



New Mexico
Office of the State Engineer
Interstate Stream Commission
2005-2006 Annual Report



Contents



2005-2006 Annual Report

Office of the State Engineer
Interstate Stream Commission
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Santa Fe NM 87504-5102

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Section 72-2-5.)



Message from the New Mexico State Engineer

This past year was definitely one of extremes with respect to water management in New Mexico. Sparse snow pack and spring runoff lead Governor Bill Richardson to declare that New Mexico was in a state of drought in mid-March. Many areas of the state experienced their worst droughts on record. However, low winter and spring precipitation was countered by monsoon rains that began falling in late June causing much of the state to contend with swift-running rivers and flooding. Although the rains were a welcome relief from the drought and helped our agency meet compact obligations to other states, it still will take several years of good snow pack and spring runoff to bring the state's reservoirs back to pre-1990 levels.

A recently released report on climate change indicated that future impacts to New Mexico from climate variability could be significant, especially for water managers. The Office of the State Engineer is currently working with other state agencies as well as local and federal agencies and the state's research institutions to prepare an analysis of the

One thing is certain, our water supply will remain variable and we must continue to put the tools in place to manage our supply and ensure supplies for future generations.

impact of climate change on the state's water supply. One thing is certain, our water supply will remain variable and we must continue to put the tools in place to manage our variable supply and ensure adequate water supplies for future generations.

Several years of severe drought leading up to this year brought to light that New Mexico must have tools in place now. A primary focus of time and resources for this agency is pursuing the Active Water Resource Management strategy, or AWRM, launched in January 2004 and for which statewide rules and regulations were adopted in December 2004. AWRM refers to a broad range of activities that emphasize permitting transfers, monitoring and metering diversions, and limiting diversions and consumptive use of water to the amount authorized by existing water rights – all within the prior appropriation system.

The objective of AWRM is not to threaten rights to the use of water, but rather it is targeted at protecting and preserving rights to the use of water, in the amount and priority of use of each water right's owner. We will require metering and measuring of water use, creation of special water districts and sub-districts, hiring water masters, and promulgating basin specific rules and regulations.

Strides were made in many of the seven priority areas around the state designated for implementation of AWRM. The priority basins include in order of priority: the Lower Pecos, Lower Rio Grande, San Juan, Upper Mimbres, Rio Gallinas, Nambé-Pojoaque-Tesuque, and Rio Chama. Water Masters in all districts were hired, and we are now working on the task of developing district-specific rules and regulations tailored to meet the needs of these priority basin areas. I anticipate that the AWRM initiative will take several years to fully implement statewide, but we have seen great progress in a very short period of time.

As part of the AWRM initiative and following a metering order that I issued in December 2004, more than 30 agency employees performed inspections over a two week period. More than 3,200 wells were visited in the Lower Rio Grande in March of 2006. Subsequently we sent notices to owners of all inspected wells and instructions on how to come into compliance for those owners not complying with the order. We anticipate most of the district will be metered by 2007. This order is part of a long-term effort to allow New

State Engineer
John D'Antonio, PE

Mexico to control its own water destiny. Metering is just one of several tools I am putting in place, so we can better manage our water. Our rights can be protected only if we measure our use.

In May, two longstanding Indian water right settlement agreements were signed – The Taos Settlement and the Aamodt Settlement. The Taos settlement will adjudicate Taos Pueblo’s water right claims and expedite the adjudication of non-Pueblo claims on all water rights in the Rio Pueblo de Taos and Rio Hondo stream systems. The Aamodt settlement was signed and involves the Pueblos of Nambe, Tesuque, Pojoaque, and San Ildefonso; non-Pueblo parties; and the State of New Mexico. This settlement resolves claims of the Pueblos and non-Pueblo parties’ use of waters of the Nambe-Pojoaque-Tesuque Basin in northern New Mexico. Both settlements now require Congressional approval.

Now comes the task of getting these settlements – as well as the Navajo Nation water rights settlement – approved by Congress, fully funded and finally implemented. We will continue to work with our state and federal representatives to get the funding needed to make the seeds of these settlements come to fruition. It is imperative that New Mexico settles its Indian water right claims, which will provide certainty to water right ownership in the state.

Future smart growth in New Mexico depends on strengthening and enforcing the state’s system of water rights administration to protect existing water rights while making supplies available to new uses. To that end, new rules and regulations are now in place for domestic wells statewide. After a series of public meetings in early 2006, public input was incorporated into the new rules and regulations, which increase well fees to rates that are still low in comparison to surrounding states, reduce the maximum diversion by



John D’Antonio, P.E.

A registered professional engineer in New Mexico and Colorado, State Engineer John D’Antonio has experience in hydraulic design, acequia rehabilitation, water resource management, and water policy development.

Before being appointed by Governor Bill Richardson to the state’s chief water post, D’Antonio was cabinet secretary of the New Mexico Environment Department in 2002. He served as director of the Water Resource Allocation Program for the Office of the State Engineer from 2001 to 2002 and served as the State Engineer’s Albuquerque district supervisor from 1998 to 2001.

D’Antonio worked 15 years with the U.S. Army Corps of Engineers as a hydraulic design engineer, as chief of the Hydrology, Hydraulics, Sedimentation, and Floodplain Management Program, and as project manager for the Acequia Rehabilitation Program.

A native New Mexican, D’Antonio received a bachelor’s degree in civil engineering from the University of New Mexico in 1979.

He has been a member of the Governor’s Blue Ribbon Task Force on Water Issues from 1998 to the present.

In his post as State Engineer, D’Antonio is secretary of the Interstate Stream Commission, chairman of the Water Trust Board, Governor’s Water Infrastructure Investment Team, and Governor’s Drought Task Force and the New Mexico Commissioner to the Rio Grande, Costilla and Upper Colorado river compacts.

D’Antonio and his wife, Cassandra, along with their son, Nick, make their home in Albuquerque.



LA Photo

Past New Mexico State Engineers

John D’Antonio has been State Engineer since his appointment in January 2003. His predecessors and their terms:

David White

April 1905-March 1907

Vernon Sullivan

April 1907-December 1910

Charles Miller

January 1911-July 1912

James A. French

July 1912-December 1918

Leslie A. Gillett

January 1920-December 1920

Charles A. May

January 1921-December 1922

James A. French

January 1923-December 1924

George M. Neel

January 1925-June 1926

Herbert W. Yeo

July 1926-June 1930

George M. Neel

July 1930-June 1932

Thomas M. McClure

July 1932-November 1946

John Bliss

November 1946-November 1953

John R. Erickson

December 1953-February 1955

John Bliss

March 1955-August 1955

Stephen E. Reynolds

September 1955-March 1990

Philip B. Mutz

April 1990-June 1990

Carl L. Slingerland

July 1990-December 1990

Eluid I. Martinez

January 1991-December 1994

Thomas C. Turney

January 1995-December 2002



Two reports mentioned in this message – *The Impact of Climate Change on New Mexico's Water Supply and Ability to Manage Water Resources* and *2006 Progress Report: New Mexico State Water Plan* can be found on the Office of the State Engineer website at www.ose.state.nm.us under "publications."

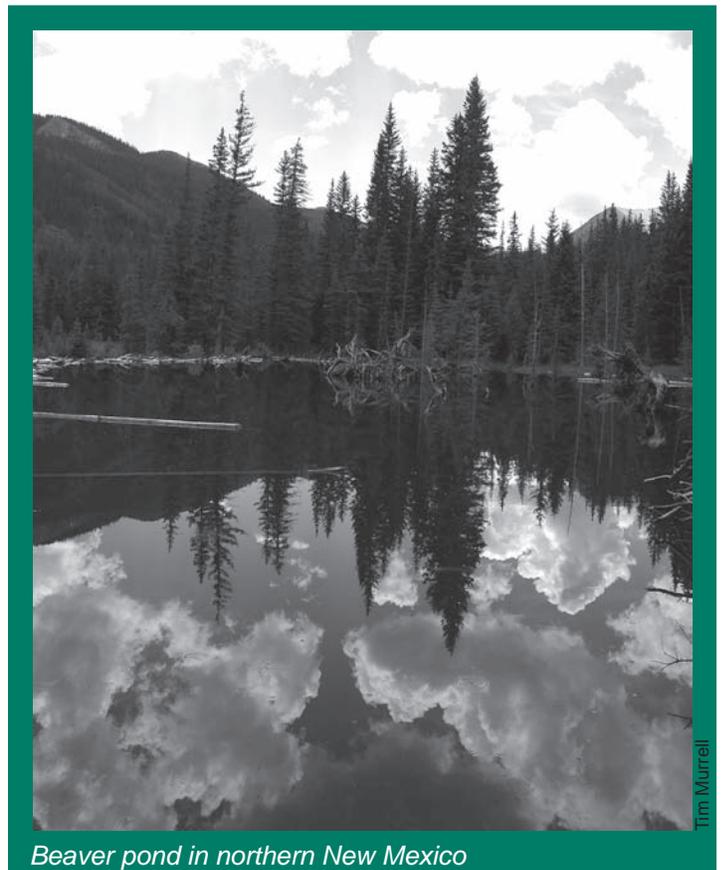
two-thirds and to allow for the establishment of domestic well management areas.

We continue to take steps to ensure the State of New Mexico continues to control its own water future by making substantial progress on the implementation of the Pecos River Settlement Agreement. This historic agreement consists of purchasing and retiring land and associated water rights to bring the basin into long-term hydrologic balance and includes construction of augmentation well fields to facilitate New Mexico's delivery obligations to the State of Texas.

Other issues of note this past year that I'd like to touch on include implementation of New Mexico's first State Water Plan, which sets a workable framework for responsible future water use in our state. This plan is a living document with prioritized agency work schedules, key milestones, and deliverables that better define our performance standards as an agency. A 2006 *Progress Report* was released on the State Water Plan, which indicates we are making headway toward our goal of implementing the State Water Plan. Work continues in the exploration of new sources of water. We will continue to make sure compact deliveries are made while continuing the progress made with endangered species protection and recovery efforts. Work also continues in the adjudication of our state's waters while keeping up with technological improvements.

Governor Bill Richardson has declared the upcoming 2007 State Legislative Session to be "The Year of Water." This designation shines a spotlight on our agency and encourages us to be innovative, bold, and decisive as we approach the many challenging water issues that affect New Mexico.

John R. D'Antonio, PE
New Mexico State Engineer



Beaver pond in northern New Mexico

Tim Murrell

Executive Summary



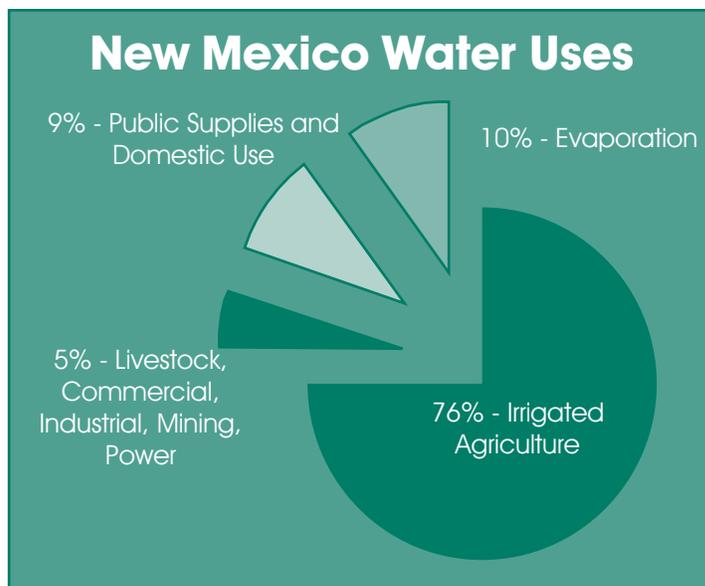
The State Engineer is statutorily charged with supervising the state’s water resources through the measurement, appropriation, and distribution of all ground and surface water in New Mexico, including streams and rivers that cross state boundaries. Created as the Office of the Territorial Irrigation Engineer in 1905, seven years before statehood, the agency assumed responsibility over all surface water in 1907 and was renamed the Office of the Territorial Engineer. With statehood in 1912, the organization’s responsibilities were expanded again to include all groundwater within declared groundwater basins – now 100 percent of the state – and the office was renamed the Office of the State Engineer.

The State Engineer’s approval is required for every use of water in New Mexico. State Engineer permission is needed to make a new appropriation, drill a well, divert surface water, or change the place or purpose of use of an existing water right. The Office of the State Engineer acts on water rights applications, evaluates existing water rights, measures and tracks water use and resources, promotes conservation, and performs the scientific, historical and legal research needed to support all of its activities. Additional duties include reviewing subdivision water-supply plans submitted by counties, licensing water-well drillers, inspecting non-federal dams, and rehabilitating diversion dams and irrigations ditches.

Although separate under state law, the Interstate Stream Commission staff members function as a division within the Office of the State Engineer. The State Engineer, appointed by the Governor and confirmed by the state Senate, serves as the Secretary of the Interstate Stream Commission. The Interstate Stream Commission Director serves as the deputy state engineer. The Legislature created the Interstate Stream Commission in 1935 and gave it broad powers to investigate, protect, conserve and develop the state’s water supplies. Its separate duties include protecting New Mexico’s right to water under eight interstate stream compacts and ensuring the state complies with each of those compacts, as well as developing and promoting regional and statewide water planning.

Water management in New Mexico is guided by several 100-year-old principles in the New Mexico Constitution: (1) All unappropriated water belongs to the public and is subject to appropriation by law. (2) The acquisition or continuation of a water right and where and how much water can be used is dependent on how the water is put to beneficial use. (3) Older water rights have

The State Engineer’s approval is required for every use of water in New Mexico





priority over more recent water rights. Since 1907, a permit from the State Engineer has been required to divert surface water and put water to beneficial use. Permits are required for diverting groundwater anywhere that the State Engineer has declared a groundwater basin, which is now the entire state of New Mexico.

The Office of the State Engineer processes some 19,000 water rights documents a year, with the overwhelming majority involving groundwater. Currently, a third of the applications for new appropriations of groundwater concern domestic or stock uses. More than 100 applications a year draw protests and are then subject to a formal hearing process.

Water management in New Mexico is complicated by the state's long history. Some uses have been in place for centuries, some before written records or water laws. Another key activity of the Office of the State Engineer is legally establishing existing water rights through water rights adjudication. This court process is required by statute and is akin to a quiet title suit for establishing a clear title to land. The first phase of adjudication is a hydrographic survey to locate, quantify and date water uses within a stream system or underground aquifer. The second, or legal, phase of an adjudication starts with the filing of a lawsuit that names water right owners as defendants and ends with a court order that delineates the parameters and priority of each owner's water right. The process provides the water right owners with opportunities to challenge the state and each other and to

Agency Trust Funds

The Ferguson Act of 1898 designated about one-ninth of all land in the state as trust land to benefit certain public institutions. The legislation identified the beneficiaries of the trust land, dedicated the amount of land to be held in trust for each beneficiary and provided for a board made up of the public land commissioner, territorial governor and solicitor general of the territory to assign specific tracts of trust land to each beneficiary.

The act designated 500,000 trust land acres to benefit reservoirs and other irrigation works and 100,000 acres to fund improvements to the Rio Grande. These lands and the trust lands set aside for 19 other beneficiaries are managed by the State Land Office, which transfers the income from certain revenue-raising activities directly to the beneficiaries and deposits the revenue from activities that deplete the resource – such as mining – in the Land Grant Permanent Fund. That fund is invested by the State Investment Council and the investment income is distributed to the trust beneficiaries.

Irrigation Works Construction Fund. The Legislature created the Irrigation Works Construction Fund in 1955 to receive the funds from the trust land acres designated for reservoirs and irrigation works, as well as certain special appropriations. Under the administration of the Interstate Stream Commission, the monies are used to make loans to acequias, and, through contracts with irrigation and water conservancy districts, to individual water users for construction and rehabilitation of on-farm irrigation works. The Irrigation Works Construction Fund pays for technical assistance and design improvements for acequias through an annual contract with the Natural Resources Conservation Service of the U.S. Department of Agriculture. Other contracts with the Conservation Service provide for

watershed planning, agricultural water conservation demonstration projects, and snow surveys. The Irrigation Works Construction Fund is also a source for the non-federal cost-share required by the U.S. Corps of Engineers Acequia Program. Loans also have been made to county flood commissions for protection of irrigation lands and works. Other appropriations have been made for dam rehabilitation and the control of phreatophytes, non-native, high-water-using plants and shrubs. The Irrigation Works Construction Fund also funded the \$14 million payment to Texas ordered by the U.S. Supreme Court to compensate Texas for historic under-deliveries on the Pecos River. It has also been a major source of funding for the Pecos River Lease/Purchase Program aimed at acquiring water rights to improve deliveries to Texas.

Improvement of the Rio Grande Income Fund. Each year the Interstate Stream Commission prepares a plan and budget for projects to be funded by the Improvement of the Rio Grande Income Fund and submits it to the Governor. Ongoing projects include cooperative agreements with the U.S. Bureau of Reclamation for vegetation management in Elephant Butte and Caballo reservoirs, for water salvage in the Middle Rio Grande, and channel maintenance along the Rio Chama below Abiquiu Dam. Through cooperative programs with the U.S. Geological Survey, the fund pays for data collection, hydrologic studies and the evaluation of reclamation projects. The fund has been used to buy San Juan-Chama Project water to establish and maintain a sediment pool in Jemez Canyon Reservoir. Significant grants to the Middle Rio Grande Conservancy District from the fund covered the non-federal share of the Corrales Levee and San Acacia to Bosque del Apache Flood Control projects.

negotiate. The Office of the State Engineer is involved in numerous adjudications, some of which are decades old.

Water management in New Mexico is further complicated by the scarcity of the supply and the eight interstate stream compacts. New Mexico is under pressure to meet its water delivery obligations to other states. Failure to comply can and often does result in litigation. For example, the U.S. Supreme Court in 1988 ordered New Mexico to pay damages to Texas for New Mexico's failure to meet its delivery obligations on the Pecos River and a court-appointed river master monitors New Mexico ongoing compliance.

Optimal management of New Mexico's water is dependent on good information and planning. Those needs have been highlighted both by the increasing demand placed on the limited resource by a growing population and by the added stress of a drought. Office of the State Engineer staff are developing more sophisticated tools for measuring and monitoring water resources, have been active in the development of regional water plans over the past few years, and in 2003 began and completed work on a comprehensive, statewide water plan.

The activities of the Office of the State Engineer and Interstate Stream Commission are financially supported with state general funds and income from state trust land. Although the income from the trust land varies, the agencies received a good portion of their funding in the 2005-2006 fiscal year from the two trust land funds: the Irrigation Works Construction Fund and the Improvements to the Rio Grande Income Fund. The trust lands, set aside under the Ferguson Act of 1898 along with trust lands for some 19 other beneficiaries, are managed by the State Land Office. This agency transfers some income directly to the agencies and the rest to the State Investment Council. The council invests the income generated through activities that deplete the resource – like mining – and the earnings on the investment go into the trust funds.

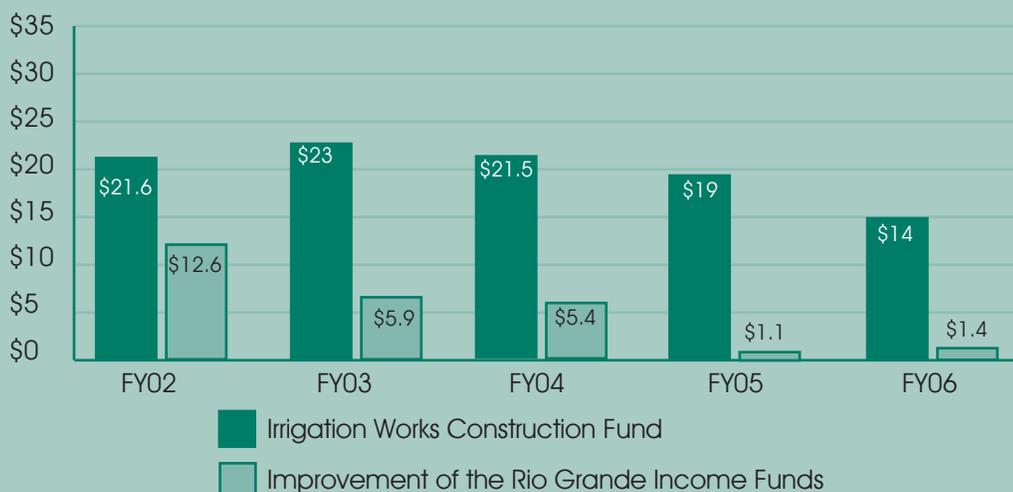
The dependency of the Office of the State Engineer and Interstate Stream Commission on these funds to meet recurring expenses and the resulting depletion of the fund balances has been brought to the attention of the executive and legislative branches. The agency must receive additional general fund support, the trust funds must be replenished, or both, for substantive and effective water administration to continue.



Trust Fund Year-End Balances

FY02-FY06

In Millions





State of the State's Waters

Severe drought conditions returned to New Mexico in 2006 after a short respite. The state's climate and water supply conditions have been dominated by drought since 1996, with recurring below-average snowpack and spring runoff. In 2000 and 2002, new records were set for low snowpacks at many sites in New Mexico. These records were broken again by even drier conditions in 2006.

In mid-March Governor Richardson declared that New Mexico was in a state of drought, ordering state agencies to implement water-saving strategies and prepare to help in statewide drought-relief efforts. By June 2006, all of New Mexico was in severe to extreme drought based on the Long-term Palmer Drought Severity Index.

The National Weather Service reported record low precipitation during winter and spring 2006. June 2006 was the seventh consecutive excessively dry month for New Mexico, according to the National Weather Service. The November through May period was the driest ever recorded at many locations in the state, including Taos, Albuquerque,

Truth or Consequences, Ruidoso, and Zuni. Albuquerque recorded only 0.41 inches of precipitation during that six-month period. For most basins, the winter of 2005-2006 brought the lowest snowpack ever recorded. The Rio en Medio near Santa Fe went an entire season with no snow for the first time since the snow course was established in 1949. In April, the snow pack was well below 50 percent of normal in every basin but one. By May, even that was gone due to abnormally warm and windy spring weather.

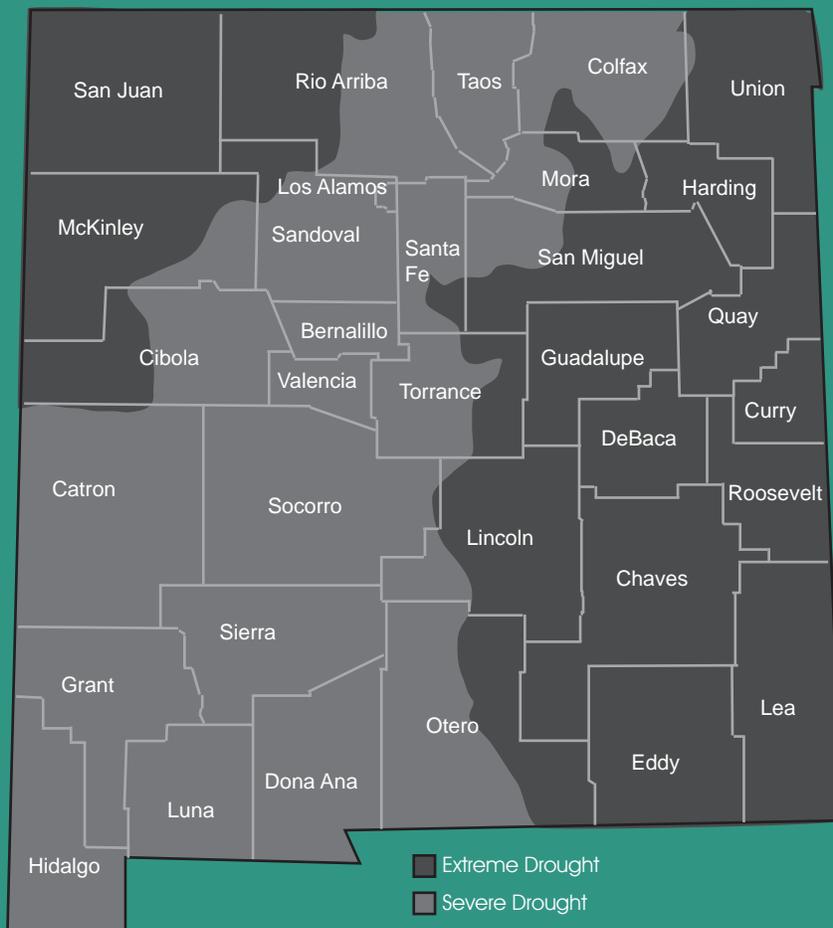
By June 2006, 79 percent of New Mexico's rangeland was in poor or extremely poor conditions according to the U.S. Department of Agriculture. The fire danger was rated high to extreme over most of the state, and 400,000 acres had burned.

Monsoonal moisture arrived in late June and early July 2006, bringing welcome rains to much of New Mexico. However, the rains were insufficient to resolve the deep drought until August.

Later in 2006, climactic researchers determined that "El Niño" conditions had returned to the Pacific Ocean. In New Mexico, El Niño winters tend to be wet.

Palmer Drought Severity Map

June 2006



Surface Water

As a result of the record low snow pack, spring runoff was almost nonexistent in 2006. The flow of the Rio Grande past Embudo during spring 2006 was only slightly higher than the all-time low in 2002. This continued the low runoff conditions seen over the last decade. Rio Grande flows at Embudo have been below the long-term average runoff for eight of the last 10 years. By late May, the Rio Grande was intermittently dry in the reach south of Socorro. Spring runoff in the Canadian and Pecos basins was only 10 percent to 20 percent of average.

Reservoir storage at the beginning of 2006 was better than in some previous drought years because above-average precipitation and snow pack in 2005 had replenished the reservoirs to some extent. However, the meager 2006 spring runoff meant that surface water users had little additional water. For the sixth year in a row, reservoir storage in June was well below the long-term average.

Low reservoir levels meant that farmers dependant on these supplies faced water shortages in 2006. On the lower Rio Grande the Elephant Butte Irrigation District's surface water allotment stood at only 14 inches in June 2006 (as compared with a full allotment of three feet). On the Pecos River the Carlsbad Irrigation District's initial allotment was set at two feet.

Groundwater

Generally, groundwater levels are less variable because aquifers are not strongly affected by annual or seasonal fluctuations in climate. Nevertheless, drought conditions can affect fractured rock aquifers common in mountainous areas and shallow alluvial aquifers along streams, and wells obtaining water from these sources become more reliable in wet years.

However, away from lakes and streams, and in upland areas, groundwater can be deep, and is less dependent on streamflow in any given year.

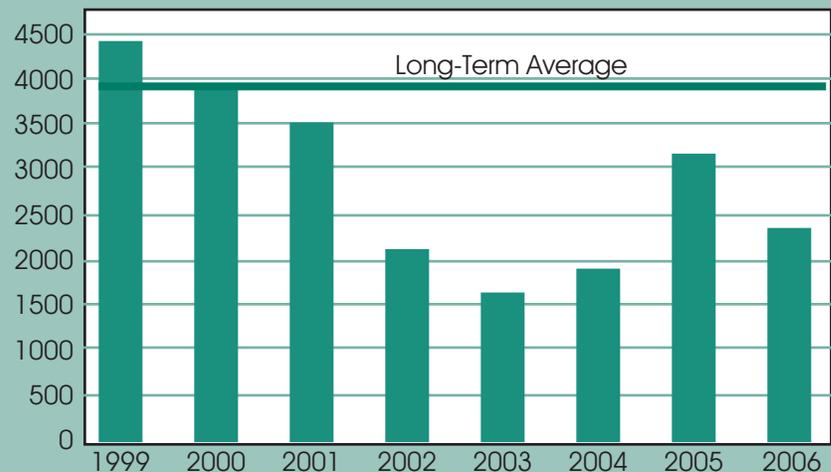
Water levels in many wells monitored in New Mexico continued trends evident over the last several decades. In the Estancia Basin and other closed basins in the southwestern part of the state and in the Ogallala aquifer in eastern New Mexico, water levels continue to decline, primarily in response to pumping for irrigation, although water levels are rising in the western parts of Lea and Curry counties. Rising water level trends, generally associated with diminished pumping, also continued in some wells in the southern San Juan Basin. Water levels in wells near Albuquerque, Silver City and Las Cruces continue to decline in response to municipal and industrial pumping.

Long-term effects of the recent drought on some groundwater supplies may not be evident for some time. If below normal precipitation continues, increased reliance on groundwater pumping is likely to impact water levels in wells in many areas. Shallow wells completed in marginal aquifers are the most likely to fail first.



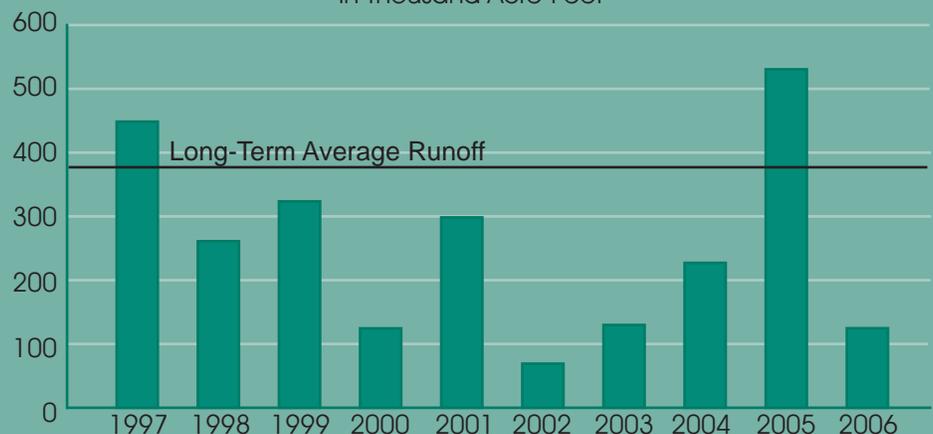
Total Reservoir Storage

In Thousand Acre-Feet



Rio Grande Spring Runoff at Embudo

In Thousand Acre-Feet





Program Support

Program Support provides administrative and management support services to the Office of the State Engineer to allow for the smooth functioning of all other programs. The program has four bureaus – Finance, Budget Services, Information Technology Systems, and Human Resources – which handle the agency’s payroll, budget planning, contract preparation, fixed assets, accounting, procurement, property management and control, personnel management, and computer systems and communication systems development and support.

Finance Bureau

The Finance Bureau is responsible for reconciling all disbursements and accounts receivable for the agency. It is also responsible for administering the expenditures and receipts portion of the agency’s regional water planning efforts, Pecos River water rights leases and purchases, numerous loans and grants issued under the Dams and Ditches Rehabilitation Loans Program, federal grants, and capital projects. This bureau also administers the agency’s procurement function, which includes capital outlay, agency vehicles, furniture, computers, office supplies, and office space rentals.

Budget Bureau

The Budget Bureau is responsible for the planning and preparation of the agency’s operating budget and the preparation of the capital improvement projects budget. This bureau is also responsible for administering, tracking and disbursing the professional services contracts, joint power agreements and joint funding agreements for the agency. The budget bureau also conducts the physical inventory of fixed assets for the Office of the State Engineer, which includes all the district offices throughout the state.

Human Resources Bureau

The Human Resources Bureau supports the day-to-day operations of Office of the State Engineer. Services include employee recruitment, employment, compensation, employee relations, administration of employee benefits and payroll, and training and staff development.

The bureau is committed to providing the highest quality customer service. It partners with management to recruit and retain a highly qualified, diverse staff; facilitate positive employee relations; and coordinate training to enhance employee skills, performance and job satisfaction. The bureau adjudicates employee grievances and disciplinary actions that protect the rights of all parties and encourage two-way communication. A primary focus of the Human Resources Bureau is to provide management and its employees with a comprehensive and supportive human resource system based on integrity and sound management principles. This includes the development of policies, procedures, information and training in support of the agency’s mission and management’s objectives.

Information Technology Systems Bureau

The Information Technology Systems Bureau (ITSB) designs new computer applications and provides technical support for personal computers, servers, imaging hardware and software, optical character recognition, bar code recognition, relational database management systems, e-mail, voice and data telecommunications, the agency website, multi-tier web applications, geographic information systems, and global positioning systems.

To make the agency’s massive quantity of water rights information more accessible to employees and the public, ITSB maintained and enhanced a computer imaging and

Director

Herman Garcia

Financial Services Bureau Chief

Dinah Sanchez

Budget Bureau Chief

Curtis Eckhart

Human Resources Bureau Chief

Lynette Rodriguez

Information Systems Technology Bureau Chief

Renée Martinez

(as of 2/07)

Nancy Knouse

(as of 12/06)



Employees of the Year 2005-2006

Angie Rodriguez
Water Resources Allocation Program

Gina Garcia
Program Support

Rebecca King
Interstate Stream Commission

Andy Core
Technical Unit

Carl Albury
Hydrographic Survey Bureau

Ray Rivera
Litigation and Adjudication Program

Yvette Chavez
Planning and Communication

Albuquerque

Yvette Quintana
Water Resources Allocation Program

Lois Turnage
WATERS

David Green
Interstate Stream Commission

Roswell

Kenneth Fresquez
Water Resources Allocation Program

Deming

Lloyd Valentine
Water Resources Allocation Program

Las Cruces

Susan Gwinn
Water Resources Allocation Program

Alma Lou LeQuieu
Litigation and Adjudication Program

able electronically via eWATERS and to the public via the Office of the State Engineer website <http://www.ose.state.nm.us>.

The website is a comprehensive source of information on New Mexico's most valuable resource. In addition to the eWATERS database, the site includes administrative guidelines for the Lower Rio Grande Basin and others; New Mexico dam safety criteria; the Regional Water Planning Handbook; and Water Conservation Program information and brochures. Access to online water rights information is through the web application called iWATERS, which enables visitors to query the WATERS database for data and related images of actual water rights documents. The webmaster updates the site regularly, ensuring media releases, job opportunities, meeting agendas, Hearing Unit decisions, and other timely postings are up-to-date.

Under the careful guidance of the agency Geographic Information System Technical Team (GISTT), the implementation of the agency Enterprise GIS (EGIS) is now supporting more than 70 analytical users located in every program area. Scientists, engineers, and mapping specialists are taking advantage of this integrated technology to support ground- and surface-water modeling, dam breach predictions, water right mapping, historical trend analyses, adjudication assessments for water use, and surface water capacity calculations.

Statement of Revenues, Expenditures and Fund Balances for the Year Ending June 30, 2007

REVENUES

FEDERAL FUNDS	\$970,264
CHARGES FOR SERVICES	\$395,351
INVESTMENT EARNINGS	\$7,475,504
INTEREST ON BANK DEPOSITS	\$546
INTEREST ON LOANS	\$84,678
LAND LEASE	\$1,966,030
INTERGOVERNMENTAL REVENUE	\$0
MISCELLANEOUS REVENUE	\$1,163,673
TOTAL REVENUE	\$12,076,049

EXPENDITURES

PERSONAL SERVICES	\$20,585,866
CONTRACTUAL SERVICES	\$12,739,185
OTHER	\$12,760,338
DEBT SERVICE	
PRINCIPAL	\$227,369
INTEREST	\$42,597
CAPITAL OUTLAY	\$21,948,166
TOTAL EXPENSES	\$68,303,523

REVENUE OVER(UNDER) EXPENDITURES

-\$56,227,477

OTHER FINANCING SOURCES (USES)

BOND PROCEED	\$6,340,490
TRANSFERS IN (OUT)	
GENERAL FUND APPROPRIATION	\$32,939,050
SPECIAL APPROPRIATIONS	\$313,500
INTERFUND TRANSFER IN	\$16,243,778
OTHER FINANCING SOURCES	\$265,000
INTERFUND TRANSFERS (OUT)	-\$16,243,778
REVERSIONS	-\$390,915
TOTAL OTHER FINANCING SOURCES (USES)	\$39,467,124

NET CHANGE IN FUND BALANCE

-\$16,760,353

BEGINNING FUND BALANCE	\$77,699,640
PRIOR YEAR ADJUSTMENTS	-\$25,269

ENDING FUND BALANCE

\$60,914,018

Balance Sheet

June 30, 2006

TOTAL ASSETS	\$71,569,312
TOTAL LIABILITIES	\$10,655,294
TOTAL FUND BALANCE	\$60,914,018
TOTAL LIABILITIES AND FUND BALANCE	\$71,569,312

Public Information/Public Outreach



Public information and public outreach efforts continued to support agency initiatives in fiscal year 2005-2006. About 30 facilitated public meetings were held around the state to support new domestic well rules and regulations and the Active Water Resource Management initiative in the Lower Pecos, Rio Gallinas, and Upper Mimbres basins. Efforts also supported Navajo Nation, Aamodt, and Taos water rights settlement agreements. More facilitated public meetings are expected to occur to support other priority basins targeted for the Active Water Resource Management initiative in fall 2006 and spring 2007.

A communication campaign supported the State Engineer's order to improve water management in the Lower Rio Grande by requiring metering of all wells except domestic and livestock wells. Although the order was issued in December 2004, numerous news releases were sent out to remind people of the impending deadline in Sierra and Doña Ana counties. An informational brochure was mailed directly to individual well owners in the areas in December 2005. As the deadline passed for meters to be installed, communication efforts supported a visit by the State Engineer to the Las Cruces area to launch two weeks of meter inspections. Radio ads in both Spanish and English were aired throughout the area during the weeks of the inspections. Also, local news media interviewed the State Engineer and ran stories about the inspection process and on how residents could become compliant. The effort was followed up by letters to the permit holders of the more than 3,200 wells that fell under the metering order but did not have meters installed yet. Information was posted on the agency's website to inform residents about how to comply with the order, and follow-up letters were sent.

A communication campaign was held jointly with the Navajo Nation in November 2005 to garner support for the Navajo Nation Water Rights Settlement. Communication staff organized a kick-off news conference at Window Rock and assisted with the daylong bus tour of the proposed pipeline route that followed. In spring 2006, a video program was produced by the agency in support of the Navajo Nation water rights settlement titled, "Water for a Nation." The eight-minute program was produced to tell the story of the "human need" of the more than 50,000 New Mexicans living on the Navajo Nation who do not have easy access to a source of clean, potable water. The video illustrates that there are many areas of the Navajo Nation where the water sometimes has to be hauled many miles in barrels in the backs of trucks. Officials discussed the negative consequences of failing to implement the settlement, which include impacts on San Juan/Chama project water allocated to growing cities like Albuquerque, Santa Fe, and Española. Discussions are now in progress with KNME-TV regarding the production of a longer version of this program suitable for airing on PBS in January 2007.

Agency communication staff took the lead in preparing materials for several joint news conferences including the Aamodt water settlement signing ceremony in May 2006, the Taos water settlement signing ceremony in May 2006, and the Eagle Nest water settlement signing ceremony in June 2006.



The State Engineer is interviewed by the Las Cruces news media during metering inspections held in March 2006.

Director
Karin Stangl, APR



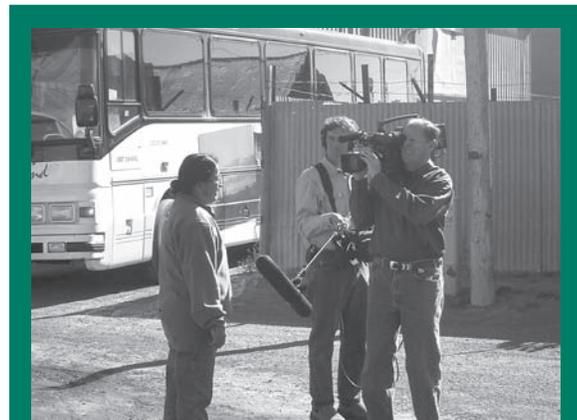
The staff also worked on the annual joint news conference with sister state agencies, the Tourism Department, State Parks, and State Forestry. The purpose of the news conference was to announce reservoir levels and a good outlook for summer recreational opportunities despite continuing drought conditions. It was well attended by the news media. A significant news conference was also held to showcase Middle Rio Grande habitat restoration efforts complete with airboat tours in January 2006.

Communication staff received two awards for public relations excellence. The staff received the “2006 Best Tactic of Show Award” was received from the New Mexico Public Relations Society of America for the new Office of the State Engineer/Interstate Stream Commission website. The new website was launched in November 2006 to provide the public with easier access to information on water issues and water policies. It can be accessed at www.ose.state.nm.us. Tactics awards recognize expertise in writing, design, production, and management of materials that meet a single communication need. A first-place Gold 2006 Cumbre Award was also received for the “Active Water Resource Management Communication Campaign in the Lower Pecos Basin.” Campaign awards recognize outstanding achievement in the implementation of a communication campaign, which includes research, planning, and evaluation components.

In fiscal year 2005-2006, the Office of the State Engineer and Interstate Stream Commission continued to expand outreach efforts. The agency mailed quarterly issue briefs to legislators, municipal and county leaders, special interest groups, and opinion leaders around the state to better inform them about the State Engineer’s and Commission’s

policies and initiatives. These issue briefs served not only to promote greater awareness of the role of the Office of the State Engineer and Interstate Stream Commission in funding better water management programs but also to generate feedback to help develop successful strategies for expanding future outreach efforts.

Communication team members Maureen Haney, Karin Stangl, and Yvette Chavez won the “Best of Show” Cumbre Award from the New Mexico Public Relations Society of America for the new Office of the State Engineer website. The team also won a Gold Cumbre for its public relations campaign on Active Water Resource Management in the Lower Pecos Basin.



A video crew for “Water for a Nation” filmed an interview at a water hauling stop in Gallup, N.M. The documentary drew attention to the needs of the many people on the Navajo reservation who must haul water to their remote homes.

Legislation and Policy



More than 120 water-related bills died during the 2006 legislative session when legislators ran out of time to act on them.

One of the most significant bills to pass through the Legislature and be signed into law by Governor Bill Richardson would allocate \$40 million into a permanent fund for water. The permanent fund bill (House Bill 272) was sponsored by Rep. Ken Martinez (D-Grants). The bill creates a second permanent trust fund for the state, contingent on a vote by all New Mexicans during the November 2006 general election.

A permanent fund is a constitutionally created fund that acts as a savings account for water projects needed around the state. The state would not be allowed to dip into the core fund but would use the interest generated from the account for water projects. The state already has a permanent fund in place for education-related projects. House Bill 2,

the general appropriations bill, set aside \$40 million for the fund and House Joint Resolution 6 proposed an amendment to the state's constitution creating the permanent water trust fund. Currently the state uses 10 percent of its severance tax bond capacity to fund water projects, which amounted to \$28 million this past year. Voters will get to decide the question in a referendum in November 2006.

Money bills to fund the state's share of Indian water rights settlements did not make it off the Governor's desk (HB 755) (HB 121).



A \$1 million appropriation for water masters was among the proposals that died during the 2006 legislative session.

Other significant legislation that was proposed but died during the session would have resulted in the following:

- An appropriation of \$1 million to fund water masters for the agencies Active Water Resource Management (AWRM) Initiative (HB 136).
- An appropriation of money to the Interstate Stream Commission to conduct a study of the Salt Basin water resources for use by New Mexico communities (HB 131).
- An appropriation of \$100 million to the water trust fund. (HB 134) (SB 80).
- An appropriation of \$300 million to the Interstate Stream Commission to design and construct a distribution system for water from the Salt Basin.
- An appropriation of up to \$10 million for adjudications (HB 183).
- Funding for an Office of the State Engineer sub-office in northeastern New Mexico. (HB 398).

Water Resources Allocation Program

Director

John T. Romero, PE



- An appropriation of \$5 million to purchase water rights for the strategic water reserve (HB 565).
- An appropriation of \$4 million to pay for legal and technical expenses related to interstate water conflicts (HB 740).
- An appropriation of \$20 million to fund the Aamodt Indian Water Rights Settlement (HB 755).

Water Committees

WATER TRUST BOARD

The New Mexico State Engineer is the chairman of the Water Trust Board. The Water Trust Board was established in 2001 to recommend water projects to the state Legislature for funding from the Water Project Fund. These water projects, paid for with grants or loans, must be for water storage, conveyance, or delivery of water to end users; implementation of federal Endangered Species Act of 1973 collaborative programs; restoration and management of watersheds; flood prevention; or water conservation.

In 2005, the Water Trust Board recommended and the Legislature provided \$17.7 million to 19 water projects throughout the state. The 2005 projects recommended by the Water Trust Board were based on 30 applications from entities in 18 different counties from all over the state.

Members:

- State Engineer John D'Antonio, chairman
- William Sisneros, New Mexico Finance Authority
- Paula Garcia, acequia water users
- Trudy Healy, irrigation or conservancy district, surface water
- Tom Davis, soil and water conservation districts
- Thomas Overstreet, irrigation or conservancy district, groundwater
- Denise Fort, environmental community
- Gustavo Cordova, New Mexico Association of Counties
- William Fulginiti, director, NM Municipal League
- Nelson Cordova, NM Commission on Indian Affairs
- Frank Dayish, vice president, Navajo Nation
- I. Miley Gonzalez, director, NM Department of Agriculture
- Bruce Thompson, director, NM Department of Game and Fish
- Joanna Prukop, cabinet secretary, NM Energy, Minerals and Natural Resources Department
- Ron Curry, cabinet secretary, NM Environment Department

GOVERNOR'S DROUGHT TASK FORCE

In May 2003, Governor Richardson established the State Drought Task Force through Executive Order 2003-19. The 12-member Task Force is chaired by the State Engineer and includes the cabinet secretaries from the state departments of Environment, Finance and Administration, Agriculture, Tourism, Economic Development, Indian Affairs, and Energy, Minerals and Natural Resources. Other members are the executive director of the New Mexico Finance Authority and the directors of the Interstate Stream Commission, Office of Emergency Management, and Governor's Office of Policy and Planning.

The Task Force is charged with monitoring drought conditions statewide and with making annual recommendations to the governor for drought mitigation. The Task Force has established six work groups to evaluate the impact of drought on different sectors of the state and to develop drought mitigation plans as well as programs to prevent emergencies arising from drought. The work groups focus on monitoring the drought and the issues of drinking water, agriculture, wildlife and wildfires, recreation and tourism and resource development.

Throughout the year, the Task Force produces a monthly drought status report that has become a resource to local and state managers and the news media. The report is published on the Drought Task Force Internet site. The Task Force also produced the 2004 New Mexico Drought Plan and sponsors the annual drought summits, which attracted more than 300 attendees in 2003 and 2004.

Members:

- State Engineer John D'Antonio, chairman
- Ron Curry, cabinet secretary, NM Environment Department
- Katherine Miller, cabinet secretary, NM Department of Finance and Administration
- Estevan López, director, Interstate Stream Commission
- Joanna Prukop, cabinet secretary, NM Energy, Minerals and Natural Resources Department
- I. Miley Gonzalez, director, NM Department of Agriculture
- Tim Manning, director, NM Office of Emergency Management
- Benny Shendo Jr., cabinet secretary, NM Department of Indian Affairs
- William Hume, director, Governor's Office of Policy and Planning
- Rick Homans, cabinet secretary, NM Economic Development Department
- Mike Cerletti, cabinet secretary, NM Department of Tourism.
- William C. Cisneros, executive director, NM Finance Authority

BLUE RIBBON TASK FORCE

The Blue Ribbon Task Force is a group that investigates and engages in discussions regarding current water policies and laws. The Task Force advises the State Engineer, Interstate Stream Commission director, and any other relevant state agencies regarding water policies and laws. The Task Force also provides its recommendations to the governor on an annual basis every November and provides copies to the State Engineer and Interstate Stream Commission director. The chairman is Brian Burnett, president of the civil engineering firm BHI.

Native American Water Liaison



The Native American Water Resources Program, created by the governor in 1995, is aimed at promoting a spirit of coordination, communication, and good will between tribal and state governments as separate sovereignties. Under Governor Bill Richardson's administration, a statement of policy and process was signed with the 19 New Mexico pueblos to work in good faith to amicably and fairly resolve issues and differences in a government-to-government relationship. This policy and process also extends to other tribes and nations within New Mexico.

Rights to water on Indian grant lands and reservations in New Mexico fall within one or a combination of three different doctrines: pueblo historic use water rights, federal reserve water rights, or water rights established under the laws of the State of New Mexico. Water rights administration, litigation and negotiation leading to a settlement of rights to water are exceedingly complex when Native American water rights are involved.

The Native American Water Liaison deals with matters related to adjudication of tribal and pueblo water rights, negotiations regarding these rights, and assistance to individual tribes and pueblos. The Liaison's role is to advocate equal protection of all water users, emphasizing conservation and the development of feasible alternative water supplies. An important goal is to resolve disputes between the State of New Mexico and Indian pueblos, tribes, and nations, without costly litigation. While the State Engineer began adjudicating water rights on tributaries to the state's major rivers more than 30 years ago, the water entitlements for the most of the state's 22 Indian pueblos, tribes, and nations have not been quantified.

Two major Indian water rights settlements were signed in 2006. The Aamodt Water Rights Settlement, one of the longest running settlements in the federal court system, was signed May 3, 2006, at the State Capitol Building. Shortly thereafter the Taos Pueblo Water Rights Settlement (formerly the Abeyta Settlement) was also signed at a ceremony hosted by Taos Pueblo. Although these significant milestones have been reached at a local level, there is a significant amount of work to be done for these settlements to receive federal legislation and funding. Following the signing of these settlements the New Mexico parties moved the process to Washington, D.C., where well-received presentations were given to congressional and other federal Officials.

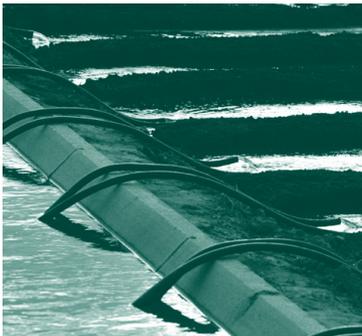
The Native American Water Liaison is participating in several ongoing issues: the Abovsleman case on the Rio Jemez; government-to-government consultation with the Pueblo of Zuni related to Zuni Salt Lake; and the Middle Rio Grande projects, such as the Endangered Species Act Collaborative Program (including restoration and silvery minnow habitat issues).

Outreach to the pueblos, tribes and nations, is an on-going process in efforts to better the relations between the state and Native American governments. The Native American Water Liaison will continue to coordinate the quarterly State-Tribal Water Institute in an effort to encourage involvement from the pueblos, tribes and nations.



Myron Armijo, Native American water liaison for the Office of the State Engineer, speaks at a State-Tribal Water Institute meeting. The meetings are held quarterly.

**Native American
Water Liaison**
Myron Armijo



Water Resources Allocation Program

The Water Resources Allocation Program is primarily responsible for processing water-rights applications, conducting the scientific research for making those water rights decisions, maintaining water rights records, and enforcing any conditions or restrictions on water use. Water masters in the program measure stream flow, allocate the water within a stream system based on state law, and regulate and control diversions. Staff also inventories water resources, monitors water use, and cooperates with the U.S. Geologic Survey in monitoring groundwater levels throughout the state. Additional duties are licensing all well drillers, maintaining and updating the rules and regulations of the State Engineer, inspecting non-federal dams, evaluating subdivision water-supply plans submitted by counties, and promoting water conservation. In addition to the Water Rights Division, the Water Resources Allocation Program also includes the Hydrology, Water Use and Conservation, and Dam Safety bureaus and the WATERS (Water Administration Technical Engineering Resource System) project. This program is responsible for populating the WATERS database with all the individual water rights files within the state.

Under New Mexico water law, all ground and surface waters belong to the public and are subject to appropriation under the Doctrine of Prior Appropriation, a constitutional provision that says earlier appropriations have priority over later appropriations.

Director

John T. Romero, PE

Water Rights Division Bureau Chief

James Sizemore, PE

Hydrology Bureau Chief

Michael Johnson
(as of 5/06)

Tom Morrison, PE
(as of 3/06)

Dam Safety Bureau Chief

Elaine Pacheco, PE

Water Use and Conservation Bureau Chief

John Longworth, PE

WATERS Program Manager

Richard DeSimone

Water Rights Division

The Water Rights Division administers water rights throughout the state of New Mexico. The division has district offices in Albuquerque, Roswell, Deming, Las Cruces, Aztec and Santa Fe. In addition, the Cimarron water master maintains an office in Cimarron.

Several new groundwater basins and extensions to existing basins were “declared” by the State Engineer during the fiscal year, which means that the State Engineer assumed administrative control or jurisdiction over the appropriation and use of groundwater within those newly declared basins and extended basins. With this round of declarations, all groundwater and surface water within the entire state came under the administrative control of the state engineer. Prior to these recent declarations, there were several groundwater basins within the state from which groundwater could be appropriated and put to beneficial use without obtaining a permit from the State Engineer. After the declarations, permits must be obtained for drilling wells and using water. Any new wells drilled in these newly declared basins must be drilled by well drillers licensed by the state of New Mexico. The newly declared and extended basins are the northern Tularosa and Canadian basin extensions and Causey-Lingo, Cloverdale, Hatchita, Mt. Riley, Yaqui and Clayton basins.

Anyone wanting to use either surface water or groundwater in New Mexico must have a permit from the State Engineer. Before granting a permit for a new appropriation or to change the place or purpose of use of existing water rights, state law requires the State Engineer determine the proposed appropriation or proposed change will not impair existing rights, will not be contrary to the conservation of water within the state of New Mexico and will not be detrimental to the public welfare of the state. The law also requires the applicant publish legal notice of the purpose of the application in a newspaper to provide anyone with a legitimate objection the opportunity to protest the application.

During fiscal year 2005-2006, the 131 employees of the Water Rights Division processed 1,960 surface water and 18,436 groundwater documents pertaining to the appropriation

and use of surface- and groundwater. Most surface water in the state has been fully appropriated and recent water rights activity has been concerned primarily with groundwater. The District II Office in Roswell, responsible for licensing all well drillers in the state, issued 12 new and 159 amended or renewed licenses this fiscal year.

The backlog of pending water rights applications varied over the year from a low of 628 applications in December 2005 to a high of 765 applications in June. The number of pending applications at the end of last fiscal year was 733 and the current backlogged number is 765. This means that the number of new water rights applications filed this fiscal year was about equal to the number of applications acted upon.

During this fiscal year, the Water Rights Division was actively involved in Active Water Resource Management (AWRM) partially in response to extreme drought conditions throughout the state. AWRM is a program to connect the management of both groundwater and surface water within river basins. Water Rights and WATERS personnel played an active role on inter-departmental teams formed by the state engineer to implement AWRM in areas of the state hardest hit by the drought.

Water masters were appointed for several AWRM priority basins throughout the state. They include the Mimbres and Carlsbad basins. Water Rights personnel were actively involved in developing district-specific rules and regulations to administer water during times of shortage for the protection of senior water rights. Also Water Rights staff worked on and promulgated new Well Drillers Rules and Regulations adopted by the State Engineer on August 31, 2005. Staff also worked on developing a draft of the General Provision Rules and Regulations for Administration of Water and Ground Water Rules and Regula-



District Offices

District V

Aztec Sub-Office
100 South Gossett, Suite A
Aztec, NM 87410-2432
505-334-4571
San Juan Basin, Animas, La Plata rivers and groundwater basins
Jicarilla, Navajo and Ute Mountain Ute nations
Robert Genualdi, PE, District Supervisor

District VI

Bataan Memorial Building
P.O. Box 25102
407 Galisteo Street Rm 102
Santa Fe, NM 87504
505-827-6120
All surface water rights and all protested applications statewide
Northern Rio Grande, Upper Pecos, Tucumcari, Canadian River groundwater basins
Rio Chama water master
Cimarron Sub-Office
Cimarron-Rayado Water District
Linda Gordan, Bureau Chief

District I

Springer Square Building
121 Tijeras NE, Suite 2000
Albuquerque, NM 87102
505-764-3888
Bluewater, Sandia, Estancia, Rio Grande, and San Juan groundwater basins
Jess Ward, District Supervisor

District II

1900 West Second Street
Roswell, NM 88201
505-622-6521
Capitan, Carlsbad, Curry County, Fort Sumner, Hondo, Jal, Lea County, Portales and Roswell groundwater basins
Ogalalla Aquifer
All well-driller license applications
Art Mason, PE, District Supervisor

District III

P.O. Box 844
216 South Silver
Deming, NM 88031
505-546-2851
Animas Valley, Gila-San Francisco, Lordsburg Valley, Mimbres Valley, Nutt-Hockett, Playas Valley, San Simon and Virden Valley groundwater basins.
Charles Jackson, District Supervisor

District IV

P.O. Box 729
1680 Hickory Loop Suite J
Las Cruces, NM 88004
505-524-6161
Lower Rio Grande, Tularosa, Hueco, Las Animas Creek, Hot Springs and Salt groundwater basins
Hydrographic Survey Bureau
Calvin Chavez, District Supervisor



tions. WATERS personnel channeled their efforts toward abstracting and imaging water rights documents into the WATERS database in support of the AWRM initiatives.

WATERS and Waters Rights division staff continued to work on the decade-long effort to convert paper water rights records into an electronic database called WATERS. New applications are directly entered into the system, and resources are being dedicated to input the thousands of existing records that must be organized, abstracted and key-entered into the database. Information from priority areas is being entered first to provide the state engineer with the information and the tools necessary to administer water by priority if necessary. Those priority basins are the Lower Pecos, Lower Rio Grande, San Juan, Rio Gallinas, Mimbres, Rio Chama and Nambe-Pojoaque-Tesuque

District Activity

The **District I** Office in Albuquerque administers water rights in the middle Rio Grande, Estancia, Sandia, Bluewater, and Gallup underground water basins as well as the newly declared northern portion of the Tularosa Basin, and the surface water rights associated with these basins. Because of population growth and concentration in the middle Rio Grande area of the Rio Grande Underground Water Basin, the District I Office processes more domestic well applications than any other area of the state. Staff also handles high volume from the Estancia Underground Water Basin and once a month staffs a field office in the Town of Estancia for walk-in customers.

Much effort was put into the transition to geographic/geo-spatial information system (GIS) technology to assist in water rights administration in the Middle Rio Grande (MRG) Basin. District I devoted many staff hours to a project to enter, update and quality-assure entries of declarations and water rights transfers previously recorded on both hard-copy Middle Rio Grande Conservation District maps and corresponding GIS ArcMap records. Eventually the data will be housed and continuously updated in ArcSDE (spatial database engine). Completion of this task will greatly facilitate administration of water rights within the

Active Water Resource

In response to continuing drought in New Mexico, general rules and regulations for administering Active Water Resource Management (AWRM) were finalized by the State Engineer in December 2004 after a public hearing in Santa Fe. Statewide rules and regulations provide the tools to move forward with priority administration to help the state be ready for future drought cycles and variability in climate, both wet years and dry years. These tools include measuring and metering, implementing district-specific rules and regulations, the creation of water master districts, appointment of water masters, and the development of water master manuals.

While these tools are being developed, our staff continues to encourage and facilitate shortage-sharing agreements among water users in the various basins around the state.

Under AWRM, the State Engineer encourages voluntary agreements among water users, such as shortage sharing, rotation, and water banking. The program acknowledges the need for priority administration, under which junior water-right holders can be cut off, but considers it a measure of last resort. Typically, senior water-right holders include Native Americans, acequias, and agricultural users. Municipalities and industrial, residential, and recreational water users tend to hold junior rights. Priority administration is already enforced on the Cimarron River and Rio Costilla.

The State Engineer has targeted seven areas of critical concern around New Mexico to begin implementation of Active Water Resource Management: the San Juan River, Rio Gallinas, Rio Pojoaque, Rio Chama, Mimbres, Lower Rio Grande, and Rio Hondo/Rio Peñasco tributaries in the Pecos River.

Considerable progress on the AWRM initiative has been made to date. The State Engineer has organized teams within the agency to implement AWRM in the areas of critical concern. He also has hired water masters in each of the priority basin areas to gain the benefits of the real world experience that will be useful in developing district-specific, workable regulations that are tailored to meet the needs of critical basin areas. Funding for water masters currently is absorbed by the Office

conservation district boundaries and the middle valley. Completion of the project will also facilitate cooperation with the conservation district in the filing of its Proof of Beneficial Use (PBU) and the overall water rights administration within the district. To have a centralized, standardized electronic source will greatly facilitate monitoring and compliance issues within the district. A four-person, District 1 WATERS team has been formed to enter data for newly processed water rights documents, abstracting historical water rights permits, surface water declarations, and entering all the Middle Rio Grande Conservation District surface water and supplemental well data into an ArcMap GIS database.

District I staff traveled around the district to take annual well measurements. The information is shared with the U.S. Geological Survey as part of the joint effort to monitor long-term trends of water levels in various basins around New Mexico. Using a global positioning system (GPS), staff located and recorded wells in the Bluewater Basin, the San Augustin Plains area of the Middle Rio Grande Basin, and the Estancia Basin. The results and analyses of this well information contribute to the formulation of basin guidelines,

aquifer characterization, and State Engineer water management strategies.

Because of sufficient water, water-master assistance on the Jemez, provided by the State Engineer upon request, was not needed for the 2005 irrigation season. While irrigation water was less plentiful during the 2006 season, irrigators are employing a shortage-sharing rotation schedule that has proven successful in previous years.

District I staff participated in the District IV Lower Rio Grande (LRG) Meter Blitz for non-domestic wells in the Las Cruces area. This state-wide effort was to inspect, locate by GPS coordinates, and photograph all non-domestic wells requiring meters within the LRG Water Master District for compliance with the recent State Engineer order that required all non-domestic wells be metered by March 1, 2006.

Also, many entities that do not own water rights, lease San Juan-Chama project water from municipalities that do not have the need for their total allocations. District I monitors release amounts with staff tracking 2005 diversions and consumptive use amounts.



Management Progress

of the State Engineer. Work on developing district-specific rules and regulations area already underway in the Lower Pecos Basin, the Lower Rio Grande, the Rio Gallinas, and the San Juan Basin with an extensive public input process to support it. Also, a metering order was issued for the Lower Rio Grande which became effective in March of 2006. Metering has already been successfully implemented in the San Juan, Roswell, Carlsbad, and in the Gila-San Francisco Basins.

The objective of Active Water Resource Management is not to threaten rights to the use of water but to protect and preserve rights to the use, amount and priority of each water-rights owner.



Charles Jackson

Mimbres water master in the field.



The **District II** office has the responsibility of administering both surface- and ground-water rights within the Roswell, Carlsbad, Fort Sumner, Hondo, Peñasco, Portales, Curry County, Lea County, Capitan, Jal and new Causey Lingo basins. In addition, the District II office processes all applications for well drillers, for the entire state.

Personnel from District II have been heavily involved with the development of the Roswell Basin guidelines, rules and regulations pertaining to AWRM within the Pecos Drainage Area, Carlsbad Irrigation District supplemental well regulations, basin-specific regulations, rules and regulations pertaining to administration of water rights on the High Plains, surface-water impoundments regulations, well drillers rules and regulations, general state rules and regulations, and rules and regulations pertaining to domestic wells.

The State Engineer this year declared the Hondo Basin Sub-District and created the Hondo Basin water master position. The water master, stationed within District II, is currently involved in those metered rights associated with the Village of Ruidoso, Alto, Ruidoso Downs, and other municipalities. In addition, the State Engineer created a Carlsbad Basin supervisor position and the incumbent is actively involved in the management of the diversion of supplemental groundwater in the Carlsbad Irrigation District.

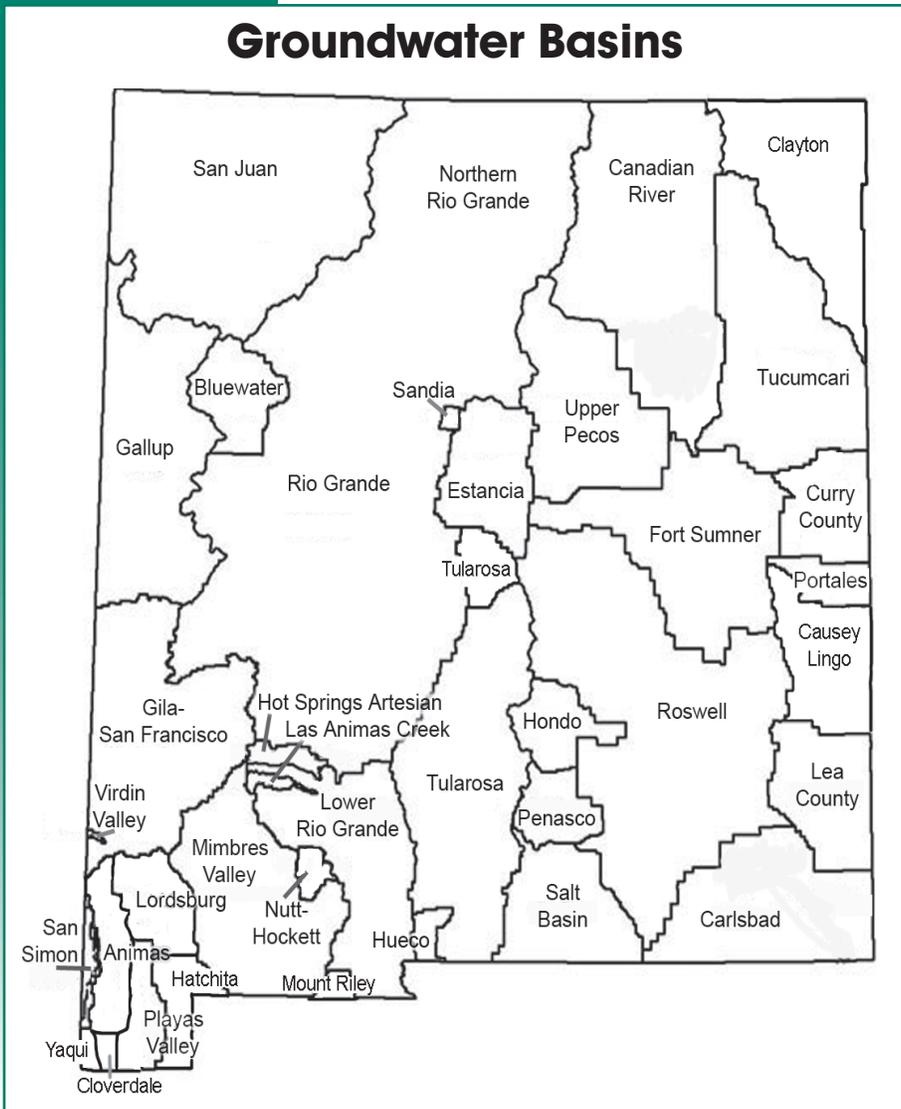
During this fiscal year, District II personnel measured water levels within the Fort Sumner and Roswell basins and the Carlsbad areas under the State Engineer's cooperative program with the U.S. Geological Survey. An extensive data review was also performed for this program, which included the review of water-level data collected by a private contractor. District staff also provided assistance in the development of the annual aquifer depletion map used by the Internal Revenue Service to determine the cost of the loss for Lea County

farmers. Personnel also performed extensive fieldwork associated with the processing of applications and in the oversight of the construction and plugging of Artesian wells.

During this fiscal year, the Roswell Basin Water Master's Office read over 1,300 groundwater meters with an average of eight readings per well per season. Over the course of the season, approximately 25 percent of these wells were also rated and adjusted for water diverted while inoperative. Similarly the Carlsbad Basin supervisor and water master read over 150 ground water meters for primary wells and over 165 meters for supplemental wells within the Carlsbad Basin with an average of four readings per well per season. The Pecos River water master continued to assume the responsibility for accounting for surface water diversions from Puerto de Luna to Black River near the state line. This includes surface water measurements in the Fort Sumner Irrigation District, Hagerman Irrigation Company and Carlsbad Irrigation District.

District II staff also continue to be involved with the permitting of water rights associated with the construction and operation of a cheddar cheese plant in Curry County that

Groundwater Basins



operator Glanbia, an international dairy products company based in Ireland, says will be the largest in North America.

A number of District II staff members have also been involved with the Pecos Project, developed from the Partial Final Decree on state-line delivery obligations of Pecos River water to Texas. This included the administrative process leading up to the construction of a Pecos well field and the review, analysis and permitting of water-right transfers associated with meeting these delivery obligations. Members of the District II staff were also a part of the evaluation committee formed to select a contractor to assist the Office of the State Engineer/Interstate Stream Commission in the acquisition of water rights within the Pecos River Basin and a contractor to provide drilling services for the Pecos well field. District II personnel have also performed compliance inspections for all wells on this site.

In addition to the regular office hours in Roswell, District II staff keeps weekly hours at the Lea County Court House in Lovington, the Roosevelt County Court House in Portales, Curry County Extension Office in Clovis, Carlsbad Irrigation Office in Carlsbad, and Ruidoso Village Hall.

During fiscal year 2005-2006, the Roswell office of District II processed more non-domestic well applications than any other area of the state.

The **District III** staff continued to maintain the detailed annual records of the diversions and consumptive uses of the water appropriated from the Gila and San Francisco rivers. This process culminated with the annual crop inventory of all irrigated lands within the Gila-San Francisco, San Simon and Virden Valley basins. The district has primary responsibility to administer water rights in the Gila-San Francisco, San Simon and Virden Valley basins in accordance with the U.S. Supreme Court decree in *Arizona v. California* and the Globe Equity Decree No. 59. The Gila Basin water master issued numerous orders related to administration of the decree, including orders to curtail illegal diversions, metering orders, and orders requiring access for the U. S. Geological Survey to gauging sites.

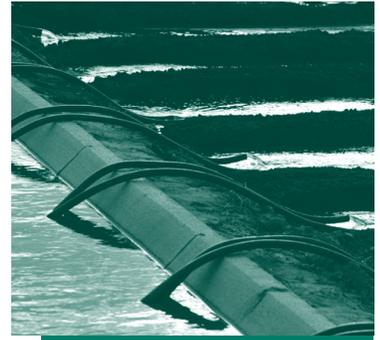
District III saw the declaration of four new basins and extensions to four existing basins during the fiscal year. The new basins include the Mount Riley Basin near Deming and the Cloverdale, Hatchita and Yaqui basins in the boot heel area of the state. With the new basins, the total area administered by the District III Office increased by 21 percent, to a total of 14,666 square miles. Staff members continue to assist large numbers of area residents declaring water rights.

AWRM advancement within District III was marked by the creation in December 2005 of the Upper Mimbres Water Master District and the appointment of the water master. In February 2006, water masters from all over the state converged on the district to install surface water measuring devices on all of the active ditches. Shortly after, the Mimbres River Water Master issued an order requiring the designation of “to-be-irrigated” lands (TBI) for determining delivery requirements to each ditch. Administration during the fiscal year was based on direct flows, and the water master coordinated release of storage water from Bear Canyon Reservoir.

Other AWRM accomplishments included formalization of numerous community ditches within the district, creation of the Upper Mimbres Water Master District Advisory Committee, and numerous public outreach initiatives designed to better inform residents about water administration in New Mexico. The District III Office has received numerous positive comments about the water master’s impact within the district.

The District III WATERS staff completed population of the WATERS database for the Animas Valley Underground Water during the fiscal year, allowing for easier use of the water-right files in the continuing adjudication process within the basin.

Additionally, the District III staff completed crop surveys for the Animas Valley, Playas, Lordsburg, Cloverdale, Yaqui, Hatchita and Nutt-Hockett underground water basins and the Mimbres River, and performed all of the measurements within the district for the cooperative groundwater-level-monitoring program with the U.S. Geological Survey. The staff also again this year participated in the annual water fair in Palomas, Mexico, and other outreach activities in New Mexico.





District IV staff continued to see an increase in the number of applications filed to drill replacement irrigation wells within the Elephant Butte Irrigation District due to the prolonged effects of the continuing drought. For the 2006 irrigation year, the irrigation district allocated 14 acre-inches for the irrigation season, sending many farmers scrambling to replace marginal irrigation wells and wells showing signs of failure. About 140 applications for replacement irrigation wells were filed during the fiscal year. The district office hired two additional technical staff to address backlogged applications and bring those applications to final resolution through administrative actions.

In March the district staff, with the assistance of Office of the State Engineer/Interstate Stream Commission statewide staff, inspected over 3,200 wells in the Lower Rio Grande Water Master District for metering compliance. In December 2004 the State Engineer signed an order requiring all wells, except for single household wells and livestock wells, within the Lower Rio Grande Water Master District to be metered by March 1, 2006. Inspections results revealed that about 25 percent of the wells had been properly metered. Owners of permitted un-metered wells began receiving metering compliance warnings from the water master for immediate metering compliance. Pre-basin well owners have been given until the end of the irrigation season to properly meter their wells.

On September 23, 2005, the State Engineer extended the Tularosa Underground Water Basin by including the undeclared lands immediately north of the existing basin. The

Water Administration Technical Engineering Resource System

The Water Administration Technical Engineering Resource System, or WATERS, is a web-based system created by the Office of the State Engineer WATERS to make the agency's extensive water right records more readily accessible to staff and the public. For the staff, WATERS is a critical tool in the administration of water rights and for active water management. The database tracks the progress of new applications through the stages of the administration process from the date of filing until action is taken. Activity after the application has been acted is also tracked via the database, as will any non-compliance of permit conditions, greatly facilitating the agency's monitoring of permit compliance. The locations and water levels of domestic wells are also entered and stored in the database and a meter-reading module allows division staff to track metered water use, facilitating tracking and enforcement of metered appropriations.

For both the staff and public, WATERS provides information on the history of individual water right claims in New Mexico, court orders and decrees, hydrographic survey results, water right applications pending before the State Engineer, and electronic images of water right documents. Using WATERS, anyone can obtain instant information concerning water use, including comprehensive data about domestic, irrigation, commercial and other water rights, location of rights, and owners of rights, as well as details of well construction. In particular, users can find out how much water use is permitted in a water basin, track changes in water use patterns, bring together regional data on water use, and compile and analyze data to build

water-use models. WATERS is capable of linking to a geographic information system to create intricate maps of water rights and resources. WATERS is fulfilling one of the Governor's initiatives to fully automate the agency and help implement the vision of Active Water Resource Management. It will help enable the state to manage its water both in times of plenty and in times of drought.

The program's success requires adequate resources to accomplish this monumental initiative. The system is operational in six of seven high-priority water basins and is partially complete in the seventh basin. Another five areas are also complete as well as all pending water right applications. An update of the Lower Rio Grande Basin has begun to include recent water-rights adjudication activity.

While completion is slated for 2018, WATERS is already providing water planners, researchers, administrators and the general public with state-of-the-art access to water-use information. WATERS is streamlining research, improving enforcement and making water application tracking easier, and improving the ability of the Office of the State Engineer to serve the public. Also, by archiving the up to 100-year-old water right records, it is helping to preserve a vital aspect of New Mexico's history.

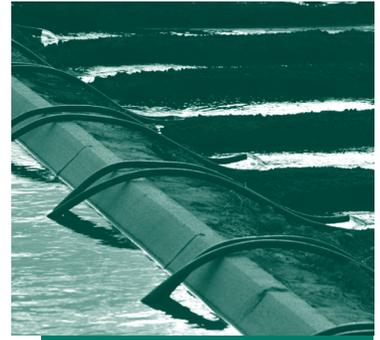
To access WATERS from the Office of the State Engineer website, click on "Water Information" on the home page. Then, click on the "WATERS User Login/Registration" hyperlink at the top of the page. All users are asked to register using their e-mail address as their user identification.

extended area includes lands within the vicinity of Claunch and the Gran Quivira and includes approximately 576 square miles.

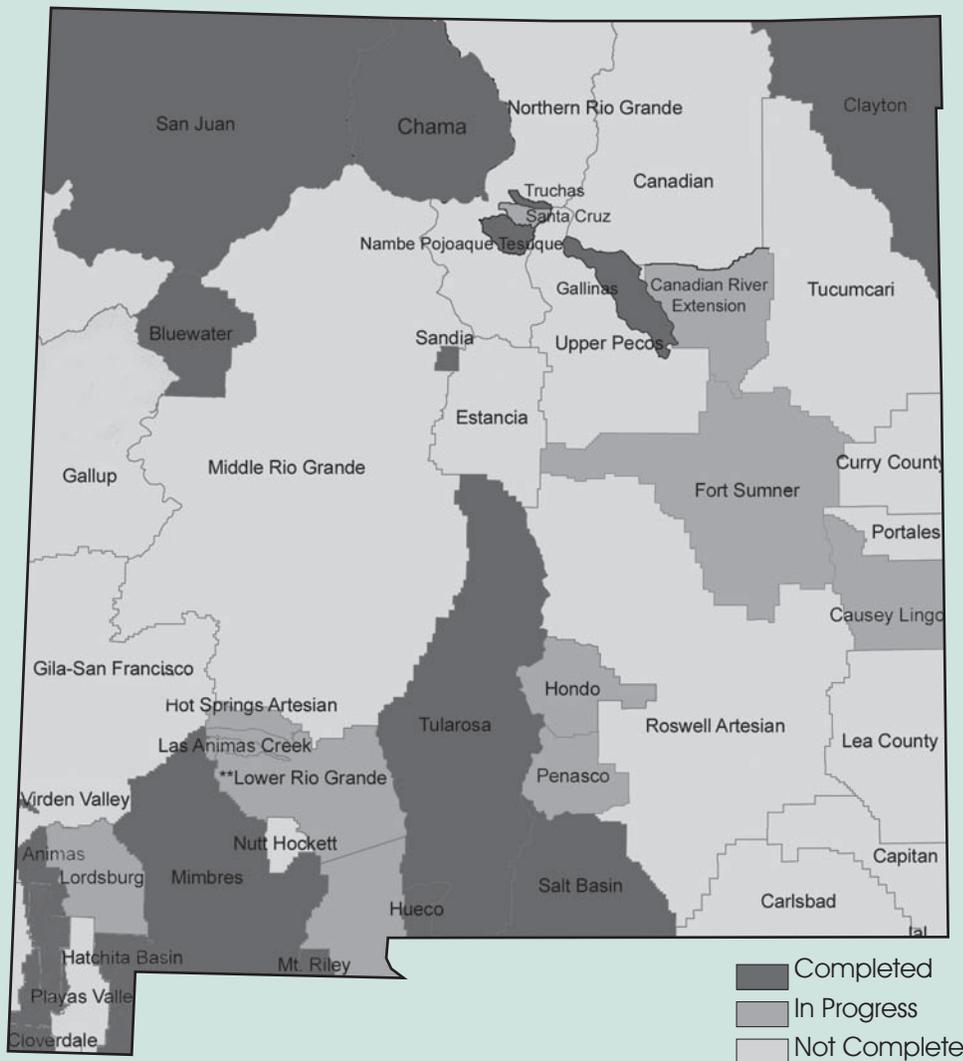
Staff continued to hold field office hours in Alamogordo twice a month at the Otero County Courthouse. District WATERS staff continued the maintenance of water rights files by entering and imaging documents that change any of the essential water rights elements associated with those files. In addition, WATERS staff have been entering and imaging documents that were initially overlooked.

The District V Office serves the San Juan Basin, which includes the San Juan, Animas, La Plata, Pine, and Navajo rivers, and numerous smaller tributaries and groundwater sources. The vast majority of water usage in the basin comes from surface water supplies emanating in Colorado. The San Juan Basin, and in particular the city of Farmington and surrounding areas, continued to see significant growth due to the favorable energy market. This growth has led to an increased demand on water resources mainly by cities and rural domestic water providers looking to expand their systems.

Efforts to advance the basin's AWRM initiative continued. The State Engineer signed an order creating the San Juan Basin Water Master District. Staff also made progress on district-specific rules and regulations. Draft documents were refined and are nearing the public review stage of the promulgation process.



Status of WATERS Implementation





Major water users on the San Juan River once again entered into a voluntary short-age-sharing agreement. The San Juan Basin water master administered flows of San Juan River in accordance with this agreement. In addition, the San Juan Basin water master continued to make improvements and perform routine maintenance to the diversion-metering infrastructure installed over the past few years. Real-time data collected at the stations is available on the Internet through the Office of the State Engineer website.

The San Juan Basin adjudication also took a big step forward during the 2005-2006 fiscal year. A court-ordered schedule was signed setting a timeframe for adjudication of irrigation rights on the La Plata River. Service packages will be mailed to irrigation water users on the La Plata River section at the start of the next fiscal year. The order may be used as a template for the adjudication of rights in the remainder of the basin.

District VI administers water rights within the northern portion of the Rio Grande Basin, the Canadian Basin and its new extension, the newly declared Clayton Basin, the Upper Pecos Basin and its new extension, the Tucumcari Basin and its extension, and the surface waters within those basins. With the declaration and extension of these new areas in 2006, the previously administered area was increased to 1.5 times its previous size. A Water Master Office is maintained in Cimarron for the Cimarron and Rayado decrees.

AWRM activities within District VI include three priority basins: the Rio Gallinas (tributary to the Pecos River), the Nambe-Pojoaque-Tesuque Basin, and the Rio Chama. The Nambe, Pojoaque and Tesuque rivers and Rio Chama are all tributaries to the Rio Grande. Active adjudications are ongoing for these stream systems and groundwater

basins. In addition to the Cimarron-Rayado Decree water master, five other water masters work out of the Santa Fe Office in these three AWRM priority basins. It is expected that the water master staff will double in the future. The Rio Gallinas water master should have an office in the city of Las Vegas in the near future, as soon as accommodations are found and secured.

WATERS personnel have completed abstracting water rights files for these AWRM areas into the water rights database, making water rights files in part accessible to division personnel and to the general public over the Internet.

District VI personnel assisted other State Engineer staff in conducting inspections of over 3,200 wells in the Lower Rio Grande

Water Master District for metering compliance. Water masters from the Santa Fe Office assisted in installing surface water measurement structures in the Mimbres Basin and Cimarron Creek area in support of the State Engineer's AWRM initiative.

Two major Indian water rights settlement agreements were signed this year for tribal areas within District VI boundaries: the Taos Settlement Agreement and the Aamodt Settlement Agreement in the Nambe-Pojoaque-Tesuque basin. These settlement agreements require funding for full implementation, but the signings were the culmination of many years of intense negotiations. The settlements, when fully implemented, will greatly improve water rights administration within District VI.

District VI personnel keep office hours twice a month in Taos and will begin holding regularly scheduled office hours in the Clayton area as part of the declaration of that area as a new groundwater basin. A field office is also being planned for the Mora area on a regular basis.



State Engineer John D'Antonio speaks at a public meeting in Roswell announcing new domestic well rules and regulations.

Hydrology Bureau

The Hydrology Bureau's 14 employees perform a wide range of activities in support of the Office of the State Engineer and the Interstate Stream Commission. The bureau develops water resource models and administrative policies, evaluates water availability, assesses and quantifies hydrologic impacts, provides expert testimony for litigation and adjudication cases, designs and manages technical projects, provides GIS and mapping services, and runs the agency library.

The Hydrology Bureau again provided extensive technical support during the 2005-2006 fiscal year to the AWRM initiative. Bureau staff provided project management and GIS support, conducted field investigations and hydrologic analyses, and assisted in the development of district-specific rules and regulations. Notably, bureau staff developed a generalized hydrologic analysis for the Lower Pecos River Basin, played a crucial role in the development of Lower Rio Grande district-specific regulations, conducted model analyses of Rio Chama depletions, and assisted with field measurement and administration in the Gallinas River and Upper Mimbres River areas.

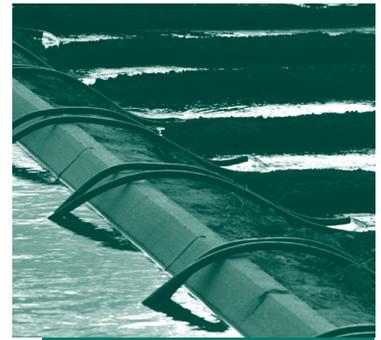
During this fiscal year the Hydrology Bureau worked on more than 55 hydrologic investigations in 15 different basins in support of water rights application processing. Of these, 49 investigations involved protested or aggrieved applications processed in cooperation with the Administrative Litigation Unit. The bureau also worked on six unprotested applications submitted by the Water Rights Division that required non-routine hydrologic evaluation. An investigation may pertain to a single water rights application or multiple applications and may involve anywhere from a few acre-feet up to tens of thousands of acre-feet of water. Not all of the water rights investigations performed during the year were finalized. Several investigations were resolved prior to project completion, and some investigations continued into the 2006-2007 fiscal year.

The bureau also provided support to the Water Use and Conservation Bureau, assisting in the evaluation of proposed subdivisions in Catron, Cibola, Lincoln, and Socorro counties. Bureau staff also reviewed proposed subdivision regulations for Guadalupe County.

The bureau continues to develop state-of-the-art technical tools to assess hydrologic impacts. A number of groundwater flow models prepared by the Office of the State Engineer, the U.S. Geological Survey, and private consultants are available for various portions of the state. These models must be updated and new models developed as activity increases in an area. During the fiscal year, bureau staff enhanced the Middle Rio Grande model, extensively revised and updated the Tularosa Basin model, and documented the Taos settlement model. In the Mimbres Basin, bureau hydrologists initiated development of a new administrative groundwater model to replace the existing model that has been in use since the late 1970s. The model incorporates new information about the basin and will be more accurate and easier to use than the previous model.

The Hydrology Bureau continued to provide valuable assistance to the Interstate Stream Commission and Litigation and Adjudication Program. In the Lower Rio Grande, the bureau continued work on studies aimed at improving the state's understanding of the hydrologic system below Elephant Butte Reservoir. These efforts allow New Mexico to better manage water resources in this area, assist in the resolution of the ongoing adjudication, and protect the state's interests in case of threatened litigation by Texas.

The Hydrology Bureau remained integrally involved in state and regional water planning activities during this fiscal year and helped implement elements of the State Water Plan. The bureau reviewed a regional plan for the Rio Chama water planning region and participated in the assessment of brackish water resources in the Tularosa Basin.



Hydrologic Investigations in Support of Applications

Basin	Protested or Aggrieved	Unprotested	Total
Canadian River	1	1	2
Carlsbad	1	0	1
Estancia	2	0	2
Gallup	3	0	1
Hondo	3	0	3
Jal	1	0	1
Lea County	4	0	4
Lower Rio Grande	3	0	3
Portales	0	2	2
Rio Grande	16	2	18
Roswell	4	0	4
Sandia	1	0	1
San Juan	1	0	1
Tularosa	7	0	7
Upper Pecos	1	1	2
Surface Permits	3	0	3
Total	49	6	55



The bureau continued its support of the Taos adjudication, contributing to the success of settlement negotiations. Bureau staff finalized the Taos groundwater model documentation, an attachment to the Taos Settlement Agreement. The bureau continued to support agency efforts in other adjudications across the state, including conducting analyses and participating in settlement negotiations related to the Jemez River adjudication and the Aamodt adjudication in the Nambe-Pojoaque-Tesuque area.

Also during this fiscal year, the bureau continued its involvement in cooperative water resource investigations in the Española Basin with the state Bureau of Geology and Mineral Resources and the U.S. Geological Survey. The bureau provided project management of multiple studies that included geophysical, geochemical, hydrogeologic and surface water investigations involving extensive coordination among various state and federal agencies and private contractors. Notable among these projects was the installation of several monitoring wells near Santa Fe by the U.S. Geological Survey, which provide vital groundwater data for the area, and an aeromagnetic survey over the eastern portion of the basin to define the location of the aquifer in that area.

The Hydrology Bureau continued its joint efforts with the Geological Survey to collect and store stream-flow and groundwater-level data throughout New Mexico. This year the bureau continued supervision and support of the agency's statewide water-level monitoring program, performing or overseeing contractor monitoring activities in the Curry County, Lea County, Portales, Santa Fe, Tularosa and Upper Rio Grande areas.

The Hydrology Bureau also maintains the Office of the State Engineer/Interstate Stream Commission library. The bureau continued working to establish Internet access to the holdings of the library to improve research capability for the agency, other agencies, and the public, with the goal of establishing the facility as one of the premier water resource libraries in the state. A preservation program is underway to slow the deterioration of the library holdings, which include many unique historical documents. This year document storage at the library was greatly improved through the installation of a modern "space saver" shelving system.

Dam Safety Bureau

The Dam Safety Bureau regulates dam safety in New Mexico. In ensuring the safety of dams, the bureau performs inspections to verify the dams are operated and maintained in a safe condition, reviews plans for new dams and modifications and repairs to existing dams, and issues permits to construct and operate the dams. The bureau inspects construction to verify the dams are built or repaired in accordance with the plans on file with the State Engineer. Safety orders are issued when a serious dam safety deficiency exists with the potential to result in a threat to life and property. The bureau also manages state funds for dams and reviews proposals for each project and manages federal funds to improve the New Mexico Dam Safety Program.

During the 2005-2006 fiscal year, the bureau inspected 160 dams on the inventory and two dams in Eddy and Doña Ana counties that were the subjects of complaints. The bureau issued four safety orders and an amended order. An unsafe, non-inventory, jurisdictional dam in Doña Ana County near the Village of Old Picacho was ordered breached and compliance is still pending. Enchanted Hills Flood Control Dam No. 1 in Sandoval County has developed cracks and was modified by a developer to an unsafe condition. The crack is being investigated and a plan to restore the dam to a safe condition is being developed. Lower Vallecito Irrigation Dam in Sandoval County was ordered drained until maintenance and design deficiencies are addressed. The City of Clovis was ordered to obtain a permit for a jurisdictional wastewater dam under construction. Clovis initiated the permitting process then moved forward with construction without a permit. The bureau completed the review of plans to obtain a permit and the city must respond to comments raised as a result of the review. An amended safety order was issued to the owners of Cabresto Lake Irrigation Dam in Taos County to limit storage in the dam due to a deficient spillway and seepage issues. The storage limitation will remain in place until the dam is rehabilitated or breached.

The bureau reviewed plans for four new dams and permits were issued to two of these projects during the fiscal year. A new permit for the City of Artesia's Wastewater Irrigation Dam in Eddy County was issued and construction is near completion. A new permit for the Montoya Arroyo Flood Control Dam in the City of Rio Rancho was issued and construction will begin in August 2006. Review of plans and specifications for a new dam for the City of Aztec to supplement their water storage supply has been completed and the bureau is waiting for the engineer to respond to review comments. Preliminary investigations were reviewed for a new flood control dam for Intrepid Potash NM, a private potash mining company located in Eddy County. A complete design submittal and permit application has not been submitted for review.

The Dam Safety Bureau reviewed plans to investigate, repair or modify 14 jurisdictional dams. Many dams in New Mexico are well over 50 years old and rehabilitation is required. Eleven of these 14 dams, including 10 earth embankment structures, are classified as "high hazard potential."

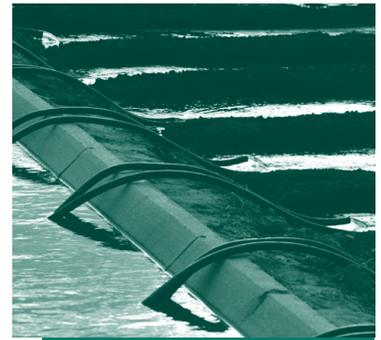
Lake Roberts Dam, on the Gila River in Grant County, is owned by the New Mexico Game and Fish Department and provides water storage for recreational use. Rehabilitation of the dam must address spillway capacity deficiency and seepage issues. An updated hydrologic analysis of the watershed, including a breach analysis and incremental damage assessment, was reviewed and accepted by the bureau. Potential upgrades include replacing the dam or armoring the dam and providing for seepage control and collection. Submittals of planning and design documents to address the needed upgrades are pending.

Dam Safety Inspections		
Year	Dams Inspected	Orders Issued
1996	193	1
1997	142	1
1998	155	4
1999	126	3
2000	96	0
2001	103	2
2002	198	2
2003	172	4
2004	160	1
2005	168	2
2006	162	4

The Game and Fish Department also owns the high-hazard Eagle Nest Dam, a concrete arch structure at the headwaters of the Cimarron River in Colfax County that provides water storage for drinking water, irrigation and recreational activity. The dam, the only high-hazard dam that is not an earth embankment structure, is operated by the Interstate Stream Commission. The scope of work at the dam involves repairing the outlet gates, evaluating erosion potential at the downstream toe area due to overtopping, and designing an alternate access route. The bureau has reviewed and commented on the access road and the need to prepare a physical model to evaluate the erosion potential. Additional submittals by the consulting engineer are pending.

The Lower Vallecito (Ponderosa) and San Mateo dams, two more dams with high hazard potential, are both subject to State Engineer orders restricting storage. The Lower Vallecito Dam on Vallecito Creek in Sandoval County provides water storage for irrigation in the community of Ponderosa and is owned by the Ponderosa Ditch Association. The dam has been inadequately maintained and has inadequate spillway capacity. The San Mateo Dam on San Mateo Creek in Cibola County provides water storage for irrigation in the community of San Mateo and is owned by the San Mateo Community Ditch. The dam has seepage that emerged on the down stream face. Both dams are being evaluated by the U.S. Army Corps of Engineers as part of the Acequia Restoration Program. The bureau has provided numerous comments for both dams on the geotechnical analysis, hydrologic analysis and recommended alternatives provided by the Corps. Responses from the Corps are pending. The Office of the State Engineer is funding 25 percent of the design and construction cost for both projects.

Five of the dams with high hazard potential are flood control dams, with three of those owned by the Albuquerque Metropolitan Arroyo Flood Control Authority. The Flood Control Authority submitted plans for Black Arroyo Dam, in Bernalillo County with the reservoir in Sandoval County, to add a water quality control structure in the reservoir to improve the quality of water release from the reservoir. Changes to the design must be





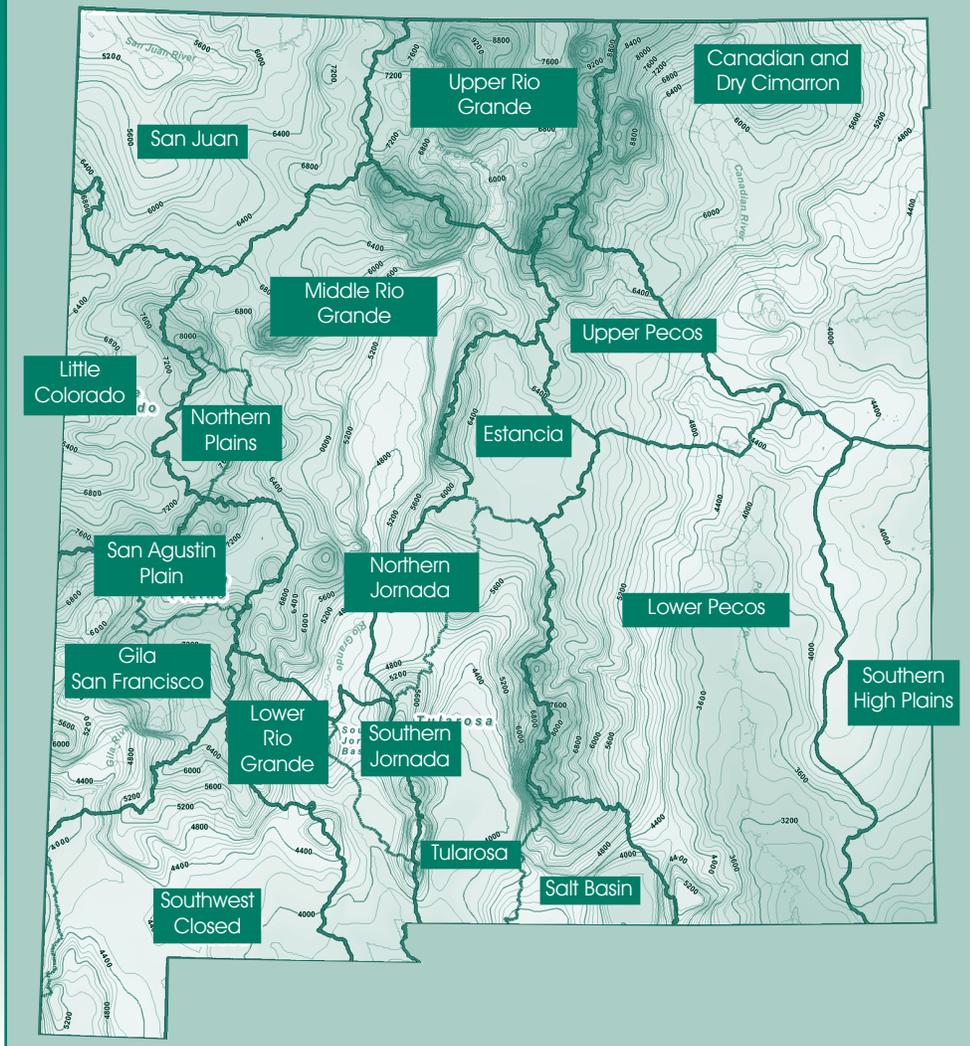
addressed before approval will be provided. The bureau has reviewed and approved Authority plans for the Ladera 15 Dam, which call for the installation of a waterline through the dam. The scope of work included breaching the dam and constructing a conduit to convey the waterline. This project is associated with the city of Albuquerque's San Juan-Chama Diversion Project. Construction was completed on the project during fall 2005. A developer has proposed building a home in the flowage easement of the emergency spillway of Pino Dam, the third Albuquerque flood control structure. The hydraulic report was reviewed and a response from the engineer to address updated hydrology and complete flood routing through the reservoir is required.

The scope of work for Sandia Mountain Site 1 Dam, which provides flood protection for the Town of Bernalillo and is owned by the Coronado Soil and Water Conservation District, involves raising the height of the dam to increase capacity through the spillway and armoring the spillway to prevent erosion. The design and construction documents have been 95 percent approved with minor issues to be addressed. Construction is anticipated for fall of 2006. The State Engineer is funding 25 percent of construction.

Hatch Valley Site 6 Dam provides flood protection for the community of Garfield in Doña Ana County. The dam is owned by the Caballo Soil and Water Conservation District. The project involves armoring the spillway and potentially replacing the outlet conduit. The U.S. Natural Resource Conservation Service, which funded 100 percent of the investigation and design, is managing this project. A review of the design raised numerous concerns by the bureau and a response from the Conservation Service is pending.

The two remaining dams with high hazard potential are MolyCorp Tailings Dam 4, which provides molybdenum tailings storage at the mine in Questa, and Power Lake Dam, which provides water storage for recreational use on El Rito Creek in Guadalup County. Construction to raise the final approved lift on the tailings dam, owned by MolyCorp, was completed this fiscal year. Plans have been submitted to raise the dam an additional 38 feet in three lifts. A review of the plans by the bureau is in progress. The Power Lake Dam, owned by the city of Santa Rosa, was ordered breached due to damage from a flood and the lack of maintenance. The hydrologic analysis was reviewed and accepted by the bureau. Submittals of additional design analysis, construction

Surface Basins and Sub-Basins with Groundwater Contours



drawings and specifications are still required. Funds for the design of the rehabilitation are provided by the Office of the State Engineer.

Two dams under review have significant hazard potential. Bloomfield Dam is an earth embankment structure that provides drinking water storage for the city of Bloomfield in San Juan County. The dam is an off channel structure that diverts water from a local irrigation ditch. The scope of the project includes upgrading the spillway to address deficiencies with capacity and dredging of the reservoir to restore storage capacity. The geotechnical analysis was completed for this project and accepted by the bureau. Submittals of additional design analysis, construction drawings and specifications are still required. Funds for the design and construction are provided by the Office of the State Engineer.

Caballo Arroyo Site 4 Dam is an earth embankment structure that provides flood protection for farmland in Doña Ana County. The dam is owned by the Caballo Soil and Water Conservation District. A plan was submitted to grout a longitudinal crack on the dam crest. The repair was reviewed and approved by the bureau and construction was completed in the fall 2005.

The final dam on the list is the Little Halla Wilson Dam, an earth embankment structure that provides flood protection in Doña Ana County. The dam was design by the Conservation Service for La Union Soil and Water Conservation District. The dam is jurisdictional but was not permitted by the Office of the State Engineer. The classification of the dams is either high or significant hazard potential. The spillway of the dam sustained damaged during a recent flood. The Conservation Service is proposing armor-ing the spillway but will not address permitting or other design deficiencies. The bureau raised concerns with the limited scope and is requiring a permit for the dam. A response from the Conservation Service and Doña Ana County Flood Commission is pending.

Plans to reclaim four tailings dams were also reviewed by the bureau. The bureau reviewed and approved plans to reclaim and close Oglebay Norton tailings dams in Rio Arriba. The dams stored mica tailings and construction was completed during this fiscal year. Plans and specifications were reviewed and approved to reclaim York Canyon Tailings Dam 3 in Colfax County. The dams stored coal tailings and construction was completed during the fiscal year. The reclaimed dams will be monitored and inspected for a few years before being removed from the bureau's inventory of dams. Plans and specifications were reviewed to reclaim Phelps Dodge Tailings Dams 2 and 3 in Grant County. The dams store copper tailings and construction is ongoing.

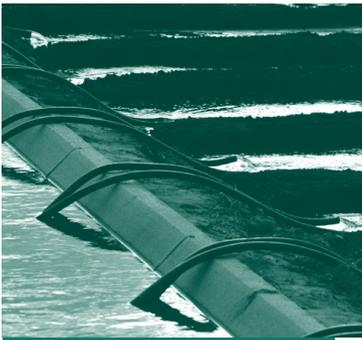
Construction was completed during this fiscal year on the city of Albuquerque Rio Grande Diversion Dam. The permit was issued last fiscal year. The diversion dam is an inflatable structure and full operation is pending construction of the water treatment plant. This project is a key element of the city's San Juan-Chama Diversion project. Construction was also completed this fiscal year on the Mosaic Potash Clay Tailings Dam in Eddy County.

This fiscal year, the bureau used funding from the Federal Emergency Management Agency to continue scanning dam construction drawings and dam safety reports to improve access to the data and to upgrade equipment and attend technical training seminars. The FEMA grant was also used to fund a workshop in Albuquerque in April for dam owners. The workshop provided information on dam safety laws and regulations, owner liability, maintenance and repair, emergency action planning and how to retain the services of an engineer. The workshop was presented by the Association of State Dam Safety Officials and attended by 85 dam owners in New Mexico.

Water Use and Conservation Bureau

The Water Use and Conservation Bureau inventories ground- and surface-water withdrawals and depletions by category, county, and river basin; maintains water-use databases; and analyzes crop, weather, and water-use data. The bureau quantifies water requirements for irrigation and other uses and prepares technical reports for the water resources investigations and adjudication activities of the Water Rights Allocation and Litigation





and Adjudication programs. In addition, the bureau coordinates water conservation activities, including maintaining a bibliographic database and clearinghouse for information; developing and distributing educational materials to school children, the general public, public water suppliers, and businesses; conducting workshops; and assisting public water suppliers, irrigation districts, and government institutions in establishing demonstration projects and water conservation programs.

During the 2005-2006 fiscal year, the bureau prepared technical reports on consumptive irrigation requirements for cropland irrigated with surface water from the Gallina area of Rio Arriba County and continued work on irrigation water requirements for the Lower Rio Grande. At the request of the Administrative Litigation Unit, the bureau reviewed and prepared technical exhibits for the Berrendo Water Cooperative and the Edgewood Elementary School and Mountainview Elementary School Return Flow Plan. Additional, bureau personnel testified at the district court hearing on the work related to Berrendo. At the request of the Interstate Stream Commission, the bureau reviewed the

Water Conservation Education

The Water Use and Conservation Bureau manages an active outreach program on water conservation education. This program evolved in response to the increasing pressures on the state's limited water supply and the realization that, for many parts of the state, water conservation may be the only practical method to meet the demand for water. The program encourages wise water use by New Mexico citizens, businesses and organizations. It includes free publications and workshops, a multi-level education curriculum, participation in water fairs, and partnerships with business, government and citizens' groups.

In an effort to make important water conservation information accessible to more New Mexicans, in fiscal year 2005-2006, two very popular informational pieces were translated into Spanish. The first, *Agua Action or Acción Para El Agua*, is a one-page guide to the indoor and outdoor action steps that all New Mexicans can easily take to conserve water in our arid state. It is popular for both classroom use and in the home. The second informative piece, *A Waterwise Guide to Rainwater Harvesting or Guía Para La Persona Educada de Como Cosechar Agua de Lluvia*, is an introduction on how to collect, or "harvest," rainwater. These reprints were funded, in part, through a Water Conservation Field Service grant provided by the U.S. Bureau of Reclamation. All information pieces are available for free by calling 1-800-WATERNM or e-mailing waternm@ose.state.nm.us or can be downloaded from the agency website at www.ose.state.nm.us/water-info/conservation.



Other significant contributions in the 2005-2006 fiscal year:

- Distributed more than 119,000 pieces of educational water conservation materials to schools, municipalities, businesses, organizations and individuals.
- Secured partners and funding for development of *Discover the Waters of New Mexico* education booklet to be completed in fiscal year 2006-2007. The colorful, hands-on elementary school booklet will be correlated to the New Mexico Public Education Department's content standards, benchmarks and performance standards.
- Began development of a landscaping DVD series. The first ten-minute DVD, *Irrigation 101*, is being created in a partnership with the city of Santa Fe and Santa Fe Community College. The DVD, in both English and Spanish, is designed to assist state building personnel and other small-scale commercial irrigators on the basics of running and maintaining an irrigation system.
- Commenced work with a water-harvesting contractor to research and write a rainwater harvesting how-to manual. A draft of the manual has been completed. The final edits and graphics will be completed following a peer review of the draft in fiscal year 2006-2007.
- Presented reports at state and national water conservation conferences and participated in state water festivals, fairs, teacher workshops and other educational events, including hands-on activities for students and adults.
- Maintained the Water Conservation Program section on the Office of the State Engineer's website. The water conservation web page received about 2,200 hits during the year.
- Participated in state and national associations involved in water conservation and environmental education activities.



regional water plans for the Chama Region. The bureau also reviewed the water development plans for Ruidoso.

The Water Use and Conservation Bureau has completed research of water use accounting methodologies used in other states and countries in order to evaluate state-of-the-art approaches for identifying municipal conservation targets. A pilot test of a water use accounting methodology based on this research is currently being implemented in two New Mexico cities, Gallup and Ruidoso. A partnership has been formed with a third city, Santa Fe, to identify the effectiveness of their various water conservation and demand reduction efforts. The combination of the research, pilot projects, and partnerships is anticipated to be completed in fiscal year 2006-2007 and will be utilized in establishment of water conservation planning guidelines for New Mexico.

Another duty of the Water Use and Conservation Bureau is to review water-supply plans for certain subdivisions. State law requires county commissioners to request an opinion from the State Engineer on whether the subdivider has enough water to meet the demand of the subdivision and can fulfill the proposals included in his subdivision plan. The Office of the State Engineer has 30 days to submit the opinion after receiving a written request and information from the county commission. Without the opinion, the commission is allowed to proceed in accordance with its own best judgment.

When the State Engineer receives a subdivision proposal it checks if the subdivider's analyses of water demand and availability are technically correct and reasonable and demonstrate that sufficient water is available. The bureau also checks if the subdivision has sufficient water rights available and if the water rights are valid. This information is compared with the water availability assessment, the water demand analysis, the disclosure statement, and the restrictive covenants.

In fiscal year 2005-2006, the bureau reviewed 153 subdivision and development proposals, issued favorable opinions on 33 proposals, unfavorable opinions on 103 proposals, and deferred 17 proposals.

Bureau staff also provides technical assistance to county staff, subdividers, developers, consultants, and the general public. In fiscal year 2005-2006, the section assisted Bernalillo, Guadalupe, Sandoval, Valencia and Santa Fe counties in development of their subdivision regulations. The bureau maintains and updates a database containing a summary of all subdivisions and development reviews. This database can be accessed on the State Engineer's website at <http://www.ose.state.nm.us/water-info/subdivisions.html>.



Subdivisions Reviewed

Year	Reviewed
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1991	37
1992	24
1993	35
1994	40
1995	92
1996	141
1997	168
1998	186
1999	149
2000	116
2001	104
2002	94
2003	84
2004	119
2005	151
2006	153



Hearing Unit

The State Engineer's Hearings Unit conducts administrative hearings on protested and aggrieved water right applications. During the 2005-2006 fiscal year, 43 new hearing matters were opened and 81 matters were closed. Of the 81 closed matters, final dispositive orders were entered for 43 applications. The final orders include seven applications granted in whole or in part, subject to conditions, 15 applications denied and 21 dismissed upon withdrawal of applications. Thirty-eight applications were remanded to the Water Rights Division for further evaluation following withdrawal, dismissal or settlement of protests.

As of June 30, 2006, 68 cases were pending on the unit's docket. Copies of selected State Engineer hearing decisions and the hearing examiner's report and recommendations are posted on the agency's website (www.ose.state.nm.us). Information concerning the status of pending matters on the Hearing Unit docket is also available on the website. To view posted information concerning hearing matters select the category "Water Information" from the index at the agency's home page.

A brief synopsis of a few of the hearing decisions issued during the 2005-2006 fiscal year:
Hearing No. 04-027 Application by Roy D. Mercer, LLC, OSE File No. 06286 and RG-10260

On December 21, 2005, the State Engineer issued his order adopting the report and recommendation of the hearing examiner and partially approving, subject to conditions, Application No. 06286 and RG-10260, for a diversion of groundwater to supplement surface water delivered by and through the works of the Middle Rio Grande Conservancy District (MRGCD). The decision is based upon the transfer of an equivalent amount of valid pre-1907 surface water irrigation rights into the move-to well and conditioned upon the severance of those water rights appurtenant to the move-from irrigated acreage and permanent retirement of those lands from irrigation.

The applicant appealed the State Engineer's decision to the 13th Judicial District Court, D-1314-CV-2006-00048.

Hearing Nos. 02-070, 02-068 and 04-019 Applications by the Village of Ruidoso Nos. H-300, H-272-S-9, H-272-S-11, 3871 & H-272 et al., Combined; 3871 & H-272 et al., Accrue; and 3871, 3038 & 0275-A(A) et al.

On June 12, 2006, the State Engineer issued his order adopting the report and recommendation of the hearing examiner granting the applications to divert leakage credit and recapture seepage loss from Grindstone Reservoir for use for municipal purposes.

The applicant appealed the State Engineer's decision to the 12th Judicial District Court, No. CV-06-172.

Hearing No. 02-038 Application by the Village of Ruidoso No. 01679-A & H-465-B into 0275-A & H-272 et al.

On June 12, 2006, the State Engineer issued his order adopting the report and recommendation of the hearing examiner and approving the Village's application to transfer surface water rights from the Hale Ditch South to certain Village surface and groundwater points of diversion, subject to conditions.

The applicant appealed the State Engineer's decision to the 12th Judicial District Court, No. CV-06-172.

Hearing Officers

Victor Kovach
Andy Core
(as of 1/06)

Hearing Unit Administrator

F. Eileen Serna

Hearing Nos. 00-041 and 02-069 Applications by the Village of Ruidoso Nos. 3038-Enlgd-2 and H-272-S-9, H-272-S-11, 3038 and 3038 Accrue.

On June 21, 2006, the State Engineer issued his order adopting the report and recommendation of the hearing examiner concerning applications involving requests to divert sewage effluent credit water from the Rio Ruidoso in amounts that are equivalent to treated effluent discharged to the Rio Ruidoso attributable to the Village's diversions of water from the Eagle Creek drainage basin.

Certain hearing matters noted in the 2004-2005 annual report, are on appeal:

Hearing No. 00-023 Application by Seven Rivers, Inc., No. RA-3200 et al., into RA-5060(T) – An appeal of the State Engineer decision of December 29, 2004, partially approving application for a temporary change in location of well and place and purpose of use of groundwater of the Roswell Underground Water Basin, is pending in the Fifth Judicial District Court, CV-2005-062.

Hearing No. 02-017 Application by City of Albuquerque Public Works Department No. 4830 – An appeal of the State Engineer's decision of July 8, 2004, conditionally approving the City of Albuquerque Public Works Department's application to divert surface water from the Rio Grande for its drinking water project was filed in the Second Judicial District Court, CV-2004-5036. The District Court granted summary judgment on April 13, 2006 in favor of the State Engineer, and the matter is on appeal at the New Mexico Court of Appeals: No. 26,757.

Hearing No. 02-035 Applications by City of Alamogordo No. T-3825–T-3825-S-9 – An appeal of the State Engineer's decision of December 29, 2004, partially approving, subject to conditions, the City of Alamogordo's applications to drill 10 wells for diversion and desalination of groundwater of the Tularosa Underground Water Basin for use for municipal, industrial and commercial purposes is pending in the Twelfth Judicial District Court, CV-2005-019, 043 and 049.

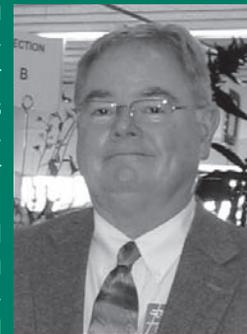
Hearing No. 03-004 Applications by City of Santa Fe Nos. RG-20516-S-10 thru RG-20516-S-13 – An appeal the State Engineer's decision of September 15, 2004, approving the City of Santa Fe's application for permits for supplemental wells for the continued diversion of up to 10,000 acre-feet/year of groundwater authorized under permit No. RG-20516 et al., (Buckman permit), subject to conditions, is pending in the First Judicial District Court, D-101-CV-2004-2038.

Hearing No. 03-018 Application by Berrendo Cooperative Water Users Association (BCWUA) No. RA-130 et al. – An appeal of the State Engineer's decision of June 7, 2005, denying BCWUA's application to increase its appropriation of groundwater of the Roswell Artesian Basin by 480.42 acre-feet per year in recognition of return flow from septic leach fields is pending in the Fifth Judicial District Court, CV-WD-04-1910.



New Hearing Officer

In January 2006, Andy Core joined the Hearings Unit as a Hearing Examiner. Prior to his appointment, Andy worked as a hydrologist with the Office of the State Engineer for 15 years. He claims that his new job represents his fifth career; after serving in the U.S. Army, he worked as a medical laboratory technician, a mineral exploration geologist, an economist and a hydrologist. Andy holds a bachelor's degree in geology and a master's degree in resource economics, both from the University of New Mexico. Core and his wife, Nancy, have two married daughters. Both Cores are accredited National Garden Club flower show judges and are apprentice judges with the American Rose Society.





Litigation and Adjudication Program

Chief Counsel and LAP Director

DL Sanders

Deputy Chief Counsel

Gregory C. Ridgley

Deputy Director, Support

Joseph Schleicher

Managing Attorney, Northern New Mexico

Arianne Singer
(as of 4/2006)

Managing Attorney, Lower Rio Grande

Frank Reckard

Managing Attorney, Pecos River

William S. Cassel

Hydrographic Survey Bureau Chief

Dario Rodriguez

Managing Attorney, Administrative Litigation Unit

Hilary Lamberton

The Chief Counsel serves as the legal advisor to the State Engineer. The Litigation and Adjudication Program (LAP) attorneys are commissioned as Special Assistant Attorneys General who also provide counsel to the State Engineer. LAP attorneys prosecute all water rights adjudications on behalf of the State of New Mexico in state and federal courts. They also represent the Water Rights Division of the Water Resources Allocation Program in all water-related administrative hearings and the State Engineer in appeals of his administrative decisions. LAP attorneys also conduct legal proceedings on the State Engineer's behalf to prevent illegal uses of water. LAP's technical staff in the Hydrographic Survey and Mapping Bureau performs hydrographic surveys and provides the foundation documents for all adjudications. Survey staff members are assigned to specific adjudication bureaus and work closely with legal staff to provide technical support for ongoing adjudications.

The main LAP office is located in Santa Fe. The attorneys, engineers, surveyors, legal assistants and administrative support staff in the office primarily work on completing the 11 adjudications pending throughout the state. LAP maintains a Lower Rio Grande (LRG) adjudication survey office in Las Cruces, which is staffed with engineers, surveyors and other technical personnel to support the Lower Rio Grande adjudication, and serves as a local point of contact for water rights owners involved in that adjudication.

Water Rights Adjudications

The State Engineer is mandated by law to perform hydrographic surveys and to investigate each stream system and source of water supply in the state, beginning with those used primarily for irrigation. Typically, before an adjudication suit is filed, the Hydrographic Survey and Mapping Bureau performs a hydrographic survey to locate, quantify and date all water rights within the geographic scope of the adjudication or within a section of the adjudication if necessary to promote the efficient use of the state's resources. Following the hydrographic survey, the State Engineer transmits the information to the New Mexico Attorney General to file suit on behalf of the state for the judicial determination of each water right. The legal basis and elements of each water right are reduced to a written Offer of Judgment and then served on a claimant. This is the subfile phase of the adjudication, during which individual water rights claims are adjudicated between the state and individual defendants, either through negotiation or litigation. Once each water right has been established, defendants may challenge the water rights of others

The Water Rights Adjudication Process

The state files a lawsuit for the adjudication of all water rights within the the stream system or aquifer. All water rights owners and claimants are joined and become parties in the lawsuit.

In the subfile phase, the state sends an offer of judgment to each water-right claimant. The claimant can agree with or challenge the description of the water rights. After all questions have been resolved, either through negotiation or litigation, the court enters a subfile order to confirm the individual agreement between the state and a water right claimant.

The court issues a partial final defining the water rights in the adjudicated area.



field surveys, conduct interviews, and acquire and analyze aerial imagery, both current and historical. The survey, however, can only be as accurate as the documents it relies on.

A completed hydrographic survey for all water rights within the scope of the adjudication, or section of the adjudication, is filed with the adjudication court. The survey is a compilation of all identifiable water rights, their elements, a map of the lands to which they are appurtenant for irrigation, and their validity at the time they were surveyed. This filed survey is presumed to be correct, and any party wishing to dispute that information has the burden of proving that it is incorrect.

To make its surveys as accurate as possible, the Office of the State Engineer has implemented the following innovations in recent years:

- The Hydrographic Survey and Mapping Bureau, together with staff from the Water Resources Allocation Program, now conducts field offices prior to beginning a survey. This new procedure is designed to improve the efficiency and accuracy of the initial field survey and to better inform water rights claimants about the survey and the adjudication processes. Disputed issues that may arise between surveyors and claimants are narrowed and more easily resolved in later proceedings. This process has been success-

fully used in the Zuni and San Juan adjudications.

- All hydrographic surveys are now based on Geographic Information Systems (GIS) and computer mapping technologies. Interpretation of aerial imagery is performed using digital ortho-rectified imagery (computer-generated imagery corrected for visual distortions caused by camera/sensor orientation and terrain), and all field measurements are made with Global Positioning Systems (GPS) receivers. The survey bureau now applies the digital ortho-rectified imagery technology to all its active surveys.

- In coordination with the Interstate Stream Commission, the survey bureau staff has been acquiring high-resolution digital aerial imagery. This is a long-term program to replace analog aerial photography with computer-based digital imagery. The first digital imagery was purchased in 1999 for portions of the Lower Rio Grande Hydrographic Survey. In 2003, imagery for the San Juan, Costilla and Los Piños/San Antonio areas was acquired.

Aamodt Settlement

On May 3, 2006, the Governor and representatives of the main parties in the *Aamodt* adjudication of the water rights of the Rios Nambe, Pojoaque and



Tesuque (NPT) signed the *Aamodt* Settlement Agreement. The Agreement, among the Pueblos of Nambe, Tesuque, Pojoaque and San Ildefonso, non-pueblo parties, the state of New Mexico and the United States, will resolve the water right claims of the four pueblos and facilitate the final adjudication of the water right claims of the non-pueblos within the NPT stream system in northern New Mexico.

The Settlement Agreement is a complex document based on four major concepts. First, the pueblos would agree to

not make priority calls against non-pueblo surface water rights in the NPT, except under certain circumstances, thereby providing greater certainty to non-Indian water right owners. Second, the United States would acquire 2,500 acre-feet of additional water for the pueblos, intended in part to provide them with the water they will not take as a result of their forbearance. Third, a pipeline from the Rio Grande would be constructed by the United States, paid for by the United States, the state and Santa Fe County, to deliver water to the pueblos and to non-pueblo water right owners in the basin. Fourth, non-pueblo parties currently using domestic wells would have the option to cap their wells, stop pumping groundwater and hook up to the pipeline.

The parties at the local level that have signed the agreement are now finalizing draft legislation for introduction before Congress for approval and authorization of the settlement and construction of the project. The U.S. Department of Justice, on behalf of the United States, cannot sign the agreement until Congress has ratified it by legislation. Once legislation has been passed, securing the necessary funding will be the next task before the Settlement Agreement can be fully implemented. The current total estimated cost to implement the settlement is \$282 million. In addition, implementation of the Settlement Agreement is subject to court deadlines: A partial final decree must be entered in the *Aamodt* case by December 15, 2012, in order for the settlement agreement to be implemented.

In 2004, imagery for the Peñasco/Mescalero area was acquired. In 2005, the Office of the State Engineer organized a statewide acquisition of digital aerial imagery.

• Survey bureau staff members also have worked with the Interstate Stream Commission to develop remote sensing mapping tools for use with satellite imagery to perform cropping area estimates for the entire state. These estimates will be used to develop a water-use model for the state of New Mexico. Initial results for the Lower Rio Grande area are very encouraging and the survey bureau plans to continue the project using 2004 Landsat ETM imagery.



Taos Settlement

Governor Bill Richardson, Taos Pueblo, the Town of Taos and the other main water-rights-owning entities in the Taos area signed the Taos Pueblo Settlement Agreement on May 30, 2006. Once approved by Congress, the Settlement Agreement will adjudicate Taos Pueblo's claims and expedite the adjudication of non-pueblo water right claims. State Engineer John D'Antonio, speaking at the signing ceremony, said the agreement was the result of "countless hours of negotiations" and "compromise and collaboration." Settlements like the Taos agreement are "imperative to meeting New Mexico's future water needs," he said.

The purpose of the Agreement is to facilitate the completion of the adjudication of all water rights and, thereby, to protect the *status quo* in the allocation and use of water resources in the Taos Valley. The Agreement is a complex document that would provide for quantification of the pueblo's water rights while avoiding disruption to existing non-pueblo water rights; protection of sacred pueblo wetlands; protection of the water rights of the 55 Taos Valley acequias; agreement of the parties to refrain from priority calls for both surface and groundwater uses; agreement as to sources of water; and mutual support for those projects necessary to provide for the sustainable development of needed water supplies within the Taos Valley.

Although the signing of the Settlement Agreement is a significant achievement at the local level, additional steps remain in the settlement process. The negotiating parties still need to obtain federal approval, including passage of settlement legislation by Congress and signature into law by the President. In addition to legislation, the settlement must receive the necessary federal and state funding before implementation can begin. The current total estimated cost to implement the settlement is \$134 million.



These new technologies are proving to be a means for dramatically reducing the time necessary to conduct and complete a survey. New databases created at the Office of the State Engineer also significantly enhance the ability to analyze the results of a survey. These computer-based tools also allow the office to readily disseminate hydrographic survey results to the public, to automate the production of maps and basic subfile pleadings, and to effectively track the status of individual subfile proceedings. The effort at closer interaction between engineers and attorneys has proven extremely fruitful: problems are identified and solved as they arise, reducing the need for global corrections at the end of the process.

Administrative Litigation Unit

The Administrative Litigation Unit (ALU) attorneys are dedicated to representing the Water Rights Division in administrative hearings before the State Engineer's Hearings Unit on protested or aggrieved applications for water use permits. The unit attorney assigned to an application works with the applicant and anyone filing a protest to informally resolve disputed matters to eliminate the need for a formal administrative hearing. If a

For more information on the status of adjudications, see Appendix A starting on page 64.

For more information on the status of hydrographic surveys, see Appendix B starting on page 67.

For more information on State Engineer decisions appealed in district court, see Appendix C on page 68.

For more information on decisions in the Court of Appeals and New Mexico Supreme Court, see Appendix D on page 68.



matter cannot be resolved informally, the application goes to hearing. Most applications are scheduled for a hearing within nine months of being sent to the Hearings Unit.

The litigation unit also represents the State Engineer when any administrative decision on an application is appealed to district court and appellate courts. The unit is currently handling 12 pending appeals: 10 are *de novo* appeals in district courts, one appeal is pending in the Court of Appeals, and one appeal is pending in the New Mexico Supreme Court. Several of the appeals involve applications filed by cities such as Santa Fe, Albuquerque, Ruidoso and Alamogordo.

The litigation unit was originally formed in 1999 to handle a backlog of over 300 applications. In fiscal year 2004-2005, the original backlog was finally eliminated, allowing the unit to take on other vital legal tasks in addition to its current caseload. The unit coordinates with the Water Resources Allocation Program, its various divisions and bureaus, and serves as legal advisor for Water Rights Division district offices. The unit has initiated a program to educate Water Rights Division district office employees on the various laws and legal procedures that impact their work. The unit also assists the district offices with enforcement issues, such as over-diversions or illegal uses of water. Unit attorneys are pursuing enforcement actions along the Rio Chama, the San Juan River, the Pecos River and the Lower Rio Grande.

An enforcement focus in 2006 is to bring all irrigation well owners in the Lower Rio Grande into compliance with the metering conditions of their groundwater permits. The unit has been working with the Lower Rio Grande water master to implement an enforcement plan with the objective of having all permitted wells (except domestic and stock) in the Lower Rio Grande metered by the end of 2006. It is anticipated that about 400 owners of permitted wells in the Lower Rio Grande will be subject to progressive enforcement actions. These actions will vary from informal requests to comply with metering require-

ments to injunction actions in district court if necessary. The unit plans to develop an enforcement model from the information gained in implementing the Lower Rio Grande enforcement plan.

Acequia Outreach

The Acequia Liaison Officer assists the Interstate Stream Commission with problems in connection with the acequia program including water right questions and easement issues. This fiscal year, the liaison reviewed bylaws for compliance for Interstate Stream Commission projects and assisted the director of the Water Resources Allocation Program with coordinating meetings of the Metering Committee. This committee originated because of the skepticism of the acequias about being metered. The committee, in coordination with the Water Masters' Committee, helped coordinate metering inspections in the Lower Rio Grande and Mimbres and plans to address the Nambé-Pojoaque-Tesuque and Gallinas basins next year.

The liaison continues to assist acequias and parciantes with their water rights in adjudications, concentrating this past year in Rio Gallinas and Rio Chama areas. Assistance was provided to acequias for implementation of water banking and authority over water right transfers. The liaison also assists acequias with allocation issues and questions of acequia governance. The liaison communicates issues and problems presented by the New Mexico Acequia Commission to the State Engineer, the director of the Interstate Stream Commission, the Chief Counsel and other staff.

Interstate Stream Commission Program



The New Mexico Interstate Stream Commission, created by Chapter 25 of the 1935 legislative session laws, has broad powers to investigate, protect, conserve and develop New Mexico's waters, including both interstate and intrastate stream systems. The Commission has eight unsalaried members appointed by the Governor. The ninth member is the State Engineer, who under state law is the secretary of the Commission. The Commission director serves as the deputy state engineer.

The Commission's authority under state law includes negotiating with other states to settle interstate stream controversies. New Mexico is a party to eight interstate stream compacts including the Colorado River, Upper Colorado River Basin, La Plata River, Animas-La Plata Project, Rio Grande, Costilla Creek, Pecos River, and Canadian River compacts. Commission staff is also responsible for compliance with provisions of the U.S. Supreme Court decisions governing water allocations on the Pecos, Canadian and Gila rivers. To assure compact compliance, staff analyzes, reviews, and implements projects in New Mexico and in other states and analyzes streamflow, reservoir levels, and other data on the stream systems.

The Commission is also authorized by statute to investigate and develop the water supplies of the state and institute legal proceedings in the name of the state for planning, conservation, protection, and development of public waters. Under a 1987 law, the Commission promotes and funds the development of regional water plans and has been responsible for statewide water planning that integrates and reconciles the regional plans. Under the State Water Plan Act, enacted in 2003, the Commission was directed to coordinate with the Office of the State Engineer and the Water Trust Board to develop a comprehensive state water plan and to review and update it periodically.

The Commission is responsible for programming, budgeting, and directing expenditures from several sources: the Commission operating budget; the Ute Dam Construction Fund, because the Commission owns and operates Ute Dam and Reservoir; the Pecos Land Management Fund, created in 2005 to allow revenues generated from Commission-owned land to be used for land, maintenance and operation of augmentation wells; special appropriations; and two trust funds – the Improvement of the Rio Grande Income Fund and the Irrigation Works Construction Fund. Both trust funds were created by the Ferguson Act of 1898, which set aside grants of trust land in what was then the Territory of New Mexico to generate income for specified beneficiaries.

Planning and Communication

Strategic planning and effective communication to the Office of the State Engineer and the Interstate Stream Commission. Public communication is essential to planning activities that integrate resource-based science and public policy, while complying with both state and federal water law.

Regional Water Planning

The New Mexico State Legislature recognized the state's need for water planning and created the state's regional water planning program in 1987 to balance current and future water demands with available water supplies for a region. The Legislature gave the Interstate Stream Commission the responsibility of overseeing a regional planning grant

Commission Director/Deputy State Engineer

Estevan López, PE

ISC General Counsel

Tanya Trujillo

Planning and Communication Director

Karin Stangl

Rio Grande Basin Manager

Rolf Schmidt-Petersen

Pecos Basin Manager

Dr. Bhasker Rao

Colorado/San Juan Basin Manager

John Whipple

Other Basins, Acequias and Irrigation Projects Manager

Craig Roepke



Interstate Stream Commissioners

• **Jim T. Dunlap**, chairman, is a businessman and rancher. The Farmington native owns the L-Bar Ranch and the Farm Center, a John Deere dealership. From 1976 to 1986, Dunlap managed the Lower Valley Water System. He also is a retired vocational agriculture teacher. Dunlap's water-related activities have included being president of the National Rural Water Association, director and founder of the New Mexico Rural Water Users Association, president of the Upper La Plata Water Users Association, president of the Lower Valley Water Users Association, and vice chairman of the San Juan Water Commission.

Dunlap served three terms as a San Juan County commissioner, including two and a half terms as commission chairman, and was a volunteer fireman. He is vice chairman of the San Juan County Communications Authority and a member of the Lion's Club, Secretary of Agriculture's Water 2000 Project, New Mexico Farm Bureau, New Mexico Cattle Growers' Association, and the New Mexico Farm and Ranch Heritage Foundation. Dunlap is also an advisor to the Kirtland Future Farmers of America and Colorado State University. He has served as the president of the Northwest Teachers Association, president of the Farmers Mutual Ditch Association, and president of the New Mexico Vocational Agriculture Teachers Association. Dunlap received a master's degree in vocational education in 1967 and a bachelor's degree in 1954 from New Mexico State University.

• **Julia Davis Stafford** is a fourth-generation rancher from northeastern New Mexico. Since 1873, her family has run the CS Cattle Company, Inc. In 1986, Davis Stafford and her husband returned to the area to run the ranch. From 1983 to 1984, she worked for the New Mexico Public Defender's Office as a staff attorney. From 1985 to 1986, Davis Stafford worked with the New Mexico Environment Department as a staff attorney. During Gary Johnson's administration, she was appointed to the Governor's Blue Ribbon Task Force for Water Issues. Previously, Davis Stafford was involved with the Colfax County Regional Water Plan Steering Committee and currently is an active member of the Cimarron River Watershed Management Group. She serves on the board of Mountain States Mutual Insurance Company. Davis Stafford received a law degree in 1982 and a bachelor's degree in English in 1978 from the University of New Mexico.

• **Judith Espinosa**, a resident of Albuquerque, is the director of the University of New Mexico's Transportation Research Institute. From 1991 to 1994, she was secretary of the New Mexico Environment Department and prior to that she was a manager in the City of Albuquerque's Environmental Health Department. A former member of the National Environmental Justice Advisory Council since 2002, Espinosa was a German Marshall Fund Environmental Fellow selected to participate in the Alliance for Transportation Institute, an international program on environment and transportation. In 1992, former President Bill Clinton appointed her to the Council on Sustainable Development. She was also recognized in 1991 by the United States Environmental Protection Agency for her work on air quality. Espinosa served as state Secretary of Transportation from 1983-1985. Espinosa was awarded a law degree from the University of New Mexico in 1980. She completed a master's degree in public health administration at the University of California in 1975 and received a bachelor's degree in nursing from the University of New Mexico in 1972.

• **Patricio Garcia** is a native of Rio Chama whose family has lived in the Rio Chama Valley since the 1700s. A land-use planner for the past 10 years, Garcia is currently the Planning Department director for Rio Arriba County. In 2000, he was instrumental in obtaining the Western Planners Four Corners Planning Award for an environmental ordinance that protects county farmland and water rights. He has also worked as an outreach worker for mutual domestic water associations, and as a mineral exploration driller at sites including Heron Lake Dam, Cochiti Lake Dam, and Nambé Dam. Garcia belongs to the Rio Chama Acequia Association and is the secretary of the Acequia Martinez y Duranes. He also worked as a Volunteer in Service to America (VISTA). A Vietnam War veteran, Garcia served in the U.S. Navy from 1965 to 1968. Garcia attended New Mexico State University, and received an associate's degree from Northern New Mexico Community College in 1975.

• **Buford Harris** is a farmer from Mesilla whose family has raised cotton and alfalfa in the Mesilla Valley for four generations. Harris studied business and agriculture at New Mexico State University from 1977 to 1981.

• **Blane Sanchez**, a tribal member and resident of Isleta Pueblo, is the first New Mexico pueblo/tribal member to serve on the Commission. His professional work includes facilitation, management of tribal environmental and water quality standards programs, and natural resources management with the Bureau of Indian Affairs. Sanchez is also the first pueblo/tribal member to receive a master's degree from the Water Resources Program at the University of New Mexico, which he earned in December 2005. He received a bachelor's degree in range science from New Mexico State University in 1981.

• **J. Phelps White III** is a retired farmer and rancher and a native of Roswell. He serves as president for the Community Foundation of Chaves County and is a member of the board of directors of the Historical Society for Southeastern New Mexico Foundation. He is a past president of the Roswell Rotary Club, New Mexico Woolgrowers Inc., and New Mexico State University Foundation. White attended the New Mexico Military Institute and served in the U.S. Army. He received a bachelor's degree of business administration from the University of Texas in 1955. He served as an officer in the U.S. Army from 1955 to 1957.

• **James Wilcox**, a resident of Carlsbad, is a consultant to the state potash industry. He worked for Mosaic Potash for 32 years prior to retiring in 1999. He continues to serve Mosaic as a consultant. While employed at Mosaic, he was responsible for the Human Resources, Safety, and Public Relations departments, as well as management of water resources. He also served as chairman of the National Mining Association's Safety Committee, chairman of the U.S. Labor Department's Mining Industry Committee on Substance Abuse, and chairman of the Palmer Drug Abuse Program, in Carlsbad. Wilcox has received numerous awards of recognition from his peers, the State of New Mexico, and the U.S. Department of Labor for his efforts to enhance safety in the mining industry.

program and the planning process itself. The Commission has worked with all regions of the state to prepare their respective regional water plans. Once regional water plans are completed, the Office of the State Engineer and Commission staff must review them. A regional water plan is considered completed when the Commission accepts it.

Significant progress has been made in the completion of regional water plans. So far, of the 16 planning regions in New Mexico, 14 have been completed and accepted by the Commission.

The Rio Chama Regional Water Plan was accepted by the Commission in June 2006. This region is located in northcentral New Mexico, comprising the Rio Chama Watershed in Rio Arriba County. Almost 50 percent of the land affected by the plan is held by the Santa Fe and Carson national forests. About 95 percent of the water diverted in the region is from surface sources and most of the water supply is used for agriculture. The Rio Chama plan addresses conservation, reduction of urban and agricultural water demands, improvement of water-use efficiency and management, improvement of water quality, and plans for future growth. The planning committee comprised a group of diverse professionals and public participants representing a wide variety of water interests in Rio Arriba County.

Regional water plans were accepted previously for the Mora-San Miguel, Colfax County, Jemez y Sangre, Lower Pecos Valley, Lea County, Tularosa-Sacramento and Salt Basins, Estancia Basin, Socorro-Sierra, San Juan Basin, Northwest New Mexico, Middle Rio Grande, Lower Rio Grande, and Southwestern regions.

The final two plans for the Taos and Northeastern New Mexico regions are expected to be completed by December 2006.

The final two plans for the Taos and Northeastern New Mexico regions are expected to be completed by December 2006.

Statewide Water Planning

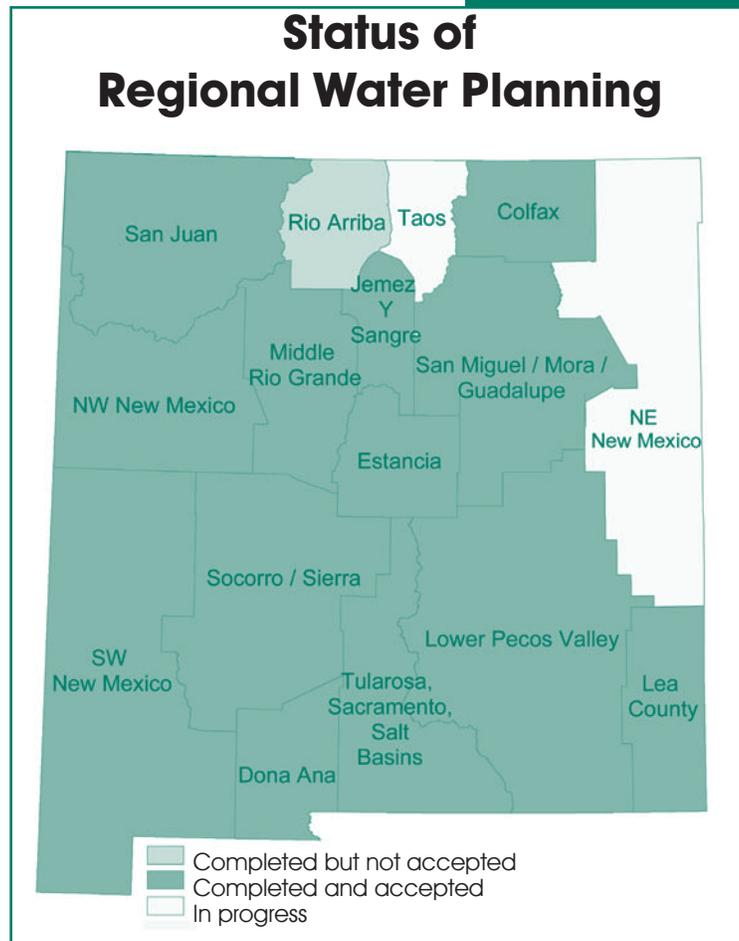
Implementation of New Mexico's first State Water Plan continues, and progress was made on all 98 implementation strategies identified in the State Water Plan. The State Water Plan was developed in 2003 in response to legislation calling for a comprehensive approach to managing the state's water resources.

Accepted by Governor Bill Richardson in January 2004, the plan reflects a year of intense staff work that included 29 public meetings attended by more than 1,500 people and a New Mexico First Town

Hall meeting. The public meetings featured in-depth discussions on key water topics such as water banking, drought management, shortage sharing, watershed restoration, strategies for water conservation and other issues. The State Water Plan is available for review on the website for the Office of the State Engineer, at www.ose.state.nm.us.

A detailed account of progress made since 2003 was published in June 2006 in the *Progress Report: The New Mexico State Water Plan*. This report was mailed to state legislators, city and county officials, water users, opinion leaders, and the general public to set the stage for the work needed to review and update the State Water Plan in 2008. The *Progress Report* can be reviewed on the website for the Office of the State Engineer, at www.ose.state.nm.us.

Ongoing implementation efforts outlined in the *Progress Report* include strides made on effective management of water during times of drought, continuing adjudications, entering information into the Water Administration Technical Engineering Resource System database, making progress on settling Native American water rights cases, developing new water sources, public outreach, and continuing the progress made with wildlife habitat and river protection.





Canadian River Basin Activity INTERSTATE STREAM ADMINISTRATION

Canadian River Compact-Decree in Oklahoma and Texas v. New Mexico

There was no need to release water from Ute Reservoir to meet the court-ordered operation schedule during the reporting period from July 2005 through June 2006. The schedule is part of a stipulated judgment and decree entered on December 13, 1993, in the U. S. Supreme Court case Oklahoma and Texas v. New Mexico. The operation schedule specifies annual operating elevation limits for Ute Reservoir. The reservoir, which begins 32.1 miles upstream from where the Canadian River crosses into Texas, underwent routine spillway maintenance activities during the fiscal year. The Commission owns and operates the dam and reservoir, constructed in 1962. Originally built with a capacity of 110,000 acre-feet, the construction of a raised spillway in 1984 increased capacity to over 246,600 acre-feet but

under the 1993 U.S. Supreme Court decree in Oklahoma and Texas v. New Mexico, the conservation pool is limited to 200,000 acre-feet.

Water Plan Progress

The Office of the State Engineer has made significant progress on implementation of the 98 strategies outlined in the State Water Plan, much of it in the area of Active Water Resource Management.

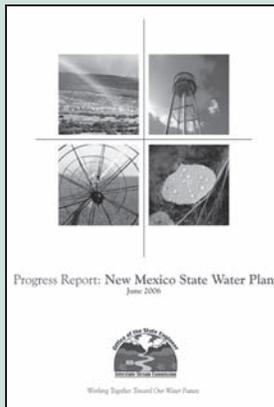
In June 2006, the State Engineer published *Progress Report: New Mexico State Water Plan* with details on the milestones, deliverables and services provided that show the gains made.

While more work needs to be done, the report shows progress in the areas of adjudications and settlements; protecting the state's waters; updating rules, regulations and safety measures; and public outreach, as well as wildlife habitat and river protection measures."

The State Water Plan, developed in 2003 in response to executive and legislative direction to the Interstate Stream Commission and the State Engineer to develop a comprehensive statewide plan, provides a policy framework for the state to manage water issues and prioritize funding needs. Applicable portions have become the strategic planning document for the Office of the State Engineer and the Interstate Stream Commission.

The state Legislature mandated that the State Water Plan be updated at least every five years. The progress report is an interim step in the process.

The 2006 State Water Plan Progress Report can be downloaded from the Office of the State Engineer's website at www.ose.state.nm.us/PDF/Publications/StateWaterPlans/swp-2006-06-progress-report.pdf.



FEDERAL MANAGEMENT ISSUES

Endangered Species Act Issues

The U.S. Fish and Wildlife Service has proposed designating the reach of the Canadian River from Ute Dam near Logan downstream to Lake Meredith in the Texas panhandle as critical habitat for the threatened Arkansas River shiner. In response, the Canadian River Municipal Water Authority, a member of a multi-state coalition that successfully stopped an earlier attempt to designate a stretch of the river as critical habitat, asked the Interstate Stream Commission to support a management plan for that reach of the river. The management plan is a cooperative effort among various local, state, and federal entities in eastern New Mexico and the Texas Panhandle, with the input and cooperation of local landowners. A long-range goal of this plan is to contribute to the eventual de-listing of the Arkansas River shiner. The Interstate Stream Commission has delegated authority to the Commission director to approve the management plan and any subsequent memorandum of agreement.

WATER PLANNING AND DEVELOPMENT

Ute Dam and Reservoir

In June 2006, the Interstate Stream Commission began the first phase of repairs to the Ute spillway apron slab. Phase I includes construction of new expansion joints and retrofitting existing contraction joints, repairing existing longitudinal

contraction joints, and concrete core testing of repairs. The repairs are scheduled to be completed in September 2006. The repairs are required to bring the storage facility up to a level that is safe and structurally sound.

The Commission has initiated the development of a Master Plan for Ute Reservoir. The purpose of the Master Plan is to guide development adjacent to the reservoir. Currently, there are no uniform ordinances or guidelines for development at Ute Reservoir. Due to the authorization of Ute Reservoir as a drinking water supply source for eastern New Mexico, it is important to implement development guidelines to protect the water quality of the reservoir.

Three tasks are associated with the development of the Ute Reservoir Master Plan. Task I, completed in June 2006, includes collection of baseline information, such as wetland identification, archaeological site locations, and soils information. Task II includes such tasks as development of a shoreline management plan, a water-quality monitoring plan, and an emergency services report. Task II is scheduled to be completed in February 2007. Task III will include a public review period and submittal of the Master Plan to the Quay County Commission. Task III is scheduled to be completed in July 2007.

Canadian River Commission

The Canadian River Commission met on March 7, 2006, in Sanford, Texas. In addition to a report on the status of releases at Ute Reservoir, commissioners heard from the Palo Duro River Authority that the Palo Duro lake level remains very low. The Canadian River Municipal Water Authority reported that the water level in Lake Meredith has continued to drop and has reached 59.94 feet. Salt cedar control along the Canadian River continued, with about 4,300 acres treated in New Mexico and Texas. The water authority, in conjunction with the Arkansas River Shiner Coalition, is using this salt cedar control as a mitigation effort to preclude the need to designate critical habitat between Ute Dam and Lake Meredith.

Colorado River Basin Activity

INTERSTATE STREAM ADMINISTRATION

Upper Colorado River Basin Compact

The Upper Colorado River Basin Compact, signed by Arizona, Colorado, New Mexico, Utah, and Wyoming in 1948 and ratified by Congress in 1949, created the Upper Colorado River Commission to administer its provisions. The river commission consists of representatives of the United States and all compact states except Arizona and has an office and staff in Salt Lake City, Utah. During the 2005-2006 fiscal year, the commissioners and staff of the river commission directed much of their effort toward investigating the coordinated operation of Lakes Powell and Mead on the Colorado River. Because of the recent extreme drought in the Colorado River Basin, storage of water in Lakes Powell and Mead is at relatively low levels. A number of meetings were held, including meetings of the seven Colorado River Basin states and the U.S. Department of the Interior, to discuss potential management strategies for operation of the two reservoirs under such low storage conditions. This effort will continue in the next fiscal year. The commissioners and staff of the river commission also worked to support congressional appropriations for authorized projects, participated in salinity control program activities and the Glen Canyon Dam Adaptive Management Program, and prepared analyses of environmental impact statements and federal water resource legislation.

The Upper Colorado River Commission has been working under a 1988 determination by the U.S. Bureau of Reclamation that the critical period yield available to the Upper Basin is at least 6 million acre-feet (maf) annually, including Colorado River Storage Project (CRSP) reservoir evaporation. In December 1999, the river commission (1) resolved that while it disagrees with the assumption used by Reclamation in the 1988 yield study of a minimum release of 8.23 maf per year from Glen Canyon Dam, it does not object to using, for water planning purposes and water supply studies in the Colorado River Basin, schedules of anticipated future depletions that assume a yield to the Upper Basin of at least 6 maf annually; and (2) approved schedules, dated January 2000, of depletions anticipated to occur in each state of the Upper Division from 2000 through 2060. New Mexico's Upper Basin depletion schedule was modified slightly in April 2005 to reflect the Navajo Nation Water Rights Settlement Agreement regarding the San Juan River Basin in New Mexico, signed by the State of New Mexico and the Navajo Nation on April 19, 2005. That agreement was modified again in May 2006 for the purpose of updating the 1988 determination.

Reclamation in May 2006 issued for review a draft determination update that refines the CRSP reservoir evaporation assumptions and, consequently, indicates that more of the critical period yield is available for use within the Upper Division States as compared with the 1988 determination. The Upper Colorado River Commission on June 5, 2006, resolved



For information on stream activity in the Pecos River Basin, see page 54. For the Rio Grande Basin, see page 58. For acequias and other community irrigation districts, see page 62.



that it supports determinations by the Secretary of the Interior that (1) at least 5.76 maf of water per year is available for use by the Upper Basin, exclusive of shared CRSP reservoir evaporation; and (2) sufficient water is reasonably likely to be available to fulfill a proposed Navajo Reservoir water supply contract for the Navajo Nation's uses in New Mexico under the planned Navajo-Gallup Water Supply Project. It is anticipated that in fiscal year 2007, the Secretary of the Interior will approve a final hydrologic determination update.

The Upper Colorado River Commission in fiscal year 2005-2006 also completed a preliminary feasibility study for enhancing Colorado River flow through wintertime cloud seeding. The study was conducted for the river commission by North American Weather Consultants. The study predicts that Colorado River stream flow may be increased by up to an average of 1.3 million acre-feet per year through winter cloud seeding; however, some of this increase is already being materialized from existing seeding programs and there is a large amount of uncertainty in attempting to quantify the amount of water generated by cloud seeding.

La Plata River Compact

The state engineers of Colorado and New Mexico administer the provisions of the La Plata River Compact. Disagreements between the state engineers over Colorado's deficient state-line deliveries of water to New Mexico under the compact remain unresolved.

The La Plata Water Conservancy District in Colorado during fiscal year 2005-2006 continued planning for the proposed Long Hollow Dam and Reservoir for uses in Colorado. Inflow to the La Plata River from Long Hollow may account for a significant portion of the flow of the river at the state-line gauge during periods of low flow. The New Mexico State Engineer, via letter to the Colorado State Engineer dated January 31, 2006, expressed support for Colorado developing its La Plata River Compact apportionment through the Long Hollow Reservoir Project. The letter expressed hope that through the construction

The Interstate

Colorado River Compact. Signed in 1922, the Colorado River Compact was ratified by California, Colorado, Nevada, New Mexico, Utah and Wyoming by 1929 and approved by Congress in the Boulder Canyon Project Act of 1929. Although Arizona did not ratify the compact until 1944, the President of the United States proclaimed it effective in 1929. It apportions the use of waters of the Colorado River system to the upper and lower basins. Parts of Arizona, Colorado, New Mexico, Utah and Wyoming constitute the upper basin. The lower basin includes parts of Arizona, California, Nevada, New Mexico, and Utah. The compact does not provide for an administrative commission. Instead it provides that each state, through the state official charged with water rights administration, together with certain agencies of the federal government, shall cooperate to promote the systematic determination and coordination of the facts as to flow, appropriation, consumption and use of water in the Colorado River basin; ascertain and publish the annual flow of the Colorado River at Lee Ferry, the point of division between the two basins; and perform such other duties as may be assigned by mutual consent of the signatory states.

Upper Colorado River Basin Compact. Signed in 1948 by Arizona, Colorado, New Mexico, Utah, and Wyoming, and approved by Congress in 1949, the compact creates the Upper Colorado River Commission to administer its provisions with members representing the United States, Colorado, New Mexico, Utah, and Wyoming. Arizona is not included. The UCRC maintains an office and staff in Salt Lake City, Utah. Members of the Commission staff serve as engineering and legal advisers and assist the individual state commissioners.

La Plata River Compact. Dividing the waters of the La Plata River between Colorado and New Mexico, the La Plata River Compact was signed in 1922 and approved by Congress in 1925. The compact provides that the state engineers of the two states shall administer the waters of the La Plata River in accordance with the terms of the compact. This requires daily administration of the flows of the La Plata River except from December 1 through February 15. The compact also provides for cooperative collection, exchange, and publication of streamflow data. Interstate Stream Commission staff monitors and evaluates the daily operation of the river and assists the State Engineer in administering the compact. The La Plata Conservancy District employs a water master to supervise water diversion within the district in New Mexico. The water master and the district's board of directors cooperate with commission staff to collect data necessary for the daily operation analysis.

Rio Grande Compact. Signed in 1938, with Colorado, New Mexico, and Texas as parties and approved by Congress in 1939, the Rio Grande Compact apportions the waters of the Rio Grande above Ft. Quitman, Texas, among the three states. It provides for administration by a compact commission consisting of the state engineers of Colorado and New Mexico, a commissioner appointed by the Governor of Texas, and a representative

of the reservoir and development of an acceptable long-term operation plan Colorado will in the future comply with its compact obligations.

FEDERAL MANAGEMENT ISSUES

Operating Plan for Colorado River Reservoirs

The Colorado River Basin Project Act requires the secretary of the U.S. Department of the Interior, in consultation with the Colorado River Basin states and other interests, to prepare the annual operating plan for the Colorado River System Reservoirs. The plan is developed through meetings of the Colorado River Management Work Group and the 2006 plan was approved by the Secretary of the Interior in November 2005.

Because of low storage conditions in Lakes Mead and Powell, the 2006 annual operating plan included a provision for conducting a mid-year review, pursuant to the Long-Range Operating Criteria, to determine whether an adjustment to the release amount from Lake

Powell for water year 2006 might be appropriate if storage was not anticipated to exceed a defined target. Based on favorable projected reservoir storage conditions in 2006, the Secretary of the Interior in April 2006 concluded that a mid-year review would not be undertaken.

Colorado River Operations and Water Delivery Shortage Guidelines

The Department of the Interior in June 2005 published in the Federal Register a notice that the Bureau of Reclamation has been directed to develop additional Colorado River management strategies to address operations of Lakes Mead and Powell under low reservoir storage conditions. Such strategies could identify those circumstances under which the Department of the Interior would reduce annual water deliveries from Lake Mead in the Lower Basin or releases from Lake Powell, and the manner in which annual operations would be modified.

In response to the Federal Register notice,



Stream Compacts

of the United States. The Rio Grande Compact establishes delivery obligations for Colorado and New Mexico. It provides for debits and credits to be carried over from year-to-year until extinguished under provisions of the compact. Accrued credits or debits are an important element of compact accounting. The Engineer Advisers to the compact commissioners meet prior to the annual Rio Grande Compact Commission meeting to prepare data on scheduled and actual delivery of water and other related topics. The U.S. Geological Survey acts as Secretary to the Compact Commission under an annual cooperative agreement, and prepares monthly and annual reports and maintains the official Compact Commission files.

Costilla Creek Compact. Representatives of Colorado and New Mexico signed the Costilla Creek Compact in 1944, and Congress approved it in 1946. The compact was amended through a similar process in 1963. The compact provides for delivery of apportioned water to users in New Mexico and to Colorado at interstate points of delivery on the New Mexico-Colorado state line. It provides for an administrative commission composed of the official in each state charged with administering public water supplies.

The Costilla Creek irrigation system begins south of the Colorado state border in the Sangre de Cristo Mountains of north-central New Mexico and extends some 40 miles downstream via Costilla Creek and irrigation ditches onto the high desert plains of New Mexico and Colorado. The compact requires daily administration of the direct flow and storage waters of the system during the irrigation season. A water master performs this function.

Pecos River Compact. Signed by New Mexico and Texas in 1948 and approved by Congress the following year, the compact provides for a compact commission to administer its provisions. Under state law New Mexico's Pecos Compact commissioner is appointed by the Governor to serve for a term of two years. Texas successfully challenged New Mexico's compliance with the compact and in 1988 the U.S. Supreme Court entered an amended decree governing New Mexico's delivery of Pecos River water to Texas. Under the decree, New Mexico is prohibited from allowing a net shortfall in its deliveries to Texas. The Commission's Pecos River water rights lease/purchase program has increased the flow of water to the state line.

Canadian River Compact. Signed in 1950 with New Mexico, Oklahoma, and Texas as parties and approved in 1952, the compact provides for a compact commission to administer its provisions with one commissioner for each state and one for the United States.

Animas-La Plata Project Compact. The states of Colorado and New Mexico concluded the Animas-La Plata Project Compact, which was approved by Congress in 1968. The compact does not provide for an administrative compact commission. It establishes equal priority for the water supply to be diverted by the project for uses in New Mexico with the priority for the project granted by the Colorado state court.



the seven Colorado River Basin states entered into discussions on the coordinated operation of the Colorado River mainstream reservoirs. On August 25, 2005, the governors' basin states representatives transmitted to the Secretary of the Interior a letter expressing conceptual agreement in the development and implementation of broad strategies for improved management and operation of the Colorado River, including coordinated reservoir management and Lower Basin shortage guidelines, system efficiency and management, and water supply augmentation. Further negotiations among the states culminated in a draft proposal for interim Colorado River operations through 2025 that was submitted through a Bureau of Reclamation scoping process to the Secretary of the Interior via letter dated February 3, 2006. The draft Seven Basin States proposal includes (1) shortage guidelines that identify circumstances under which the secretary would reduce annual deliveries from Lake Mead to the Lower Division States for consumptive uses below 7.5 maf; (2) guidelines for the coordinated operation of Lakes Mead and Powell designed to improve operation of the two reservoirs, particularly under low storage conditions; (3) guidelines for the storage and delivery of water in Lake Mead to increase flexibility in water management for meeting demands from Lake Mead; and (4) modification of the substance and term of the Interim Surplus Guidelines published in the Federal Register on January 25, 2001. A Seven Basin States agreement has been drafted in support of the provisions of the proposal, and it is anticipated that the draft agreement will be finalized and executed by the states in fiscal year 2007. The basin states continue to meet and discuss the proposal and draft agreement. The proposal is not to affect the yield available to the Upper Basin for development.

The Department of the Interior in March 2006 published in the Federal Register a notice of public availability of a Scoping Summary Report on the development of Lower Basin shortage guidelines and coordinated management strategies for the operation of Lake Powell and Lake Mead, particularly under low reservoir conditions. The notice also indicated that based on information presented in the report, the Interior Department is undertaking preparation of a draft Environmental Impact Statement. The department anticipates that the elements of the proposed action will include items from the draft Seven Basin States proposal, and that the proposed action will be designed to delay the onset and magnitude of shortages and maximize the protection afforded to water supply, hydropower production, recreation and environmental benefits by water storage in Lakes Powell and Mead. The department anticipates that the draft EIS will be published in December 2006.

Colorado River System Simulation Model Development

Commission staff during fiscal year 2006 participated in the continued development and refinement of the Colorado River system simulation model developed by Reclamation for use in planning and policy analyses. The model is based on "RiverWare," a generic modeling tool or framework developed by CADSWES of Boulder, Colorado. The Colorado River system model was used for development of the Seven Basin States proposal for coordinated operations of Lakes Powell and Mead, evaluation of Lower Basin shortage guidelines and water conservation and banking concepts, development of the annual operating plan for Colorado River reservoirs, projections of salinity for the 2005 Review of Water Quality Standards for Salinity for the Colorado River System, and other similar activities of the basin states and the federal government.

Glen Canyon Adaptive Management Program

The Glen Canyon Adaptive Management Program is in its ninth year in efforts to improve conditions in the Colorado River below Glen Canyon Dam for populations of endangered fish species and other uses of the river. The Glen Canyon Adaptive Management Work Group is a cross-interest committee chartered by the Secretary of the Interior to provide advice to the secretary on the Adaptive Management Program. The Secretary of the Interior in fiscal year 2005-2006 reaffirmed Interior's support for the adaptive management process. The Grand Canyon Monitoring and Research Center operates within the Adaptive Management Program to define research objectives and develop monitoring programs to meet information needs of the program. The Adaptive Management Work Group in fiscal year 2005-2006 initiated a public outreach campaign for the program.

Goals of the Adaptive Management Program include (1) the conservation of sediment resources and sand bars in the Colorado River through the Glen, Marble and Grand canyons downstream from Glen Canyon Dam, and (2) the control of non-native fish species detrimental to endangered native fish. Sediment and sand bars provide for native fish habitat, riparian vegetation, rafter campsites and protection of archeological sites. Pursuant to recommendations of the Adaptive Management Work Group, a short-duration, high beach-building test flow was conducted in November 2004 to investigate redistribution of stored sediment onto beaches through the Grand Canyon by making a large release from Glen Canyon Dam in excess of power plant capacity. Monitoring since the November 2004 test flow has shown a significant increase in sand bar volume in Upper Marble Canyon, historically one of the most sediment-limited reaches of the river, and a good retention of the sand deposited on the beaches in this reach. These findings suggest that strategically timed high-flow releases may be a possible strategy for rebuilding beaches and sandbars in Upper Marble Canyon. There was less or no increase in beach areas in Lower Marble Canyon as a result of the November 2004 test flow.

Flow regimes and non-flow measures are being evaluated for conserving populations of endangered humpback chub in the Colorado River and tributaries within the Grand Canyon. In fiscal year 2003, the U.S. Fish and Wildlife Service issued a recovery plan that requires the development and maintenance of the current population as well as other populations outside the Grand Canyon vicinity. Trout predation on humpback chub is believed to be high, and mechanical removal of trout at the confluence of the Colorado and Little Colorado rivers in 2004 and 2005 has been shown to be effective in reducing the number of non-native fish and possibly minimizing trout predation. Also, a fish barrier and trout removal project was implemented on Bright Angel Creek. Mechanical trout removal efforts will continue during fiscal year 2006-2007 and high-fluctuating-flow releases from Glen Canyon Dam also may be continued to disadvantage trout reproduction.

In fall 2005, 300 young-of-year humpback chub were seined from a backwater in the Colorado River above the confluence with the Little Colorado River where almost all known reproduction of the species has occurred. This may be due to the release of warmer water due to low reservoir storage conditions in Lake Powell stemming from the recent drought. The Adaptive Management Work Group has recommended that the Secretary of the Interior complete National Environmental Policy Act compliance activities on a temperature control device for the outlet penstocks at the Glen Canyon Dam power plant, and the Bureau of Reclamation as of the end of fiscal year 2006 is evaluating designs for a temperature control device to regulate the temperature of Glen Canyon Dam releases in the future.

The Center for Biological Diversity, Sierra Club, Glen Canyon Institute, Living Rivers and Arizona Wildlife Federation on February 14, 2006, filed suit against the secretary of the Interior and the Bureau of Reclamation in the U.S. District Court for the District of Arizona claiming that the results of the Adaptive Management Program have not resulted in the United States operating Glen Canyon Dam in a way that complies with the Grand Canyon Protection Act, the Endangered Species Act or the National Environmental Policy Act. The suit seeks an order compelling the Bureau of Reclamation to reinitiate consultation with the Fish and Wildlife Service in the face of new information regarding the effects of dam operations on endangered fish species and to supplement the Final Environmental Impact Statement on the Operation of Glen Canyon Dam. The Department of the Interior is vigorously defending the suit, and court activity in the suit is expected to continue into fiscal year 2006-2007.

Colorado River Salinity

Mexico began protesting the salinity of the Colorado River in 1961 and Congress enacted the Colorado River Basin Salinity Control Act in 1974 authorizing the construction, operation and maintenance of certain works in the Colorado River Basin to control the salinity of water delivered to users in the United States and Mexico. A desalting plant was built in the 1980s and began operation in 1992, but operations were suspended in early 1993 because of the operating costs. New Mexico has agreed with other basin states that the plant should be maintained on standby status to enable restart within a reason-





able time. The Bureau of Reclamation consults with the basin states at least annually on the status of the plant and the need to operate during the year.

The Colorado River Basin Salinity Control Forum was created by the basin states in response to a proposal by the Environmental Protection Agency and promulgation of a regulation (40 CFR 120) on basin-wide salinity control policy that required the states to adopt water quality standards for salinity. Forum activities include reviewing program progress, recommending and cost-sharing salinity control projects, preparing and recommending the triennial review of water quality standards within the basin, and development of future program objectives. Current studies show that the numeric criteria of the water quality standards for salinity could be exceeded and damages could escalate without future controls and continued implementation of salinity control projects. An updated economic damage model is used to estimate current and future damages from salinity, most of which occur in the Lower Colorado River Basin. Presently, there is concern that salinity levels in the Colorado River could rise further if the basin-wide drought continues and storage in mainstem reservoirs continues to be low.

The Forum at its October 26, 2005, meeting adopted the 2005 Review, Water Quality Standards for Salinity, Colorado River System. The 2005 Review has been forwarded to the states' water quality agencies for adoption into state water quality standards and subsequent approval by the Environmental Protection Agency.

The Navajo Nation continues to study salinity loadings in the Hogback area near Shiprock, N.M., in anticipation of developing a salinity control project. Studies throughout the Colorado River Basin will continue to identify the cost-effective areas for implementation of salinity control projects.

Endangered Species Act Issues

Colorado River Delta. Minute 306 to the 1944 Treaty between the United States and Mexico for the Utilization of the Waters of the Colorado and Tijuana Rivers and the Rio Grande establishes a conceptual framework for joint studies to prepare recommendations concerning the riparian and estuary ecology of the Limitrophe Section of the Colorado River and its associated delta. The seven Colorado River Basin states have stated their opposition to any proposed restoration measures that would involve delivery of Colorado River water from the United States to Mexico in excess of the current treaty delivery obligation.

The basin states have appointed representatives to a technical committee to maintain contacts, gather information as available, and report to the Basin State Representatives on the delta issues being considered. The technical committee made no report to the basin state representatives during fiscal year 2005-2006.

San Juan River Basin Recovery Implementation Program. The San Juan River Basin Recovery Implementation Program is a multi-state, cross-agency effort to conserve populations of Colorado pikeminnow and razorback sucker in the San Juan River Basin while water development in the basin proceeds in compliance with interstate compacts and other applicable laws. The reach of the San Juan River from Farmington to Lake Powell, Utah, has been designated critical habitat for the Colorado pikeminnow, and the reach of the river from the Hogback to Lake Powell has been designated critical habitat for the razorback sucker. Both fish species are listed as endangered under the Endangered Species Act. The U.S. Fish and Wildlife Service in fiscal year 2002-2003 issued recovery plans and goals for the Colorado pikeminnow and razorback sucker. Under the plans, development and maintenance of the San Juan River populations to specific population goals are integral to achieving recovery and delisting of both species.

In fiscal year 2006, the Recovery Implementation Program's Biology Committee: (1) conducted research, (2) collected habitat and fish population monitoring data, (3) completed a program integration report that summarizes monitoring activities and findings through the research and recovery implementation period of the program, (4) evaluated fish passage at the diversion structures for the Four Corners Power Plant and the Fruitland Irrigation Canal, and (5) worked on increasing pond capacity for rearing razorback sucker for augmenting the population in the San Juan River. In April 2006, the Bureau

of Reclamation completed a Final Environmental Impact Statement on Navajo Reservoir Operations that includes as the preferred alternative operating Navajo Dam to meet the Recovery Implementation Program's recommendations for flows to provide for the habitat needs of endangered fish populations in the San Juan River. Using adaptive management strategies, the Recovery Implementation Program is reviewing its flow recommendations in light of new fish and habitat monitoring data.

The Biology Committee also continued to evaluate capital works needed to recover the populations of endangered fish species in the San Juan River. Possible capital works include fish passage structures at diversion dams, fish screens on diversions, ponds for rearing endangered fish, physical habitat modifications and a temperature-control device at Navajo Dam.

The selective fish passage at the Public Service Company of New Mexico's San Juan Generating Station diversion weir continued to be operated during fiscal year 2006 to allow only native fish to move upstream of the weir. Native fish, including endangered species, used the fish passage in fiscal year 2005-2006, and non-native fish captured at the fish passage were removed from the river. Fish passage enhancements are needed at the Arizona Public Service Company's Four Corners Power Plant diversion dam, and fish screen improvements are needed at the Hogback Irrigation Project canal heading. Designs for both are in progress. The recovery implementation program in fiscal year 2005-2006 also approved expansion of fish rearing facilities for razorback sucker. In 2002, a non-selective fish passage was completed at the Hogback Irrigation Project diversion structure and the Cudei Irrigation Project diversion structure was removed from the river. Cudei project lands now receive irrigation water from the Hogback canal. Funding for all of these measures was authorized by Public Law 106-392, as amended. If installation of a temperature-control device on the outlet works of Navajo Dam is warranted and feasible to control water temperatures in the San Juan River below the dam for endangered fish, additional congressional authorizations may be sought.

During fiscal year 2006, the Recovery Implementation Program's Hydrology Committee continued work on the development or refinement of a hydrology model for the San Juan River Basin. A hydrology model for the Basin has been, and may continue to be, used to assess the availability of water supply for meeting endangered fish flow and habitat needs and water development needs. An updated model revision is expected to be completed in fiscal year 2007. New Mexico continues to raise concerns about the use of the San Juan River Basin hydrology model in the Recovery Implementation Program or in federal environmental and endangered species compliance. New Mexico's position is that the data, methodologies and assumptions used in the model are not fully accurate; do not under any circumstances constitute evidence of actual water use, water rights or water availability under compact apportionments; and should not be construed as binding on any party. Furthermore, use of the model, model data, methodologies and assumptions does not change the responsibilities of the respective states to maintain records of water rights and water use.



Cooperative Agreement on San Juan River

Major water users on the San Juan River in 2003 developed and endorsed recommendations and principles for the operation of Navajo Dam and the administration of diversions from the river for the calendar year. Every year since, including calendar year 2006, the water users have endorsed similar recommendations for the operation of Navajo Dam and the administration of diversions from the river.

The water users making the recommendations include the Bloomfield Irrigation District, City of Farmington, Hammond Conservancy District, Farmers Mutual Ditch, Jewett Valley Ditch, Public Service Company of New Mexico, Arizona Public Service Company, BHP Billiton, Jicarilla Apache Nation and Navajo Nation. The Navajo Nation approved the recommendations and principles on behalf of the Navajo Indian Irrigation Project and the Fruitland and Hogback irrigation projects. The New Mexico State Engineer and the Bureau of Reclamation have accepted the recommendations and principles, and they assist in implementing them.

Under the recommendations and principles, the water users share in the water supply available to meet the water use needs from the San Juan River. No shortages will occur in 2006 under the cooperative recommendations as the runoff and Navajo Reservoir storage will be shared to meet all demands on the river during the year.



WATER PLANNING AND DEVELOPMENT

Upper Colorado River Basin Development

Much of the water use apportioned to New Mexico by the Upper Colorado River Basin Compact is put to use through projects in the San Juan River Basin developed and operated by the Bureau of Reclamation. These projects include Navajo Dam and Reservoir, the Hammond Irrigation Project and the San Juan-Chama Project. In addition to operation of these projects, Reclamation continues work on the Animas-La Plata Project, construction of the Navajo Indian Irrigation Project, and study of the Navajo-Gallup Water Supply Project.

Navajo Dam and Reservoir. The state of New Mexico and the Navajo Nation on April 19, 2005, signed the San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement. The settlement agreement would resolve the water rights claims of the Navajo Nation to waters of the San Juan River Basin in New Mexico, including to Navajo Reservoir storage. Navajo Nation use of Navajo Reservoir water supply for both the Navajo Indian Irrigation Project and the proposed Navajo-Gallup Water Supply Project is a key component to the water rights settlement. The reservoir provides river regulation pursuant to the Colorado River Storage Project Act and provides storage for the Navajo Indian Irrigation Project, the Hammond Project, and municipal and industrial uses.

In furtherance of legislation for congressional approval of the settlement agreement, the Upper Colorado River Commission on June 5, 2006, adopted a resolution supporting the findings of the Bureau of Reclamation's May 2006 Draft Hydrologic Determination, the authorization of the Navajo-Gallup Water Supply Project, and the congressional approval of the settlement agreement and a Navajo Reservoir water supply contract for the project. The hydrologic determination would provide for the Secretary of the Interior determining that sufficient water is reasonably likely to be available from New Mexico's allocation under Articles III and XIV of the Upper Colorado River Basin Compact to service the Navajo Nation's uses under the Navajo-Gallup Project in addition to the other existing Navajo Reservoir and San Juan-Chama Project water and repayment contracts. This determination is required by Section 11 of Public Law 87-483 for Congress to approve the proposed contract to cover the Navajo Nation's water uses under the project. The Upper Colorado River Commission's resolution helps pave the way for introduction to Congress of legislation to approve the settlement agreement, including the proposed Navajo Reservoir water supply contract for the Navajo Nation, and to authorize the Navajo-Gallup Project. It is anticipated that in fiscal year 2006-2007, the Secretary of the Interior will approve a final hydrologic determination update and New Mexico's Congressional delegation will introduce the settlement legislation to Congress.

The Bureau of Reclamation in April 2006 issued a Final Environmental Impact Statement on Navajo Reservoir Operations that identifies as the preferred alternative operating Navajo Dam to meet the San Juan River Basin Recovery Implementation Program's flow recommendations for the San Juan River or a reasonable alternative. Navajo Dam and Reservoir has been operated since 1991 to produce downstream flow hydrographs that mimic natural spring snowmelt runoff patterns. This operation is believed to benefit endangered fish populations in the San Juan River. The Recovery Implementation Program has recommended flows and operating procedures that address the needs of both the species and water users. Operation of Navajo Reservoir to meet the habitat and recovery needs of populations of endangered fish species in the San Juan River provides Endangered Species Act compliance for federal water operations in the San Juan River Basin, including for the San Juan-Chama Project, the Animas-La Plata Project, the Navajo Indian Irrigation Project, the Hammond Irrigation Project, and the proposed Navajo-Gallup Water Supply Project. Under the preferred alternative, releases from Navajo Reservoir would range from a minimum of 250 cubic feet per second (cfs) to a maximum of 5,000 cfs as necessary to meet recommended spring peak flow statistics and target base flows specified by the flow recommendations, or reasonable alternatives, to benefit the endangered fish species in the San Juan River. It is anticipated that the Secretary of the Interior in fiscal year 2006-2007 will issue a Record of Decision on Navajo Reservoir operations.

The State Engineer anticipates administering diversions in the San Juan River Basin in accordance with water rights priorities and available flows so as to protect rights and meet New Mexico's commitment under the San Juan River Basin Recovery Implementation Program to protect releases from Navajo Dam made to benefit endangered fish species. Administration of diversions in the basin is anticipated to begin in 2008 after preparation for administration is completed in accordance with the rules and regulations approved by the State Engineer in December 2004 for implementation statewide of active water resource management. The rules and regulations require the State Engineer to promulgate additional rules and regulations for administration of water rights specifically in the San Juan River Basin and to use public processes for developing a water master manual and for developing a priority list determination of rights in the basin in New Mexico. Commission staff is assisting the State Engineer to prepare for administration in the basin.

Navajo Indian Irrigation Project. Construction of facilities to deliver water to lands under Block 9 of the project continued during fiscal year 2006. The Navajo Agricultural Products Industry, formed by resolution of the Navajo Tribal Council, is responsible for the operation and management of the project's irrigation works and for the farming and marketing activities of the project.

Navajo-Gallup Water Supply Project. The proposed Navajo-Gallup Water Supply Project would deliver water from Navajo Reservoir to Gallup and communities on Navajo Nation lands in New Mexico and, if additional conditions are met, in Arizona for municipal and domestic water uses. The Bureau of Reclamation during fiscal year 2006 continued its feasibility planning study for the project and its development of a draft environmental impact statement for the project that is expected to be completed in fiscal year 2007. The Bureau of Reclamation completed a Biological Assessment for the Navajo-Gallup Project in August 2005, and the Fish and Wildlife Service in May 2006 completed a draft Biological Opinion for the Navajo-Gallup Project. The draft Biological Opinion was under review for approval by Interior's Solicitor at the end of fiscal year 2006. The Biological Assessment and the draft Biological Opinion indicate that water is likely to be physically available from Navajo Reservoir for the Navajo Nation's uses under both the Navajo Indian Irrigation Project and the Navajo-Gallup Water Supply Project while operating the reservoir also to meet the San Juan River Basin Recovery Implementation Program's flow recommendations or a reasonable alternative. The Biological Opinion would provide Endangered Species Act Section 7 compliance for the Navajo-Gallup Water Supply Project.

Commission staff participates with the federal agencies, the Navajo Nation, the city of Gallup and others on a steering committee that provides oversight to the planning process for the Navajo-Gallup Water Supply Project. Progress on planning for the Navajo-Gallup Project should increase in fiscal year 2007 due to (1) the Upper Colorado River Commission's June 5, 2006, resolution supporting the availability of water within New Mexico's Upper Basin allocation for the project uses in New Mexico and supporting the San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement; (2) the anticipated finalization in fiscal year 2007 of the Secretary's hydrologic determination update supporting the availability of water for the project uses in New Mexico, of the Biological Opinion for the project, and of a draft environmental impact statement for the project; and (3) the anticipated introduction to Congress of legislation to authorize construction of the project and to approve the Settlement Agreement. The water supply for the Arizona portion of the project remains unidentified, and the Secretary of the Interior will need to determine that sufficient water is reasonably likely to be available within Arizona's compact allocations to supply the project uses in that state.

Lower Colorado River Basin Development

Little Puerco Wash Flood Control Project. The U.S. Army Corps of Engineers in fiscal year 2005-2006 completed construction of a flood control project for the Little Puerco Wash to protect the city of Gallup's downtown area from flooding caused by storm water runoff. The project includes an earthen retention dam with outlet works and an emergency spillway and reconstructed box culverts downstream from the dam.





New Mexico's Gila River Allocation. The Colorado River Basin Projects Act in 1968 authorized the Central Arizona Project and provided that the Secretary of the Interior will contract with water users in New Mexico for water from the Gila River, its tributaries and underground sources in amounts that would permit an annual average of 18,000 acre-feet of consumptive use in New Mexico in addition to the consumptive use provided by the U.S. Supreme Court's 1964 decree in *Arizona v. California*. In 2004, after four years of negotiations between the states of New Mexico and Arizona and Arizona water users, the Arizona Water Settlements Act was signed into law and provided New Mexico up to \$128 million in non-reimbursable funding to develop the additional Gila River system water.

The 2004 Arizona Water Settlements Act included provisions to permit New Mexico to develop 140,000 acre-feet of additional depletions from the Gila River Basin in New

Gila Settlement

In December 2004, New Mexico received the right to an additional 14,000 acre-feet of water a year. The settlement also provided for New Mexico to receive \$66 million to \$128 million to assist in planning for the use of that water and assistance with a possible water development project. New Mexico was given the deadline of 2014 to give notice to the secretary of the Interior of what New Mexico intends to do with the allotted water and money.

With the deadline looming close for such a large decision, the Interstate Stream Commission formed the Gila-San Francisco Coordinating Committee to act as the planning management body for the Settlement. This group is made up of the Interstate Stream Commission, the US Fish and Wildlife Service, the Bureau of Reclamation, the Office of the Governor, and the Southwest New Mexico Water Planning Group (a group made up of local elected officials to represent southwest New Mexico).

Planning has gotten underway with the formation of a Technical Subcommittee, Public Involvement Subcommittee, and the first Science Forum for the Gila River to take place in late October 2006.

Mexico during any period of 10 consecutive years, provided that specific flow bypass requirements and other terms are met. As long as these terms of diversion are met, senior downstream users are bound to not protest any additional diversions by New Mexico water users made for the purpose of developing up to 14,000 acre-feet per year, on average, of depletions over and above the consumptive use provided by the 1964 decree in *Arizona v. California*. Objection by senior downstream users had been a major obstacle to development of the 18,000 acre-feet per year of new consumptive use authorized by the 1968 Colorado River Basin Projects Act.

To effect the additional depletions in New Mexico, the Secretary of the Interior is bound to enter into a contract with New Mexico water users to exchange Central Arizona Project water for the Gila River water that downstream Arizona water users will forbear calling. The Interstate Stream Commission must approve any contract between the Secretary and New Mexico water users.

In addition, the Upper Valley Defendant Agreement approved in Title II of the 2004 Arizona Water Settlements Act provides for settlement of a suit over groundwater pumping brought by the Gila River Indian Community. New Mexico farmers in the Virden Valley are defendants in the suit, and the legislation allows Virden Valley farmers to conjunctively divert up to six acre-feet per acre from ground and surface water, regardless of priority. In return, Virden Valley farmers in New Mexico will be required to retire up to 240 acres of irrigated lands, 160 acres of which will be purchased by the Department of the Interior from willing sellers.

The Commission in fiscal year 2006 initiated a comprehensive planning process that will address, among other things, endangered species and ecological issues that may arise if the additional water development in the Gila River Basin in New Mexico authorized by the Arizona Water Settlements Act is carried out. The process is a partnership between the Commission, the New Mexico Office of the Governor, the US Fish and Wildlife Service, the US Bureau of Reclamation and an organization of local governments referred to as the Southwest Water Planning Group. Under a policy adopted by the Commission, the planning process will utilize the best available science and include a full public involvement component.

Pecos River Basin Activity

INTERSTATE STREAM ADMINISTRATION

Compact Deliveries to Texas

The Pecos River master found that, for calendar year 2005, New Mexico was able to meet its compact delivery obligation to Texas and to add 24,000 acre-feet of credit. This

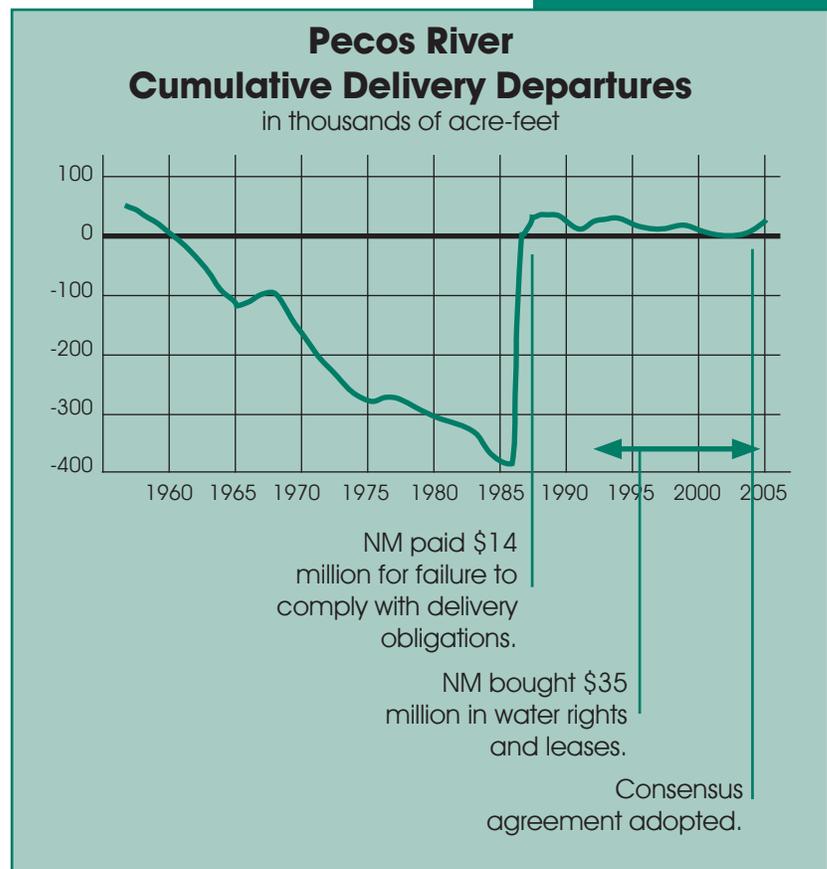
increased New Mexico's accumulated delivery credit from 17,200 to 41,200 acre-feet. In 1988, the U.S. Supreme Court found in *Texas v. New Mexico* that New Mexico had under-delivered to Texas, on average, 10,000 acre-feet per year during the period from 1950 to 1983. New Mexico was allowed to clear its past debt with a payment of \$14 million to Texas. However, the court mandated that New Mexico deliver its future water obligations to Texas on an annual basis without ever incurring a cumulative shortfall. Delivery over-ages, or credits, are permitted to accumulate with no limits imposed. The court-appointed river master determines New Mexico's compliance with delivery obligations to Texas on the Pecos River each year.



Water Resource Conservation Project – Pecos River Portion - (WRCP-PRP). The New Mexico Legislature, in response to the U.S. Supreme Court order, directed the Commission to purchase and retire adequate water rights on the Pecos River to meet compact obligations and to avoid catastrophic economic consequences that may result from net delivery shortfalls to Texas. The Commission adopted its WRCP-PRP on July 24, 1991. Approximately \$33.8 million was spent for acquisition of water rights and water leases between 1991 and 2006. The breakdown is \$19.4 million on the purchase and retirement of 27,300 acre-feet of water rights and \$14.4 million on leases of water to meet short-term delivery needs. Commission staff estimates that the purchase and retirement of water rights has increased state-line flows by about 8,800 acre-feet per year. The WRCP-PRP has allowed New Mexico to remain in compliance with its Pecos River Compact delivery obligations to date.

Pecos Settlement. Anticipating a delivery shortfall in 2001, the Commission created an ad hoc committee of water users, now called the Lower Pecos River Basin Committee, made up of representatives from five irrigation entities, six municipalities, four counties, the Lower Pecos River Basin Regional Planning Committee, four industries, and Reclamation. Asked to craft a long-term solution to the Pecos River Compact compliance problem, the committee developed a Consensus Plan that included the purchase and retirement of land and appurtenant water rights in the Lower Pecos River Basin, long-term and short-term augmentation pumping from the Roswell Artesian Aquifer to the Pecos River, and short-term leasing of water and water salvage projects. The Legislature authorized and partially funded the committee's plan and the committee is serving in an advisory capacity while the long-term solution is implemented.

Important caveats were placed on the 2003 appropriation by the Legislature. One requirement is that the Commission had to complete additional agreements to settle Carlsbad Irrigation District water rights adjudication issues. In March 2003, the Carlsbad Irrigation District, Pecos Valley Artesian Conservancy District, Reclamation and the Commission reached a settlement agreement adjudicating the irrigation district's water rights and implementing the Consensus Plan. Commission staff is working to implement the various elements of the Consensus Plan, including the purchase of 18,000 acres of irrigated farmland in the Pecos Valley, the development of well fields to augment the flows of the Pecos River, along with related contracts enabling Carlsbad Project water to be released for deliveries to the state line with completion of any necessary environmental compliance, and completion of





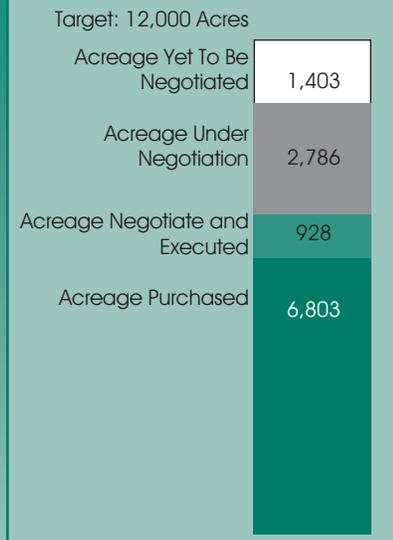
an environmental impact statement on Reclamation operations and Endangered Species Act compliance.

In 2005-2006, Commission staff continued to negotiate and acquire appurtenant land and water rights. As of June 30, 2006, the Commission has acquired a total of 6,803 acres with appurtenant water rights in the basin; 4,138 acres are in the Pecos Valley Artesian Conservancy District and 2,665 acres are in the Carlsbad Irrigation District.

Land Management. The Consensus Plan and authorizing state statute requires that when the Commission purchases water rights, it must also purchase the land associated with those rights. Given this requirement, the Commission as of July 2005 owns a little more than 7,800 acres of lands, while 6,803 of those acres have appurtenant water rights attached to them. Most of these properties are previously irrigated croplands and have a high susceptibility to weeds and erosion. As a mechanism to address these concerns Commission staff continues to work with agricultural experts to create individual land management plans on all its properties. These plans not only give a snapshot of the current condition of the properties but also recommend future management considerations that will assist in bringing the lands back into a native rangeland condition.

Augmentation Pumping. Augmentation pumping sites are being developed in three locations. The primary augmentation well field is located in the Seven Rivers Area. This well field has 10 artesian wells that have been drilled and tested during the period of March 2005 to June 2006. A pipeline is being designed to deliver water from the Seven Rivers well field to the Pecos River and the anticipated completion date of this project is spring 2007. There are currently two complementary augmentation sites being developed. In December 2004, a pipeline connecting a lateral of the Hagerman Canal to the Rio Felix was completed, which has the ability to deliver Commission-owned and -leased water to the Pecos River in the winter months. A second pipeline that connects five wells in the Lake Arthur Area to the Pecos River was completed in December 2005. The Lake Arthur pipeline was used to deliver Commission-owned water to the Pecos River in the winter of 2005-2006.

Progress on Pecos Land and Water Purchases



FEDERAL MANAGEMENT ISSUES

During the 2004-2005 fiscal year, the Commission and the Bureau of Reclamation, joint lead agencies in conducting National Environmental Policy Act (NEPA) compliance on the Pecos River, continued to work on the two NEPA processes initiated in the spring of 2002. One environmental impact statement will address modified dam operations needed for Endangered Species Act compliance and associated water supply impacts.

Both NEPA processes are nearing completion. Draft environmental impact statements (EIS) were issued for each in fiscal year 2006. A final EIS for the modified dam operations needed for Endangered Species Act compliance was issued in June 2006 and is accessible through the Reclamation website. The final EIS that discloses the effects of the long-term miscellaneous purposes contract will be issued in July 2006.

Commission staff members co-lead the hydrology, biology and water depletion offset work groups developing the impact statement. The other environmental impact statement will address the consequences of Reclamation entering into a long-term contract with the Carlsbad Irrigation District that would allow the Commission to use water for miscellaneous purposes, other than solely irrigation purposes. This action will allow water associated with the state of New Mexico's acquisition of land within the irrigation district to be used for state-line deliveries to Texas as contemplated under the Pecos Settlement. The Commission, as joint lead on NEPA efforts with Reclamation, will develop and prepare the impact statements and all other compliance documentation required for the projects.

Endangered Species

Responding to a finding by the U.S. Fish and Wildlife Service in 1991 that Reclamation operations on the Pecos River were harming the threatened Pecos bluntnose shiner, Reclamation and the Wildlife Service, the New Mexico Department of Game and Fish, and the Carlsbad Irrigation District agreed to work together to address threats to the survival of the shiner. The Commission joined the effort in 1997. Modifications to historic dam operations to conserve the federally threatened Pecos bluntnose shiner resulted in additional depletions of the fully appropriated Pecos River waters.

In fiscal years 1999 and 2000, Reclamation signed agreements with the Commission to make its best effort to fully offset any new depletion with other valid New Mexico water rights to protect New Mexico's ability to meet its Pecos River Compact obligations. If Reclamation's best efforts were insufficient to offset the depletion, Reclamation agreed to lease any water needed for the offset from the Commission's Water Resource Conservation Project. The federal agency continues to fully offset new depletions resulting from activities related to the conservation of endangered species in the Pecos River.

The Commission has been working closely with Reclamation to develop a methodology to annually account for depletions and offsets made to the river system related to Reclamation's modified dam operations for Endangered Species Act compliance purposes. An agreement to utilize this method and offset depletions is being negotiated concurrently.

Four invertebrate species (Roswell springsnail, Koster's tryonia, Pecos assiminea, and Noel's amphipod) located in the Bitter Lake National Wildlife Refuge area in New Mexico and Pecos and Reeves counties in Texas were proposed for listing as endangered with critical habitat under the Endangered Species Act in February 2002. The Center for Biological Diversity and Forest Guardians sued the U.S. Fish and Wildlife Service in April 2004 to complete the listing process for these species.

Threats to the species identified in the listing package included local and regional groundwater depletion, surface and groundwater contamination, oil and gas extraction, and direct loss of habitat. The Commission submitted formal comments to the Wildlife Service to more accurately characterize the threats imposed by groundwater pumping in New Mexico and to provide additional hydrologic information that may not have been available to the Wildlife Service when the proposed listing was drafted. The Wildlife Service listed these species as endangered on August 9, 2005. The final listing package did not designate critical habitat for these species in New Mexico and accepted comments the Commission submitted regarding groundwater pumping.

In 2002, the Commission initiated research to increase the knowledge base of information for the federally protected Pecos bluntnose shiner. Two important studies were completed in 2004 and made available to several federal and state agencies. Those studies are being submitted to a scientific journal for publication. One study focused on the relationship between river discharge, habitat availability, and habitat use. Results of the study indicated that the habitat types most consistently used by the shiner were available in the same quantities across the full range of flows sampled, indicating that habitat is available to the shiner even at low flows. These results assist in selecting dam operations being considered as part of the environmental impact statement.

The other study focused on the effect that irrigation block releases have on shiner eggs. By releasing artificial eggs with similar mass and buoyancy to natural shiner eggs after a block release was initiated and collecting these eggs at various distances downstream, the amount of eggs retained in various river reaches could be calculated. The results of the study suggest that most of the eggs produced during increased flows associated with block releases remain close to their population center, and that block releases are not the primary threat to the shiner.

The 2003-2006 Biological Opinion for Carlsbad Project reservoir operations expired on February 28, 2006. An interim biological opinion was accepted by Reclamation on April 19, 2006, that was in place until the new 10-year Biological Opinion was accepted. A long-term Biological Opinion covering years 2006-2016 that protects against river drying





by defining intermittency as 5 cubic-feet per second near Acme gauge, where good habitat is found but the river is prone to drying, was accepted by Reclamation in May 2006.

Negotiations for the state's first acquisition of water rights for the Strategic Water Reserve were initiated early in 2006. These water rights will primarily benefit Endangered Species Act (ESA) compliance purposes. A pipeline will be constructed to convey water to the river to help avoid river drying. Reclamation will lease this water from the State as a major part of their ESA compliance activities. Through this partnership, the environment will be protected and the State will be able to recover the cost of its investment.

WATER PLANNING AND DEVELOPMENT

Rio Hondo Channel Capacity Improvement. A channel capacity analysis performed by the U.S. Army Corps of Engineers concluded the channel could not maintain adequate flow throughout its length. Work to resolve remaining issues among the affected landowners, the City of Roswell, Chaves County, the Chaves County Flood Commission and the Corps is ongoing. A Joint Powers Agreement between the Commission, Chaves County, Chaves County Flood Commission and the City of Roswell to enumerate the responsibilities of those parties in the channel capacity augmentation project was signed in October 2002. The City of Roswell commissioned an engineering firm to generate a construction level design for the channel augmentation. The design was completed in 2003. Natural and cultural resource surveys were conducted in the areas affected by the proposed augmentation. The Commission is working with the landowners to resolve construction design concerns and to negotiate construction and maintenance easements.

Reclamation's Water 2025 Challenge Grant. In fiscal year 2006, the Commission received nearly \$60,000 through Reclamation's Water 2025 Challenge Grant Program. The grant program encourages and offers matching funds for projects intended to reduce potential conflict over scarce western water resources. Commission staff proposed to improve stream flow measurement accuracy, especially at high flows, at the Pecos River at Red Bluff gage by installing a state-of-the-art, bank-operated cableway capable of deploying new acoustic Doppler current profiler technology. Accurate stream flow measurements at the Red Bluff location are critical because the site is an index gage used to account for New Mexico's delivery of water to Texas under the Pecos River Compact. Installation was completed in June 2006.

Phreatophyte Control. Congress has authorized Reclamation to carry out a program of eradication and management of phreatophytes – high-water-use, non-native plants – in the flood plain of the Pecos River extending from Santa Rosa, New Mexico, to Girvin, Texas. The states of New Mexico and Texas are required to acquire such lands, easements, rights of way, and other interests in lands as are necessary to carry out the program.

The Commission has contracted with Reclamation for acquisition of new and permanent easements required for the program and contributes \$150,000 annually to the maintenance of the cleared areas. No new phreatophyte clearing was undertaken, but all of the previously cleared areas in New Mexico (33,230 acres) were kept clear by root plowing during fiscal year 2006.

New Stream Gauges. In October 2005, the Interstate Stream Commission Pecos River Bureau installed two stream gauges on the Pecos River. The first gauge was installed half a mile above Brantley Reservoir to improve the monitoring of ISC releases from Hagerman Irrigation Company and Lake Arthur well field to the Pecos River. The other gauge was installed five miles above the USGS gauge near Acme to provide continuous flow measurements and monitoring of flow intermittency in the reach of the Pecos River above Acme and to provide backup measurements for the USGS gage near Acme.

Rio Grande Basin Activity

INTERSTATE STREAM ADMINISTRATION

Rio Grande Compact

Both Colorado and New Mexico met their scheduled 2005 deliveries under the Rio Grande Compact and remained in an accrued credit status throughout the 2005-2006

fiscal year. During 2005, Colorado over-delivered a total of 2,600 acre-feet for an accrued credit as of January 1, 2006, of 4,600 acre-feet; and New Mexico over-delivered a total of 7,600 acre-feet for an accrued credit as of January 1, 2006, of 37,100 acre-feet. New Mexico has not been in deficit in compact deliveries on the Rio Grande since 1990.

The most significant management challenge related to the Rio Grande Compact during the 2005-2006 fiscal year remained the impact of Article VII of the compact. Article VII prohibits the storage of native Rio Grande water in post-1929 reservoirs if the amount of usable water in Elephant Butte and Caballo reservoirs is below 400,000 acre-feet. When Article VII is in effect, New Mexico cannot increase native water storage in McClure and Nichols reservoirs on the Santa Fe River, El Vado Reservoir on the Rio Chama, or in any other reservoir built after 1929 in the Rio Grande basin upstream of Elephant Butte Reservoir.

After coming out of Article VII on May 20, 2005, this usable water supply in Elephant Butte and Caballo reservoirs exceeded the 400,000 acre-feet Article VII trigger level, allowing the Middle Rio Grande Conservancy District to store over 100,000 acre-feet of snowmelt runoff in El Vado Reservoir. Usable water fell below 400,000 acre-feet again on August 26, 2005, subsequently rose above that level on December 26, 2005, and thereafter remained above 400,000 acre-feet until April 14, 2006. Article VII remained in effect at the close of the fiscal year. The Commission maintained close coordination with the Middle Rio Grande Conservancy District, the City of Santa Fe and the U.S. Bureau of Reclamation as to when they could and could not store native Rio Grande water pursuant to the compact.

Commission staff continued to work with staff of the New Mexico Environment Department and New Mexico Attorney General's Office on issues related to threatened interstate compact litigation on the Lower Rio Grande by the State of Texas.

FEDERAL MANAGEMENT ISSUES

During the 2005-2006 fiscal year, the Commission, Reclamation, and the U.S. Army Corps of Engineers continued their efforts to produce the first integrated plan for the operation of federal facilities in the Rio Grande Basin above Fort Quitman, Texas. The plan, to be developed through a review of the Upper Rio Grande water operations and preparation of an Environmental Impact Statement, excludes El Vado Reservoir and Elephant Butte and Caballo Reservoir operations, except for the flood control function of these two reservoirs. The Commission participated as a joint lead agency with Reclamation and the Corps in the review to assure that the resulting operations plan (1) supports New Mexico's compliance with its obligations under the Rio Grande Compact, (2) reflects New Mexico's social and economic interests, and (3) protects the rights of New Mexico's water users. During the 2005-2006 fiscal year, a draft EIS was published and 10 public meetings were conducted in locations along the river from Alamosa, Colorado, to El Paso, Texas. Comments on the draft document were received and responses were prepared. The process is anticipated to be complete in late 2006 with the publication of a Final Environmental Impact Statement followed by the issuance of separate Records of Decision, stating each agency's plan for future exercise of its authorities in light of the findings.

Endangered Species Issues

The Commission has continued to support staff work in the Middle Rio Grande to proactively seek long-term solutions for endangered species issues. Staff participated in and provided leadership to the Middle Rio Grande Endangered Species Act Collaborative Program (CP) throughout the year. The goal of the CP is to meet endangered species habitat needs in the Middle Rio Grande while protecting existing agricultural, municipal, industrial, and other beneficial uses of water. The Commission and the Office of the State Engineer approved the hiring of an additional three staff to assist with project activities, CP management, and operation of a new facility for breeding and rearing silvery minnow.

Commission staff completed numerous projects designed to prevent extinction and promote recovery of the silvery minnow. In addition, staff conducted planning and permitting for several new projects. Examples include siting and planning for construction and operation of a second silvery minnow refugium and planning and permitting for another phase of





habitat restoration work. The Commission-led projects have been funded through a variety of sources including the New Mexico Water Trust Board, the Commission, and the CP.

The success of the program was particularly evident in the October 2005 silvery minnow catch data. The number of silvery minnow caught in October 2005 was statistically similar to those caught in October 1994 and 1995: the highest recorded catch rates since catch-monitoring began. Additionally, in contrast to 2000-2003, significant numbers of silvery minnow were caught in the Albuquerque reach of the river.

In November 2005, U.S. District Court Judge Parker issued a Memorandum Opinion and an Order and Final Judgment in the long running Rio Grande Silvery Minnow v. Keys lawsuit. The judge ruled the case moot, denied motions to vacate his earlier decisions, and then affirmed those decisions. The state of New Mexico, along with the federal defendants and other defender intervenor's appealed the decision to the U.S. 10th Circuit Court of Appeals in June 2006.

WATER PLANNING AND DEVELOPMENT

Improvement of the Rio Grande Income Fund Programs

The Commission continues to use funding from the Improvement of the Rio Grande Income Fund for numerous high-priority projects involving cooperation with Reclamation to maintain the river channel and associated drainage facilities along the Rio Grande between Velarde and Elephant Butte Reservoir to minimize conveyance losses and non-beneficial consumption of water. The Commission contributes funding and equipment to that effort, and Reclamation contributes manpower and equipment. Each year, work in the lower half of the Middle Rio Grande includes cleaning, mowing, and maintaining several state-owned drains; conducting levee repairs; and maintaining the pilot channel through the Elephant Butte sediment delta.

Habitat Restoration

The improvement of habitat for native fish and wildlife in a river system altered by the construction of dams, diversions, levees, and bank-line stabilization for flood control and water-delivery purposes is important for helping to rebuild and maintain robust populations. Lack of specific types of habitat, including areas where overbank flooding can occur, has been cited as one reason for the paucity of silvery minnow caught in the Albuquerque area in the late 1990s and early 2000s, even though this stretch of river has been kept wet.



Other techniques involve cutting side channels into sandbars immediately adjacent to the river and islands to provide slow-moving, shallow water for silvery minnow habitat when the flow in the main river channel is high and fast. These side channels are within the river channel adjacent to the bosque but only contain water when the flow in the river is above a target level.

The Interstate Stream Commission is one of the first entities to construct minnow habitat within the river itself. The project modified more than 20 acres within and along the river channel from the North AMAFCA Channel to near Rio Bravo Boulevard in Albuquerque. It was designed to increase the areas of inundation, particularly on islands, over a variety of river flows by lowering bank lines. A number of habitat restoration techniques were used to create the habitat diversity that is so important for the various life stages of the minnow, without increasing water depletions. This is the first phase of a planned four-year project being funded through the New Mexico



Habitat restoration techniques include cutting down high, steep banklines to provide shelves during high river flows where silvery minnows can find shallow, slower-moving water.

Water Trust Board, the Interstate Stream Commission, and the Middle Rio Grande Collaborative Program. State funds for the project are used as a portion of the non-federal cost share for the Middle Rio Grande Collaborative Program. This project has involved collaboration with many entities, including, but not limited to, the City of Albuquerque, Sandia Pueblo, the Corps of Engineers, the Bureau of Reclamation, and the Middle Rio Grande Conservancy District.

Work in the 2005-2006 fiscal year work focused on construction and maintenance of a pilot channel through the sediment delta of Elephant Butte Reservoir and removal of a 3-mile long sediment plug in the river near Tiffany. The work is done to ensure efficient conveyance of Rio Grande water into the active reservoir pool and reduce flood risk. By spring 2006, the Commission and Reclamation had succeeded in maintaining nearly 22 miles of pilot channel through the Elephant Butte Reservoir sediment delta, which effectively conveyed the extremely low stream flows of the 2006 snowmelt runoff into the reservoir. The pilot channel also helped to reduce the potential for a catastrophic breach of the river levees upstream of the reservoir during the high-volume monsoonal flows, and contributed significantly to the quantity of water delivered to the reservoir. Due to the ongoing recession of the active reservoir pool, the pilot channel was extended south of the Narrows to the vicinity of North Monticello Point, using the Commission's contractor to maintain an active connection between the river and the reservoir. Commission staff estimates that a maintained pilot channel reduces evaporative losses by 15,000 to 20,000 acre-feet per year.



The Commission also continues to work with Reclamation to reduce the non-beneficial consumption of ground-water by invasive phreatophyte vegetation – high-water-use, non-native plants – on 11,000 acres of the delta areas at Caballo and Elephant Butte reservoirs. The Commission contributes funding and equipment to the program and Reclamation contributes manpower and equipment. The Legislature has restricted the use of funding for this work to maintenance of previously cleared areas. The primary means of clearing has been mowing. However, in 2006, Reclamation continued a pilot study begun in 2003, on 200 acres in the Caballo delta on the effect of herbicidal treatment on salt-cedar-infested land previously maintained by mowing. The study has shown that herbicidal treatment of previously mowed salt cedar using a mixture of herbicides approved for aquatic environments will result in complete mortality only if the leaf mass available for absorption of the herbicide is substantially greater than the root mass. Final reports on these studies are pending. This project has been successful in controlling the

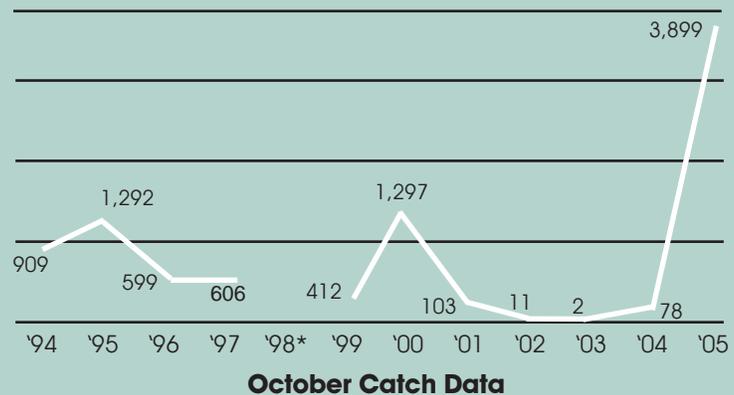
Surviving Drought: Fish and Farmers

In 2000, with continued drought conditions in New Mexico and endangered species litigation concerning the silvery minnow and river flows, many people would probably have bet that the Rio Grande silvery minnow would be extinct by 2005 or that farming would be greatly impaired in the Middle Rio Grande because of the fish. However, coordinated water operation and management efforts of local, state, and federal agencies have significantly increased over the past five years with the result that, despite long-term drought, the silvery minnow and irrigators have managed to survive and perhaps even thrive. Minnow recovery efforts over this time have included augmenting captive-bred minnow in Albuquerque, supplementing river flows with leased and purchased water, and creating additional minnow habitat. Although the silvery minnow showed continued decline based on catch trend data (Platania) in 2002 and 2003, the silvery minnow appears to have rebounded in 2004 and 2005 due to better than average snowmelt runoff coupled with recovery efforts. This occurred even though drought conditions led to significant river drying in 2002, 2003 and 2004.

Working on many fronts, the New Mexico Interstate Stream Commission has contributed to these successes. The use of Rio Grande Compact relinquishment water in 2003 has been critical for meeting endangered species flow requirements on the river as well as supplying water for Middle Rio Grande irrigators and the City of Santa Fe. The Commission managed and partially funded the construction of a state-of-the-art breeding and rearing facility for the silvery minnow at the City of Albuquerque. Between 75,000 and 100,000 minnow are now being released yearly to the river from this facility alone.

The Commission is also the primary source of non-federal cost share to the Collaborative Program, which receives federal funds to support ESA compliance and recovery efforts. Challenges ahead (long-term drought, water shortages, funding restrictions) for fish and farmers will need strategic planning and continued collaboration.

Silvery Minnow Population Trend



*No sample taken in 1998



growth of non-native vegetation at Elephant Butte Reservoir (below the Narrows) as the reservoir has receded.

The Commission continues to work with the Middle Rio Grande Conservancy District and the Elephant Butte Irrigation District to improve water management; water metering and measurement; and data collection, storage, and retrieval. Such efforts are critical to gain a better understanding of where and how much water is being used and to better utilize the reduced amount of water available as a result of the recent drought. The Commission contributes funding and supplies to this effort and the districts contribute manpower and equipment.

The Commission is also conducting monitoring and data evaluation for a surface water and groundwater interaction characterization program in the reach of the Rio Grande from San Acacia to Elephant Butte Reservoir. This program seeks to characterize and understand the hydrology of the reach by refining the understanding of the temporal and spatial interactions between surface water and groundwater. Such an understanding is essential for making sound water management decisions related to endangered species management and Rio Grande Compact compliance. The characterization work included drilling and installing more than 140 piezometers (pressure gauges); installing staff gauges in the river, low-flow conveyance channel, and riverside drains; and installing 70 automatic water-level data loggers. A report with initial analyses and results of data collection activities will be finalized in the 2006-2007 fiscal year.

Finally, Commission staff developed a series of high-resolution linked surface water/groundwater models along the Rio Grande bosque in the middle valley. The numerical models are complete from Angostura Diversion dam to the highway-380 crossing of the Rio Grande. These models are used to evaluate the interaction between the river, the riverside drains and the riparian vegetation along the Rio Grande corridor.

San Juan-Chama Project

The San Juan-Chama Project is a transbasin diversion authorized in 1962 by federal law to divert Upper Colorado River basin water allocated to New Mexico under the Upper Colorado Basin Compact into the Rio Grande basin for use in New Mexico. The water is diverted from tributaries to the San Juan River and brought through a tunnel under the Continental Divide to the Rio Chama drainage, where it is stored in Heron Reservoir until it is released to New Mexico contractors for use in the Rio Grande basin above Elephant Butte Reservoir.

Diversions from the San Juan River Basin by the San Juan-Chama Project in any given year are limited by the available water supply. The project has three points of diversion in Colorado on the Blanco River, the Little Navajo River and the Navajo River. The diversions are administered to provide minimum bypass flows required by the authorizing legislation for the preservation of fish and aquatic life in the Blanco and Navajo rivers.

The total quantity of water delivered into Heron Reservoir during the 2005 calendar year was about 155,000 acre-feet. At the end of 2005, storage of San Juan-Chama Project water in Heron Reservoir was approximately 199,000 acre-feet, which was a significant rebound from 2004.

Acequia Construction Program

Acequias, or community ditches, are recognized under New Mexico law as political subdivisions of the state. Many of the state's acequia associations have been in existence since the Spanish colonization period of the 17th and 18th centuries. Historically, they have been a principal local government unit for the distribution and use of surface water. The associations have the power of eminent domain and are authorized to borrow money and enter into contracts for maintenance and improvements. The costs of maintenance and improvements are borne by the individuals served by the irrigation system.

The Commission has established an Acequia Construction Program to assist acequia associations with construction and repair projects. The U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) and the U.S. Army Corps of Engineers

support the Acequia Construction Program. Commission staff coordinates the involvement of these agencies, support and advise the acequias, review design and construction, and manage state and federal support in the form of loans or grants.

In 2006, the Commission entered into a multi-year agreement with the NRCS to provide design work on acequia projects. Previous agreements were on a year-to-year basis. The multi-year agreement allows for more efficient staffing by NRCS. The Commission funds up to \$250,000 of work per year with actual costs based on New Mexico Society of Professional Engineers cost schedules.

The Acequia Construction Program includes five ongoing sub-programs: the Loan Program, the 80/20 Acequia Grant Program, the Corps Section 215 Acequia Program, the Corps Section 1113 Acequia Program, and Legislative Special Appropriations Projects (capital projects).

Loan Program. The loan program makes low-interest loans from the Irrigation Works Construction Fund available to acequia, community ditch, and other organizations for construction and repair of irrigation works. Acequia associations may use the loans to pay their share of costs of construction programs. The loans are provided at 2.5 percent interest and the usual repayment period is 10 years.

80/20 Grant Program. The New Mexico State Legislature appropriates funds from the Irrigation Works Construction Fund to the State Engineer for grants for improvement and repair work on specific acequias. Eighty percent of project cost, up to \$96,000 per project, can be covered by the grant. Total construction costs for this program are capped at \$120,000.

Section 1113 and Section 215 Acequia Programs. The federal Water Resource and Development Act of 1986 authorized the Secretary of the Army to undertake measures necessary to preserve and restore the diversion structures and associated canals of acequias. Under both the Section 1113 and Section 215 programs, the federal government funds 75 percent of total project costs. The annual federal funding for Section 1113 and Section 215 Programs, routed through the U.S. Army Corps of Engineers, ranges from approximately \$1.5 million per year to about \$5 million per year. The Commission provides 17.5 percent of the total cost and the acequia association provides 7.5 percent of the total cost.

Under the Section 1113 Acequia Program, the Corps is responsible for all design, National Environmental Policy Act (NEPA) compliance activities, real estate easements, advertisement of the construction bids, contract awards, construction inspection and oversight, and project financial management. Under the Section 215 Acequia Program, the acequia manages construction. NRCS typically completes the project design through the Commission's technical assistance programs. The Corps manages NEPA compliance activities.

In July 2002, the Corps and Commission signed an agreement concerning the Section 215 and Section 1113 programs that clarifies the responsibilities of each agency and specifies criteria for design deadlines, compliance activity schedules, program and project financial reporting, and project prioritization and construction timelines. The agreement supplements a March 8, 1999, agreement between the Corps and the Commission.

Acequia Capital Projects. The New Mexico State Legislature appropriates funds to individual acequias for specific projects. Commission staff reviews plans, specifications, and ditch eligibility; executes contracts and agreements; and inspects the completed projects.



Projected FY07 Acequia Construction Program

80/20 Grant Program recipients: Acequia del Marrano, \$82,000; Canones Ditch No. 1, \$141,000.

Section 215 Grant Program recipients: Acequia de los Ancones, \$395,000; Mulcock-Foley-Powell, \$75,936; Los Trigos Ditch, \$180,000; Acequia de los Utes, \$45,418.

Section 1113 Program recipients: Acequia Posecion, \$2.5 million; Cuchillo Acequia, \$2.5 million; Acequia de los Vigiles, \$3.3 million.

Appendix A

Status of Active Adjudications

INTRODUCTION

Water rights adjudications are currently pending in both federal and state courts in New Mexico. These lawsuits were filed to determine the elements of the water rights within the Pecos River stream system, several Rio Grande tributaries, the San Juan River stream system, the Lower Rio Grande stream system, the Zuni River stream system and the Animas Underground Water Basin.

PECOS RIVER STREAM SYSTEM

State of New Mexico ex rel. State Engineer and Pecos Valley Artesian Conservancy District v. Lewis, et al. and *State of New Mexico ex rel. State Engineer and Pecos Valley Artesian Conservancy District v. Hagerman Canal Co.*, Fifth Judicial District Court, Chaves County, Cause Nos. 20294 and 22600, consolidated (Lewis adjudication).

The *Lewis* adjudication currently includes ground and surface water rights throughout the Pecos River stream system. By necessity of scale, the adjudication has been conducted within sub-areas loosely described by the six groundwater basins within the stream system.

The adjudication began in 1956 in the Roswell Artesian Basin (RAB). After an expansion in 1974 to include the Rio Hondo stream system, two other events added to the *Lewis* adjudication challenge. In 1976, the Carlsbad Irrigation District (CID) made a priority call to the State Engineer for priority administration and the *Lewis* case was expanded to include the entire Pecos River stream system. Then, in 1988, the U.S. Supreme Court entered an amended decree in *Texas v. New Mexico*, which requires New Mexico to timely meet its water delivery obligations to Texas pursuant to the Pecos River Compact. If the Pecos River water master determines that New Mexico has under-delivered, the shortfall must be remedied within six months.

The state is performing the work necessary to complete the *Lewis* adjudication and to, thereby, meet three objectives: (1) facilitate Pecos River administration according to the doctrine of prior appropriation in New Mexico, in the event it is necessary; (2) facilitate the success of the implementation of the 2003 CID Project settlement agreement; and (3) facilitate New Mexico meeting delivery obligations to Texas under the Pecos River Compact. The following describes the progress made in the adjudication to date.

Roswell Artesian Basin: When the adjudication began in 1956, its objective was to adjudicate all groundwater rights in the RAB in order to eliminate illegal and excessive pumping.¹ Because a number of groundwater rights were supplemental to the Hagerman Canal surface water rights, a separate action was filed in 1958. The two cases were later consolidated and, in 1966, the district court entered a decree adjudicating the approximately 3,000 water rights. The decree was appealed and, in 1967, the New Mexico Supreme Court ruled, in *State ex rel. Reynolds v. Allman*, 78 N.M. 1, 427 P.2d 886 (1967), that all priorities must be determined using the same criteria. That 1967 ruling allowed the 1966 decree to be re-opened and individual RAB groundwater rights owners to pursue a re-adjudication of pre-1947 groundwater rights in order to relate their priorities back to antecedent surface water right priorities. The re-adjudication of approximately 2000 "relation-back" claims continues today. Status: Active.

Adjudication of the state law rights for federal holdings was completed by 1996 and the only federal reserved water rights claim is for the Bitter Lake National Wildlife Refuge, which is in active negotiations. Status: Active.

Pecos River Supplemental Adjudication: Since 1982, 33 of the 48 additional surface and groundwater rights claimed as omitted from the 1966 RAB decree have been adjudicated. Status: Inactive.

Pecos River Miscellaneous Adjudication: The Pecos Hydrographic Survey staff has recently surveyed 38 additional miscellaneous unadjudicated groundwater declarations in the RAB and Fort Sumner Groundwater Basins and another 52 groundwater declarations in those two basins remain to be surveyed. Status: Inactive.

Rio Hondo Stream System: Adjudication of the water rights of the Mescalero Apache Tribe (1993 Final Judgment), the Lincoln National Forest (1979 Judgment) and the non-Indian water right owners (entry of consent orders) is nearly complete, with only the *inter se* segment remaining. Status: Active.

Fort Sumner Groundwater Basin: The court entered subfile orders for 105 groundwater rights between 1980 and 1995; and the hydrographic survey for the surface water rights will take approximately two years to complete once resources are available. Status: Inactive.

Carlsbad Underground Water Basin (CUB): For case management purposes, the adjudication of water rights in the CUB has been divided into (1) the CID surface rights adjudication; (2) the CUB groundwater adjudication; and (3) the Black River stream system adjudication. The state's focus at present is on the CID surface rights adjudication.

CID Project: The court ordered, and the state conducted, supplemental service of a stipulated offer of judgment involving the rights of the United States and the CID in the Carlsbad Project. Under a February 1996 pretrial order, briefing of all procedural issues and threshold legal issues was completed. The court granted the state's motion to consolidate the members and project adjudications in April 1996. The purpose of consolidation was to allow members to participate in briefing of issues that affect them, such as ownership of water rights. By May 2002, the court had issued its final decision on all procedural and threshold legal issues, deciding that the diversion and storage rights of project water are held by the United States for the members of the CID, that the decree adjudicating the water rights of the project will be binding on all water right owners in the Pecos River stream system, that objectors are precluded from challenging the determination of the 1933 Hope Decree as it pertains to the rights and interests of the United States in the project, and determining that the United States is not an indispensable party to adjudication of the rights of the individual members of the CID, and leaving only the project priority date and amounts of water to be litigated.

From 2002 through 2003, the state negotiated with CID, Pecos Valley Artesian Conservancy District, Fort Sumner Irrigation District and the United States Bureau of Reclamation to settle the project (offer) phase of the litigation, as directed by the Legislature through its enactment of NMSA 1978, § 72-1-2.4 (2002).

The negotiating parties executed a settlement agreement on March 25, 2003. The settlement resolved a number of issues including the priority dates, the project's diversion amounts, and a structure for addressing priority call and short-delivery events. Under the terms of the settlement, certain conditions precedent must be met or

waived by August 31, 2006. If these conditions are not met or waived, and if the deadline is not further extended, the settlement will be considered void *ab initio* and the project litigation will be restored to the status quo prior to the initiation of the settlement negotiations. On December 10, 2004, the court entered a partial final decree approving and adopting the settlement agreement. Two objectors to the settlement agreement filed an appeal from this decree. The Court of Appeals heard oral argument on this matter in April 2006 and the appeal is pending.

CID Members: The state filed the first volume of the member hydrographic resurvey (CID Section 1) with the court in September 2002 and the second volume (CID Section 2) in April 2003, and began serving offers of judgment in 2003. Subfile consent orders, rather than offers of judgment, are being used for CID Section 4. As of mid-2006, most of the water rights located within these three sections have consent orders entered. The state continues to negotiate some of the remaining disputed water rights and will litigate those that are not. The state expects to complete Sections 1, 2 and 4 by the end of 2007. Status: Active.

The state began work on CID Section 3 in 2006 and has experienced great success in obtaining agreement and signed consent orders from Section 3 water right claimants. The state's survey in Section 3 has been enhanced by modifying procedures previously used in Sections 1, 2 and 4 to create a more easily understood process for the water right claimants. The state has also modified procedures it uses with the court to eliminate steps in the process that lead to redundancy or delay. Based upon early observation of these modified procedures, the state expects to complete the adjudication of Section 3 by the fall of 2007. Status: Active.

CUB Groundwater: The hydrographic survey is scheduled for completion in 2007. Joinder of water right claimants and service of consent orders will follow thereafter.

Black River Stream System: Status: Not initiated.

Upper Pecos Underground Water Basin: The adjudication of the Upper Pecos Underground Water Basin began with the filing of the Hydrographic Survey Report in 1977. Consent orders for many of the groundwater rights have been entered, but the adjudication of this basin stalled when the court ordered the state to concentrate its resources in other areas.

Gallinas River Stream System: In 1991, the five-volume Gallinas River Hydrographic Survey Report for surface water rights was filed with the court. Since that time, the state has completed Volume II adjudicating the Storrie Lake Irrigation Project (Storrie Project) water rights, portions of the City of Las Vegas (city) water rights, and some of the individual owners' water rights. The court decreed Storrie Project water rights in the mid-to-late 1990s, for approximately 70 individual subfile owners. Thereafter, the court redirected the state's focus from the Gallinas to the CID area of the adjudication.

In the fall of 2002, a group of acequias moved for, and the district court ordered, the state to resume active adjudication of their water rights. The state expects to complete the adjudication of the rights described in Volume I of the hydrographic survey by the end of 2006; except for certain priority dates and irrigation water requirement issues raised by the acequias and the Gallinas Canal & Storage Company (Gallinas Canal).

The Gallinas River subfile adjudication has been delayed because necessary resources have been diverted to litigate issues raised by the acequias and by the Gallinas Canal. Status: Active.

City of Las Vegas Remand: The New Mexico Supreme Court issued its Opinion and Mandate in April 2004 rejecting the City of Las Vegas' claim to a pueblo doctrine water right. The Supreme Court remanded the matter with instructions to the district court to fashion an equitable reliance right for the city. Since that remand, extensive negotiations and litigation have occurred involving the City of Las Vegas, the state, the United States, numerous acequias, Storrie Project and the Gallinas Canal. This matter is continuing in parallel with the adjudication of the individual water right claims in the Gallinas stream system, requiring the state to divide its limited resources in the Gallinas area between these two activities. Status: Active.

Rio Peñasco Stream System: Status: Not initiated.

RIO GRANDE STREAM SYSTEM

Rio Pueblo de Taos and Rio Hondo. *State of New Mexico ex rel. State Engineer v. Abeyta, et al.*, U.S. District Court Nos. 69-cv-7896 BB and 69-cv-7939 BB, are consolidated lawsuits for the adjudication of all water rights in the Rio Pueblo de Taos and Rio Hondo stream systems.

Taos Pueblo Claims: Claims on behalf of Taos Pueblo were originally filed on August 1, 1989. Subsequent claims were made in 1992, 1996, and 1997. Summary judgment motions by the state and certain non-pueblo defendants seeking the dismissal of some of these claims are still pending before the special master. Beginning in 2003, the parties intensified efforts to resolve the Taos Pueblo claims through mediated negotiations. In the spring of 2006, these efforts produced a proposed settlement agreement among the state, the pueblo, the United States, and non-Indian water right owning parties, resolving the pueblo's claims. On May 30, 2006, all parties except the United States signed the settlement agreement at a ceremony at Taos Pueblo. Federal legislation approving the settlement is necessary before the United States will execute the settlement agreement.

With the exception of priority dates, nearly all non-pueblo surface water rights have been provisionally adjudicated in the Taos and Rio Hondo stream systems. Efforts to resolve the remaining non-pueblo claims in the last few years include the following:

MDWCA Claims: The special master conducted an evidentiary hearing on the rights claimed by 12 Taos-area mutual domestic water consumer associations in August 2001, and post-trial briefing was completed in 2002. The dispute has been awaiting a decision by the special master since then. These claims are resolved by the Taos Pueblo claims settlement, whether it becomes final or not.

Remaining Individual Claims: In January 2002, pursuant to a special master deadline, approximately 120 claims were filed alleging that water rights were either incorrectly adjudicated or erroneously omitted from the adjudication. Following field-checks and analysis of historical aerial photography, all of these claims were resolved in 2004.

Remaining Acequia Claims: In January 2002, approximately 25 community acequias filed claims of error in the state's hydrographic survey or the court's orders. All but two of these claims have been resolved, and the remaining two claims are expected to be withdrawn before the end of 2006. Under a separate process, 22 acequias also submitted to the state, in June 2002, claims to water from various springs in the Taos and Rio Hondo stream

¹Until 1965, the statutes provided that the cost of an adjudication was charged to the water rights owners based on their water rights. See NMSA 1953, § 75-4-6 (amended 1965).

systems. The state field investigated these complex claims during the summers of 2002, 2003, and 2004, and some of these claims have been resolved by consent order as the result of these investigations. Twenty acequias filed springs claims with the court in June 2005, thereby commencing the official process for resolving those claims. All but nine of these claims have been resolved.

Court's Errors and Omissions Process. The state and the court's data manager are conducting a thorough errors and omissions process to prepare for issuance of the partial final decree for non-pueblo water rights. This process is ongoing and identifies and corrects apparent discrepancies between adjudicated subfile orders and hydrographic survey maps.

Subfile Priority Dates. In February 2002, the court began the process of acting upon special master Zinn's 1993 report on priority dates for non-pueblo subfiles. The court has entered three orders confirming the priority dates of multiple acequias, but the court has not yet issued an order confirming the priority dates of several other acequias.

Santa Fe River. *Anaya v. Public Service Company of New Mexico*, Santa Fe County Cause No. 43, 347, was filed in 1971 and re-filed in 1974. The state intervened in the suit in 1975 and completed the Santa Fe hydrographic survey in 1978.

In 1990, the Public Service Company of New Mexico was ordered to release Santa Fe River water from its dams in an amount calculated to reach the downstream Acequias Madre and Cerro Gordo. There is now in place an operating agreement that requires the State Engineer to certify that these two acequias, parties to the lawsuit, are prepared to accept water from the releases. Every spring the State Engineer must conduct a field visit to these two ditch systems and submit a report to the court stating the condition of the ditches and whether water should be released.

The Sangre de Cristo Water Company, previously owned by the Public Service Company of New Mexico, sold its water rights and water system to the City of Santa Fe. The city's previously held rights and those of Sangre de Cristo have been merged and will be adjudicated together. The city and the State Engineer are working to identify the city's water rights and negotiate a consent order. The attorney from the LAP Northern New Mexico Bureau permanently assigned to the Santa Fe adjudication has conducted a detailed review and analysis of the history and status of the adjudication and is adjudicating the few remaining subfiles. The attorney will analyze the current situation to recommend whether additional work is required.

Rio Chama. *State of New Mexico ex rel. State Engineer v. Aragon, et al.*, U.S. District Court No. 69-cv-7941 BB, involves the adjudication of all water rights in the Rio Chama stream system, including the claims of the United States, the Pueblo of San Juan, and the Jicarilla Apache Tribe. The suit was originally filed in state court in 1948 and was removed to the federal district court in 1969. The federal suit incorporates prior state court orders adjudicating non-federal water rights on the mainstream Rio Chama below Abiquiu Dam and on the Rio Puerco, a tributary to the Rio Chama.

Surface water diversions in the Rio Chama mainstream section, consisting of the mainstream of the Rio Chama from El Vado Dam to the confluence of the Rio Chama and the Rio Grande, including the waters of Abiquiu Creek, the Rio Frijoles, and Los Ojitos de Agua Salada Donosa, have been adjudicated. A water master appointed pursuant to a 1971 Partial Final Judgment and Decree administers this area. Surface diversions in Section 6, the Cañones Creek area, and Section 8, the Rio Puerco area, also have been adjudicated. The water uses of the Jicarilla Apache Nation are subject to a Partial Final Judgment and Decree entered in April 1998.

In 1995, the district court ordered the State Engineer to complete the hydrographic survey of the remainder of the Rio Chama Stream system in six years. The amended hydrographic survey report for Section 5, Rio Gallina, was filed with the court in January 2000. All claims with respect to the amount and location of irrigated acreage were resolved, and, in February 2005, a stipulation was filed on priority dates for the community ditches in Section 5. The state and the community ditches in that section continue to negotiate the remaining issue concerning irrigation water requirements.

Hydrographic survey reports for Section 3, Rio Nutrias, Rio Cebolla, and Canjilon Creek, were completed and filed with the court between June and August 2000 and the determination of claims in these areas is approximately 85 percent complete. The determination of priority dates and irrigation water requirements has been reserved for future determination.

The hydrographic surveys for Section 7, Rito de Tierra Amarilla, Rio Brazos, Rutherford and Plaza Blanca, Cañones Creek, and Village of Chama, were completed between January 2001 and July 2003. The defendants in these areas have been joined to the adjudication and the determination of claims in these areas is approximately 75 percent complete. As in Sections 3 and 5, the determination of priority dates and irrigation water requirements has been reserved for future determination. The water uses of the Jicarilla Apache Nation on reservation lands in Section 7 are subject to a Partial Final Judgment and Decree entered in April 1998. Water right claims of the Jicarilla Apache Nation on 1,146 acres of non-reservation lands formerly owned by the Chama Land & Cattle Company were resolved by the approval of four consent orders in April 2006.

The state is also negotiating the reserved water right claim of the United States under the Wild & Scenic Rivers Act below El Vado, and is also in the process of evaluating the United States' claims for stock and wildlife uses in Sections 3 and 5.

Rio San Jose. *State of New Mexico ex rel. State Engineer v. Kerr-McGee Corp.*, Cibola County Cause Nos. CB-83-190-CV and CB-83-220-CV, is the general water rights adjudication suit concerning the Rio San Jose stream system. In November 1992, the special master issued a report recommending, among other matters, that the state's motion for partial summary judgment on the water rights of the Pueblos of Acoma and Laguna be granted. The district court adopted the report and included language permitting interlocutory appeal. The pueblos and the non-Indian defendants requested interlocutory appeal. The Court of Appeals ultimately remanded the case to the district court for further action on issues relating to the quantification of the pueblos' claims for existing and historic uses. Petition for certiorari to the New Mexico Supreme Court was denied. After the remand of this case to the district court, the case was inactive for several years.

In January 2001, a new special master was appointed to preside over the adjudication. On September 23, 2002, the court granted the joint motion of the state and the United States to establish an expedited *inter se* subproceeding to adjudicate the water rights of Acoma Pueblo and Laguna Pueblo based on past and present uses of water. The United States on behalf of the pueblos, as well as the Pueblos of Acoma and Laguna, have filed their answers to the state's subproceeding complaint asserting and detailing the water right claims of the pueblos based on past and present uses of water. Evaluation of these claims by the state and other parties is

now under way.

In the summer of 2004, the state provided extensive notice of the expedited subproceeding to landowners, potential water right claimants and the public at large. The notified water right owners in the stream system were given an opportunity to object to the water right claims of the pueblos. Approximately 1,200 objections were filed. Of these objectors, approximately 60 have opted to be active parties in the subproceeding. In 2006, the subproceeding transitioned from a procedural to a more substantive posture. The United States, the pueblos, the state and other parties have submitted their initial disclosures (list of potential witnesses and documents supporting their claims).

In early 2006, a status conference was held before the special master, who signed a pre-hearing order that establishes pre-hearing deadlines in the subproceeding for the identification of expert witnesses and production of expert reports, initial dispositive motions and discovery (April 30, 2010). Some written discovery and deposition discovery has begun in the subproceeding. The active parties have planned a visit to some of the relevant non-pueblo sites in July 2006, and anticipate seeing some of the relevant pueblo sites later in the year.

Rio Santa Cruz and Rio de Truchas Systems. *State of New Mexico ex rel. State Engineer v. Abbott, et al.*, U.S. District Court Nos. 68-cv-7488 BB and 70-cv-8650 B, the consolidated Rio Santa Cruz and Rio de Truchas adjudication suits, were filed in 1968 and 1970, respectively. The suits were consolidated in 1970 because water right claimants in the Rio de Truchas suit use the Acequia de la Sierra to divert water from the north fork of the Rio Quemado, a tributary of the Santa Cruz River, for use in the Truchas area.

The Rio Santa Cruz adjudication was filed in response to a proposal to construct the Llano Unit as a tributary project of the San Juan-Chama diversion project, to divert water from the Rio Grande at Velarde and deliver it for use as a supplemental supply for lands irrigated from the lower Santa Cruz River. The Llano Unit ultimately failed to obtain the necessary local support for construction, however, and the San Juan-Chama project water has been allocated to other uses.

In 1975, the district court entered a Partial Final Decree confirming and approving all prior orders adjudicating water rights in the Santa Cruz and Truchas stream systems. The 1975 decree adjudicated *inter se* the water right claims of 2,500 defendants in approximately 3,500 individual subfile orders. The adjudicated irrigation water rights totaled 5,045.38 acres in the Santa Cruz River system and 2,159.80 acres in the Rio de Truchas system. The decree reserved jurisdiction to adjudicate water right priorities and the water rights of the United States and the Pueblos of San Juan, Santa Clara, and San Ildefonso.

Since the entry of the decree, community acequias in Truchas have identified additional tracts which they claim should have been adjudicated irrigation water rights. In the Rio Santa Cruz, approximately 155 individual water right claimants, involving 186 tracts, submitted written requests for correction to subfile orders adjudicating their water rights. To date, 22 claims remain unresolved.

At the time the 1975 Partial Final Decree was entered, approximately 13 community ditches and 300 individuals filed objections to water right priorities adjudicated to other parties in subfile orders. The court reserved jurisdiction in the 1975 decree to consider and decide these objections at a later time. The court appointed two historians to investigate Spanish and Mexican archives to find evidence documenting early irrigation. The historians' draft report was completed in 1986. In 1995, the state filed pleadings describing stream flow allocation rights between community acequias in the Santa Cruz and Truchas systems. The state also took the depositions of individuals who have knowledge of stream flow allocation. The court's historian completed additional research on the Santa Cruz system priorities in 2001.

On October 4, 1999 the court amended the scope of the adjudication to include an area of land lodged between the western junction of the Santa Cruz and Truchas basins. The state has since performed two site inspections of the area and determined that the land is returning to its native state and no water rights claims are indicated.

The water right claims of the pueblos within the adjudication are now being addressed in a series of subproceedings defined by a procedural order entered by the court's special master. In Pueblo Claims Subproceeding 1, certain water right claims of the Pueblos of Nambé and San Ildefonso were resolved by a negotiated settlement agreement filed on March 15, 2002 and a consent order filed on September 12, 2005. The United States, the Pueblos of San Juan and Santa Clara, the state, the City of Española, Santa Fe and Rio Arriba counties, and acequia associations from the Truchas and Santa Cruz areas all were parties to Subproceeding 1. Subproceeding 2, involving pueblo claims based on past or present uses of diverted water on the lands of the Pueblo of San Juan, was initiated in March 2005 by the filing of subproceeding complaints by the United States and San Juan Pueblo. The state, Santa Clara Pueblo, the City of Española, Santa Cruz Irrigation District, and acequia associations from the Truchas and Santa Cruz areas filed their answers to the subproceeding complaint in 2005.

Jemez River. *United States v. Abouseleman, et al.*, U.S. District Court No. 83-cv-1041 MV, is a suit filed by the United States on its own behalf and on behalf of the Pueblos of Jemez, Santa Ana, and Zia to adjudicate water rights in the Jemez River system.

During the 1996 drought, the Pueblos of Jemez and Zia moved for a temporary restraining order (TRO) and preliminary injunction seeking to curtail non-Indian irrigation diversions above the pueblos. The court did not grant the TRO or preliminary injunction, but instead entered an order adopting a stipulation between the pueblos and the non-Indian community acequias that established a rotation schedule to share the available supply in dry years.

The court has entered a Partial Final Decree for the proprietary claims of the United States, except for its Wild and Scenic River claim, which is pending before the special master. The state, the United States and non-Indian defendants engaged in talks in 2006 in an effort to resolve this remaining claim by a negotiated settlement.

In 1991, a proposed partial final decree on the water rights of non-federal, non-pueblo parties was prepared and made available for public inspection. The pueblos filed *inter se* objections to 61 subfiles. Over several years, the court ruled on all these objections and, on December 1, 2000, the court entered a Partial Final Decree for the water rights of non-pueblo, non-federal parties in the Jemez stream system.

Although the adjudication of non-pueblo, non-federal water rights was completed in 2000, the New Mexico Commissioner of Public Lands filed a "Declaration" in September 2004 claiming federal reserved rights to ground-water beneath state trust lands. The court entered an order dismissing the Declaration in July 2005.

Litigation over the claims of the Pueblos of Jemez, Zia, and Santa Ana, and of the United States on behalf of those pueblos, dates back to the 1980s. In proceedings addressing claims based upon the historic and existing uses of the pueblos, the special master held evidentiary hearings in July and December 1988. The special

master filed his report and recommendation to the court on these claims in October 1991, and the United States and the pueblos filed objections to that report. The court has not yet ruled on the 1991 special master's report.

In separate proceedings concerning the future use claims asserted by and on behalf of the pueblos, the special master, in September 1988, recommended rulings to the court on summary judgment motions argued by the state, the United States, the pueblos, and non-Indian defendants. The United States and the pueblos filed objections to the master's report, and, in December 1989, the court held oral arguments on those objections.

In 2004, the court directed the parties to provide additional briefing on the objections to the 1988 and 1991 special master's reports. That briefing was completed in July 2004. In a Memorandum Opinion and Order entered in October 2004, the court granted in part and denied in part the summary judgment motions of the state and the non-Indian defendants concerning the pueblos' future use claims. In that same Opinion and Order, the court declined to act on the special master's 1991 report and recommendation on the pueblos' historic and existing use claims.

Pursuant to a November 2004 scheduling order, the pueblos provided proposals for the settlement of their claims to the state and non-Indian parties in June 2005. Since that time, the parties have been exploring the potential for a negotiated settlement of the pueblos' claims.

Rio Pojoaque System. *State of New Mexico ex rel. State Engineer v. Aamodt*, U.S. District Court No. 66-cv-6639 MV, was filed in 1966 and involves the adjudication of all water rights in the Rio Pojoaque system, including the claims of the Pueblos of Nambé, Pojoaque, Tesuque, and San Ildefonso. The lawsuit has been active since that time, and has resulted in the adjudication of a significant portion of those rights – both pueblo and non-pueblo.

Global Settlement. For the past seven years, the parties have been engaged in discussions aimed at resolving through a global settlement all remaining issues in the case, including the claims of the pueblos of Nambé, Pojoaque, Tesuque, and San Ildefonso. Since August 31, 2000, proceedings before the special master have been stayed to facilitate these settlement negotiations. The negotiations have been mediated by a former Arizona district court judge and are protected from public disclosure by a confidentiality agreement. Congress has contributed \$1.5 million to the process to perform a settlement study of a pipeline project that might serve as the centerpiece of any settlement.

On February 5, 2004, the draft Aamodt Settlement Agreement was made public by the mediation parties, followed by a series of public meetings designed to provide information about the Settlement Agreement, and to take comments and reactions from the parties affected. In response to public opposition regarding the proposed settlement, the court, on May 27, 2004, appointed two individuals to represent the opposition parties in the ongoing global settlement negotiations. Since that time, attorneys representing large groups of opponents of the original settlement have also joined the mediation process.

Then, in January 2005, the United States informed the court and its mediation partners that it would be unwilling to fund the Aamodt settlement in anything like the amounts that had been previously contemplated. Instead, the United States reported that a likely federal contribution would be on the order of less than one quarter of what the other parties had anticipated. Nonetheless, negotiations continued.

In the months following the United States' January 12, 2005, announcement, the negotiating parties wrestled with the twin problems of community opposition and lack of funding for the settlement project. The approach that was decided upon was to step out of the original settlement agreement, an extremely lengthy and complex document, and to develop a second, shorter, more conceptual document, to describe in broad terms how the original settlement agreement must be changed. This approach was, in many respects, successful, and, in June 2005, an agreement had been reached on a conceptual proposal, at least as between the attorneys at the negotiating table.

Since June 1, 2005, the negotiators have worked to integrate the conceptual proposal into the original settlement agreement, to develop a consolidated settlement document the attorneys could then recommend to their clients. On February 1, 2006, the result, a revised settlement agreement, was released. Public information meetings were held, and on May 3, 2006, at a ceremony held in the office of Governor Richardson, the Aamodt Settlement Agreement was signed by all governmental parties (with the exception of the United States, which has represented that it will not execute the settlement agreement without an act of Congress).

The settlement agreement is a complex document based on four major concepts. First, the pueblos would agree to forbear from making priority calls against non-pueblo surface water users except under certain circumstances, thereby preserving existing surface water users in the Nambé-Pojoaque-Tesuque. Second, the United States would acquire 2,500 acre-feet of additional water for the pueblos' economic development, intended, in part, to compensate them for the water they would not be able to take as a result of their forbearance. Third, a pipeline would be constructed at the United States' expense to deliver water to pueblo and non-pueblo users in the basin from the Rio Grande. Fourth, non-pueblo parties currently using domestic wells would cap their wells, stop pumping groundwater and hook up to the pipeline.

The settlement agreement resolves all pueblo water right claims in the stream system.

Further, as a result of including representatives of the opposition in the negotiations, significant changes were made to the settlement agreement, and the concerns expressed by the public in 2004 have largely been addressed. Most significantly, the capping of wells and hooking up to a water utility under the Aamodt Settlement Agreement would now be voluntary.

Negotiations continue with regard to cost sharing and system implementation.

Legislation necessary to implement the Aamodt Settlement Agreement is currently being drafted and will be presented to New Mexico's congressional delegation. It is presently anticipated that, after Congress has acted on such legislation, the parties will then jointly move the court for approval of the settlement agreement. Service of the proposed settlement agreement on all parties to the Aamodt lawsuit, and proceedings to hear any objections to the settlement agreement, will follow, in a process which will extend, at a minimum, well into 2007.

Even in the context of a fully funded and approved Aamodt settlement agreement, there remain significant adjudication tasks to be completed. Priorities for surface water, and quantities and priorities for hundreds of ground water rights, remain to be adjudicated and *inter se* proceedings, as between claimants, will have to be undertaken and completed.

Other issues in the case, but which fall outside the scope of the court's agenda for litigation at this time, include the following:

Post-1982 Domestic Wells. On January 13, 1983, the court ordered that all subsequent domestic well

permittees in the basin would be restricted to indoor uses only. In 1996, the court allowed litigation to commence concerning all aspects of this order, and in 1997, discussions began as to possible settlement of this particular issue. After more than a year of negotiations, representatives of the state, pueblos, United States, and individual well owners reached a settlement agreement, which the court approved on October 4, 1999. The state has notified all post-1982 well owners of the agreement and held public meetings encouraging them to participate in this settlement, which allows all settling well owners to use water from their wells for outdoor uses. Approximately 325 well owners ultimately participated in the Post-1982 Wells Settlement Agreement, and a water master has been appointed to verify compliance and field check those wells to confirm their locations. The process of metering and monitoring the wells is ongoing.

Comprehensive Basin Administration Plan. The state and the United States have jointly proposed a plan for the metering and/or measurement of all diversions in the basin for the purpose of administration of water rights. Refinement of the metering plan, development of a water-rights administration plan for the basin, and attempts to obtain funding for implementation of the plans are ongoing.

Motion to Enjoin Pueblo of Pojoaque Overdiversions. See 2002-2003 Annual Report. The Aamodt Settlement Agreement contains provisions which would permanently resolve this issue.

Lower Rio Grande. *State of New Mexico ex rel. State Engineer v. Elephant Butte Irrigation District*, Third Judicial District Cause No. CV 96-888 (formerly *Elephant Butte Irrigation District v. State Engineer*, Doña Ana County Cause No. CV-86-848) was originally filed in 1986. After 10 years of litigation over procedural matters involving venue, jurisdiction and indispensable parties, the State Engineer secured funds from the Legislature to initiate the hydrographic survey of the Lower Rio Grande.

With sufficient funds in hand, the State Engineer hired a private engineering firm to conduct the hydrographic survey with a projected completion date in the year 2000. The first phase of the hydrographic survey, for the Nutt-Hockett Basin, was filed with the court on April 29, 1998. The second phase of the hydrographic survey, for the Rincon Section, was filed on May 20, 1999. The third phase of the hydrographic survey, for the North Mesilla Section, was filed on July 20, 2000. Reports for the fourth (South Mesilla) and fifth (Outlying Areas) sections were filed on March 28, 2001. A separate supplementary hydrographic survey of surface water claims for small domestic and agricultural users, called "flat-raters," was commissioned in 2001 and collection of field data for this survey has been completed. Data from the supplementary survey is being integrated into the original hydrographic survey on an ongoing basis.

From 2001 to 2003, State Engineer staff served a large number of claimants with offers of judgment. Unfortunately, this resulted in many claimants filing objections to offers of judgment that State Engineer staff could not respond to in a timely manner due to insufficient resources. In 2003, State Engineer staff began to serve offers of judgment to claimants in smaller, more manageable, groups. This procedure has allowed claimants' objections to be addressed in a more timely fashion, resulting in a more efficient adjudication process.

In place of traditional adversarial litigation, the court has adopted an alternative dispute resolution (ADR) process to address legal issues and factual disputes through informal negotiations and/or mediation before any formal hearings or trials are scheduled. ADR provides an opportunity for claimants to resolve issues arising after service of the original offer of judgment through informal negotiations with the state or formal mediation.

Increases in staffing for the Lower Rio Grande Adjudication Bureau have significantly quickened the pace at which subfiles with objecting claimants are resolved through negotiation, mediation, or formal hearing. The fast-track approach is intended to result in a fairly rapid adjudication of all of the water rights in the Lower Rio Grande. Adjudication of the surface and groundwater rights among the many claimants will include all municipal, domestic, agricultural, industrial and other uses. At present, the LRG hydrographic survey is comprised of 13,138 subfiles, the majority of which involve claims of individuals within the Elephant Butte Irrigation District. Adjudication of subfiles in the Nutt-Hockett Basin is 99 percent complete. Adjudication of water rights in the Rincon, Northern Mesilla, and Southern Mesilla sections is progressing. As of June 29, 2006, offers of judgment have been sent to claimants for 6,209 subfiles and subfile orders have been entered for 3,901 of these subfiles.

On May 10, 2006, the court entered a Fourth Amended Order Regarding Stream Adjudication Procedures. It is the state's opinion, however, that this order cannot go into effect in its entirety unless the New Mexico Supreme Court agrees to amend its own procedural order for the adjudication. The fourth amended order adopts new procedures concerning how global or threshold issues may be brought before the court and decided. The most significant changes would require the state to immediately join all remaining claimants in the Lower Rio Grande adjudication by first class mail. Newly joined claimants would then need to file notice of water right claims with the court or be subject to default to the findings of the hydrographic survey. Additionally, new owners of water rights would be required to provide the court with notice of changes of ownership. If it goes into effect, the new procedural order will require that the state change much of the process it has developed for adjudication of water right claims in the Lower Rio Grande.

LOWER COLORADO RIVER STREAM SYSTEM

Zuni River. The Zuni River adjudication suit, *United States v. A&R Productions, et al.*, U.S. District Court No. 01-CV-0072 BB, was filed by the United States on January 19, 2001, without meaningful prior notice to, or consultation with, the State Engineer or the state of New Mexico. From the outset, the suit suffered from several serious defects, not the least of which was a failure to join the proper parties, and ambiguity as to whether the United States sought quiet title and declaratory judgment relief or a statutory adjudication of water rights in the stream system pursuant to New Mexico law. These problems were compounded by the fact that the United States had made no effort to educate the community regarding the nature and implications of an adjudication prior to joining the defendants, and as a result the suit immediately generated a great deal of resistance, misunderstanding, and hostility from area residents.

Due to the defendants' dismay and confusion generated by the suit, the court stayed the proceedings to allow the United States and the state of New Mexico to confer regarding cost and resource issues presented by undertaking the adjudication of the Zuni River stream system. The discussions were not fruitful, and the state and the United States independently submitted their own proposals to the court as to how the adjudication should proceed.

On July 15, 2002, the court acted on the recommendations of the special master and effectively adopted the state's proposal. The court ordered that the matter remain stayed, that the United States confer with the state to define the geographical scope of the adjudication, that the United States amend the complaint to clearly plead a

general stream system adjudication, and that the state be realigned as a plaintiff when that occurred. Perhaps most significant, the court ordered that the United States alone support the cost of the hydrographic survey. The court allowed that erroneously joined defendants who were not claiming water rights could be dismissed by filing a disclaimer. The court also required that the United States make progress reports to the court every six months, and maintain a public repository of pertinent adjudication documents and a public website containing information on the adjudication.

The state and the United States then consulted with regard to the conduct of the hydrographic survey and reached agreement as to its details. The survey is being conducted by the United States' contractor, at the United States' expense, but to the specifications and under the supervision of the Hydrographic Survey and Mapping Bureau of the Office of the State Engineer. For purposes of the hydrographic survey, the stream system has been divided into ten sub-areas, which are being sequentially surveyed and adjudicated. On February 21, 2003, the state and the United States filed their Joint Progress Report, describing in detail their agreed arrangement for the conduct of the hydrographic survey. On May 21, 2003, the court lifted the stay on the adjudication and ordered that the geographical scope of the adjudication be limited to the boundaries of the surface drainage of the Zuni River. At that time, the court also directed the United States to file its amended complaint, which was done in August 2003. The state was then realigned as a plaintiff.

In June 2003, the special master entered an order requiring all water rights claimants in the Zuni River stream system to update their files with the Water Resources Allocation Program of the Office of the State Engineer (WRAP). WRAP conducted a series of field offices in the Zuni area so that water rights claimants could update their water rights files. The court's order generated significant attendance at the field offices and resulted in the update, or creation, of hundreds of water rights files. That information was integrated into the State Engineer's electronic WATERS database and provided the foundation on which the hydrographic survey was built.

Since that time, the United States' hydrographic survey contractor has completed the hydrographic survey for sub-areas four, seven, eight, nine and ten. It has conferred with the state on those surveys, and filed the survey reports and maps with the court. The United States has also prepared, and the state has reviewed, all the proposed consent orders for these sub-areas, and the United States has served them on the claimants. Consultation between claimants contesting the offers contained in their consent orders and the state and the United States are taking place on a regular basis in and around the stream system in an effort to settle disputes without court intervention.

The United States has completed a draft of the hydrographic survey of sub-areas one, two and three. Revisions to those surveys are being contemplated and it is expected that they will be filed with the court, and the related consent orders served, during the summer of 2006.

The court had ordered that the United States complete the hydrographic survey of the Zuni River stream system by December 2006, and that all Indian claims be prepared and filed by that date. All indications are that those deadlines will be met.

UPPER COLORADO RIVER STREAM SYSTEM

San Juan River. *State of New Mexico ex rel. State Engineer v. United States, et al.*, San Juan County Cause No. D-1116-CV-7500184, is a suit to adjudicate all water rights in the San Juan River stream system. The non-Indian, non-federal water rights of the San Juan River stream system were hydrographically surveyed in the late

1930s and adjudicated by the Echo Ditch Decree in 1948. The state was not a party to this adjudication, however, and no Indian or federal water rights were adjudicated in the Echo Ditch Decree. The State Engineer conducted a second partial survey in the early 1980s, and the Hydrographic Survey Bureau is in the process of updating the survey using all available current and historical data, including infrared aerial digital imagery taken in 2003.

In response to an order to show cause issued by the court in January 2005, the state successfully argued that the San Juan adjudication should not be dismissed for failure to prosecute. The court appointed an attorney advisory committee to assist the state in drafting a scheduling order for the adjudication of water rights in the La Plata Section and an overall case management order. The court entered a scheduling order to govern the adjudication of water rights in the La Plata on April 30, 2006. The state joined about 600 parties in the La Plata Section on April 27 and has commenced serving each of these parties via certified mail with a "service package." The service package includes the original 1975 complaint, the La Plata scheduling order, and various forms for filing claims and other matters. The state anticipates that service will be mostly complete within two months, and that subfile adjudication on the first four ditches (involving about 127 parties) will commence in August 2006. In addition, on July 3, 2006, the state and the Commissioner of Public Lands filed opening briefs in litigation over the legal basis for the commissioner's claim for federal reserved water rights on state trust land.

The state and the Navajo Nation signed the Navajo Settlement agreement in 2005, but the United States cannot sign the agreement unless and until Congress first enacts legislation approving the agreement. Once the United States executes the agreement, the state anticipates that a proposed order adjudicating the Navajo Nation's water rights will be filed with the court and, after notice is provided, an expedited *inter se* proceeding will be conducted to allow all other water right claimants in the San Juan River stream system to raise objections to the proposed adjudication of the Navajo Nation's rights. The state anticipates that this process will require several years to complete.

NEW MEXICO SUPREME COURT AD HOC COMMITTEE ON WATER LITIGATION AND STREAM ADJUDICATIONS

•Created on October 15, 2002.

•State Engineer appointed to the Committee on February 10, 2003.

•Draft Proposed Rules submitted to the Supreme Court on February 17, 2006.

The Ad Hoc Committee was appointed by the New Mexico Supreme Court to propose rules of procedure specific to stream adjudications that would improve the efficiency of the process in which water rights are adjudicated statewide. Specifically, the proposed rules submitted by the committee without the State Engineer's support would require the state to radically change the manner in which it joins claimants in an adjudication, and to maintain an updated file for every defendant joined. In some cases, such as the Lower Rio Grande, this would result in managing paper files for approximately 19,000-20,000 defendants. This is impractical, if possible, and fiscally burdensome, if not cost prohibitive, due to flat budget constraints. The proposed rules would also require claimants to file notices of water rights claims before being served with offers of judgment. The Supreme Court has directed the Administrative Office of the Courts and the State Engineer form a working group to evaluate the feasibility of implementing the proposed rules. The working group has indicated that, while it believes the proposed rules offer numerous positive reforms, their implementation may not be possible in the absence of other institutional, and perhaps legislative, changes.

Appendix B Status of Hydrographic Surveys

RIO GRANDE STREAM SYSTEM

Rio Chama. In 1948, the lawsuit that became the Rio Chama adjudication was initiated. In September 1951, the court entered an order directing the State Engineer to furnish a hydrographic survey of the stream system and community ditches named in that complaint. The Office of the State Engineer completed the mapping and report for the Rio Puerto de Chama during the 1952-53 period. In August 1957, State Engineer S.E. Reynolds directed his staff to make a hydrographic survey of the entire Rio Chama stream system below El Vado Reservoir. For survey and adjudication purposes, the Chama stream system was divided into eight sub-basins.

In 1995, the United States District Court for New Mexico ordered the State Engineer to complete the hydrographic survey of the remainder of the Rio Chama stream system within the next six years. During fiscal year 2000, the Hydrographic Survey and Mapping (HS&M) Bureau completed, published and filed with the Court the first of nine reports in the three sections that remained unsurveyed. By the end of fiscal year 2006, the entire Chama stream system had been surveyed. The HS&M is currently provides support to the attorneys as the adjudication proceeds.

Rio San Jose. In 1984, the Cibola County District Court ordered the State Engineer to conduct a hydrographic survey of the surface and ground water uses in the Rio San Jose stream system, which encompasses approximately 3,700 square miles. The federal government, through a private contractor, completed a hydrographic survey of the area in October 2001 using 1981 aerial photography and field work. The HS&M has reviewed the hydrographic survey of the Acoma and Laguna pueblos and has examined past water use on pueblo lands by reviewing four sets of historical aerial photography (1935, 1971, 1991 and 1997). The matter is now at the negotiation stage.

Rio Pueblo de Taos/Rio Hondo/Rio Grande del Rancho. Three sections of this survey were completed and filed with the court in 1969. In 2002, however, the court allowed claimants to file claims to allegedly omitted surface water rights. More than 100 such claims were filed. HS&M completed the field checking and mapping of these claims. HS&M is also working in conjunction with the court's data manager to provide technical support for the errors and omissions process being conducted by the court.

Lower Rio Grande. In 2000, the initial survey was completed by a contractor under the direction of the HS&M Bureau. The supplemental survey that was completed in December 2001 determined the extent of the water rights of approximately 6,500 small domestic and agricultural users of water within the Elephant Butte Irrigation District. The supplemental survey is being fully integrated into the adjudication process on an on-going basis.

PECOS RIVER

Rio Peñasco. The survey involves approximately 5,500 acres of land irrigated by surface water, groundwater, and surface water supplemented by groundwater. The Rio Peñasco drainage area encompasses about 1,080 square miles and extends from the Pecos River on the east to Cloudcroft on the west, a distance of approximately 95 miles. A preliminary survey exists, consisting of map sheets only. No hydrographic survey report was compiled, but high resolution aerial imagery was acquired in 2004. The imagery also covers the nearby Mesalero Apache area in preparation for future adjudication work.

Carlsbad Irrigation District. This survey involves approximately 800 owners of irrigated tracts. The survey has been divided into four separate geographic areas by township, with those tracts within CID and Township 24S comprising Section One, Township 23S comprising Section Two, Township 22S comprising Section Three and Township 21S surveyed as Section Four. Sections One and Two have been completed and filed with the court and are almost completely adjudicated. Section Four has been completed, but has not yet been filed with the court. Section Three will be completed during fiscal year 2007.

Carlsbad Underground Water Basin. This survey will report all the remaining water uses within the Carlsbad Underground Water Basin. It is expected that this work will be performed during the 2007 and 2008 fiscal years.

Black River. The Black River is a west-side tributary of the Pecos River in southern Eddy County. Irrigated cropland in the Black River drainage includes approximately 2400 acres reported in the Carlsbad Irrigation District section and 2500 acres outside the district. An outside contractor for the State Engineer prepared initial drafts of the hydrographic survey and maps for this section. The HS&M Bureau will perform quality assurance and quality control checks on the materials produced by the outside contractor, and will complete the final version of the hydrographic survey report. It is expected that this work will be performed when resources are available.

Gallinas River. The Gallinas River is a northern tributary of the Pecos, which runs through the city of Las Vegas and intersects with the Pecos above Santa Rosa. The Gallinas River supplies most of the water for the city of Las Vegas. The area was the subject of a five volume hydrosurvey report published in 1991. The survey is in need of updating to complete the adjudication. Adjudication of the water rights identified in Volume One of the survey is currently under way and is expected to be completed in 2007. Adjudication of the water rights identified in Volume Two was completed in the mid-1990s.

SAN JUAN RIVER

The non-Indian, non-federal water rights of the San Juan River Stream System were hydrographically surveyed in the 1930s and adjudicated by the Echo Ditch Decree in 1948. The state was not a party to this adjudication, however, and no Indian or federal water rights were adjudicated in the Echo Ditch Decree. The State Engineer conducted a second partial survey in the early 1980s, and HSB is in the process of completing the survey using all available current and historical data, including infrared aerial imagery taken in 2003. The state is using the data to analyze the current ownership and status of non-Indian, non-federal water rights and seek adjudication of these rights by the court. The state is currently meeting with water users and performing field inspections on individual subfiles, and recently mailed documents to 600 water rights claimants in the La Plata area.

ZUNI RIVER

The United States commenced this adjudication in 2001 in the United States District Court for New Mexico, and the court subsequently ordered the United States to conduct the hydrographic survey subject to review by HS&M. So far 2 out of 8 sections of the Zuni River stream system have been surveyed, reviewed by HS&M, and filed with the court.

This hydrographic survey has provided an opportunity to implement new procedures designed to promote claimant involvement in the process from the initial steps. HS&M has worked with the Water Resource Allocation Program and the federal government's hydrographic survey contractor to hold field offices to work with claimants to compile and update water rights information in the stream system and to educate the public about the

hydrographic survey and adjudication process. To date, results from this pilot project have proven encouraging with significant participation from claimants during these pre-survey field offices.

ANIMAS VALLEY

A complaint was filed in 2004 for the adjudication of the water rights in the Animas Valley Ground Water Basin. The 2005 Legislature appropriated funds to initiate a hydrographic survey. The Animas Valley Underground Water Basin, declared on May 5, 1948, and amended on February 23, 1956, covers a total of 426 square miles. It is an underground water basin, with no surface streams, but numerous flood flows during the rainy season.

The area was surveyed in 1948 and a hydrographic survey report was generated. The report found approximately 15,000 acres of land irrigated from 155 wells. The survey was revisited in the early 1950's finding approximately the same amount of land irrigated by 197 wells. Thereafter, a series of maps was produced in 1980, but no report was found. A post-1980 review of the area was conducted.

These various data and maps were scanned and rectified. A proto-survey database was created containing historical maps, aerial coverage, hydrographic surveys, soils and vegetation maps, etc. HS&M then officially started the hydrographic survey of the Animas Valley on December 22, 2005. Work was initiated at the same time to locate irrigated areas and wells. The OSE received a preliminary set of aerial digital imagery of the Animas Valley from a contractor in March 2006. All these data are being analyzed to produce a preliminary draft of the irrigated acreage, all well locations and abstracts of WATERS database by the end of 2006. The final hydrographic survey report is projected to be ready by the end of 2007.

Appendix C State Engineer Decisions Appealed in District Court

Certain hearing matters noted in the 2004-2005 annual report, are on appeal, as follows:

Gregory Rockhouse Ranch, LLC v. New Mexico State Engineer – No. CV-2005-062 Fifth Judicial District Court – An appeal of the State Engineer decision of December 29, 2004, partially approving the application of Seven Rivers, Inc. for a temporary change in location of well and place and purpose of use of groundwater of the Roswell Underground Water Basin.

City of Alamogordo et al v. State Engineer – No. CV-2005-019 (Consolidated) Twelfth Judicial District Court – An appeal of the State Engineer's decision of December 29, 2004, partially approving, subject to conditions, the city of Alamogordo's applications to drill 10 wells for diversion and desalination of groundwater of the Tularosa Underground Water Basin for use for municipal, industrial and commercial purposes. The city and two of the protestants to the application appealed the State Engineer's decision. The parties have recently filed their statements of issues on appeal.

Berrendo Cooperative Water Users Association v. State Engineer - No. CV-WZ-26-01, Fifth Judicial District Court – An appeal of the State Engineer's decision of June 7, 2005, denying BCWUA's application to increase its appropriation of groundwater of the Roswell Artesian Basin by 480.42 acre-feet per year in recognition of return flow from septic leach fields. The case is proceeding under a scheduling order and the parties are to submit proposed findings of fact and conclusions of law by August 30, 2006.

Lion's Gate Water v. State Engineer, No. D1314-CV-06-765, Thirteenth Judicial District Court. This case involves an appeal from the State Engineer's rejection of an application by Lion's Gate Water ("LGW") to appropriate all of the water that evaporates annually from Elephant Butte, Cochiti and Caballo reservoirs, amounting to

approximately 373,000 acre feet of water per year. The State Engineer initially rejected the application because he determined that there was no unappropriated water in the Rio Grande stream system and LGW requested a hearing on the rejection. While LGW's application never specifically stated the method it intended to use to capture or divert the evaporative water it sought to appropriate, it revealed through discovery in the case that one method under consideration was to remove the Elephant Butte dam and drain the reservoir by injecting the water into unspecified underground reservoirs, from which LGW would control and effect the delivery of water to all users in New Mexico's Mesilla Valley and Rio Grande Compact releases of water. The State Engineer granted a motion for summary judgment filed by the OSE's Water Rights Division, finding no undisputed material fact that all of the water in the Rio Grande stream system was fully appropriated. LGW has recently filed an appeal of this decision in district court.

Roy D. Mercer LLC v. D'Antonio, No. D-1314-CV-2006-00048, Thirteenth Judicial District Court. The State Engineer approved a protested application for supplemental diversion of groundwater subject to conditions. The Applicant appeals the conditions limiting his permit. The Appellant requested, and obtained, an extension of time to file his Statement of Appellate Issues. Settlement negotiations have been taking place between the OSE and the Appellant.

Village of Ruidoso v. State Engineer, No. CV-06-172, Twelfth Judicial District Court. The State Engineer approved, subject to conditions, the Village's combined applications. The Village is dissatisfied with certain portions of the State Engineer's order (requiring metering and gauging of diversions) and has filed an appeal in the Twelfth Judicial District Court. A schedule has not been set for action on this matter.

Appendix D Decisions in the Court of Appeals and New Mexico Supreme Court

NEW MEXICO COURT OF APPEALS

Carangelo v. State Engineer, No. 26,757. Challenge of permit granted by the State Engineer. Appeal of district court decision granting State Engineer and Albuquerque Bernalillo County Water Utility Authority's motions for partial summary judgment and denying the Appellants' motion for summary judgment, concerning the validity of a pre-1907 declared surface water right.

D'Antonio v. San Lorenzo Community Ditch, No. 26,388. The Office of the State Engineer filed this appeal when the adjudication court declined to relinquish jurisdiction over administration of water rights in the fully adjudicated Mimbres Basin, which conflicts with State Engineer administration pursuant to statute. Briefing is in progress.

Moongate Water Co. v. D'Antonio, No., 26,411. The Court of Appeals rejected Moongate's leave to file inter-lodatory appeal on whether, as a matter of law, the State Engineer was required to grant Moongate's application for a new appropriation of groundwater pursuant to NMSA 1978, § 72-12-3(E), and remanded the case to the Third Judicial District Court for further proceedings.

Rosette v. United States Department of Interior, No. 26, 013. Rosette is appealing the dismissal without prejudice of the suit it filed for adjudication of the Animas Basin and the district court's ruling ordering the state to file an adjudication suit pursuant to NMSA 1978, § 72-4-17, which he has now done. The United States and the State of New Mexico ex rel. State Engineer submitted their answer briefs in June 2006. Rosette did not submit a reply brief.

State ex rel. OSE v. Lewis (CID Project Settlement appeal), No. 25,522. In March 2006, the court granted the Pecos Valley Artesian Conservancy District's motion to withdraw its motion to strike a section of the appellants' consolidated reply brief. Oral argument was held in April 2006. The parties are awaiting the court's decision.

Stennis v. The City of Santa Fe, No. 25,549. Suit against the city of Santa Fe regarding its ordinance governing the drilling of domestic wells within city limits. The State Engineer is *amicus* for the city and filed its reply brief on June 20, 2006.

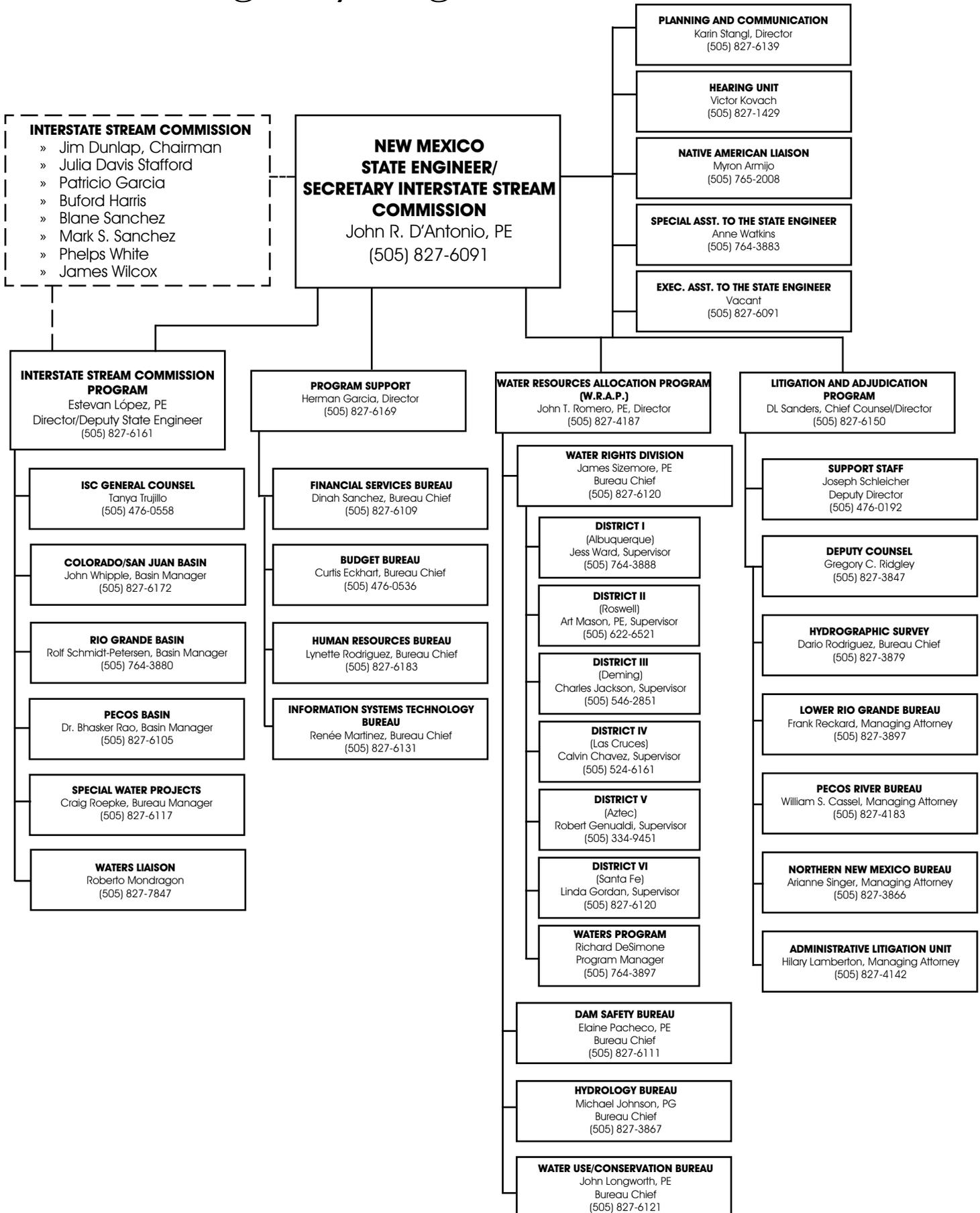
NEW MEXICO SUPREME COURT

Ellis B. and Laverne Herrington v. State of New Mexico ex rel. Office of the State Engineer, Opinion No. 2006-NMSC-014. The New Mexico Supreme Court issued its opinion reversing the decision of the Court of Appeals, which affirmed the district court's decision, and remanding to the district court for additional findings of fact concerning the hydrology, as the original findings supported both granting and denying the application. The Supreme Court opinion addressed and clarified the circumstances under which the *Templeton* doctrine may apply. *Lynn Montgomery, Dr. Robert Wessely and Dr. Catherine Harris v. New Mexico State Engineer and Lomos Altos, Inc. and Garden Path Associates*, Opinion No. 2005-NMCA-071. Appeal from decision in Hearing Unit No. 99-058 and 99-068 Consolidated, OSE File Nos. 03713-C and 03713-D into RG-52013; 04595 into RG-52013 and 04600-B into RG-71805. The Court of Appeals affirmed the district court's decision upholding the decision of the State Engineer granting the transfer of surface water rights that had the effect of offsetting Rio Grande mainstem depletions. Certiorari was granted in the New Mexico Supreme Court and oral arguments were held in November 2005. The parties are awaiting the court's decision.

Smith v. The City of Santa Fe, No. 29, 712. Suit against the city of Santa Fe regarding its ordinance governing the drilling of domestic wells within city limits. The State Engineer is *amicus* for the city. Oral argument took place in June 2006. The parties are awaiting the court's decision.

Walker v. United States, No. 29,544. Suit involving the question of whether grazing rights on federal lands can be denied by the United States if the former lessee had established a stock-watering right. The theory is that grazing rights are inherent to, or an element of, a stockwatering right. The State Engineer is *amicus* for the United States. Briefing is in progress.

Agency Organizational Chart





New Mexico
Office of the State Engineer
Interstate Stream Commission
2005-2006 Annual Report