



Progress Report: New Mexico State Water Plan

June 2006



Working Together Toward Our Water Future

Progress Report: Contents

A Message from the State Engineer	1
Introduction	2
Active Water Resource Management	3
Technological Advancements	5
Adjudications and Settlements	7
Interstate Compact Compliance	8
Wildlife, Habitat and River Protection	9
Protecting Our State’s Waters	11
New Water Sources	12
New Rules, Regulations, and Safety Measures	13
Assuring Water Quantity by Protecting Water Quality	15
Mitigating Adverse Effects of Drought	17
Coordination and Collaboration	18
Conservation Initiatives	19
Government-to-Government Outreach	20
Public Outreach	21

Progress Report: New Mexico State Water Plan

A Message from the State Engineer

New Mexico's First State Water Plan Progress Report for 2006 will endeavor to describe the steps that the Office of the State Engineer and Interstate Stream Commission have taken to use the *State Water Plan* document as a strategic plan for managing our state's water supplies.

This *Progress Report* outlines viable management tools currently being used to track our continued progress as implementation of the State Water Plan moves forward. Thus far, we have made significant advances. Progress has been measured in terms of milestones, deliverables, and service provided. Accountability is a priority.

The *State Water Plan* identifies common priorities, goals and objectives for the state.

- Ensuring that water is available for the continued and future economic vitality of the state;
- Ensuring a safe and adequate drinking water supply for all New Mexicans;
- Developing water resources to expand the available supply;
- Promoting conservation and the efficient use of water;
- Promoting drought planning;
- Protecting, maintaining, and enhancing the quality of the state's waters;
- Providing for fish and wildlife habitat preservation and maintenance and for river restoration;
- Protecting senior water rights;
- Maintaining and enforcing interstate stream compact compliance;
- Preserving state administrative authority over the state's waters; and
- Completing water rights adjudications.

Our agency has made progress on all 98 of the implementation strategies outlined in the *State Water Plan*. A great majority of those strategies are interrelated to our Active Water Resource Management (AWRM) initiative. Progress will continue as we move into coming years. Highlights of our accomplishments so far are illustrated in this document, which will be periodically updated.



Photo by Tim Murrell

The public input we received as we developed the *State Water Plan* made it a better document, and public outreach continues to be a key element of all our initiatives. The more light we can shine on the way we do business as a state agency, the more confidence the public has in our leadership and the more effective we will be in accomplishing the state's priorities as well as our agency's goals.

Everyone needs to become actively involved with water issues in our state, especially when it comes to water conservation – whether it be at home, at work, or as a community. If we all think innovatively and act decisively as we respond to these challenging times, effective management of New Mexico's future water supplies will be a reality.

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

Progress Report: New Mexico State Water Plan

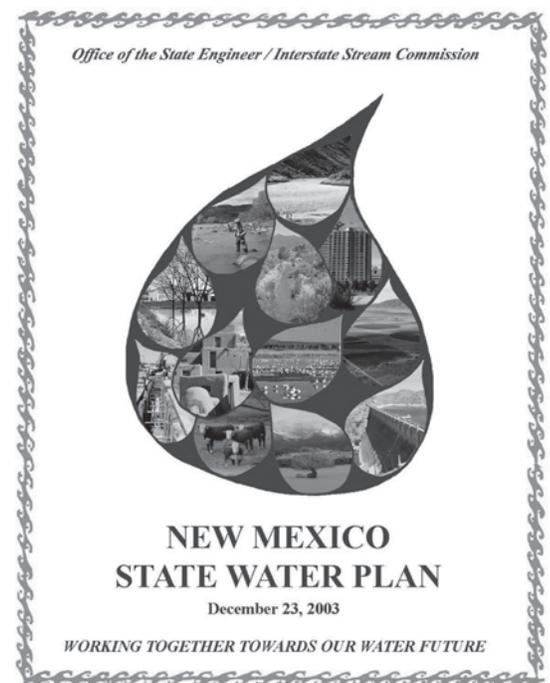
Introduction

Great strides have been made since New Mexico's First *State Water Plan* was approved by the Interstate Stream Commission in December of 2003 and accepted by Governor Bill Richardson in January of 2004.

The State Water Plan provides a policy framework for the state to manage water issues and prioritize funding needs around the state. Applicable portions have become the strategic planning document for the Office of the State Engineer and Interstate Stream Commission.

It was completed in response to the State Legislature's enactment of the State Water Plan Act, and direction from the Governor to the Interstate Stream Commission to have a comprehensive statewide water plan in place by the end of 2003. The act required that the Commission, in collaboration with the Office of the State Engineer and the Water Trust Board, prepare a plan in accordance with the provisions of the act. A key provision of the act required that the plan be developed with extensive public input.

Against this backdrop, 29 public meetings were held from July to September 2003 to gather public input on how New Mexico balances future water needs with limited supplies. About 1,500 participants from 232 communities around New Mexico attended the public meetings, held across the state. Planning staff met with the Governor's Blue Ribbon Task Force on Water and various community organizations to implement the requirements for public participation and involvement in the act. The Commission also appointed an ad hoc committee of regional water planners to develop policy on integrating regional water plans with the *State Water Plan*. There were also outreach efforts by the Interstate Stream Commission and the Office of the State Engineer at meetings facilitated by the Governor's Office with the state's 22 federally recognized Indian Tribes, Nations, and Pueblos in compliance with a provision of the act specifically requiring Native American outreach.



The public input process to develop the first statewide water plan culminated in September 2003 with a consensus-building "town hall" with more than 140 participants representing water users and stakeholders. The Commission contracted with New Mexico First to conduct this meeting, and the Town Hall report was posted on the agency website.

The agency benefited from \$148,000 in earned (free) media coverage of activities surrounding the State Water Plan and the public meetings held statewide.

The comprehensive statewide water plan was presented to the Water Trust Board on October 22, 2003, and to the Interim Water and Natural Resources Committee of the New Mexico State Legislature on November 14, 2003, and was adopted by the Interstate Stream Commission on December 17, 2003. It was presented to Governor Bill Richardson at a news conference in January of 2004.

Since then, the Office of the State Engineer and Interstate Stream Commission have focused on implementation of the 98 strategies identified in New Mexico's First *State Water Plan*.

Progress Report: Active Water Resource Management

State Water Plan Goals: **Ensuring that water is available for the continued and future economic vitality of the state;**
Protecting senior water rights.

Background:

The Active Water Resource Management (AWRM) initiative was launched in January 2004 in response to continued drought conditions in our state. Although the state constitution mandates priority administration as the basis for water administration, the tools necessary to enforce priority administration are only now being put in place. The essential tools and elements needed to enable our agency to actively manage the state's limited water resources include: meters, rules and regulations, creation of water districts, appointment of water masters, and the development of water master manuals. While those tools and elements are being developed, our staff continues to encourage and facilitate shortage-sharing agreements among water users in the various basins. The AWRM initiative received an endorsement from the Interstate Stream Commission on July 21, 2004.

Successes:

◆ Priority Basins

Priority basin areas were designated by the State Engineer in February 2004. They are the Lower Pecos Basin, Lower Rio Grande, San Juan, Upper Mimbres, Rio Gallinas, Nambé-Pojoaque-Tesuque Basin, and Rio Chama. Statewide rules and regulations were finalized by the State Engineer in December 2004.

The State Engineer has prioritized agency resources and created teams to implement AWRM in each priority basin. Each basin team includes a hydrologist, attorney, communication manager, personnel manager, and technical support staff.

The following goals were set for each team:

- to develop schedules for establishing AWRM in all key basins,
- to develop district-specific rules and regulations,
- to establish a realistic budget of metering costs, guidelines, and field implementation and enforcement,
- to develop a comprehensive plan for public communication,
- to hire a water master for each area of priority,
- to provide training for water masters and other personnel,
- to administer water in the priority areas, and
- to set feasible short-term and long-term goals.

Basin-specific rules and regulations tailored to meet the needs of the priority basin areas are being developed for the Lower Pecos Basin, the San Juan Basin, the Lower Rio Grande, the Rio Gallinas, the Upper Mimbres and the Gallinas. The other priority basins will follow.

A metering order has been issued for the Lower Rio Grande and similar orders will be issued for other priority basins as this initiative progresses in 2006 and 2007.



San Juan Basin water master

New subdistricts were created for the Rio Gallinas, Rio Hondo, and the Lower Rio Grande in 2004 and 2005. The Rio Mimbres and San Juan subdistricts were created in 2006.

Water masters will actively administer the distribution of water from stream systems on a daily basis. They serve an important function for the State Engineer because they will ensure that water is distributed fairly. Water masters were hired for all seven priority basin areas. Surface water-metering flumes have been installed on the Mimbres.

Funding for water masters currently is being absorbed by the Office of the State Engineer's budget. In future, that will likely change. If not funded by the state legislature, state law provides a means for funding of water masters. The State Engineer would provide a budget for water masters to the county or counties involved. The counties then can pass on the cost to the affected water users.



AWRM Initiative

◆ Public Communication/Public Outreach

A key component of AWRM implementation is development of a comprehensive communication plan for sharing information with the general public. An extensive outreach plan for public meetings was launched in the Lower Pecos and Upper Mimbres basins in 2005 and in the Rio Gallinas in 2004.

The agency's Planning and Communication Division is coordinating the media outreach and public outreach efforts for this initiative.

The division received two recognition awards from the New Mexico Public Relations Society for communication campaigns associated with AWRM outreach efforts.

◆ Description of Seven Priority Basins

• Lower Pecos

The Lower Pecos, which extends from Fort Sumner to the southern state line, was selected for Active Water Resource Management in order to maintain compliance with the Pecos River Compact and the U.S. Supreme Court Amended Decree. Additional water masters were hired for the Hondo area in spring of 2005 and for Carlsbad in 2006.

• Lower Rio Grande

The Lower Rio Grande Basin extends from Elephant Butte Dam to the Texas border near El Paso. Rapid population growth, especially in the El Paso area, coupled with extended drought is placing ever increasing demands on the basin's

limited water resources. Active Water Resource Management will be implemented to optimize effective conjunctive use of the basin's surface water and groundwater to meet critical needs, especially in times of reduced surface-water flow. A water master was hired for the basin in 2005.

• **San Juan Basin**

Competing demands for the San Juan River Basin water require that the State Engineer administer water rights as the drought continues. In recent years, the State Engineer has participated in negotiations for shortage-sharing agreements among the water users. Steps to implement Active Water Resource Management began in the 2004 irrigation season. A water master was hired for the basin in May 2004.

• **Upper Mimbres**

The State Engineer recently declared the Upper Mimbres, from the town of Mimbres to south of San Lorenzo, a critical basin area. Currently, a large portion of the Mimbres Basin is being managed under Active Water Resource Management. A water master was hired for the basin in 2004.

Steps Toward Active Water Resource Management	Lower Pecos	Lower Rio Grande	Mimbres	San Juan	Rio Chama	Nambe-Pojoaque-Tesuque	Rio Gallinas
➤ Designate basin managers and project teams	✓	✓	✓	✓	✓	✓	✓
➤ Develop schedules for implementation of AWRM	✓	✓	✓	✓	✓	✓	✓
➤ Develop district-specific regulations	✓	✓	⦿	✓	⦿	⦿	⦿
➤ Establish a budget of metering costs and implementation of metering devices	⦿	⦿	✓	✓	⦿	⦿	⦿
➤ Develop a plan for communication with the public	✓	✓	✓	✓	✓	✓	✓
➤ Hire water masters for each area of critical concern	✓	✓	✓	✓	✓	✓	✓
➤ Provide training for water masters and other personnel	✓	✓	✓	✓	✓	✓	✓
➤ Develop water master manuals	⦿	⦿	⦿	⦿	⦿	⦿	⦿
➤ Abstract water rights files into WATERS database	⦿	⦿	✓	✓	✓	✓	✓

Key ⦿ = Work in Progress ✓ = Complete

• **Rio Gallinas**

The Rio Gallinas Basin is an area that is dominated by surface water rights and is highly susceptible to drought. The State Engineer has created water master guidelines and hired a water master on the Rio Gallinas to help resolve controversy regarding the allocation of water supply among the City of Las Vegas, the Rio Gallinas acequias, and the Storrie Project water users.

• **Nambe-Pojoaque-Tesuque**

The Aamodt water rights adjudication affects both Pueblo and non-Pueblo water users in the Rio Nambe, Rio Pojoaque, and Rio Tesuque watershed. The four affected Pueblos are Nambe, Pojoaque, Tesuque, and San Ildefonso. A water master was hired for the area in 2005.

• **Rio Chama**

In the Rio Chama Basin, the State Engineer currently administers the release and delivery of the San Juan-Chama Project water. The entire Rio Chama watershed is targeted for Active Water Resource Management. A water master was hired for the Rio Chama in 2005.

◆ **Shortage Sharing Agreements**

For three years in a row, major water users on the San Juan River developed and endorsed recommendations and principles for the operation of Navajo Dam and the administration of diversions from the river for the remainder of the year. The New Mexico State Engineer and the U.S. Bureau

of Reclamation have accepted the recommendations and principles. The recommendations were developed in response to low water supplies during 2002-2004, the continuance of the drought until the spring snowmelt runoff in 2005 that refilled storage in Navajo Reservoir and competing needs for water. Water users making the recommendations included 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 the 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 State Engineer assisted in monitoring the implementation of the recommendations and principles. With funding support from the Interstate Stream Commission, the State Engineer installed gauging equipment on most non-Indian ditches in the basin diverting from the San Juan,

Animas, and La Plata rivers. The Bureau of Indian Affairs installed gauging equipment on the Fruitland and Hogback irrigation canals. Measurement of diversions is necessary to implement water rights administration and cooperative solutions such as the recommendations.

◆ **Rio Hondo Ditch Agreement**

The Rio Hondo Administration Shortage Sharing Agreement was signed in 2006. This was set up for the purpose of establishing a cooperative distribution of water supplies among users of water from the Rio Hondo in New Mexico. The agreement of the endorsing parties

subjugates priorities to allow for administration of water sharing in lieu of strict priority administration during periods of shortage. After two years of meetings, staff facilitated a shortage sharing agreement among the parties.

New Mexico State Water Plan References

"(The state will)...establish a clear vision and policy direction for active management of the state's waters."

"The State Engineer will prepare plans consistent with the prior appropriation doctrine and priority administration of every basin."

"The State Engineer will establish water districts and appoint water masters to administer diversions and existing water rights as necessary."

"The State Engineer should encourage voluntary agreements among water users for coping with water shortages, but must be prepared for priority administration of water rights where such voluntary agreements are not reached or if they do not achieve the required result."

"The Office of the State Engineer should receive funding adequate for the acquisition of the technological and scientific tools necessary for efficient administration and management."

"Where appropriate, the State Engineer should include communities and water management entities in water administration matters."

"The State Engineer will develop a strategy for the coordinated enactment of statutes, promulgation of regulations, and development of policies to achieve efficient, localized water markets."

— New Mexico State Water Plan, 13-14

Progress Report: Technological Advancements

State Water Plan Goal: **Completing water rights adjudication** **Protecting Senior Water Rights**

Background:

Advances in technology will help expedite the adjudication process. Completion of these adjudications by using new technology can greatly facilitate water planning by all entities and ultimately help the State Engineer more actively manage the state's water resources. Though century-old laws dictate water management, recent technological advances and staff ingenuity have provided for a streamlined and technically defensible manner to assist with successful water management. Through the use of geographic information systems (GIS), hydrologic modeling, hydrographic surveys, water rights abstractions and various web-based tools, the agency has revolutionized the effectiveness and timeliness of keeping up the data necessary for the active management of the state's water resources.

Successes:

◆ **WATERS Database**

The Water Administration Technical Engineering Resource System (WATERS) is designed to provide the state's water managers, planners, and researchers, as well as the general public, with information concerning the demand for water within the state. This includes the total amount of water rights, the status and priority of each right, the registered owner of each right, well locations, meter readings of actual water usage, and all current water right applications pending before the State Engineer. WATERS will provide comprehensive data and information concerning irrigation; commercial, municipal, domestic, and other use wells; surface water uses; subdivision applications review; and water rights summaries. It provides a tracking system that follows water right applications from receipt to final status. The system also tracks approved applications to the final disposition of the permit.

Significant progress has been made with the WATERS database in 2004 and 2005.

Staff have completed the San Juan Basin abstract and entered the data into the database. We have bridged the gap

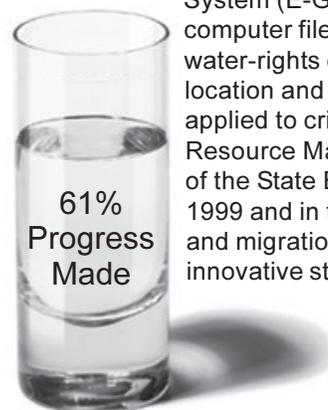


Elephant Butte Reservoir

between the administration of water rights and the adjudication of those water rights within the Litigation and Adjudication Program (LAP) database and the WATERS database. Other basins completed to date include the Rio Chama; the Gallinas; the Nambe, Pojoaque, Tesuque rivers; the Mimbres River surface files; Sandia, Bluewater, and Lower Rio Grande groundwater files; Tularosa, Ft. Sumner, Hueco, Salt, Virden Valley, and Las Animas.

◆ **Virden Valley E-GIS**

A computer pilot project by the Deming Office used the Virden Valley Basin to create a template allowing quick access to WATERS information by way of a separate



WATERS Database

mapping system. This Enterprise-Geographical Information System (E-GIS) allows administrators to create a computer file merging all historical information on water-rights ownership with site photos and well-location and access maps. The advancement will be applied to critical basins to support the Active Water Resource Management (AWRM) initiative. The Office of the State Engineer began the E-GIS program in 1999 and in the last year has improved data collection and migration in the E-GIS standard, developed an innovative staff cross-training program, added important datasets, converted old data to new standards, consolidated information flow, and enhanced user access. Staff also completed the Upper Mimbres Basin E-GIS project and began pilot E-GIS projects in the San Juan and Sandia Basins.

◆ **E-GIS/WATERS/Hydrographic Survey**

Continued efforts to expedite adjudications have been enhanced by the linking within the E-GIS system of collected data and hydrosurvey technical mapping. This innovation allows information to be shared within the Office of the State Engineer and among other agencies, constituents, and the general public through a searchable database. The Office of the State Engineer and other agencies continue to collaborate on acquiring aerial imagery of the entire state of New Mexico. A crucial component of E-GIS to meet the need for integrated mapping will be developing geospatial production capacity by developing new data or updating existing resources.

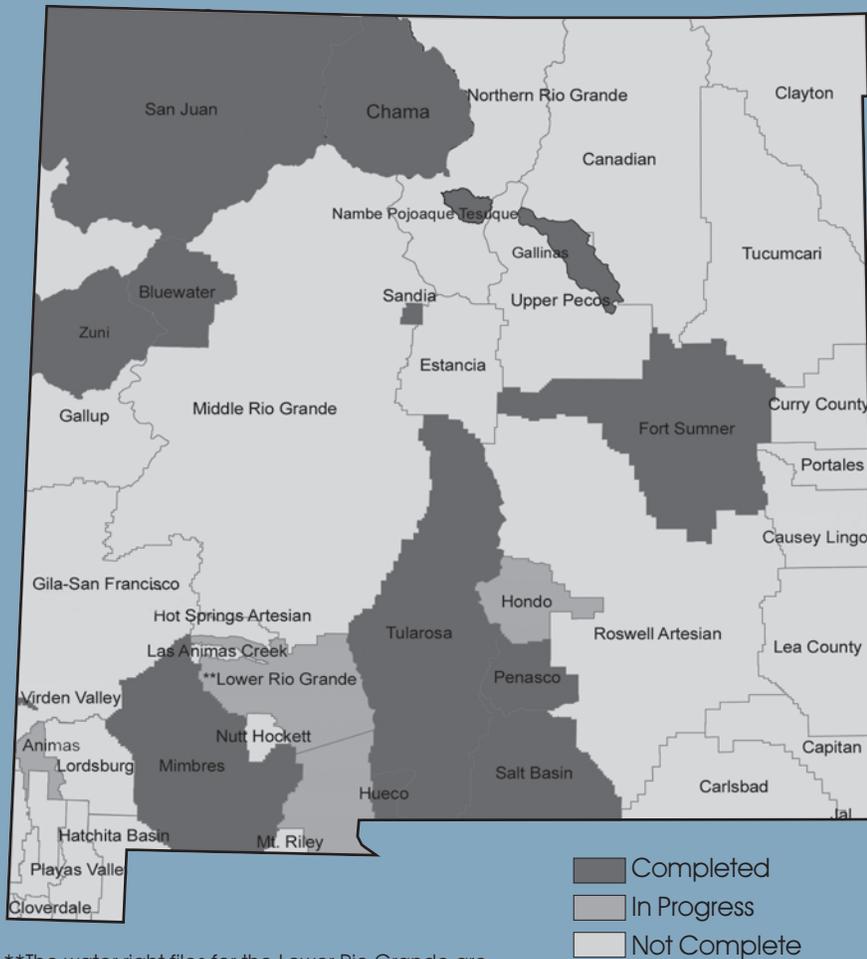
◆ **Hydrology Models**

The agency's Hydrology Bureau finalized the Taos Model in 2005. The model was developed to predict stream depletions and water level declines in the



Mapping digitization

Status of WATERS Implementation



**The water right files for the Lower Rio Grande are complete. The adjudication files are in progress.

Taos Basin. The model will be used by the agency to process new water right applications. In addition, the bureau finalized the Tularosa Model, which will be used for water rights administration. Due to the lack of surface water in the basin, the model will be used to determine water level declines and to evaluate water quantity changes.

◆ Hydrographic Surveys

The application of GIS in the office and global positioning system receivers in the field is dramatically reducing the time needed by the Hydrographic Survey Bureau to produce its surveys. Hydrographic surveys, required by statute to begin adjudication, determine historic water uses and quantities and must be precise.

The Hydrographic Survey Bureau this year has completed or is in the process of completing the San Juan/La Plata Project, Animas Valley Hydrographic Survey, Aamodt Adjudication, Zuni Hydrographic Survey, San Jose Hydrographic Survey Review, Chama Adjudication Support, Lower Rio Grande Crop Pattern Determination, Taos Historical Acreage Review, and Statewide Agricultural Area Determination.

New Mexico State Water Plan References

-“(The state should)...include work plans and strategies for completion of water rights adjudications, with required supporting documentation, including hydrographic surveys, aquifer mapping, and aerial mapping of irrigated land.” (Section D.1)

-“The state shall accelerate the adjudication of water rights by prioritizing adjudications, setting our projected schedules and timelines for their completion, allocating the necessary state resources, and obtaining federal funding where possible.”

-“The state shall continue to pursue adjudication process improvements to make the process more efficient and understandable to water right owners.”

— New Mexico State Water Plan, page 58

Progress Report: Adjudications and Settlements

State Water Plan Goal: **Completing water rights adjudications**

Background:

By statute, water rights adjudications are comprehensive judicial determinations of the elements of each right to the use of the state's waters. Adjudications serve several important purposes: the legal determination of surface water rights that predate the state's adoption of the 1907 water code; the legal determination of groundwater rights that predate the State Engineer's assertion of administration authority over a groundwater basin; the determination of all water rights permitted by the State Engineer; and federal reserved Indian water rights.

At present, water rights adjudications are completed for roughly 20 percent of the state while another 40 percent is subject to 12 currently pending adjudication lawsuits. The active adjudications involve about 59,000 non-Indian defendants and 17 defendant Indian tribes, nations, or pueblos. Completion of these adjudications will greatly facilitate water planning and aid the State Engineer in being more effective in actively managing the state's water resources to stretch the available supply to most efficiently meet existing and future demands.

Successes:

◆ **Navajo Nation Settlement**

A settlement resolving the claims of the Navajo Nation for use of waters of the San Juan River Basin between the Navajo Nation and the State of New Mexico was signed on April 19, 2005. Implementation of the settlement will provide water to areas of the Navajo Nation without a water source and will provide for the future economic development of the Four Corners region. The settlement adjudicates water rights and provides for associated water development projects to benefit the Navajo Nation without displacing existing non-Navajo water rights owners in the basin. In addition, successful implementation of the settlement will allow the parties to avoid an expensive and lengthy lawsuit. Now funding is needed to implement the settlement.



Navajo Nation Signing Ceremony

◆ **Pecos Settlement: Pecos River**

In 2003, the Pecos Valley Artesian Conservancy District (PVACD), the Carlsbad Irrigation District (CID), the State of New Mexico, and the United States entered into a settlement that, if implemented, will result in the adjudication of the CID Project after 50 years of litigation. Implementation also will provide the state with the ability to more effectively comply with its obligations under the Pecos River Compact as decreed by the United State Supreme Court in 1988. *(For more information, see page 8 for **Interstate Compact Compliance.**)*

◆ **Aamodt Settlement: Nambe-Pojoaque-Tesuque Basin**

On May 3, 2006, parties to the *Aamodt* Adjudication signed a settlement agreement that, if implemented, will result in the adjudication of the water rights of the Nambe, Pojoaque, Tesuque and San Ildefonso Pueblos. The settlement provides for, if implemented, the creation of a regional water system that will import water to provide a reliable water supply for non-Indian defendants because their water rights are subject to curtailment. State, federal, and local funding will be required to successfully implement the settlement.

◆ **Taos Settlement: Rio Hondo and Rio de Taos**

In May 2006, parties to the *Abeyta* Adjudication signed a settlement, that if implemented, will result in the adjudication of the water rights of the Taos Pueblo without displacing existing water right owners. State, federal, and local funding will be required to successfully implement the settlement.

◆ **Arizona Water Rights Settlement**

The Arizona Water Rights Settlement Act involves waters of the Gila River in southwestern New Mexico. An amendment to the legislation provided southwestern New Mexico with the possibility of using an average additional 14,000 acre-feet of Gila River water every year. Beginning in 2012, \$6.6 million a year for 10 years will become available from the Lower Colorado River Basin Project Development Fund to New Mexico for water utilization. This funding may increase to \$128 million for a water development project. In January 2005, more than 100 people attended the first of many planned public meetings in Silver City to discuss options that would meet the present and future water

and funding needs of the region. It is critical that the planning process for using the water and spending the funds now begin in earnest. Future meetings will be scheduled later this year to continue the public planning process.

◆ **Indian Water Rights Settlement Fund**

In 2005, the Governor signed Senate Bill 172 into law that created an Indian Water Rights Settlement Fund. Although the legislation calls for a special fund to pay the state's share of costs for projects for the non-Indian portion of water rights settlements with Indian Tribes, Pueblos, and Nations, no money was appropriated to the fund. Efforts will begin in 2006 to get lawmakers to appropriate money for the fund.



Status of Adjudications

New Mexico State Water Plan References

-"The state should)...include work plans and strategies for completion of water rights adjudications, with required supporting documentation, including hydrographic surveys, aquifer mapping, and aerial mapping of irrigated land." (Section D.1)

-"The state shall accelerate the adjudication of water rights by prioritizing adjudications, setting our projected schedules and timelines for their completion, allocating the necessary state resources, and obtaining federal funding where possible."

-"The state shall continue to pursue adjudication process improvements to make the process more efficient and understandable to water right owners."

— *New Mexico State Water Plan*, page 58

Progress Report: Interstate Compact Compliance

State Water Plan Goal: **Maintaining and enforcing interstate stream compact compliance**

Background:

New Mexico is a party to eight interstate stream compacts. The Interstate Stream Commission is responsible for compliance with provisions of those compacts as well as U.S. Supreme Court decisions governing water allocations on the Pecos, Canadian and Gila Rivers. To assure compact compliance, staff analyze streamflow, reservoir levels, and other data on the stream systems and implement projects in New Mexico and neighboring states.

Successes:

◆ Elephant Butte Pilot Channel

Interstate Stream Commission staff, working with the U.S. Bureau of Reclamation, continues to excavate and maintain the Elephant Butte Pilot Channel as needed. The Pilot Channel is critical for the effective conveyance of water through the delta at the upstream end of the Elephant Butte Reservoir to help meet Rio Grande Compact obligations. Each year, the Pilot Channel provides substantial water savings of between 15,000 and 20,000 acre-feet of water, which would have otherwise been lost to evaporation due to inefficient conveyance.



Elephant Butte Pilot Channel

◆ Strategic Water Reserve Legislation

Strategic Water Reserve legislation was passed by the 2005 State Legislature and signed into law by the Governor. This legislation gives the state more options for meeting interstate compact deliveries and for managing water for the benefit of threatened and endangered species. Rules and Regulations for managing the Strategic Water Reserve were adopted by the Interstate Stream Commission in November 2005. The initial river reach priorities established for the Strategic Water Reserve were the middle Rio Grande, Lower Pecos River, and Canadian River.

◆ Pecos Settlement

The Interstate Stream Commission continues the process of acquiring land and water rights needed to implement the Pecos Settlement with funds appropriated by the Legislature. The settlement is designed to enable New Mexico to continue to comply with its obligations under the Pecos River Compact and the U.S. Supreme Court's 1988 amended decree and to bring the over-appropriated river into hydrologic balance. The partial final decree adjudicates the water rights of the United States and the Carlsbad Irrigation District (CID). The Commission has received bids from landowners offering to sell thousands of

acres of land and associated water rights in the Lower Pecos River Basin. The settlement contemplates that the Commission will purchase up to 6,000 acres of land with water rights in the CID and up to 12,000 acres above Brantley Dam, which includes the Pecos Valley Artesia Conservancy District (PVACD), and the Fort Sumner Irrigation District. The Interstate Stream Commission has purchased and is currently overseeing more than 2,300 acres in the CID and more than 4,100 acres in the PVACD. Three augmentation well fields are being developed to deliver water to the river. Current well-field capacity is about 14,000 acre-feet per year toward a settlement goal of 15,750 acre-feet per year.



Pecos Settlement Implementation

◆ Rio Grande Compact Credit Water Relinquishment To Texas

Although the agreement to relinquish Rio Grande Compact credit water to the State of Texas was negotiated in April 2003, the second phase of relinquishment took place in 2004. The benefits of that relinquishment and the associated Emergency Drought Water Agreement (EDWA) with the U.S. Bureau of Reclamation continue to be of great importance to the State of New Mexico. The EDWA has allowed New Mexico to store water in upstream reservoirs on the Rio Grande built after 1929, which would otherwise have been prohibited under the current drought conditions (Article VII of the Rio Grande Compact). This water assured a sufficient, albeit minimal, supply of water for the City of Santa Fe, farmers in the Middle Rio Grande Conservancy District, and the endangered Rio Grande silvery minnow during drought years 2003, 2004, 2005, and will help extend supplies in 2006 and beyond.

◆ Water Talks with the State of Texas and the Governor's Office

Water talks with the State of Texas initiated by the Governor's Office in November of 2004 to discuss critical state-to-state water issues continue. In addition, the State Engineer and the Commission continue technical work relating to the Lower Rio Grande adjudication and Active Water Resource Management. In December, the State Engineer issued orders requiring metering of wells and establishing a water master district in the area. All of these efforts are designed to help resolve Texas concerns.

New Mexico State Water Plan References

-“(The state shall)...establish a clear vision and policy direction for active management of the state's waters.

— New Mexico State Water Plan, page 13

Progress Report: Wildlife, Habitat and River Protection

State Water Plan Goal: **Providing for fish and wildlife habitat preservation and maintenance and for river restoration**

Background:

The Interstate Stream Commission is providing a critical leadership role for several stream systems in New Mexico, including the Rio Grande, Pecos, and recently the Gila, to provide for the preservation of fish and wildlife habitat while also protecting human water uses. Water operations and management on which agricultural and other uses depend are affected by federal requirements for protecting threatened and endangered species. Especially in the drought conditions of the past 10 years, the need to carefully manage the water supplies in New Mexico rivers has been crucial. The Interstate Stream Commission is working within collaborative programs and workgroups to provide for species through habitat improvements and improved water operations to assure water uses are protected.

On the Rio Grande, the Interstate Stream Commission has been involved with an effort to prevent extinction and to contribute to the recovery of the Rio Grande silvery minnow and the southwestern willow flycatcher. As a member of the Middle Rio Grande Endangered Species Collaborative Program, the Interstate Stream Commission is funding projects to better understand the life stages of the silvery minnow, to create off-channel 'refugium' that augment wild populations, to construct in stream habitat, to improve irrigation efficiencies, to measure surface water flows, and to actively participate in minnow rescue activities whenever there is river drying. Not least, water has been made available by the Interstate Stream Commission to provide supplemental flows to meet the federal ESA requirements. As a 25 percent match to federal dollars (75 percent), the impact of the state funds in the Middle Rio Grande has been significant.

On the Pecos River, the Interstate Stream Commission works with Game and Fish Department, the federal government, and landowners to not only ensure compact deliveries are met, but also to protect human uses and the Pecos bluntnose shiner, a federally listed threatened fish and to protect and improve its habitat.

On the Gila and Canadian rivers, the Interstate Stream Commission is engaging in collaborative Endangered Species Act management efforts early to try to keep endangered species issues from becoming unmanageable.

Successes:

◆ Water Operations Improvement

The irrigation system within the Middle Rio Grande is now significantly more efficient with the addition of gauges and automated gates funded through the Water Trust Board and the Collaborative Program. The Interstate Stream Commission has partnered with the Middle Rio Grande Conservancy District to complete these improvements as well as initiating a decision support system model for the irrigation district.

The Interstate Stream Commission has been active on the Pecos River investigating the Pecos bluntnose shiner, a listed threatened species, to better understand its biological needs at each of its life stages in an effort to ensure reasonable flow requirements are set that do not impair water deliveries to water users.

◆ Species Population on Rise

Populations for the silvery minnow are on the increase and, with only one high flow year in the past five, the minnow have rebounded to pre-1996 numbers. One

reason for this is the greater number of fish present in the Albuquerque area. Because minnow eggs can drift downstream a long distance before hatching, it is essential to maintain a healthy population in this area. About 150,000 captive bred minnow are being released annually in the Albuquerque area, which has resulted in a steady increase in the overall population as these fish reproduce.

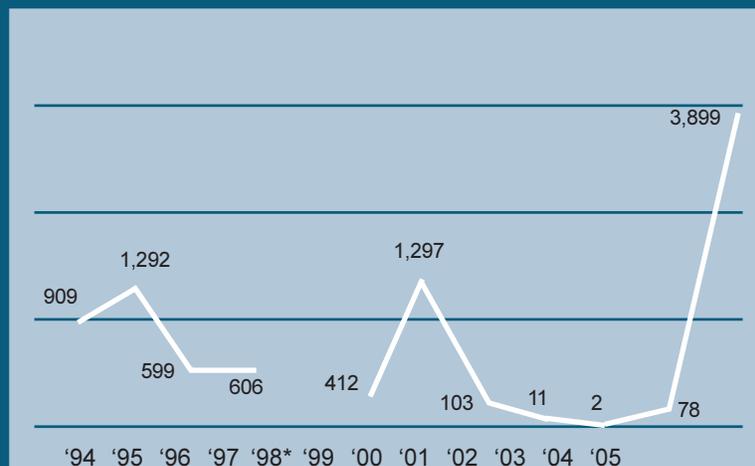
In 2001, the Interstate Stream Commission partnered with the City of Albuquerque to construct a state-of-the-art rearing and breeding facility, known as a refugium, for silvery minnow. Since opening in 2003, the naturalized refugium in the Albuquerque Biopark has raised over

100,000 minnows for augmentation as well as made important research advances that will help build better habitat on the river.

• Additional Refugia Construction

The U.S. Fish and Wildlife Service eventually recognized the importance of maintaining off-channel refugia for the

Silvery Minnow Population Trend



*No sample taken in 1998



Albuquerque Biopark Silvery Minnow Refugium

minnow both to prevent extinction and to move towards recovery and delisting. Two additional refugia were mandated in the biological opinion in 2003.

The Interstate Stream Commission is in the process of designing and constructing a new silvery minnow refugium in Los Lunas, New Mexico, on state-owned lands. The federal government is constructing another. Fish from these refugia will not only augment the Rio Grande in New Mexico but also be used for experimental silvery minnow reintroduction in Big Bend National Park, Texas.

• **Habitat Restoration Projects**

Improving habitat for native fish and wildlife in a river system that has been disturbed and altered by the construction of dams, diversions, levees, and bank-line stabilization is important for helping rebuild and maintain robust populations. Lack of good habitat, including areas where overbank flooding can occur, has been cited as one reason for the paucity of silvery minnow in the Albuquerque area, even though this stretch of river has been kept wet.

The Interstate Stream Commission is one of the first entities to construct minnow habitat within the river itself. Without creating additional depletions, the project is designed to increase the areas of inundation, particularly on islands, over a variety of flows by lowering banklines. Additionally, a number of habitat restoration techniques are utilized to create habitat diversity that is so important for the various life stages of the minnow. The second year of an estimated four-year project is being funded through the Water Trust Board, the Interstate Stream Commission, and the Middle Rio Grande Collaborative Program. This project will involve collaboration with many entities, including the City of Albuquerque, the Corps of Engineers and the Middle Rio Grande Conservancy District.



Airboat Tour on the Rio Grande to view restoration sites along the Albuquerque reach of the river

New Mexico Water Plan References

- “(The state shall)...promote river riparian and watershed restoration that focuses on protecting the water supply, improving water quality, and complying with federal Endangered Species Act of 1973 mandates.”
- “The state shall support and, as appropriate, conduct river riparian restoration and water acquisition activities to protect endangered species and to reduce the likelihood of additional listings.”
- “The state shall seek to ensure that river riparian and watershed restoration is performed, and water is acquired to meet Endangered Species Act-related river flow targets and/or high priority environmental needs, in accordance with the following principles: the acquisition and use of water must be in accordance with state water law and state water rights administration regulations; State Engineer permits are required for all habitat restoration activities that result in increased depletions of water; New Mexico’s ability to meet its obligations under interstate stream compacts must not be compromised.”

— New Mexico State Water Plan, page 38

Progress Report: Protecting Our State's Waters

State Water Plan Goal: **Preserving state administrative authority over state's waters**

Background:

New Mexico must actively manage its water resources to benefit New Mexicans if it is to avoid threats to its administrative authority from other states, the courts, and the federal government. To do so, the State Water Plan Act calls for the State Water Plan to establish a clear vision and policy direction for active management of the state's waters.

Successes:

◆ Arizona Water Rights Settlement

In the 2004 Arizona Water Settlements Act, Congress affirmed New Mexico has a right to an average of 14,000 acre-feet per year of additional water from the Gila Basin and up to \$128 million in non-reimbursable funding. To fully realize these benefits, the Act requires New Mexico to give notice to the Secretary of Interior by 2014 of whether and how New Mexico chooses to use the 14,000 acre-feet of water on the Gila River. If New Mexico is not able to give the Secretary an informed and considered decision by 2014, \$66 million in federal funding and the 14,000 acre-feet per year of additional Gila Basin water may be at risk. Governor Richardson tasked the Interstate Stream Commission to implement a planning and decision-making process incorporating the use of sound science and a full and inclusive public outreach program. The formal policy of the Commission and the

Governor is to fully protect the unique and valuable ecology of the Gila Basin, to use the best available science in design and engineering, and to also consider traditional uses as well as current and future demands for water. To meet the 2014 deadline for an informed and considered decision by New Mexico, watershed-wide scientific and ecological studies on the Upper Gila River Basin have been initiated.



Regional Water Plans

◆ Eagle Nest Reservoir Water Settlement

The Eagle Nest Reservoir Water Settlement Agreement was signed on June 2, 2006. The State of New Mexico purchased Eagle Nest Reservoir in 2002 and the Interstate Stream Commission was tasked with operating and maintaining Eagle Nest Dam and Reservoir. It appeared an on-going court case over Eagle Nest water would again wend its way to the steps of the State Supreme Court. The staff of the Interstate Stream Commission provided technical support and facilitation to the water users as they spent two years in intense and difficult negotiations. The water users agreed to the basics of a settlement, key to which is an agreement that the users will equally share shortages. The settlement also resolves all outstanding litigation and conflicting legal positions over water amounts and priorities of deliveries.

The 2005 State Legislature passed and the governor signed into law the Strategic Water Reserve. This legislation gives the state more options for meeting interstate stream compact delivery obligations and for managing water for the benefit of threatened and endangered species. Rules and regulations for managing the Strategic Water Reserve have been adopted and the Lower Pecos River, the middle Rio Grande and the Canadian River below Ute Reservoir have been designated as priority reaches.

◆ Strategic Water Reserve Legislation

The 2005 State Legislature passed and the governor signed into law the Strategic Water Reserve. This legislation gives the state more options for meeting interstate stream compact delivery obligations and for managing water for the benefit of threatened and endangered species. Rules and regulations for managing the Strategic Water Reserve have been adopted and the Lower Pecos River, the middle Rio Grande and the Canadian River below Ute Reservoir have been designated as priority reaches.

◆ Regional Water Plans

Of the 16 water planning regions in New Mexico, 14 plans have been completed and accepted by the Interstate Stream Commission. Planning and Communication Division staff are working with committees for the two remaining incomplete plans. Regional planning efforts water users in each area of the state to engage in developing the plans that affect their own water resources. Work to integrate the State Water Plan with regional plans is continuing.

New Mexico State Water Plan References

—“(The state will)...identify and reflect the common priorities, goals, and objectives that will have a positive impact on the public welfare of the state.” (Section C.1)

— New Mexico State Water Plan, page 4

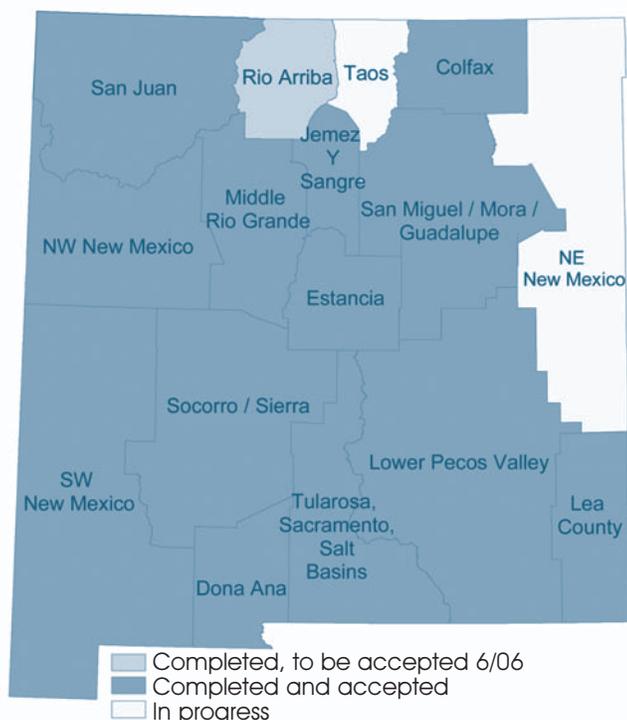
Photo by Charles Johnson



Gila River

14,000 acre-feet of water on the Gila River. If New Mexico is not able to give the Secretary an informed and considered decision by 2014, \$66 million in federal funding and the 14,000 acre-feet per year of additional Gila Basin water may be at risk. Governor Richardson tasked the Interstate Stream Commission to implement a planning and decision-making process incorporating the use of sound science and a full and inclusive public outreach program. The formal policy of the Commission and the

Status of Regional Water Planning



Progress Report: New Water Sources

State Water Plan Goal: **Developing water resources to expand available supply**

Background:

In many areas the state's surface waters have been fully appropriated since the early to mid-1990s, and most of the municipal and community water supplies developed since then have relied on the state's substantial potable groundwater reserves. Much of that groundwater is in storage in aquifers, which are hydrologically connected to the state's rivers and not available for use because the pumping of that groundwater would reduce river flows and impair senior surface rights. The development of these groundwater resources requires the identification, purchase and retirement of surface rights. Continued development of potable water supplies will require further development of both surface and groundwater resources.

Successes:

◆ Desalination Plant Permit Transfer

The State Engineer approved a conditional permit transfer in December 2004 authorizing the City of Alamogordo to divert ground water from the Tularosa Underground Water Basin for use in their desalination project for potential municipal, industrial, and commercial purposes in New Mexico. Under the terms of the permit, the City of Alamogordo may divert up to 3,000 acre-feet per year, while the diversion for any calendar year may be increased up to 4,500 acre-feet, provided that the sum of annual diversions for any consecutive five-year period does not exceed 15,000 acre-feet. The amount of water requested by the City of Alamogordo in its final application was 10,000 acre-feet per year. Conditions provide that there must be ongoing monitoring plan submitted to the State Engineer for the protection of area residents before any diversion of water can begin. Conservation provisions were also included. This facility will help meet growing water demands, while conditions imposed will protect existing water rights in the area.



Finding New Water Sources

New Mexico water users, wildlife, reduced risk of fire, and meeting river compact obligations. The proposal includes a statewide analysis of climatologic data and satellite imagery, public education, program design and acquisition of equipment, cloud seeding operations, and assessments of operations.



Architectural rendering of desalination plant.

◆ Cloud Seeding

Cloud seeding is listed as a water development strategy to enhance supply in nine of the regional plans accepted by the Interstate Stream Commission. Both summer and winter programs are recommended.

Jemez y Sangre water planning region (Region 3), via the New Mexico Weather Modification Association, Inc., is actively seeking funds from the New Mexico Legislature, cities and counties, and private foundations to establish a winter seeding program in the Jemez Mountains and the Sangre de Cristo Mountains. The Guadalupe and Sacramento mountains are also targeted by the association as locations with potential for both summer and winter seeding programs. Increased precipitation – as much as 10 percent can augment stream flow and recharge to aquifers to benefit

New Mexico State Water Plan References

-“(The state shall)... promote collaboration with and strategic focusing of the research and development of the state’s national laboratories and research institutions to address the state’s water challenges and to bring to the state demonstration projects in desalination, conservation, watershed restoration, weather modification, and other technological approaches to enhancing water supply and management.” (Section C.14)

-“The state shall use all means available to evaluate and pursue viable approaches for enhancing water supply and management.”

-“The state shall coordinate, prioritize, fund, and execute studies and research on critical water issues with the state’s national laboratories and research institutions”

— New Mexico State Water Plan, page 56

Progress Report: New Rules, Regulations and Safety Measures

State Water Plan Goals: **Ensuring that water is available for the continued and future economic vitality of the state;**
Promoting conservation and efficient use of water;
Protecting, maintaining, and enhancing the quality of the state's waters;
Preserving state administrative authority over the state's waters.

Background:

The State Engineer has made it a priority to update New Mexico's rules and regulations governing surface, groundwater, and other water management issues around the state.

Successes:

◆ New Dam Safety Rules and Regulations

New Dam Safety Rules and Regulations were adopted by the State Engineer in 2005 after a public hearing.

◆ New Surface Water Rules and Regulations

New Rules and Regulations for Surface Water Administration in New Mexico were adopted by the State Engineer in 2005 after a public hearing. These rules and regulations were last updated in 1953.

◆ New Groundwater Rules and Regulations

Progress was made on new rules and regulations for groundwater use in New Mexico. These rules and regulations were last updated in 1995.

◆ New Well Drillers Rules and Regulations

New Rules and Regulations for Well Drilling, Licensing, and Well Construction in New Mexico were adopted in 2005 by the State Engineer after a public hearing. These proposed rules and regulations were last updated in 1983.

◆ Declaration and Extension of Underground Water Basins

The State Engineer declared and extended 15 underground water basins in New Mexico in December 2005 after a public hearing in Santa Fe. The purpose of the declarations and extensions is to provide for statewide administration of underground water, accurately accounting for and administering resources, and for prevention of impairment to valid and existing water rights. Areas declared and extended included 11,500 square miles, roughly 9.5 percent of the state, which gives the State Engineer jurisdiction over the appropriation and beneficial use of all the underground waters in the state. Declared basins included Clayton, Causey Lingo, Mount Riley, Hachita, Yaqui, and Cloverdale Underground Basins. Extended basins included the Canadian River, Curry County, Fort Sumner, Lea County, Tularosa, Animas, Lordsburg, Nutt-Hockett, and Playas Underground Water Basins.

◆ Administration of General Water Use

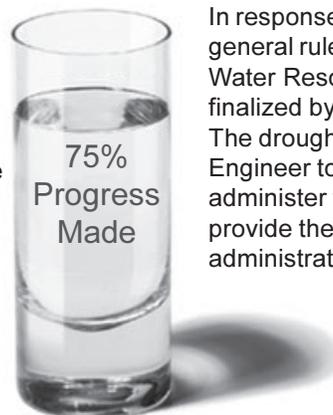
Progress was made on new *Rules and Regulations for Administration of General Water Use* in New Mexico.

◆ Active Water Resource Management General Rules and Regulations

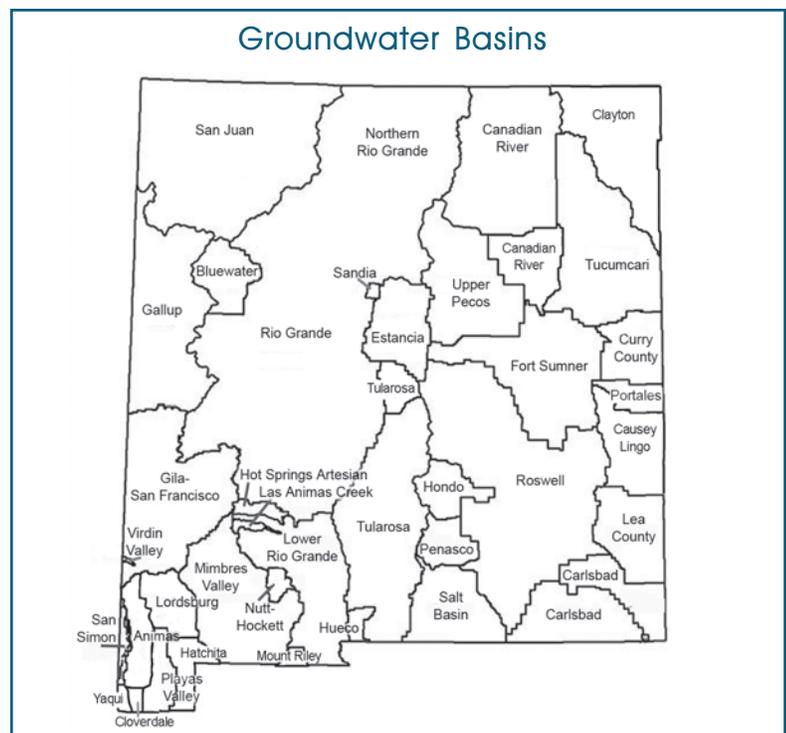
In response to continuing drought in New Mexico, general rules and regulations for administering Active Water Resource Management (AWRM) were finalized by the State Engineer in December of 2004. The drought highlights the need for the State Engineer to be actively engaged in the field to administer the use of water. The statewide rules provide the tools to move forward with priority administration and help the state to be ready for future drought cycles. The general rules and regulations were adopted after a public hearing in Santa Fe.

◆ AWRM District-Specific Rules and Regulations for the Lower Pecos Basin

District-specific Rules and Regulations for the Lower Pecos River Basin were released in January of 2006. The proposed



Updated and New Rules and Regulations



regulations are intended to promote the effective implementation of the settlement agreement between New Mexico, the U.S. Bureau of Reclamation, the Carlsbad Irrigation District, and the Pecos Valley Artesian Conservancy District to help provide for the state's permanent compliance with the Pecos River compact. Also, it is another step forward in the AWRM initiative.

The regulations provide for elimination of illegal diversions and over diversions within the water master district and establish procedures for use of priority administration as required by the settlement agreement or for compliance with the U.S. Supreme Court's 1988 Amended Decree regarding the Pecos River Compact. A public hearing on the proposed new rules is scheduled for March of 2006.

◆ New Surface and Groundwater Measurement Specifications

New statewide specifications for surface and groundwater measurement devices were adopted by the State Engineer



Lower Rio Grande water master

in December of 2005. These specifications were put into place to provide for efficient statewide administration and to establish minimum standards for acceptable measurement devices in the state. Prior to these specifications, basin

supervisors and water masters had to determine on a case-by-case basis whether a measurement device was adequate. With these new specifications, water right owners throughout the state are installing metering devices that are acceptable.

◆ Strategic Water Reserve Rules and Regulations

Rules and regulations were adopted by the State Engineer for a Strategic Water Reserve in October of 2005. Governor Richardson signed into law legislation to set up the Strategic Water Reserve to provide an additional tool to the state for meeting interstate stream compact deliveries and for managing water for the benefit of threatened and endangered species. The new rules and regulations will help the Interstate Stream Commission with implementation of the Strategic Water Reserve.

◆ Domestic Well Rules and Regulations

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 in spring of 2006, the State Engineer released draft rules and regulations for domestic wells and household use to protect existing water rights from future impacts that would be caused by new domestic wells throughout the state. The draft regulations govern diversion rates, domestic well management areas, expedited water

transfers, and domestic well fees in the state. The new rules and regulations were necessary to protect senior water rights as well as existing users. In certain areas where there are compact delivery obligations, even a small measure of water pumped by domestic wells becomes critically important.

Prior to January 3, 2006, New Mexico law provided that anyone wishing to drill a well for domestic water use was entitled for a permit fee of \$5. It is the only use of public water in the state for which no water rights are required. Concentrations of domestic wells can affect the flows in adjacent streams, including those with interstate compact delivery requirements. Under the new regulations, the schedule of fees will increase. Domestic wells already in place will not be affected. A final version of the regulations will be adopted after a hearing scheduled in April of 2006.

A series of public meetings are scheduled around the state in early 2006 to get public input on the new rules and regulations.

Fees for domestic well permits in New Mexico are extremely low in comparison to other states. For example, the fee for a permit in Arizona is \$150, in California is \$170, and in Colorado is \$480.

◆ Carlsbad Irrigation District Supplemental Wells Rules and Regulations

In an effort to regulate over-diversions from supplemental wells located within the Carlsbad Irrigation District (CID), the State Engineer adopted new rules and regulations in 2005. The Pecos Settlement allows CID members to pump groundwater so that the annual surface water allotment plus the groundwater total no more than 3.697 acre-feet per acre per year. The rules and regulations were approved after public meetings were held.

New Mexico Water Plan References

-“(The state shall)...include work plans and strategies for measuring of surface and groundwater uses in the state as necessary for the management of the state's water resources.

— New Mexico State Water Plan, page 68

Progress Report: Assuring Water Quantity by Protecting Water Quality

State Water Plan Goals: **Developing water resources to expand the available supply; Protecting, maintaining, and enhancing the quality of state's waters.**

Background:

Water Quantity

New Mexico's surface waters in many parts of the state have been fully appropriated since the early to middle 1900s. Most of the municipal and community water supplies developed since then have relied on the state's substantial potable ground water reserves. However, much of that ground water is in storage in aquifers hydrologically connected to the state's rivers and is not available for use because the pumping of that groundwater would reduce river flows and impair senior surface rights. Development of these groundwater resources has required the identification, purchase and retirement of surface rights. Continued development of potable water supplies will necessitate further development of both surface and groundwater resources.

Water Quality

The Office of the State Engineer and the Interstate Stream Commission recognizes that protecting, maintaining, and enhancing the quality of the state's waters is critical to sustaining the state's residential population, businesses, and agriculture for present and future generations of New Mexicans. Once water becomes contaminated, it is extremely expensive to restore to its original quality, and in many cases restoration is not possible at any cost. The New Mexico Water Quality Act is a legislative recognition of the importance of this common priority and incorporates water quality protection provisions designed to ensure the long-term protection of New Mexico's water resources. Critical to the accomplishment of this long-term goal are the completion of surveys, compilation of data, and maintenance of databases on the state's water supplies and water quality.

Successes:

◆ Watershed Health

- Governor Richardson signed the *Forest and Watershed Health Plan* in early 2005. The plan sets comprehensive guidelines and recommendations for watershed management in New Mexico, which include monitoring, remediation, long-term management, improved coordination among state and federal agencies, increased state and federal funding, and a new state management office and stakeholder group to direct watershed projects.
- The agency was involved in a multi-agency work group established by House Bill 2 in order to address non-native phreatophyte and watershed management throughout New Mexico. The document, titled *Non-Native Phreatophyte/ Watershed Management Plan*, provides plans, templates, and protocols for watershed treatment, monitoring, remediation, and long-term management and maintenance.

◆ Measurement of Supplies

The agency's Measurement Committee was created to make recommendations for implementation of metering and measurement for the basins designated within the State Engineer's Active Water Resource Management (AWRM) program. With input from the Office of the



Rio Chama water master



Lower Rio Grande Metering Progress

State Engineer Water Masters as well as Water Resource Allocation Program, Interstate Stream Commission, and Litigation and Adjudication Unit staff, the committee has recommended minimum specifications for the installation of surface and groundwater metering devices for the entire state. It is currently working to implement metering in the Lower Rio Grande as well as the Nambe-Pojoaque-Tesuque, Mimbres, and Rio Gallinas basins.

◆ Metering Orders

A Metering Committee comprised of staff members from the Office of the State Engineer meets regularly to address statewide groundwater measuring specifications and statewide surface water specifications. The specifications are based on estimated measured flows for each diversion. The result of the Metering Committee's work will form the basis for existing and future metering orders. The State Engineer issued a metering order on December 3, 2004 for the Lower Rio Grande with a deadline set for compliance of March 1, 2006. Other metering orders are planned in the future.

◆ Water Quality Control Commission

The Office of the State Engineer has a designated staff member on the 12-member New Mexico Water Quality Control Commission of the New Mexico Environment Department. The basic authority for water quality management in New Mexico is provided through the State Water Quality Act. This law establishes the Water Quality Control Commission and specifies its duties and powers, which include adoption of a comprehensive water quality management program, the

development of a continuing planning process, the administration of loans and grants from the federal government, the adoption of water quality standards, and the adoption of regulations to prevent or abate water pollution in the state or in any specific geographic area or watershed of the state or for any class of waters.

◆ Collaboration with the New Mexico Environment Department

The State Engineer has collaborated with the New Mexico Environment (NMED) on the following projects:

- Creating more consistency between regulation by the NMED's Liquid Waste Program and Ground Water Quality Bureau with respect to wastewater systems.
- Providing assistance to 30 percent of New Mexico's community water systems to foster local wellhead/watershed protection activities by June 2006.
- Promoting and encouraging these community water systems to adopt protection plans based on information provided in Source Water Assessment reports and based on local needs by December 2007.
- Adopting a Wellhead/Watershed Protection Plan based on NMED's Source Water Assessment Report.
- Implementing an Area Wide Optimization program to assist surface drinking water systems with new and complex rules and Safe Drinking Water Act compliance by December 2005.



Media interview with Interstate Stream Commission Director Estevan Lopez at the Endangered Species Collaborative news conference in January 2004 at Isleta Pueblo near the Rio Grande

New Mexico State Water Plan References

-*(The state shall)...include an inventory of the quantity and quality of the state's water resources, population projections, and other water resource demands under a range of conditions. (Section C.3, page 18)*

-*(The state shall)... include water budgets for the state and for all major river basins and aquifer systems in the state." (Section C.4, page 23)*

-*(The state shall)...recognize the relationship between water availability and land-use decisions. (Section C.7, page 34)*

-*(The state shall)... promote river riparian and watershed restoration that focuses on protecting the water supply, improving water quality, and complying with federal Endangered Species Act of 1973 mandates." (Section C.8, page 38)*

— New Mexico State Water Plan

Progress Report: Mitigating Adverse Effects of Drought

State Water Plan Goal: Promoting drought planning

Background:

The availability of safe and adequate drinking water supplies is of critical importance to the health and safety of all New Mexico's citizens. While the provision for adequate safe drinking water is primarily the responsibility of local agencies and entities, the state supports local agencies through the combined efforts of the Environment Department, the Office of the State Engineer, Interstate Stream Commission, and the Water Trust Board.

Successes:

◆ Drought Summits

To raise awareness and pursue comprehensive response strategies Drought Summits were held in 2003, 2004 and 2005. The conferences were supported by the Governor's Drought Task Force and jointly sponsored by the Office of the State Engineer, the New Mexico Energy, Minerals, and Natural Resources Department, the U.S. Bureau of Reclamation, the U.S. Forest Service, and Southwest Strategy.



Photo by Yvette Chavez
Drought Summit

◆ Drought Task Force

The Governor's Drought Task Force (DTF) work groups continue to address the need for active planning for drought monitoring, management, and mitigation.

- The Drinking Water Work Group (DWWG) has produced recommendations for high-priority conservation measures and is developing model city and county landscape ordinances and policy recommendations for the state. DWWG continues to research and discuss options for improved source water protection, water system planning and conservation statutory requirements.
- The Water Infrastructure Investment Team (WIIT) was created by gubernatorial executive order and is charged with developing a long-range plan for secure and sustainable water and wastewater infrastructure. WIIT is responsible for the development of a uniform application process for all water and wastewater projects requesting state funding. It also brings additional accountability, technical support and oversight into New Mexico's efforts to modernize its water systems.
- The Monitoring Work Group, in addition to preparing the monthly drought status reports, has developed a proposal to increase the number of streamflow, snowpack, temperature and precipitation monitors around the state so as to improve the scope and efficiency of drought monitoring by water managers in all sectors.
- The Wildlife and Wildfire Work Group has produced a species-at-risk list to complete data gaps in this area subject. This information was posted on the DTF website in fall 2005. It had also worked to assure appropriate response to natural disasters on state and private lands and assisted

with development of community partnerships to promote defensible community space ordinances. Members have been actively involved in completing the Forest and Watershed Health Plan recently signed by the Governor, and the HB2 Phreatophyte/Watershed Strategic Plan.

- The Agriculture Work Group sponsored an Agricultural Water Use workshop in 2005 and is working with the Monitoring Work Group to place more monitoring equipment around the state. It has also investigated opportunities for removing obstacles to agricultural conservation projects. Members of this group remain involved with the completion of the Forest and Watershed Health Plan and the HB2 Phreatophyte/Watershed Strategic Plan.
- The Recreation, Economic Development, and Tourism Work Group is presently being realigned by the cabinet secretaries of Economic Development and Tourism. DTF staff have been working with the departments to identify opportunities for drought management and conservation activities and to help create initiatives specific to those sectors.



Drought Planning

◆ Drought Website

A website was developed for the Drought Task Force, accessible on the Office of the State Engineer's website at www.ose.state.nm.us under "More Information," and "Drought Task Force."

◆ Colfax County Regional Plan

There is an extensive drought program outlined in the Colfax County Regional Water Plan. This program will be taken into account as Regional Water Planning efforts are integrated with the State Water Plan in the future.

New Mexico State Water Plan References

-"(The state shall)...include a drought management plan designed to address drought emergencies, promote strategies for prevention of drought-related emergencies in the future and coordinate drought planning statewide." (Section C.6)

-"The state shall promote preparedness to prevent emergencies and minimize the harm to the state's economy, environment, and citizens that can result from periods of drought."

-"In drought emergencies, the state shall seek to ensure that all residents have adequate drinking water."

— New Mexico State Water Plan, page 29

Progress Report: Coordination and Collaboration

State Water Plan Goal: **Protecting, maintaining, and enhancing the quality of the state's waters.**

Background:

Collaborative and information-building relationships with various agencies have continued to be strengthened in recent years. Cooperation and collaboration are important to making sure agency goals are met, while fostering a team approach to problem-solving.

Successes:

◆ Agency Staff Collaboration

Relationships have been built and progress has been made through the following groups: Endangered Species Act (ESA) Collaborative, Water Trust Board, Brackish Water Task Force, New Mexico Game and Fish Department, Drinking Water Work Group. Meetings with agency personnel and specific entities, groups, and organizations have occurred routinely where a desire or need was expressed.

◆ Watershed Collaboration

The Office of the State Engineer and Interstate Stream Commission were involved in two watershed plans that were completed in 2005.

◆ Acequia Liaison

The Acequia Liaison of the State Engineer has worked with acequias in the various basins in New Mexico — especially the Gallinas, Chama, Pecos, Mimbres, Santa Cruz, Nambe-Pojoaque- Tesuque and Canadian as well as the Taos and Peñasco areas — to assure that senior water rights users receive their water. Work has included follow-up with the water masters in these areas and some conflict resolution to include responses to issues communicated by the New Mexico Acequia Commission and the New Mexico Acequia Association. The Liaison also assisted some acequias with information on the new laws regarding authority over water rights transfers, implementation of water banking and the new law regarding penalties for ditch infractions. This included dispersing the bylaws template provided by the New Mexico Acequia Association for transfers, water banking and prosecution for ditch offenses to acequia associations.



Acequia Madre in Santa Fe

◆ Acequia Collaboration

The Office of the State Engineer's Acequia Liaison currently meets with acequia associations and members on a number of issues including water rights, easements, governance, and Active Water Resource Management (AWRM) issues. Through the agency's development of basin-specific rules and regulations for AWRM, each of these groups will be provided the opportunity to comment.

◆ Hydrology Collaboration

The Office of the State Engineer Hydrology Bureau coordinates monitoring and measuring activities with the U.S. Geological Survey (USGS).

◆ Desalination Technology

The Office of the State Engineer works with the U.S. Bureau of Reclamation and Sandia National Laboratories to develop desalination technology.

◆ Forest Watershed Health Plan

The Forest Watershed Health Plan is a collaborative effort with the New Mexico Environment Department, the Office of the State Engineer, the Department of Indian Affairs, as well as Soil and Water Conservation Districts around the state under the coordination of the U.S. Department of Agriculture.

◆ Seven Basin States

Seven Basin States of the Colorado River collaborate on weather modification and other water supply enhancement initiatives. The New Mexico State Engineer is involved with these efforts.

◆ Mapping

The Office of the State Engineer is involved in a state mapping initiative that is currently underway with multiple funding sources including state, federal, and local government agencies with the goal of the effort to share information.



Coordination and Collaboration

New Mexico State Water Plan References

-*"The agency will undertake joint efforts with the Environment Department to improve communication and coordination between those agencies, in recognition of the fact that water quality and quantity are intrinsically linked."* (Section C.3, page 18)

-*"The State Engineer, Secretaries of the Environment, Energy, Minerals and Natural Resources, Public Safety, and Agriculture Departments, as well as the Interstate Stream Commission, Game and Fish Commission, Homeland Security, and State Land Commissioner will meet on a quarterly basis to discuss and facilitate issues including, but not limited to, endangered species, watershed management, water quality, water and disaster planning, water supply and infrastructure security, water project development, development of new sources of water supply, management of state-owned water resources, and interstate stream compact compliance."* (Section C.10, page 46)

— New Mexico State Water Plan

Progress Report: Conservation Initiatives

State Water Plan Goal: Promoting conservation and the efficient use of water

Background:

Even during times of average water supply, the demand in New Mexico could exceed supply if all water rights and permits around the state were fully exercised. As the state's population increases and develops new uses for water — and as federal environmental mandates increase the stresses on available water resources — conservation and efficient water use become ever more important factors to meet the present and future water needs of the state. The Water Use and Conservation Bureau manages these activities for the Office of the State Engineer.

Successes:

◆ Policies and Guidelines

- **Rainwater/Snowmelt Harvesting Policy:** In 2005, the Office of the State Engineer developed a rainwater/snowmelt harvesting policy which addresses rooftop harvesting of water. The policy specifies the agency's support for the wise and efficient use of water and encourages harvesting, collection and use of rainwater from residential and commercial roof surfaces for on-site landscape irrigation and domestic uses. It notes that the collection of water harvested in this matter should not reduce the amount of runoff that would have occurred from the site in its natural, pre-development state and that harvested rainwater may not be appropriated for any other uses.
- **Gray Water Guidelines:** In 2005, the Water Use and Conservation Bureau developed guidelines for gray water use in collaboration with the New Mexico Environment Department and the WaterWise Development Committee, composed of landscapers, developers, builders, real estate agents, as well as local and state government representatives. The committee published two documents on residential gray water use: a brochure, *Using Gray Water in New Mexico's Residential Landscapes*; and the more comprehensive booklet, *New Mexico Gray Water Guide*.

◆ Conservation Education

The Water Use and Conservation Bureau manages the active outreach program of water conservation education. The bureau maintains a water conservation information database; develops and distributes educational materials to school children, the general public, public water suppliers, and businesses; conducts workshops; and assists public water suppliers and other government entities in establishing demonstration projects and water conservation programs. Significant highlights:



- **Conservation Curriculum for Elementary School Students:** *RIO! A Water Detective* is an elementary curriculum that contains a student booklet and teacher's guide published in 2004. It provides background information, demonstrations, and activities for classroom teachers, non-formal educators, and families to teach a fundamental understanding of water issues and the responsible use of water in New Mexico. Collaborating with the Office of the State Engineer in the production of the booklet were the Albuquerque Bernalillo County Water Authority, City of Las Cruces, City of Santa Fe Water Division, City of Rio Rancho, and New Mexico State University.

- **Xeriscape Curriculum for Mid and High School Students:** In 2004 and 2005 12 mini-workshops were held for

middle and high school students and other educators across the state using the agency's *Learning to Xeriscape* curriculum.

- **Water Conservation Information Materials:** The bureau has published five pamphlets that offer helpful water conservation information to the general public: *A Waterwise Guide to Evaporative Coolers*, *A Waterwise Guide to Clothes Washers*, *A Waterwise Guide to Rainwater Harvesting*, *A Waterwise Guide to Trees*, and *A Waterwise Guide to Ultra-Low-Flow Toilets*.

- **North American Association for Environmental Education Involvement:** The bureau continues to be involved in NAAEE, including sponsoring the NAAEE's primary International Conference in Albuquerque in October 2005. The conference brought together leading environmental educators to examine the effects of environmental education as a key to developing a new ethic for water governance to avoid environmental degradation and unsustainable use of water resources.

• Education Materials Distribution

The bureau has distributed more than 200,000 pieces of educational water conservation materials to school, municipalities, businesses, organizations, and individuals during 2004 and 2005.

◆ Water Use Audits

The bureau has completed research of water use accounting methodologies used in other states and countries to evaluate state-of-the-art approaches for identifying conservation targets. A pilot test of a methodology based on this research is being implemented in the cities of Ruidoso and Gallup. In addition, a partnership has been formed with the City of Santa Fe to identify the effectiveness of its various water conservation and demand-reduction efforts. The combination of research, pilot projects, and partnerships will be used to establish water conservation planning guidelines for New Mexico.

New Mexico State Water Plan References

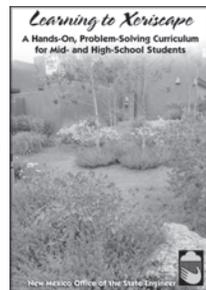
—“(The state shall) ... develop water conservation strategies and policies to maximize beneficial use, including reuse and recycling by conjunctive management of water resources and by doing so to promote nonforfeiture of water rights. (Section C.5)

—“(The state shall) ... engage in a coordinated and concerted effort to promote conservation and efficient use of water in all water use sectors as one of the cornerstones of New Mexico's efforts to meet the state's present and future water needs.” (Section C.5)

— New Mexico State Water Plan, page 25



Conservation Initiatives



Progress Report: Government-to-Government Outreach

State Water Plan Goal: Protecting Senior Water Rights

Background:

During the creation of the State Water Plan, the Office of the State Engineer and the Interstate Stream Commission, in coordination with the Governor's Office, set up a series of government-to-government meetings with tribal leaders from around the state. Four of the public meetings were held at locations within the Pueblos of Jemez, Acoma and Isleta and at the Navajo Nation Chapter House of Shiprock. The meetings improved dialogue between the state and tribes as well between Indian and non-Indian users and contributed to the crafting of the policy statements adopted under Section E of the State Water Plan. Since then, the Office of the State Engineer and Interstate Stream Commission have continued to strengthen communications and build trust between tribal governments and the agencies.

Successes:

◆ State-Tribal Water Institute

Governor Bill Richardson, through his Executive Order No. 2005-004, established the Statewide Pilot Tribal Consultation Plan. The order required the Office of the State Engineer, the Interstate Stream Commission and other state agencies to adopt a plan no later than July 1, 2005, outlining agency interaction with tribal governments and communities and their members within New Mexico.

The State Engineer and Interstate Stream Commission met the deadline with an initiative featuring as a key component improved communication between the state water managers and the tribal governments.

To further its consultation plan, the Interstate Stream Commission and Office of the State Engineer sponsored two State-Tribal Water Institute sessions in 2005. Representatives from most of New Mexico's 19 Pueblos, the Navajo Nation and the Mescalero and

Jicarilla Apache Tribes attended. The State Engineer designated his Native American Water Liaison to host the Institute, which will continue to meet on a quarterly basis. The Institute has successfully initiated a new forum for ongoing and periodic consultation and communication between the state and tribal governments on statewide water planning issues. Agency Planning and Communications Division staff provide public outreach and media support for the Institute.

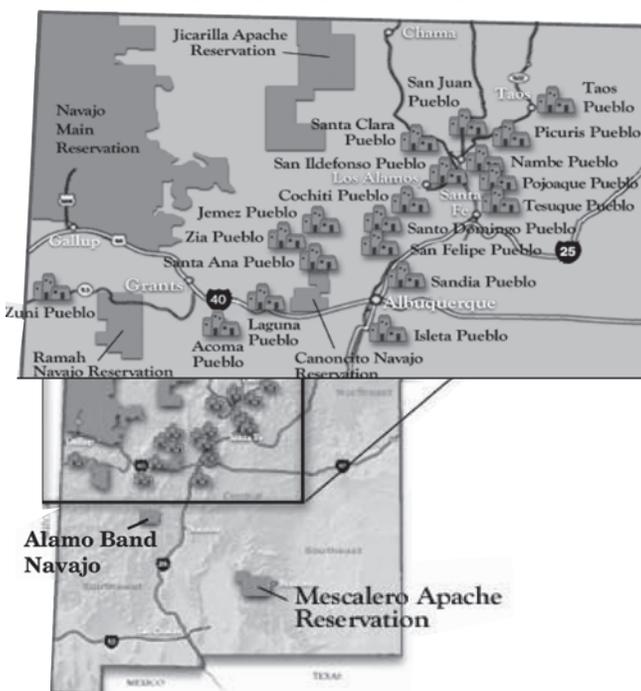


Consultation with Leadership of 22 Tribes and Pueblos

◆ Outreach to Tribes and Pueblos

Efforts to reach out to representatives of Pueblos located along the Middle Rio Grande and around the state were successfully initiated in 2005. The agency's Native American Water Liaison and regional planning staff were instrumental in opening the door for discussions between state and Tribal leaders, laying a framework for future discussions of water issues in the Middle Rio Grande region.

Pueblos and Tribes



◆ Government-to-Government Consultations

Indian Water Rights Settlement Fund legislation was passed by the state Legislature and signed into law by the Governor in 2005. It calls for a special fund to pay the state's share of costs for projects for the non-Indian portion of water rights settlements with Indian Tribes, Pueblos, and Nations. Although, has yet to be appropriated for the fund, efforts to obtain such appropriations will continue as needed.

New Mexico State Water Plan References

-"The Interstate Stream Commission and the Office of the State Engineer shall consult directly with the governments of Indian Tribes, Nations, and Pueblos to formulate a statement of policy and process to guide: (1) coordination or integration of the water plans of Indian Nations, Tribes, and Pueblos located wholly or partially within New Mexico with the State Water Plan; and (2) final adjudication or settlement of all water rights claims by Indian Tribes, Nations and Pueblos located wholly or partially within New Mexico.

— New Mexico State Water Plan, Section E, page 73

Progress Report: Public Outreach

Background:

The State Water Plan resulted from public input from around the state and represents many diverse values and interests of water users in New Mexico. When the State Water Plan was presented to Governor Richardson in January of 2004, he praised the amount of public involvement that went into the development of the plan. State Engineer John D'Antonio has placed a high priority on proactive rather than reactive communication as well as extensive public involvement during his administration. Effective communication of the common priorities, goals, and objectives of the agency and how they impact public welfare is key to the success of all initiatives of the State Engineer and the Interstate Stream Commission. This is also the primary goal of the Planning and Communication Division.

Successes:

◆ Earned Media Coverage

An extensive media campaign was launched to support State Water Plan efforts in 2003. Communication staff worked with water planners to strategically schedule media visits and news releases with three goals: to effectively inform citizens about the need for a state water plan, to encourage public participation at the 29 public meetings and New Mexico First Town Hall meeting (which attracted more than 1,500 participants representing 232 communities around the state), and to focus positive media attention on State Water Plan efforts. Media visits in key New Mexico cities in advance of public meetings successfully opened the discussion about topics such as water banking, drought contingency measures, strategies for water conservation, watershed restoration, shortage sharing, and other issues. Tracking data indicated that the advertising value of the earned (free) media coverage received totaled more than \$148,000 over a six-month period. Key messages potentially made more than 5 million impressions on viewers using radio, television, and



State Engineer John D'Antonio in an interview with KOB-TV in Farmington, New Mexico.

print media sources. In fact, 23 percent of all media inquiries received between June and December 2003 were about the State Water Plan. Communication efforts today build on that statewide success.

◆ Comprehensive Communication for AWRM

A comprehensive communication plan for sharing information with the general public was developed to support the Active Water Resource Management (AWRM) initiative in spring 2004. Plan implementation has included visits by the State Engineer with regional news media and legislators in the priority basin areas of the Lower Pecos Basin, Lower Rio Grande, Upper Mimbres, and Rio Gallinas. Other implementation steps included six facilitated public meetings, additional legislative briefings, and one-on-one meetings with groups of water users in priority basin areas. Public communication efforts will be ramping up as the AWRM initiative progresses in coming years.

◆ Joint Efforts with Other Groups

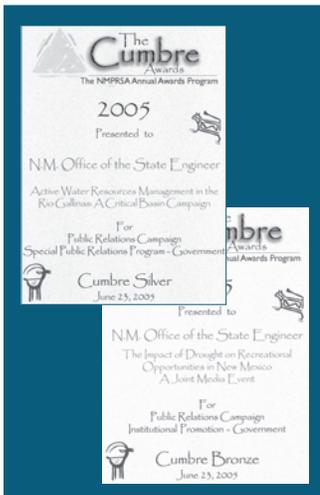
- **Joint news conferences were held** in the spring of 2004 and 2005 to provide information on reservoir levels and projections on summer recreational opportunities in collaboration with sister state agencies: State Parks Division, State Tourism, and Department of Energy, Minerals, and Natural Resources. Agency communication staff took the lead in communication efforts and joint news conferences with the Navajo Nation to support the water rights settlement agreement (signed in April 2005) and with parties involved with the Aamodt water rights settlement agreement (announced in June 2005). Communication staff are now taking the lead in launching a comprehensive communication campaign with the Navajo Nation and the City of Gallup to generate support for funding to implement the Navajo settlement agreement. The effort involves producing a video program, media event, tour, and support materials for Congressional and State Legislative briefings.
- **An Ad-Hoc Committee of regional water planners** was appointed by the Interstate Stream Commission to develop policy on integrating regional water plans with the State Water Plan. Planning and Communication Division staff are taking the lead in coordinating those efforts.
- **Quarterly meetings with representatives of the state's 22 Tribes, Nations, and Pueblos** will be coordinated by the Planning and Communication Division and the Native American Water Liaison to get input into future efforts to implement the State Water Plan.
- **Recognition for the Middle Rio Grande Endangered Species Collaborative Program** was a focus for agency staff in 2004. Staff spearheaded efforts for a media event that drew more than a dozen radio, television and newspaper representatives. Held near the banks of the Rio Grande near the Pueblo of Isleta in January of 2004, the event celebrated the Pueblo of Isleta becoming one of the newest signatories to the Collaborative Program as well as the release of the *Collaborative Program Progress Report*, which highlighted the program's accomplishments in recent years.



Public Outreach

◆ Award-Winning Communication

Four awards for public relations excellence were received by the agency communication staff. These awards recognize expertise in writing, design, production, and management of materials that meet a single communication need or recognize outstanding achievement in the implementation of a communication campaign, which includes research, planning and evaluation components.



A First-Place Gold 2004 Cumbre Award was received for “The Media Campaign for New Mexico’s First State Water Plan.” A Third-Place Bronze 2004 Cumbre Award was received for the agency’s “2003 Annual Report.” A Second-Place Silver 2005 Cumbre Award was received for the

“Active Water Resource Management Communication Campaign in the Rio Gallinas,” and a Third-Place Bronze 2005 Cumbre was received for “The Impact of Drought on Recreational Opportunities in New Mexico: A Joint Media Event.”

◆ Encouraging Public Involvement

About 40 facilitated public meetings have been held since 2004 to support the Aamodt water rights settlement agreement, the Navajo water rights settlement agreement, the Gila water rights settlement with Arizona, new domestic water well rules and regulations, and the Active Water Resource Management initiative in the Rio Gallinas, Lower Pecos, and Upper Mimbres areas, as well as the Taos settlement. More facilitated public meetings are expected to occur to support other priority basins targeted for the Active Water Resource Management initiative.

◆ Proactive Public Outreach

Outreach efforts to communicate with the public will be expanded considerably in coming years. An issue brief was developed called *WaterWise Community Brief*, which is mailed to the general public, special interest groups, legislators, and opinion leaders around the state to inform them about Office of the State Engineer policies and initiatives. These issue briefs not only serve to promote a greater awareness of the role of the State Engineer in funding better water management programs, but also to generate feedback to help develop successful strategies for expanding outreach efforts in the future. Community outreach efforts include the agency’s booth at the New Mexico State Fair, which reaches thousands of New Mexicans in September each year with a targeted message.

◆ New Website

The agency launched a new website on November 8, 2005. This new site will provide easier public access to information on water issues and water policy.



Joint news conference for the Middle Rio Grande Endangered Species Collaborative Program.



Public meetings on the Aamodt adjudication in March 2006 were coordinated by the Office of State Engineer’s Planning and Communication Team in Pojoaque and Tesuque.



Joint press conference with State Parks and State Tourism agencies in March 2005.

New Mexico State Water Plan References

–“(The state shall)...identify and reflect the common priorities, goals, and objectives that will have a positive impact on the public welfare of the state.” (Section C.1, page 4)

–“(The state shall)...establish a clear vision and policy direction for active management of the state’s waters.” (Section C.2, page 13)

Progress Report:
New Mexico State Water Plan

Karin Stangl, Editor
GrafText, Design
Cover Photos, Tim Murrell

© 2006 New Mexico Office of the State Engineer