use, power generation, environmental use, Indian tribes, and recreation, and addressing flood control and drought planning issues.

From 1993 through 2000, Reclamation changed significantly to (in the words of Commissioner Martinez) "bring a balanced and sensitive approach to resolving the important water issues of the West."

During the Clinton Administration, Reclamation created more flexibility in its project operations, created new partnerships with stakeholders to develop innovative, consensus-based, sustainable solutions to water resource problems, and maintained a core of top-notch engineering and research skills.

## ***U.S. GEOLOGICAL SURVEY***

### **Introduction**

The Clinton Administration marked an increased commitment to solving the nation's environmental, natural-hazard, and natural-resource problems through strong partnerships and through integration of scientific disciplines to address real-world issues.

During the Clinton years, geospatial data technologies became more widely available and user friendly. As a result, great strides were made in geospatial data collection, processing, archiving, and distribution. Use of the World Wide Web expanded dramatically, and the USGS responded by ensuring that much of its vast storehouse of scientific data, monitoring, and interpretation is available on the Web.

During the past eight years, the USGS has maintained its high standard of scientific excellence while broadening its range of expertise through the addition of the former National Biological Service and part of the former Bureau of Mines. These added capabilities have allowed the USGS to provide integrated science to address the needs of customers on issues such as the alarming increase in deformed amphibians, the spread of invasive species of plants and animals, and the presence of pesticides and other contaminants in the nation's water supply.

At the same time, the USGS maintained its commitment to ongoing basic research about the fundamental structure of the Earth and the processes that shape the landscape—and our future.

### **USGS Leadership**

#### **Gordon P. Eaton**

As Director of the USGS from 1994 to 1997, Dr. Gordon P. Eaton overcame attempts to abolish the USGS while leading the bureau through a significant downsizing and restructuring. Establishing an integrated approach to science, he oversaw the incorporation into the USGS of the former National Biological Service and part of the former Bureau of Mines, and established the first Strategic Plan for the USGS.

#### **Charles G. Groat**

Dr. Groat's leadership from 1998-2000 brought a strong commitment to streamlining the business practices and management functions of the USGS to encourage integrated science responsive to the needs of USGS customers and partners. He strengthened the regional application of USGS science while maintaining a national focus in real-time monitoring of hazards, including earthquakes, volcanoes, and river levels, and assessing the quality of the nation's water supply.

## Contributions to Major Interior Department Initiatives

### California Desert

USGS initiated a Mojave Desert Ecosystem Science Program, as part of its Place-Based Studies Program, to improve scientific understanding of desert ecosystem processes and apply that understanding to land management needs. This program supports land managers by developing maps and data bases describing vulnerability and recoverability of the land, and using these to identify methods that will monitor vital signs of ecosystem health.

Starting with baseline data, much of which has been assembled by the Department of Defense Legacy Program, local studies by USGS researchers aim at gaining a deeper understanding of how surface processes interact with the biota. A key is to examine natural and human-induced variations, both locally and across the region, using remote sensing and GIS analytical tools.

### Elwha River Ecosystem

The formerly free-flowing Elwha River was famous for the diversity and size of its salmon runs; it produced an estimated 380,000 migrating salmon and trout and supported ten runs of anadromous salmonids, including chinook that exceeded 100 pounds (National Park Service, 1996). After the construction of the Elwha Dam (1912) and the Glines Canyon Dam (1927), more than seventy miles of mainstem river and tributary habitat were lost to anadromous fish production. This loss resulted in a precipitous decline in the native populations of all ten runs of Elwha salmon and sea-going trout.

After Congress enacted a 1992 law to restore the river ecosystem and its salmon and steelhead runs, Secretary Babbitt determined that the best way to restore the river was to remove the dams. But no one could predict with confidence how the accumulated sediment, which had formed deltas at the upper ends of the lakes behind the dams, would react to the change in the river.

In preparation, a 1994 drawdown experiment at Lake Mills behind Glines Canyon Dam was conducted to see how the sediment and the river would react to the change. The results of that experiment were published in a 1999 report of the U.S. Geological Survey (Childers, 1999).

An earlier 1999 USGS study that dealt with the issue of removing the dams concluded that restoring salmon runs to the Elwha River system will greatly benefit the ecosystem (Munn, 1999). New runs of spawning salmon will likely contribute huge new quantities of nutrients from their decaying bodies. Thanks to the restored instream habitat, the nutrients should be retained long enough to nourish the next generations of salmon so that their numbers and sizes will increase.

### Grand Canyon

River runners and other observers in the Grand Canyon of the Colorado River noticed a decline in the number and size of sandbars used as campsites—a decline attributed to Glen Canyon Dam, which controls the flow of the Colorado through the canyon. The U.S. Bureau of Reclamation,

which operates the dam, released an unusually high flow of water in spring 1996 to see if it could rebuild camping beaches and restore other habitats that have deteriorated since the dam's completion in 1963.

Scientists from the Bureau of Reclamation, the U.S. Geological Survey and other federal and state agencies and academic institutions studied the effects of the test flow, which was expected to rebuild sandbars that provide campsites and clean silt out of backwater channels used by native fish.

Several USGS scientists studied the redistribution of sand by the controlled flood. Their results will be used to test the validity of theoretical models that USGS hydrologists have developed to predict what will happen to sediment in the river at different flow rates. These models may eventually be used by the Bureau of Reclamation to regulate the flow of water from Glen Canyon Dam.

Established by the Department of the Interior in 1995, the USGS Grand Canyon Monitoring and Research Center (GCMRC) is the cornerstone of the Glen Canyon Dam Adaptive Management Program, which was created in November of 1996. The Adaptive Management Program is a multi-agency, multi-stakeholder, interdisciplinary program that was initiated by the Bureau of Reclamation. The GCMRC has been called, "a science-policy experiment of local, regional, national, and international importance," by the National Academy of Sciences.

### **Endangered Species**

USGS Species at Risk projects have led to conservation options and actions that have reduced the need for listing species as threatened or endangered. Through this program, established in 1995, USGS develops biological information to assist federal, state, and private land and resource managers in their decisions regarding the protection of sensitive species and their habitats.

Species at Risk projects focus on species for which there is concern over possible endangerment, but for which there is insufficient information regarding their status-abundance, distribution and habitat relationships—and therefore no scientific basis to list, de-list, or take positive management actions. Species at Risk projects are often conducted by investigators who have identified small but critical gaps in our biological knowledge. The program aims to fill these gaps by providing resource managers, regulators, and private landowners with definable scientific information from which prudent decisions can be made regarding the nation's biological resources.

The results of a plant species survey on two geologic formations in the area of the new Grand Staircase/Escalante National Monument are assisting the Bureau of Land Management (BLM) in managing natural resources in the Monument. During a Species at Risk study of fourteen rare plants of the northern islands within the Channel Islands National Park, four of the plants came under consideration by the FWS for listing as endangered and other critical data needed by FWS to make informed decisions were made available. The U.S. Fish and Wildlife Service recently made a "not warranted" finding on the listing of the redband trout in Oregon based on a Species

at Risk survey conducted by the USFWS and the Oregon Department of Fish and Wildlife of redband trout in 1999.

### **Status of Migratory Bird Populations; Status of Wetlands**

USGS is an international leader in developing and delivering research information for the conservation and management of migratory birds, and its many contributions in this area over the past eight years can only be summarily described in this brief history. USGS research related to bird conservation is especially prominent in understanding the ecological relationships between bird populations and the habitats upon which they depend, measuring and tracking the long-term population trends of more than 500 species, and developing innovative scientific solutions to problems associated with endangered and declining species. At any given time during the past eight years, the USGS has had more than 500 active research projects investigating migratory birds.

One highlight of the migratory bird research program is USGS re-engineering of its National Bird Banding Laboratory at Patuxent Wildlife Research Center in Laurel, Maryland. The re-engineering incorporated new technologies into the Center's data processing, management, and delivery systems. Bird banding allows USGS to track migratory birds and is a critical tool for scientific studies of bird populations and how birds use habitats. The U.S. Fish and Wildlife Service and the states use USGS bird banding data to manage migratory waterfowl populations. This information is indispensable to the U.S. Fish and Wildlife Service in establishing annual hunting regulations.

Starting in 1993, USGS scientists have made major contributions to the development and implementation of Adaptive Harvest Management (AHM), the system now in use by the U.S. Fish and Wildlife Service and the Waterfowl Flyway Councils for analysis and identification of optimal waterfowl harvest regulations. AHM is a cooperative effort between USGS, FWS, and the states to integrate science and information into the analysis and management of waterfowl harvests. The AHM approach has greatly improved cooperation among federal and state partners, and has led to scientifically defensible harvest strategies that are broadly accepted by the conservation community.

The USGS is responsible for coordination of the Breeding Bird Survey, which has monitored bird populations since 1966. When the BBS indicated significant declines in grassland, forest, and shrubland birds, such as eastern meadowlarks, grasshopper sparrows, yellow-breasted chats, and wood thrushes, USGS scientists began looking at potential causes. The long-term population information provided by the BBS has formed the foundation for many bird conservation efforts throughout the Western Hemisphere.

Wildlife disease specialists from USGS' National Wildlife Health Center in Madison, Wisconsin, have been in the forefront of the current West Nile Virus investigations, as well as investigations into other die-offs involving migratory birds. West Nile virus causes encephalitis in humans; seven people died from the virus in fall 1999 in the New York City area. Wild birds can serve as hosts for West Nile Virus and provide the early warning signals for areas where outbreaks may occur, putting people at risk. USGS scientists helped establish a bird surveillance

network along the Atlantic and Gulf Coasts that provided an early warning system when the virus re-emerged in the spring of 2000.

In the desert Southwest, USGS scientists conducted important landscape assessments of riparian, or streamside, areas. These studies support conservation planning for rare and endangered species such as least Bell's vireos, willow flycatchers, pygmy owls, and other species. The scientific information that USGS provides in the Southwest and elsewhere is crucial for conservation management of rare and endangered species by the U.S. Fish and Wildlife Service, and for land-use planning by USGS' other partner agencies within Interior.

USGS developed a decision-support system that assists biologists in the management of trumpeter swans on national wildlife refuges along the Pacific Flyway. USGS scientists also have actively investigated predation by waterbirds on Pacific salmon smolt, which is contributing to the resolution of complex ecological issues in the Pacific Northwest.

### **Coral Reef Initiative**

The U.S. Geological Survey was a key scientific agency of the Coral Reef Task Force, a government-wide effort to protect and restore coral reefs in U.S., commonwealth and territorial waters and to work in partnership with other nations to conserve and protect coral reefs worldwide. With research centers and field stations in south Florida, the U.S. Virgin Islands, Hawaii, and elsewhere across the nation, USGS focused its coral reef research efforts on: mapping and characterization, geologic growth and development, sedimentary and hydrologic processes, effects of water quality, effects of fishing on coral reef resources, and development of monitoring techniques.

Working within national park units, USGS scientists documented the status of coral reefs and the impacts of some of these stresses. One new method of status documentation uses a digital video camera to film the corals, algae, and other reef organisms that can cover reefs. Designed for use in U.S. national parks, the technique is now in use in a number of Caribbean nations.

USGS geologists and coral biologists also collaborated to determine the relationship between global warming, deposition of dust and Caribbean-wide outbreaks of coral diseases.

### **Amphibians**

At least 230 species of frogs and salamanders make up the amphibian fauna of the continental United States. Focused research in local areas over the past ten years has indicated dramatic declines in some amphibians, though the exact extent of losses remains unknown. Reports of malformed frogs, toads, and salamanders are increasing. In May 1998, a meeting of international experts concluded that significant amphibian declines have occurred, even in protected areas not subject to obvious changes in habitat, such as national parks, wildlife refuges, and wilderness areas.

In partnership with other bureaus in the Department of the Interior, the USGS is leading a national program to determine the status of amphibians and to investigate potential factors

causing their declines and malformations. Preliminary findings indicate that these environmental insults, acting alone or in combination, may be contributing to widespread amphibian declines and/or malformations.

The President and the Secretary of the Interior instructed USGS to launch a nationwide Amphibian Research and Monitoring Initiative (ARMI) in 2000 to determine the depth and breadth of the problem and to investigate potential causal factors. Under ARMI, USGS is collecting status and trend information and assessing habitat conditions for amphibian populations throughout the U.S. USGS is preparing a national amphibian atlas with current and historical range maps. ARMI is supporting focused research projects investigating various factors that may be responsible for widespread amphibian declines or malformations. All ARMI data will be provided to a central clearinghouse maintained by the USGS, where it will be analyzed, synthesized, and the products and other information made available through the World Wide Web for use by resource managers, stakeholders and the general public.

### **Invasive Species**

In February 1999, the Administration issued an Executive Order on Invasive Species in recognition of the need for a national response to the rapidly increasing ecological and economic impacts posed by these exotic invaders. USGS, along with other agencies, directed studies to combat invasive species in natural and semi-natural areas. Early detection of newly established exotics and monitoring of invading populations, along with improved understanding of the ecology of invaders and factors in the resistance of habitats to invasion, have led to the development and testing of alternative management and control approaches. USGS has also led the way in facilitating the availability and integration of information on invasive species.

### **Dam Effects**

In 1996, the U.S. Geological Survey produced the report, *Dams and Rivers: Primer on the Downstream Effects of Dams*, outlining the role of science in restoring or otherwise altering the downstream effects of dams. Research provides hard data on environmental changes that might occur if water releases are altered. By using computer modeling, management plans can be developed that best balance needs of users with concerns for the environment. Monitoring and long-term data sets of streamflow trends can help in the development of better predictions of the movement of water and sediment below dams. As the number of dams being considered for removal increased, the USGS undertook more research on dams and the sediments behind them. This research proved to be crucial for decision-makers involved in "dam-breaking" events.

The USGS was instrumental in designing a fish-passage system for anadromous fishes, including American shad, which was installed in March 2000 on the Little Falls Dam on the Potomac River. In 2000, the USGS conducted a study of predation on juvenile salmonids in the lower Snake River, where breaching of four dams has been proposed. The study, funded by the Army Corps of Engineers, was part of a large regional effort to examine the biological, economic, and cultural impacts (positive and negative) of dam breaching in the lower Snake River.

## **Clean Water Action Plan**

The Clean Water Action Plan calls for the U.S. Geological Survey (USGS) to assist the National Park Service (NPS) in meeting critical water-quality protection and management responsibilities in national parks, monuments, recreation areas, and scenic riverways. More than thirty monitoring and assessment projects, which were designed collaboratively by the USGS and NPS in direct support of NPS Resource Management Plans, have been initiated. The projects will help ensure safer swimming beaches and drinking water, enhance baseline monitoring and assessments and assess the effects of changing atmospheric deposition on lake chemistry.

## **Energy Research: Oil & Gas Reserves**

In 1995 and 2000, new estimates of undiscovered oil and gas reserves were released by the USGS. Both reports showed larger reserves than previously thought, reflecting a refinement and enhancement of scientific estimation techniques, and an ability to more precisely calculate the world's remaining energy base. In 2000, the USGS' latest assessment of global undiscovered oil and gas resources reported an increase in energy resources, with a 20 percent increase in undiscovered oil and a slight decrease in undiscovered natural gas. This assessment estimates the volume of oil and gas, exclusive of the U.S., that may be added to the world's reserves in the next thirty years.

## **Measuring Petroleum Potential in the Arctic National Wildlife Refuge**

The Alaska National Interest Lands Conservation Act (1980) established the Arctic National Wildlife Refuge (ANWR). In section 1002 of that act, Congress deferred a decision regarding future management of the 1.5-million-acre coastal plain ("1002 area") in recognition of the area's potentially enormous oil and gas resources and its importance as wildlife habitat. A report on the resources (including petroleum) of the 1002 area was submitted in 1987 to Congress by the Department of the Interior:

In 1998, the USGS completed a reassessment of the petroleum potential of the ANWR 1002 area. This was a comprehensive study by a team of USGS scientists in collaboration on technical issues with colleagues in other agencies and universities. The study incorporated all available public data and included new field and analytic work as well as the reevaluation of all previous work.

The amounts of in-place oil estimated in 1998 for the 1002 area were larger than previous USGS estimates, but were found in numerous smaller reservoirs rather than a few very large ones. The increased estimate resulted in large part from improved resolution of reprocessed seismic data and geologic analogs provided by recent nearby oil discoveries.

## Water Research

### Major Reports on Pesticides and Nutrients

In the years 1992-2000, the USGS conducted many critical investigations to inform scientists and the public of the state of the nation's water availability and quality. For example, the *National Water Summary on Wetland Resources* (1996) gave a broad overview of wetland resources and included discussions of the scientific basis for understanding wetland functions and values. *The Quality of Our Nation's Waters* (1999) was the first-ever national synthesis of information on pesticides and nutrients in surface-water and groundwater resources across the country.

### Methyl Tert-Butyl Ether (MTBE)

The blending of methyl tert-butyl ether (MTBE) in gasoline in the United States to reduce air pollution has increased markedly since its first use in the late 1970s. As MTBE has become one of the largest-volume organic chemicals produced in the United States, the large-scale use of MTBE-containing gasoline inadvertently has resulted in its introduction to some surface and ground waters. MTBE is of concern to drinking water utilities because of its low taste and odor threshold and possible human-health effects. The release of MTBE-containing gasoline from storage tanks, pipelines, and other point sources has caused the concentration of MTBE in some ground water to exceed the U.S. Environmental Protection Agency (USEPA) advisory limits for MTBE. As a result, some domestic and community water supply wells have been abandoned, and, in other cases, it has become necessary treat ground water prior to use for drinking purposes. Through a combination of monitoring and research, the U.S. Geological Survey (USGS) is attempting to answer several important questions about MTBE contamination of water resources in the United States.

A study from the U.S. Geological Survey and the Oregon Graduate Institute released in March 2000 showed that as many as 9,000 community water wells in thirty-one states may be affected by contamination from MTBE due to their proximity to leaking underground storage tanks. Shortly afterward, the Environmental Protection Agency announced it would begin phasing out the use of MTBE in gasoline. But because it is persistent in the environment, even if the use of MTBE were to be completely banned immediately, it will be with us for at least a decade, according to the study's authors.

### Water Use Analysis

An analysis of water use in the United States that is conducted by the USGS at regular five-year intervals (published 1995 and 2000) shows that although population is increasing, people are using less water. The nation is using water more efficiently and conservation programs in many communities have cut water use. Improved irrigation techniques and more efficient use of water by industry are additional contributors to the trend.

## **Ecosystems Research**

### **USGS Ecosystem Program**

The USGS Ecosystem Program was established in 1995 to enable the USGS to enhance its scientific assistance to resource managers who require an improved scientific information base to resolve or prevent complex resource conflicts or environmental problems in specific ecosystem sites. The Ecosystem Program initially focused on two ecosystems: San Francisco Bay and South Florida. The Chesapeake Bay was added in FY 1996. Through three-to-five-year efforts in each ecosystem site, USGS intensifies its provision of scientific information tailored to the specific management needs of that ecosystem. The information is designed to have a direct, significant, and immediate impact on management and policy decisions. The sites may have as their focus such issues as water quality or water supply, environmental effects of mineral or energy use or extraction, effects of alterations in land use or land cover.

### **South Florida**

The USGS South Florida Ecosystem Program, begun in 1995, supplies resource-management agencies with information that will enable them to reestablish the water regime and to manage and maintain the components of the hydrologic system so that natural ecosystem functions can recover. The USGS provides multidisciplinary hydrologic, cartographic, and geologic data that relates to the mainland of south Florida, the Florida Bay, and the Florida Keys and Reef ecosystems.

The USGS supplies agencies involved in South Florida restoration efforts with accurate information on such specialized scientific topics as water flows into Florida Bay and the Atlantic Ocean, evapotranspiration measurement and modeling, high-resolution elevation data, historical water and fire conditions, and ecological yardsticks to measure the success of the restoration.

### **Chesapeake Bay**

The USGS Chesapeake Bay Ecosystem Program, begun in May 1996, is a five-year effort to carry out an integrated coring, sedimentological, environmental, and ecological investigation of the bay's ecosystem. The USGS also conducts studies on the response of biological resources of the bay to natural and anthropogenic changes at several time scales. Through the Ecosystem Program, USGS brings together a team of investigators from relevant complementary disciplines, a team that includes members of more than twelve programs within the USGS, and other scientists and resource managers within the Chesapeake Bay Program.

The Ecosystem Program has prepared detailed spatial coverages of the bay watershed for land characteristics (topography, hydrography, drainage divides, physiography, land cover, and soil), subsurface characteristics (geology and lithochemistry), and estuarine characteristics (bathymetry and shoreline changes). A new satellite-image mosaic of the watershed has been prepared using data developed by ongoing efforts of the USGS and other agency programs. Additionally, a temporal land-use change study is designed to show the influence that

agricultural, urban, and forest land-use change over the past 200 years has had in the Chesapeake Bay area.

#### *Modeling of Nutrient Sources and Transport in Chesapeake Bay Watershed*

USGS has developed a set of spatially referenced regression models for the evaluation of nutrient loading in the Chesapeake Bay watershed. The information, recently released in a USGS Water-Resources Investigations Report (99-4054), is being used by the Chesapeake Bay Program to target nutrient-reduction areas and to design nutrient-load reduction plans that are specific to each tributary.

#### **Platte River**

The central Platte River Valley in Nebraska is an internationally significant staging area for migratory water birds of the Central Flyway and is best known for the one-half million sandhill cranes and the several million other waterfowl that migrate annually through the valley. Nine endangered species use the central Platte River Valley for habitat, including the whooping crane, piping plover, and least tern. With changes in the hydrology of the river and the structure of riparian habitats, the sustainability of migratory and resident birds and other biota have been brought into question.

In 1995, a memorandum of agreement was signed by the Secretary of the Interior and the governors of the states of Colorado, Wyoming, and Nebraska to begin developing a basin-wide habitat recovery program for the Platte River. This agreement was implemented by the Platte River Endangered Species Partnership (PRES-P) beginning in 1997. Major aspects of the program call for the acquisition and restoration of habitat areas, design and implementation of water augmentation and conservation measures, and development of an overall monitoring and research plan to determine the effectiveness of an adaptive management plan.

Developing successful strategies to sustain or rehabilitate the riparian ecosystem of the central Platte River requires an understanding of the linkages between hydrology, river morphology, biological communities, and ecosystem processes. The U.S. Geological Survey (USGS) Platte River Place-Based Study Program has used resources from its four discipline areas—biology, geology, mapping and water—to build an understanding of these physical and biological linkages.

#### **Greater Yellowstone area**

Yellowstone National Park has drawn worldwide attention for over 100 years, largely due to its spectacular landscape and wildlife. However, the Yellowstone landscape extends far outside the park boundary and includes humans as part of the ecosystem. As the human influence over land-cover patterns evolves and intensifies, the potential for impacts increases. Historical studies of land-use and land-cover change are one way to explore the effects of human activities on our environment and can be used to predict future landscapes.

The objective of the Greater Yellowstone Ecosystem Initiative is to provide integrated natural resource science information for use by land-resource managers and policy makers. Information will be provided through three activities: (1) development of consistent geographic data bases, (2) research into the factors that control habitat use by humans and by wildlife, and (3) decision support capabilities and services. The unique role and objective of USGS is to provide information that is consistent across boundaries of management units.

## **CALFED**

In August 2000, the CALFED Bay-Delta Program, sometimes hailed as the world's largest water management effort, announced the assignment of Dr. Samuel N. Luoma, a research hydrologist with USGS, as the Interim Science Leader of the CALFED Science Program.

The USGS long-term monitoring and research programs in San Francisco Bay provide needed data, information, interpretations, and assessments that contribute to the work of other federal and state agencies.

## **Landscape restoration**

The USGS Abandoned Mine Lands (AML) Initiative began in 1997 and will continue through 2001 in two pilot watersheds—the Boulder River basin in southwestern Montana and the upper Animas River basin in southwestern Colorado. USGS ecologists, geologists, water quality experts, hydrologists, geochemists, and mapping and digital data collection experts are collaborating to provide the scientific knowledge needed for an effective cleanup of AMLs.

Metal concentrations in fish and invertebrates in the two pilot watersheds were found to be higher than in the surrounding water and bottom sediments. These measurements show that metals (some of which are toxic) are accumulating in the local food chain. Researchers have also determined how these metals (such as cadmium, copper, lead, and zinc) move downstream to settle and accumulate in the bottom sediment of rivers and streams. In other cases, water quality near AMLs was affected by the natural weathering of mineral deposits before mining occurred. Because of this, scientists are working to determine the environmental conditions that existed before mining began in order to establish realistic cleanup goals for an area.

USGS AML Initiative activities will conclude in the year 2001 with a summary of lessons learned for successful implementation of a watershed approach to characterize contamination from AML. Land managers will then be able to apply these lessons to remediate AML sites in other watersheds.

The USGS-Department of Defense Environmental Conservation (DODEC) Program has carried out scientific and technical studies related to environmental contamination issues of concern to Department of Defense (DOD) agencies since 1988. The purpose of the program is to provide scientific and technical data and interpretations needed to characterize hazardous waste sites, provide data to support evaluation of plausible remedial alternatives, and search for new technologies to improve cost effectiveness of DOD efforts. These activities support the DOD Restoration Program, designed to address issues of contamination resulting from activities of the

past, and the Environmental Compliance Program, designed to address issues of contamination resulting from current operations.

The DODEC program has conducted activities at more than 100 military installations in forty-six states, Puerto Rico, and two foreign countries, including facilities of the Air Force, Army, Navy, Marine Corps, Air National Guard, Army National Guard, and Defense Logistics Agency. Major investigation issues have been the characterization of local geologic frameworks through which ground water moves; the levels and environmental interactions of chlorinated hydrocarbon compounds (trichloroethene, dichloroethene, vinyl chloride), constituents of fuels (benzene, toluene, xylenes), and trace metals (lead); and the documentation of contaminant toxicity to local biota.

USGS researchers have been leaders in the development of innovative media sampling techniques to lower costs of environmental projects and in the development of innovative geophysical techniques to refine documentation of local geologic frameworks. The USGS has also been in the forefront of identifying the processes affecting natural attenuation and phytoremediation of contaminants in ground water and soil.

## **Downsizing and Reorganizing**

During the eight-year Clinton Administration, reorganization and reinvention initiatives resulted in a reduction of about 500 employees of the USGS. Employees of the former National Biological Service were also affected when NBS was into the U.S. Geological Survey.

### **The National Biological Service**

The National Biological Service (NBS) was formed in 1993 from the research and related activities of seven Department of the Interior bureaus, with the largest components coming from the U.S. Fish and Wildlife Service and the National Park Service. Smaller units came from the Bureau of Land Management, the Bureau of Reclamation, the U.S. Geological Survey, the Minerals Management Service, and the Office of Surface Mining. All of these units were engaged in scientific activities tied to the missions and responsibilities of their parent organizations.

Secretary Babbitt said of the new agency, "the National Biological Service will help provide the scientific knowledge America needs to balance the compatible goals of ecosystem protection and economic progress. Just as the U.S. Geological Survey gave us an understanding of America's geography and earth science resources in 1879, the National Biological Service will unlock information about how we protect ecosystems and plan for the future."

In October 1996, Congressional action forced the integration of NBS into the U.S. Geological Survey (USGS) as its Biological Resources Division. This move added an important living resources dimension to the USGS earth sciences orientation, making it possible for the bureau to bring physical plus biological science to natural resource management problems

## Streamlining and Improving Management

The 1996 *Strategic Plan for the U.S. Geological Survey, 1996 to 2005* was designed to provide a statement of direction for the USGS as an organization. Refocused in 1997, this plan recognized that powerful forces in the world such as changing federal government functions, new technologies, demographic changes, and global interdependence will shape the future of the nation, the needs of the public, and the roles of federal agencies. The strategic vision of the USGS is that the agency will be a world leader in the natural sciences through its scientific excellence and responsiveness to society's needs. The USGS mission is to serve the nation by providing reliable scientific information to: describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy and mineral resources; and enhance and protect our quality of life.

To achieve the vision of "one Bureau, one Mission, one Message," in 2000 the USGS restructured its traditional organizational emphasis from divisions based on four scientific disciplines to a new style of regional management of programs in order to focus more directly on regional customers, science, and information needs.

In response to the Clinton Administration's "Customer-Focused Government" initiative, the U.S. Geological Survey increased its emphasis on customer service. This strategic emphasis resulted in some changes to USGS business practices, enabling the USGS to make continuous improvements to the service, information, and products it provides to its customers.

In 1997, USGS set its first customer service goals and has actively tracked its progress in meeting those goals. Annual customer service reports, "Reports to Our Customers for 1997, 1998 and 1999," are available online at [www.usgs.gov/customer/](http://www.usgs.gov/customer/). In 1998, USGS established its first customer service policy which policy reaffirmed the USGS pledge to serve its customers with excellence and outlined the USGS responsibility to work with its customers. This policy has served as a model for a customer service policy written for the U.S. Department of the Interior in 2000.

## "Our Living Resources" / "Status and Trends of the Nation's Biological Resources"

The 1995 report *Our Living Resources* was the first product of the Status and Trends Program in the former National Biological Service. The report compiled information on many species and the ecosystems on which they depend, making these facts available to scientists, managers, and the lay public. An initial first step toward a consistent, large-scale understanding of the status and trends of these resources, this report brought together for the first time a host of information about the nation's biological wealth, highlighting causes for both comfort and concern. The report provided valuable information about causes for the decline of some species and habitats and also gave insight into successful management strategies that have resulted in recovery of others.

A 1999 USGS publication, *Status and Trends of the Nation's Biological Resources*, detailed the first large-scale assessment of the health, status, and trends of our plants, animals, and

ecosystems. The USGS produced the two-volume report with contributions from nearly 200 experts from the federal Government, academic, and non-governmental communities. The report synthesized current information on the status and trends of biological resources with an historical perspective of ecosystems across the country to assess how the nation's resources are changing. It also described major factors that affect biological resources nationwide.

### **Federal Geographic Data Committee & National Biological Information Infrastructure**

The Federal Geographic Data Committee (FGDC), an interagency committee that promotes the coordinated development, use, sharing, and dissemination of geospatial data on a national basis, was established by the Office of Management and Budget (OMB) in its 1990 revision of Circular A-16, *Coordination of Surveying, Mapping, and Related Spatial Data Activities*.

Circular A-16 defined specific coordination responsibilities for the FGDC to include promoting the development of distributed databases of geospatial data that are national in scope. Currently, Secretary Babbitt chairs the FGDC.

To extend the scope of Circular A-16 in support of the National Information Infrastructure, President Clinton in 1994 issued Executive Order 12906, *Coordinating Geographic Data Acquisition and Access: The National Spatial Data Infrastructure (NSDI)*. NSDI encompasses the technology, policies, standards and human resources necessary to acquire, process, store, distribute, and improve the use of geospatial data. The FGDC committees and working groups provide the basic structure for institutions and individuals to come together to discuss and work on various aspects of the implementation of the NSDI. In recent years the FGDC has sponsored national forums on geospatial data and instituted a grant program to support cooperative agreements for development with participants from state and local governments and academia.

The National Biological Information Infrastructure (NBII) is a broad and collaborative initiative to develop a distributed, Internet-based federation of biological and ecological information that links scientific information sources across the United States and throughout the world. Though administered by the U.S. Geological Survey, the program depends on the active participation of many agencies, organizations, and individuals.

Development of the NBII began in 1994, under the direction of the former National Biological Service (NBS) as one of its primary mission responsibilities. The need for this "national biotic resource information system" was specifically highlighted as a key recommendation in the 1993 report of the National Research Council: *A Biological Survey for the Nation*.

The USGS works closely with several other federal agencies, state agencies, academic institutions, and non-government organizations to help plan the development of the NBII. The NBII program has been a key participant in several inter-governmental activities including the Interamerican Biodiversity Information Network, North American Biodiversity Information Network, Global Biodiversity Information Facility, Species 2000, and the Clearinghouse Mechanism of the Convention on Biological Diversity.

In the years 1995-2000, the NBII was regularly highlighted as a key component of the Administration's activities to improve government delivery of information and services through the innovative use of information technology. Recommendations on strengthening the NBII were included in the 1997 report from the Vice President and the National Performance Review entitled *Access America: Reengineering Through Information Technology*. In 1998, the Integrated Taxonomic Information System, which is a key component of the NBII network, was recognized with a Hammer Award from the Vice President, for significantly advancing the Web-based delivery of scientific information on the names and classifications of all U.S. plant and animal species. Also in 1998, the President's Committee of Advisors in Science and Technology released the report *Teaming with Life: Investing in Science to Understand and Use America's Living Capital* which highlighted the importance of the current NBII program and recommended the launching of a "next generation" of the NBII.

Since its inception in 1994, the NBII program has received a 1999 Government Technology Leadership award; has been selected as one of the "Best Feds on the Web" for 1999 by *Government Executive* magazine, and has twice received a Certificate of Environmental Achievement from Renew America and the National Awards Council for Environmental Sustainability.

## **Natural Hazards**

During the 1990s, it became increasingly clear that the costs of natural disasters, in both human and economic terms, were rising at an alarming rate. The old response-and-recovery approach to these natural extremes—floods, earthquakes, wildfires, landslides, hurricanes, and so forth—was not solving the problem. A new model was needed, one that included strong partnerships among government agencies and with the private sector, and one that focused on learning how to live safely on our planet. The USGS embraced this new way of dealing with natural hazards by combining its traditional emphasis on building a strong scientific understanding of the natural forces that shape our planet with a new commitment to sharing information with partners and the public.

### **Floods**

Floods were the number-one natural disaster in the United States during the 20<sup>th</sup> century, in lives lost and property damage. As of 2000, the USGS maintained a network of more than 7,000 stream-gauging stations throughout the United States, Puerto Rico, and the Virgin Islands that monitor streamflow and provide data to various federal, State, and local cooperating agencies as well as the general public. In addition to providing critical information on flood heights and discharges, these stations provide data used in the effective management of water-supply and water-quality needs, protection of aquatic habitat, recreation, and water-resources research. The most damaging floods of the century were the Midwest floods of the 1993, along the Mississippi and Missouri Rivers. During these floods, USGS furnished continuous information on streamflow and other related topics to the National Weather Service, the U.S. Army Corps of Engineers, the Federal Emergency Management Agency, and many state and local agencies.

USGS provided leadership for the Scientific Assessment and Strategy Team, which was created by a White House Directive in November 1993 to provide decision-makers with scientific advice on flood recovery and future management of the floodplain. The California and south-central U.S. floods of 1995, the North Dakota flood of 1997, and the devastating impact of Hurricane Floyd along the East Coast in 1999 were also costly natural disasters. However, thanks to improved warning systems and close cooperation among responsible agencies, the loss of life from flooding declined while economic costs have risen. USGS also provided significant aid to Central American countries in the wake of Hurricane Mitch.

### **Earthquakes**

The costliest single natural disaster to strike the United States during the 1990s was the Northridge earthquake of 1994. Thousands of buildings were damaged; fifty-seven people lost their lives and thousands were injured. USGS scientists responded quickly to the earthquake, investigating and reporting on both geological and societal effects. In the months following the earthquake, USGS personnel focused on monitoring the ongoing seismic activity (the region experienced thousands of aftershocks) and providing information about seismic hazards to local government, media, and the public; and collecting data on seismic hazards in southern California to help mitigate damage from future earthquakes.

In 2000, USGS is implementing a new Advanced National Seismic System, a nation-wide network of at least 7,000 seismic monitors that will make it possible to provide emergency response personnel with real-time earthquake information, so they know where the worst damage is likely to be. The system provides engineers with information about building and site response, so they can design safer buildings for future earthquakes, and scientists with high-quality data to help them understand earthquake processes and the structure and dynamics of the Earth. The new instruments allow development of early-warning systems that will detect and broadcast the location and magnitude of large earthquakes immediately and can, under certain circumstances, transmit warning signals to regions farther away before the damaging waves arrive. Such warnings can give utilities, railroads, hospitals, and schools the precious seconds needed to take life-saving actions before the most intense shaking begins.

### **Urban Growth**

The growth of urban and suburban populations is not new, but a growing urban population that enjoys high per capita consumption of resources has made the concept of sustainable development a staple of political discussion. Through its program of Urban Dynamics, the USGS is studying the effects of humans on the landscape; charting the growth of our cities in the past and predicting future growth; mapping the location of crucial natural resources, such as aggregates; and monitoring the availability and quality of water in order to help decision makers understand how growth may affect the basic environmental condition of the region under study.

### **The National Atlas of the United States**

Begun in 1997, the new electronic National Atlas <<http://www.nationalatlas.gov/>> replaces a traditional collection of maps that was published under the same title in 1971. The original

bound volume characterized the America of the mid-1960s through hundreds of unchanging paper maps that were dated before their printing. The new National Atlas exploits digital mapping technologies developed in the past thirty years. With its content growing each month, its maps will always include the latest government information available.

The interactive National Atlas includes products that are more adaptable, interesting, and useful than any book of paper maps. It offers multimedia articles and maps that illuminate natural and manmade processes or illustrate change over time, such as the rapid spread of an invasive species. Authoritative and documented digital maps are also provided. These integrated map layers and data tables can be downloaded for use in desktop mapping and data base management systems. Yet no special software beyond a Web browser is needed to use the National Atlas.

The National Atlas delivers the first online national geographic information system (GIS), promoting both increased geographic literacy and national self-awareness. In August 2000, the National Atlas Web site was responding to more than 3.6 million requests for information by more than 86,000 individuals; more than 1,900 other Web sites were linked to [nationalatlas.gov](http://nationalatlas.gov).

## **USGS in the 21<sup>st</sup> Century**

The complex problems our society faces in the 21<sup>st</sup> century are inherently multidimensional, and their solution requires the integration of scientific excellence in many fields. USGS science provides the essential understanding of the natural forces of change that underlie human influences on our planet, and is critical for forecasting the consequences of possible decisions. Sound science, clearly communicated to those who need the information, allows policy makers and managers to make the best choices for today and tomorrow to ensure stronger, safer communities and healthy, thriving landscapes for our children and grandchildren.

### **CHAPTER FOUR: INDIAN AFFAIRS**

#### ***BUREAU OF INDIAN AFFAIRS***

##### **Introduction**

The Bureau of Indian Affairs (BIA) is the primary federal agency charged with carrying out the United States' trust responsibility to American Indian and Alaska Native people and maintaining the federal government-to-government relationship with federally recognized Indian tribes

The BIA was established on March 11, 1824 under the War Department and was transferred in 1849 to the Department of the Interior. Through most of its history, the BIA has been responsible for implementing federal laws, policies, and programs intended to break up tribes and assimilate their members into American society. Gradually, such intentions were abandoned, and in the 1970s Congress enacted several important pieces of legislation, most notably the Indian Self-Determination and Education Assistance Act of 1975, to give tribes greater say in how the BIA and the Indian Health Service (IHS) conducted their programs for Indian people. During the 1980s, tribal governments began to forcefully assert their sovereignty in matters of self-governance and economic self-sufficiency. This trend was reflected in the

increasing number of tribes who contracted with the BIA to assume direct control of schools and programs.

In 1993, President Clinton signaled an aggressive new direction for Indian affairs with two announcements: the Initiative to Streamline Government, announced on March 3, and his May 11 nomination of Ada E. Deer for Assistant Secretary - Indian Affairs, the first woman to serve in that position. Through these and subsequent actions, the Administration raised the standard in federal-tribal relations.

## **Strengthening Indian Policy & Services**

### **Tribal Sovereignty**

President Clinton's Memorandum on Government-to-Government Relations With Native American Tribal Governments (April 29, 1994) and Executive Order No. 13084 (May 14, 1998), subsequently updated and replaced by Executive Order No. 13175, Consultation and Coordination With Indian Tribal Governments (November 6, 2000), expressly acknowledges the "unique legal relationship" of the United States with federally recognized tribes and the rights of tribes to exercise inherent sovereign powers over their members and lands.

The Memorandum makes the head of each executive department and agency responsible for ensuring that his or her department or agency "operates within a government-to-government relationship with federally recognized tribal governments." It directs them to "assess the impact of Federal Government plans, projects, programs, and activities on tribal trust resources and assure that tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities." Together, the Memorandum and Executive Order introduced departments and agencies outside of the BIA to the concepts of tribal consultation, the trust responsibility, and the government-to-government relationship that have been the backbone of BIA-tribal relations for years.

The Administration actively supported tribal self-determination by providing tribal governments with more opportunities to directly administer programs that the BIA, as well as other federal departments and agencies, have managed for them in the past. For example, under the Indian Employment, Training and Related Services Demonstration Act of 1992, tribes can integrate several employment and training services into a single program and submit only one annual report. Since 1994, over 200 federally recognized tribes have participated under the Act.

One of the ways sovereignty is enhanced is the Tribal Priority Allocation system (TPA), the portion of BIA's budget that provides a stable, recurring base of funds for the 556 federally recognized tribes and Alaska Native villages. The TPA funding base represents a vital core of financing for tribes and the flexibility they need to allocate TPA funds to meet their most critical needs.

In the last twenty-five years, federal appropriations have not kept pace with fast-growing tribal populations. In July 1999, the BIA completed a TPA analysis to identify unmet tribal funding needs. The study, *Report on Tribal Priority Allocations*, was undertaken by a partnership of the

BIA, tribal leaders, Indian organizations such as the National Congress of American Indians (NCAI), and legal experts. The study identified an enormous gap between current funding levels and the tribes' unmet needs.

The BIA has diligently carried out the President's Executive Order No. 13175 on tribal consultation. The document, titled *Bureau of Indian Affairs Government-to-Government Consultation Policy*, requires federal agencies to establish regular and meaningful consultation and collaboration with tribal officials in developing federal policies that have tribal implications, and is the work product of a BIA-NCAI Tribal Leaders Workgroup on Government-to-Government Consultation.

### **Indian Trust Assets and Resources**

The fractionation of Indian allotted lands has created almost insurmountable problems with management, record keeping and distribution of proceeds derived from Indian trust and restricted lands. Fractionated ownership of Indian lands, by rendering the lands idle, has negative economic impact on Indian landowners.

The fractionation problem is rooted in a 1887 law, the General Allotment Act. This Act directed that tribal lands be divided into small parcels and given, or "allotted," to individual Indians. The intent was to accelerate the assimilation of Indian people into American society by making them private landowners and open Indian land to non-Indian settlement. Ultimately, many Indian people were forced to sell their allotments, but few assimilated into surrounding non-Indian communities. The result was widespread homelessness and the impoverishment of numerous individuals and families.

Allotted property descended to heirs as undivided "fractional" interests, not parcels of land separately assigned to specific owners. As "fractions" have grown smaller and more numerous over time, they have little or no economic value to their owners. The BIA spends approximately 80 percent of its annual real estate services budget on attempting to administer fractionalized allotments, which total less than 20 percent of the lands under its jurisdiction.

In October 1994, the Administration opened consultations with tribal leaders and individual Indian landowners to discuss proposed solutions to the fractionated ownership problem. Public meetings were held from December 1994 through March 1995 and were attended by over 10,000 people. To solicit additional comments, questionnaires were sent to more than 500 Indian tribes and 100,000 individual Indian landowners. Sixty-five percent of the respondents agreed that legislation was needed to end fractionation of Indian lands.

From 1995 through 1997 the Administration continued to seek solutions to the problems caused by fractionated ownership, advancing a package of legislative proposals. Following additional meetings and consultations with Congressional staff and Indian groups, the Administration's proposed legislation was introduced in 1999 as S. 1586, the Indian Land Consolidation Act, followed by Administration testimony in a joint hearing on the bill held by the House Resources Committee and the Senate Committee on Indian Affairs. As a result of the Administration's commitment, the bill was passed by Congress. On November 7, 2000, President Clinton signed

the Indian Land Consolidation Act Amendments of 2000, an historic step toward resolving the issue of fractionated ownership of Indian trust and restricted lands.

### **Self-Determination and Self-Governance**

Over the past eight years, there has been a dramatic increase in tribal self-governance, an integral part of tribal self-determination and the government-to-government relationship. The Clinton Administration actively worked with tribes to secure passage of the Tribal Self-Governance Act of 1994 (PL 103-413), which made permanent the Department's Tribal Self-Governance Demonstration Project. Now called the Office of Tribal Self-Governance (OSG), the office is responsible for administering tribal self-governance as it relates to BIA programs and advocating the "transfer of federal programmatic authorities and resources to Tribal Governments in accordance with Tribal Self-Governance statutes and policies."

Under self-governance, tribes have the authority to reallocate the funds they receive from the BIA and redesign or consolidate programs, services, functions or activities they directly administer to better address conditions unique to their reservations. In 1993, there were eighteen annual self-governance funding agreements totaling \$60.7 million and covering fifty-three federally recognized tribes. By 2000, that number had increased to seventy-five annual funding agreements totaling an estimated \$240 million covering 218 federally recognized tribes—about 40 percent of all federally recognized tribes nationwide.

The Clinton Administration further demonstrated its commitment to self-governance by forming an advisory committee made up of leaders from self-governance tribes and embarking on a five-year negotiated rulemaking process. As a result, new self-governance rules were in place by December 2000.

### **Economic and Infrastructure Development**

The Clinton Administration has vigorously supported economic and infrastructure development in Indian Country with a variety of legislative, policy, and regulatory initiatives carried out by Departments of Agriculture, Housing and Urban Development, Interior, Justice, Treasury and the Internal Revenue Service.

In addition to appointing the Assistant Secretary - Indian Affairs to the Community Development Advisory Board, established under the Community Development and Regulatory Improvement Act of 1994, the Administration has directed significant attention and federal resources to tribes to assist them with economic development. At the White House Conference on Building Economic Self-Determination in Indian Communities in August 1998, President Clinton outlined his ideas and goals for helping to build strong tribal economies and developing tribal infrastructures, and released an Executive Memorandum on Economic Development in American Indian and Alaska Native Communities (August 6, 1998). In it he directed the Secretaries of the Interior and Commerce Departments, and the Administrator of the Small Business Administration to coordinate existing economic development initiatives for Native American and Alaska Native communities, including initiatives involving the private sector.

In addition to working cooperatively with other departments and agencies on tribal economic development, BIA provides direct loans, grants, and technical assistance to federally recognized Indian tribes and individuals. The BIA remains the only agency with a funding mechanism that can assist all 556 federally recognized tribes.

The BIA's Office of Economic Development provides financial assistance to American Indian tribes, tribal organizations and individuals to establish, acquire or expand a business on or near reservations through the Indian Loan Guaranty Program. Loans made by private lenders are guaranteed to 90 percent. A subsidy to reduce interest costs for the borrower down to the Treasury rate is also authorized.

Over the past eight years, the loan guaranty program experienced a sharp performance decline followed by a dramatic increase. Before 1993, over \$65.1 million in loan guarantees and \$2 million in technical assistance funds were available for tribal businesses. When technical assistance funds were abolished in 1996, the amount of loan guarantees declined to their lowest level, \$10.3 million. In 1997, only 55 percent of the \$34.6 million available was used. This increased to 77 percent of the \$34.6 million available in 1998. During the past two years, available program funding has increased to \$59.7 million, and in both years 100 percent of available funds were allocated. In FY 2000, the loan guaranty funds were expended before the end of the third quarter. Jobs created or sustained have increased to an average of over 1,100 per year..

### **Intra-governmental Coordination**

The Clinton Administration established the Working Group on American Indian and Alaska Natives as part of the White House Domestic Policy Council. Chaired by Interior Secretary Babbitt, the Working Group met on a quarterly basis and provided a government-wide forum for to discuss and address federal government responsibilities to American Indians and Alaska Natives.

The Working Group consisted of high level representatives from Interior, the White House, the Departments of Agriculture, Health and Human Services, Education, Justice, Commerce, Defense, Energy, Labor, and Treasury, as well as numerous federal offices and bureaus. Subgroups worked in specific areas of concern, including education, Indian youth, environment and natural resources, and Freedom of Information Act issues.

### **Statutory and Regulatory Reform**

The BIA has undertaken major efforts to improve its management of trust assets and resources, as well as the administration of programs and services for which it is responsible. These efforts, which are in keeping with Administration policy directives on the trust responsibility, tribal consultation and the government-to-government relationship, have focused on specific areas needing reform.

#### *Trust Management Regulations*

Historically, proper management of Indian trust assets has been hampered by a lack of comprehensive, consistent and up-to-date regulations, policies and procedures covering the entire trust cycle. Prior to the Clinton Administration, many trust administration regulations had not been updated in four decades. Over the years, the BIA in particular had adopted many internal procedures that affected property and monies owned by individual Indians and Indian tribes without the benefit of formal rulemaking.

Due to the enormous scope of work to be done in this area, it was necessary to develop a plan that addressed the most critical issues first. In November 1999, four priority areas were identified for regulatory revision during the year 2000: leasing and permitting, grazing, probate, and tribal and individual funds held in trust.

Before proposing regulations, however, Interior had to first re-examine federal Indian trust responsibility in light of new Executive directives on Indian self-determination and the government-to-government relationship. Internal discussions resulted in a preliminary draft of trust principles that was subsequently the subject of tribal consultation. Principles were established as a result of the consultation sessions and issued on April 28, 2000 as Secretarial Order No. 3215, *Principles for the Discharge of the Secretary's Trust Responsibility*. In October 2000, the document *Principles for Managing Indian Trust Assets* was published in the Departmental Manual. In summary, these two documents state that the Department of the Interior will:

- protect and preserve the trust assets from loss, damage, unlawful alienation, waste and depletion;
- assure that management actions promote the interest of the beneficial owner and provide the owners with timely, accurate information on the lands they own and the income derived from such lands;
- enforce leases and other agreements that provide for productive use of Indian trust assets;
- promote tribal control and self-determination over tribal trust lands and resources; and
- provide proper oversight of all aspects of trust management.

In October 1999, the Assistant Secretary for Indian Affairs invited the National Congress of American Indians (NCAI) to work with the Department to help draft proposed regulations. The Intertribal Monitoring Association (ITMA), which has been involved in the Department's trust reform efforts for almost a decade, joined with NCAI in reviewing various regulatory drafts and recommending changes to these proposals. Following publication of the proposed rules on July 14, 2000, the Department conducted eight regional consultation meetings with tribal leaders, individual Indians and other interested parties. The Department received 317 responses during the formal comment period that ended on October 12, 2000. Based on the comments received and the passage of the Indian Land Consolidation Act Amendments of 2000, substantial revisions were made, and final regulations will be published before the end of the Clinton Administration.

The successful execution of this first phase of trust management regulatory reform during the Clinton Administration has established a strong foundation for the next administration to complete the crucial work of trust management.

### *Law Enforcement*

Illegal drug trafficking, gang-related activities, domestic violence, and other threats to public safety are creating a law enforcement crisis in Indian Country. In an effort to reduce violent crime and improve public safety in tribal communities, President Clinton issued a Memorandum on Law Enforcement in Indian Country (August 25, 1997) in which he directed the U.S. Attorney General and the Secretary of the Interior to work with tribal leaders to analyze law enforcement problems on Indian lands, and to provide him with options for improving public safety and criminal justice. The Joint Interior-Justice Departments Presidential Initiative in Law Enforcement in Indian Country was established to refine and implement a comprehensive plan for improving law enforcement services.

The BIA's Office of Law Enforcement Services (OLES) has received increased funding over the last three years to carry out the initiative's goals and objectives and to strengthen its administration of BIA law enforcement. Since 1999, the Administration has worked to strengthen core law enforcement functions on reservations, in addition to hiring more uniformed police and providing improved communications and detention services.

OLES has assumed line authority over all BIA law enforcement functions—criminal investigations, police operations and detention—to ensure professional law enforcement

management in Indian Country. OLES has proposed amendments to the Indian Law Enforcement Reform Act to reflect that line authority.

### *Laws, Rules and Regulations*

Significant legal opinions and regulations for the period 1993-2000 include:

- Revised list of Alaska Native tribes eligible for BIA services (October 15, 1993).
- Final rule revising administrative procedures for federal acknowledgement (February 25, 1994).
- Final rule to implement amendments to the Indian Self-Determination and Education Assistance Act of 1975 (June 24, 1996).
- U.S. Supreme Court upholds statutory authority of the Secretary of the Interior to take fee land into trust for Indian tribes under Section 5 of the Indian Reorganization Act of 1934 (October 15, 1996).
- Final rule revising procedures governing the Housing Improvement Program (HIP), to clarify and simplify the conditions and terms for providing housing assistance and to allow additional flexibility in administering the program (March 2, 1998).
- Final regulations on Class III Indian Gaming (April 12, 1999).
- Proposed amendments to 25 CFR Part 151 regulations clarifying Departmental review process for land-into-trust requests (April 12, 1999).
- Final rule on governing review of per capita distributions (March 17, 2000).
- Proposed rule to establish documentation requirements and standards for filing, processing and issuing a Certificate of Degree of Indian Blood (CDIB) (April 18, 2000).
- Proposed rule on encumbrances of tribal land-contract approvals under the Indian Tribal Economic Development and Contract Encouragement Act of 2000 (July 14, 2000).
- Proposed rule to implement changes to probate, funds held in trust, leasing/permitting and grazing (July 14, 2000).

### **Religious Freedom**

Throughout the nineteenth and well into the twentieth century, federal Indian policy regulated and sought to eliminate the traditional religious practices of American Indians and Alaska Natives and to convert Indian and Alaska Native people from their traditional religious beliefs to Christianity. The BIA was the federal policy instrument for assimilation of Indian and Alaska Native people into American society and effacement of their lands, cultures, languages, and religious practices. Today it is the agency responsible for developing policies to preserve tribal cultures, institutions, lands, languages, and religions.

The Clinton Administration has undertaken two important policy initiatives on religious freedom for Indian and Alaska Native people. The Presidential Memorandum on Distribution of Eagle Feathers for Native American Religious Purposes (April 29, 1994) and Executive Order No. 13007—Indian Sacred Sites (May 25, 1996) changed how the federal government, including the BIA, responds to and accommodates the needs of Indian and Alaska Native people as they exercise their constitutional rights. Through these documents, which affirm the importance of eagle feathers to Native American culture and religious practices and seek to protect and

preserve Indian sacred sites for religious practices, the Clinton Administration has recognized to a greater degree than its predecessors that Native American religions have their rightful place within America's religious community, and that Native American beliefs and practices are deserving of respect and protection.

### **Indian Land Claims**

A number of Indian land claims were successfully resolved over the past eight years with the Administration's support:

#### *Catawba Land Claims Settlement Act of 1993*

The Act ratified a settlement resolving the tribe's claims and related litigation for approximately 140,000 acres of land in South Carolina. The Clinton Administration was instrumental in securing Congressional approval.

#### *Crow Boundary Settlement Act of 1994*

The Act ratified a settlement agreement resolving the 107<sup>th</sup> meridian boundary dispute of approximately 36,000 acres of land created by an erroneous 1891 survey of the eastern boundary of the Crow Indian Reservation in Montana.

#### *Coquille Forest Act of 1996*

The Act restored 5,410 acres of ancestral homelands to the Coquille Indian Tribe and designated the restored lands as the Coquille Forest. Interior negotiated the land transfer from Bureau of Land Management (BLM) lands, and took them into trust for the tribe. A unique aspect of this settlement is that the Act required the Forest to be subject to the standards and guidelines for adjacent or nearby federal lands. The Act makes the Coquille Forest the only Indian forest land in the nation with a statutory requirement for ecosystem management, and requires the development of a forest management agreement with the state.

#### *Hoopa Reservation South Boundary Adjustment Act of 1997*

The Act settled a long-standing dispute over the correct boundary of the Hoopa Reservation, removing lands from California's Six Rivers National Forest and enlarging the reservation by 2,641 acres. The Administration drafted the legislative language.

#### *Miccosukee Reserved Area Act of 1998*

The Act terminated the tribe's special use permit within Everglades National Park and established instead the Miccosukee Reserved Area (MRA), where the tribe has the exclusive right to use, develop and govern its affairs within the MRA as though it were a federal Indian reservation.

### *Sandia Settlement Agreement*

The May 2000 agreement settles the Pueblo's claim and related litigation involving approximately 10,000 acres of land in the Sandia Mountains of New Mexico. The Administration has strongly supported the resolution of this dispute, which is pending Congressional approval.

### *Santo Domingo Claims Settlement Agreement Act of 2000*

The Act settled the Pueblo's land claims and related litigation involving approximately 80,000 acres.

### *Timbisha Shoshone Homeland Act of 2000*

The Act transferred lands and water rights in Death Valley National Park--the tribe's ancestral homeland--and in California and Nevada into trust for the Timbisha Shoshone Tribe. The Act authorizes the Secretary of the Interior to acquire other lands into trust for the tribe.

### *Torres-Martinez Desert Cahuilla Indian Claims Settlement Agreement*

The 1996 agreement settles the tribe's claims and related litigation involving approximately 11,000 acres of reservation land. The agreement received Congressional approval in December 2000, with passage of the Omnibus Indian Advancement Act.

### *Transfer of Naval Oil Shale Reserve #2 to the Uintah & Ouray Tribes*

A February 2000 Memorandum of Understanding (MOU) transfers to the tribes approximately 80,000 acres of land of the tribes' aboriginal land claim. Implementing legislation (Section 3403 of H.R. 4205) has passed the House and is currently awaiting Senate action.

## **Federal Acknowledgement Process**

The acknowledgement process is the administrative mechanism to give tribal groups federal recognition as Indian tribes, a distinction that makes them eligible to participate in federal programs and receive federal services. During the 1993-2000 period, the Department resolved the following petitions:

### *Acknowledged through 25 CFR Part 83*

- Mohegan Indian Tribe, CT #38, effective May 14, 1994.
- Jena Band of Choctaws, LA #45, effective August 29, 1995.
- Samish Indian Tribe, WA #14, effective April 26, 1996.
- Huron Potawatomi Inc., MI #9, effective March 17, 1996.
- Match-E-Be-Nash-She-Wish Band of Potawatomi Indians of MI (formerly, Gun Lake Band) #9a, effective August 23, 1999.
- Snoqualmie Indian Tribe, WA #20, effective October 6, 1999.

Cowlitz Tribe of Indians, WA #16, final determination published February 18, 2000; before the Interior Board of Indian Appeals (IBIA).

*Denied Acknowledgement through 25 CFR Part 83*

Ramapough Mountain Indians, Inc., NJ #58, effective January 7, 1998.

MOWA Band of Choctaw, AL #86, effective November 26, 1999.

Yuchi Tribal Organization, OK #121, effective March 21, 2000.

*Status Clarified by Other Means*

Ione Band of Miwok Indians, CA #2, status confirmed by the Assistant Secretary - Indian Affairs on March 22, 1994.

*Resolved by Congress*

Legislative Restoration:

Paskenta Band of Nomlaki Indians of the Paskenta Rancheria of CA, November 2, 1994.  
United Auburn Indian Community of the Auburn Rancheria of CA.

Legislative Recognition:

Pokagon Potawatomi Indians of Indiana & Michigan, IN #75/78, September 21, 1994.

Little Traverse Bay Bands of Odawa Indians, MI #115, September 21, 1994.

Little River Band of Odawa Indians, MI #125, September 21, 1994.

**Indian Child Welfare**

BIA's Indian Child Welfare Program provides direct social services and placement services on reservations. These services include licensing foster and adoption homes, providing day and after-school care, direct counseling and resource referrals for families in trouble, identifying child abuse and neglect, obtaining and referring children to appropriate treatment services, and coordinating with law enforcement and the courts. Support services are also offered with the goal of rebuilding families.

Funding for the Indian Child Welfare Program has increased significantly during the Clinton Administration. From a level of \$9.4 million in FY 1993, funding increased to \$22.9 million in FY 1995. During FY 1994, the BIA, in consultation with tribes, implemented new regulations for non-competitive tribal Indian child welfare programs. In FY 1995, Indian child welfare funds were permanently added to the recurring TPA base so that every federally recognized tribe received funding to develop long-term plans and programs.

## Education

The BIA's Office of Indian Education Programs (OIEP) serves 80,000 elementary, secondary and postsecondary American Indian and Alaska Native students. The BIA's role in education was first codified in the Snyder Act of 1921. In the decades following the Act, the Bureau directly operated boarding and reservation-based schools for elementary and secondary Indian students. In the 1970s, legislation was enacted giving tribes the opportunity to directly administer the schools in their communities and create tribal colleges. The Bureau's role in Indian education increased, but funding for BIA schools and programs did not.

Since 1993, the Clinton Administration's emphasis on increasing education funding and improving standards, coupled with its support for tribal self-determination and self-governance, has given greater impetus to BIA efforts to improve Indian student learning. The Administration has sought increased funding for programs and new school construction, addressed health and safety issues, helped schools qualify for E-rate discounts and gain access to the Internet, assisted tribes with school administration and management, raised education standards and student achievement scores, integrated culture-based curricula in BIA-funded schools, supported tribal colleges and universities, and created partnerships between federal agencies who have Indian students in their service populations.

Underscoring these efforts are three Executive Orders that have provided unprecedented support for Indian education and BIA-funded schools: Executive Order No. 13021—Tribal Colleges and Universities (October 19, 1996); Executive Order No. 13096—American Indian and Alaska Native Education (August 6, 1998); and Executive Order No. 13153—Actions to Improve Low-Performing Schools (May 3, 2000).

To improve the overall quality of both public and Indian education, and to raise student academic performance and achievement levels, the Administration has sought to develop national learning standards, improve access to higher education, increase the supply of teachers, reduce class size, build and repair schools, and bring educational technology and the Internet into the classroom.

### *Comprehensive School Reform Demonstration Program*

The Comprehensive School Reform Demonstration Program (CSRDP) is a competitive grant program created in the Clinton Administration that integrates curriculum and instruction, student assessment, professional development for teachers, parental involvement and school management based on an effective research-based model. Schools must designate an external partner with expertise in school reform and improvement to assist them with implementing their program.

### *Improving Student Performance and Achievement*

Starting in 1995 with the enactment of the Goals 2000: Educate America Act, the Administration instituted efforts to develop national standards for math, science, language arts, history and social studies. This led to the development of American Indian Content Standards and Report Cards for tracking student performance and academic achievement. The Standards reinforced the

development of culture-based curricula by BIA-funded schools as one way to improve student academic progress.

In concert with a National Indian Goals 2000 Panel, OIEP developed long-range goals and benchmarks for BIA-funded schools including increasing the average daily attendance rate from 90 percent to 94 percent; increasing the student enrollment retention rate from 93 percent to 97 percent; and, reducing the yearly dropout rate from 15.6 percent to 11.6 percent. Many goals have been met and some have been exceeded.

#### *Attendance Rate*

The average daily attendance rate for BIA-funded schools is now 91 percent, just below the 92.3 percent national daily attendance rate as reported by the Department of Education's Office of Educational Research and Improvement (OERI).

#### *Dropout Rate*

In the school year (SY) 1992-93, the annual dropout rate for BIA-funded high schools was approximately 17 percent. By SY 1997-98 it had fallen to 12 percent. In SY 1998-99 the rate fell to 11 percent.

#### *Enrollment Retention Rate*

In SY 1992-93 the retention rate (maintenance of the student population number from the beginning of the school year to the end of the same school year) was 91 percent. It rose to 95 percent in SY 1997-98 and to 99 percent in SY 1998-99. The schools also exceeded the goal of 98 percent set for the SY 1999-00.

In 1998, President Clinton issued an Executive Order on American Indian and Alaska Native Education. The Order established six goals for Indian education: (1) improve reading and math; (2) increase high school completion and postsecondary attendance rates; (3) reduce impediments to educational performance, such as poverty and substance abuse; (4) create strong, safe, and drug-free schools; (5) improve science education; and (6) expand the use of educational technology.

OIEP has consulted and worked cooperatively with Education's Offices of Educational Research and Improvement (OERI) and Indian Education (OIE), Indian educators, tribal representatives, and national and local groups including the National Indian Education Association (NIEA) and the National Indian School Board Association (NISBA) to achieve the Order's goals.

#### *Creating Safe and Healthy Learning Environments*

BIA-funded schools have been in serious disrepair for decades. Some cannot be repaired and must be replaced. Although OIEP has worked to alleviate the problem using available resources to make repairs and add portable classrooms, funding has remained insufficient to fix the problem.

In making safe and healthy learning environments one of its education priorities, the Administration has sought to repair or replace public and BIA-funded schools. With a significant increase in funding for new construction and improvement and repair in the BIA's FY 2001 budget, OIEP can begin to address an \$800 million backlog in facility maintenance and repair work, and replace six schools.

In 1996, as part of a Reinvention Laboratory Team, OIEP developed and implemented a fast-track system for planning, designing and constructing new Indian schools. The streamlined process means the BIA has reduced the time it takes to complete new schools from seven or eight years to three years.

#### *Access Native America: Preparing BIA Schools for the 21<sup>st</sup> Century*

As part of the President's initiatives to connect every American to the Internet and to bring the information superhighway to Indian Country, OIEP obtained Internet access and E-rate discounts for all BIA-funded schools.

OIEP helped to establish the Four Directions project to electronically link schools to the Internet; held Net Days for BIA employees and local volunteers to work together to wire schools; conducted telecom technology inventories for each school; and partnered with the Microsoft Corporation to provide schools with hardware and software resources.

#### *Supporting Tribal Colleges and Universities*

President Clinton signed an Executive Order on Tribal Colleges and Universities in 1996 to expand opportunities for federal assistance and, for the first time, recognize a government-wide federal commitment to these institutions. The Order's purpose is to promote tribal sovereignty and individual achievement; strengthen tribal colleges and universities; offer expanded learning and future career opportunities for tribal members; improve tribal higher education so that more tribal members will go on to four-year institutions; and advance National Education Goals and federal Indian education policy.

#### *Partnerships for Indian Education*

The OIEP worked cooperatively with other federal departments and agencies, as well as private sector organizations, to support students and teachers. BIA-funded schools have participated in the Administration's School-to-Work Opportunities program administered through the Departments of Education and Labor. In 1996, the BIA signed a Memorandum of Understanding with the U.S. Geological Survey (USGS) to provide science and environmental education support, including educational materials and other resources, at the elementary and secondary levels. Through a collaborative effort with Parents as Teachers, the National Center for Family Literacy, the High Scope Educational Foundation and the BIA, schools have participated in the Family and Child Education (FACE) program. FACE is a family literacy program serving children and their parents designed to enhance early childhood education, parent and child time, parenting skills and adult education.

### *Tribal Control of Education*

In keeping with the spirit of self-determination and tribal self-governance, and the Administration's support for tribal sovereignty and local control of education, tribal governments now operate 120 schools funded by the BIA, an increase of twenty-two schools in the last six years.

These and other Administration efforts have given Indian students at the elementary, secondary, and post-secondary levels greater opportunities to attend schools in their own communities, graduate from high school, obtain advanced degrees, and become self-supporting, contributing members of their tribes and the nation.

### **Management and Administration**

In 1999, the BIA asked the prestigious National Academy of Public Administration (NAPA) to review and analyze BIA management, organizational structure and administrative services. In its August 1999 report, *A Study of Management and Administration: the Bureau of Indian Affairs*, NAPA found that the BIA's budget and staffing had been reduced so severely in FY 1996 that it was unable to fulfill its mission, particularly without additional staff resources and fundamental changes in management. The NAPA determined that the BIA needed a minimum of 250 administrative positions throughout its organization and identified sixty new positions as necessary for the Office of the Assistant Secretary - Indian Affairs to manage the agency. The report led to improvements in BIA funding levels totaling \$5 million in FY 2000 and \$4 million in FY 2001 to allow BIA to carry out the NAPA recommendations.

In addition, the BIA was recognized by Interior and the Office of the Inspector General (OIG) for its outstanding efforts to resolve long-standing financial management problems. As a result of the FY 1999 audit of BIA principal financial statements, the OIG issued the first-ever unqualified audit opinion. After years of non-compliance with generally accepted accounting principles, the BIA demonstrated its accountability to the Administration, the Congress, the tribes and the American public.

### **Environmental Protection**

The BIA works with tribes, tribal organizations and other federal agencies, both within and outside of the Department of the Interior, to mitigate and improve hazardous environmental conditions that existing on many reservations across the country.

To comply with a December 1998 regulatory deadline set by the Environmental Protection Agency (EPA), the BIA removed, replaced, or upgraded over 300 underground fuel storage tanks on reservations across the country. This not only brought BIA into compliance with the regulation, but reduced the agency's total number of active underground storage tanks (USTs) to thirty-five nationwide, drastically reducing the threat to public health in Indian Country from contaminated soil and groundwater.

In April 1998, the BIA became part of a multi-agency National Tribal Solid Waste Interagency Workgroup to coordinate federal assistance for tribal solid waste management programs. On August 11, 2000, the BIA joined EPA, the U.S. Department of Agriculture's Rural Utilities Service, the Department of Defense (DOD), the Department of Health and Human Services Indian Health Service (HHS/IHS), and the Department of Housing and Urban Development (HUD) in a Memorandum of Understanding to coordinate and promote safe waste management practices on Indian lands. The agreement also sets short-term and long-term goals for assisting tribes with the closing or upgrading open dumps on Indian lands, and provides coordination of separate federal programs and responsibilities rather than individual procedures, requirements or financial arrangements.

## **A New Era**

In April of 1994, President Clinton became the first sitting president to meet with tribal leaders in the White House since James Monroe in 1822. The April 29<sup>th</sup> meeting inaugurated a dialogue on long-standing problems affecting the well-being of American Indians and Alaska Natives, and established a proactive relationship between the Clinton Administration and the tribes.

President Clinton was also the first sitting President since Franklin Roosevelt (who drove through Oklahoma Indian Territory) to visit Indian Country. The President traveled to Pine Ridge Reservation and the Navajo Nation. First Lady Hillary Clinton visited Acoma Pueblo.

At BIA's 175<sup>th</sup> anniversary observance on September 8, 2000, Assistant Secretary Kevin Gover offered a formal apology on behalf of the BIA for maltreatment of American Indian and Alaska Native people during most of its history. This was the first time any federal government official had formally acknowledged the federal government's role in Indian suffering, and it elicited a tremendous response from Indians and non-Indians alike.

## ***OFFICE OF SPECIAL TRUSTEE FOR AMERICAN INDIANS***

### **Introduction**

On October 25, 1994 President Clinton signed into law the American Indian Trust Fund Management Reform Act, (PL 103-412). It was the first legislation to comprehensively address historical problems plaguing federal government management of the physical and monetary assets held in trust for Indian tribes and individuals.

### **History of the Indian Trust Funds**

Funds have been held in trust for American Indians by the federal government since 1820, and criticism of the management of the Indian trust funds is longstanding. At the end of 1999, the federal government, as trustee, maintained approximately 1,400 trust accounts for 315 tribal entities with trust assets in excess of \$2.5 billion, and \$800 million passed through the tribal trust fund account system annually. The government also maintained approximately 285,000 Individual Indian Monies (IIM) trust fund accounts through which over \$300 million passed each year. All of those assets are held in trust pursuant to federal law and treaties negotiated by the United States with specific tribes, each of which is recognized by the United States and its courts as sovereign dependent nations.

The physical assets of each tribal account consist of significant tracts of land conveyed by the tribe to the United States in trust. Those assets are managed by the Department of the Interior and produce income. That income is derived mainly through the sale or lease of the trust lands and includes timber stumpage, oil and gas royalties and agriculture fees. The monetary assets are comprised of this income and judgement funds awarded by the courts, appropriated by Congress and placed in trust to settle specific claims brought against the United States by a tribe or tribes. These funds are invested while held in trust and also produce income for the particular trust account or accounts.

As early as 1928 the General Accounting Office (GAO), the investigative research arm of Congress, issued reports documenting weak accounting practices and other problems in the Bureau of Indian Affairs (BIA) trust fund management system. Accounting activities associated with the income derived from the land were performed at each BIA Agency Office using handwritten ledgers and journals. Each Agency Office, typically located on an Indian reservation, was charged with the maintenance of its own local trust records. There was little or no standardization in the record keeping function.

In 1951, a new accounting procedure was designed and approved by GAO and installed in the BIA Area (regional) Offices. All fund types, IIM as well as Tribal, were integrated into this new system. In 1952 and 1955 GAO published reports describing numerous management concerns with the performance of the various Area Offices. Thereafter, beginning in 1965, BIA began centralizing the trust fund accounting functions on a mainframe computer in Albuquerque, New Mexico. The conversion of the monetary assets of the accounts to this computer system was completed in 1967. Thereafter, the Department of the Interior developed and implemented a new automated accounting system in 1968, which was further updated in 1974.

At the same time, Treasury decided to simplify the manner in which it maintained the tribal appropriation accounts. As a result, in July 1972 some 1,100 accounts were combined into one account. Prior to that time, Treasury had maintained a separate account for each tribal trust fund, typically with a separate account balance for principal and interest for each account. These dual sets of records allowed the trustee to detect errors in recording financial data. For example, if Treasury received cash for a particular account, but BIA had failed to record it to the proper account record, a variance would show up between the specific account on the BIA books and the specific account kept at Treasury. Such a difference could not be identified once Treasury combined the individual tribal accounts into one account. Nevertheless, consolidation occurred to alleviate the administrative and cost burdens on Treasury associated with the maintenance of accounts for each tribe.

Additionally, effective in Fiscal Year 1973, Treasury no longer posted semi-annual interest income to trust fund account balances, something that had been done from 1928 to 1972. Rather, BIA assumed responsibility for computing and distributing interest on the trust cash held at Treasury. BIA regional offices were also responsible for posting interest earned on trust cash deposited outside of Treasury.

In 1982, GAO once again issued reports critical of the trust funds management system. Throughout the 1980s and up until President Clinton entered office in 1992, the Office of Management and Budget had consistently identified the financial management of Indian trust funds as a high-risk liability to the United States. In the late 1980s the Environment, Energy and Natural Resources Subcommittee of the House Committee on Government Operations initiated a three-year investigation into the issue. That investigation led to the publication of a report on April 22, 1992 entitled "Misplaced Trust: The Bureau of Indian Affairs' Mismanagement of the Indian Trust Fund."

### **The American Indian Trust Fund Management Reform Act of 1994**

It was against this background that the Congress passed and President Clinton signed the American Indian Trust Fund Management Reform Act, which is codified at 25 United States Code (U.S.C.) 4001-4061. The Act established the Office of the Special Trustee for American Indians and provided-at 25 U.S.C. 4042 (b)(1)-that the Special Trustee (1) demonstrated ability in the general management of large governmental or business entities, and (2) particular knowledge of trust fund management, management of financial institutions and the investment of large sums of money.

The Act provides that the Special Trustee, a Presidential appointee who reports directly to the Secretary of the Interior, is responsible for the oversight, reform and coordination of the policies, procedures, systems and practices used by the various Departmental agencies in managing Indian trust assets of whatever type and wherever located.

The Act required the Special Trustee to prepare a comprehensive strategic plan for the management of all phases of the trust management business cycle. It was intended that the successful implementation of the recommendations in that plan would ensure the proper and

efficient discharge of the federal government's trust responsibilities with respect to the Indian trust assets for which the Secretary is responsible (25 U.S.C. 4043).

The Act also set out and identified those trust duties the Secretary must perform at a minimum to properly discharge the trust responsibilities the United States had assumed to these Indian beneficiaries. Those duties include: providing adequate systems for accounting for and reporting trust fund balances; providing adequate controls over receipts and disbursements; providing periodic, timely reconciliations to assure the accuracy of accounts; determining accurate cash balances; preparing and supplying account holders with periodic statements of their account performance and with balances of their account which shall be available on a daily basis; establishing consistent, written policies and procedures for trust fund management and accounting; providing adequate staffing, supervision, and training for trust fund management and accounting; appropriately managing the natural resources located within the boundaries of Indian reservations and trust lands; properly accounting for and investing, as well as maximizing, in a manner consistent with the statutory restrictions imposed on the Secretary's investment options, the return on the investment of all trust fund monies; preparing accurate and timely reports to account holders (and others, as required) on a periodic basis regarding all collections, disbursements, investments, and return on investments related to their trust accounts; maintaining complete, accurate and timely data regarding the ownership and lease of Indian lands.

## **Reforms**

In April 1997, the Special Trustee submitted to the Secretary and the Congress a Strategic Plan to Implement the Reforms Required by the American Indian Trust Fund Management Reform Act of 1994. Notwithstanding the Secretary's reservations about certain recommendations made by the Special Trustee, the Secretary and the Special Trustee agreed that the trust system improvements and data cleanup efforts outlined in the Plan could and should proceed as soon as possible. The Secretary's decisions are memorialized in his Memorandum of August 22, 1997, Trust Improvements Project Definition. They were, thereafter, organized into separate but complementary sub-projects that comprise the Trust Management Improvement Project (TMIP) and published in the High Level Implementation Plan (HLIP) in July 1997.

With the help of its Advisory Board (25 U.S.C. 4046) under the leadership of Elouise C. Cobell (the Controller for the Blackfeet Tribe located in Montana and a member of the group that organized the Blackfeet National Bank), the OST and the Department initiated the required reforms, including some already underway. For example, the Office of Trust Funds Management, located in Albuquerque, New Mexico, which is responsible for the investment of the monies generated by the underlying trust assets, had been transferred to OST in 1996 and had already undertaken the first reforms of the functions for which it is responsible.

As the Department and OST proceeded with the reforms called for in the HLIP it became apparent that the plan itself needed revision and restatement. With the reevaluation and revision of the HLIP well underway, Paul Homan resigned as Special Trustee in 1998. He was replaced by Thomas N. Slonaker of Arizona. Under his leadership and using the road map set out in HLIP-2000 (published in February 2000), the OST was able to guide the Department into the

next phase of reforms necessary to allow the Secretary to successfully discharge the government's trust responsibilities with respect to the Indian assets it holds in trust.

### **Progress**

As President Clinton left office in January 2001, many important reforms had been successfully put in place. Building on that foundation, it was expected that the remaining difficulties would be conquered early in the 21<sup>st</sup> century.