



New Mexico Office of the State Engineer Interstate Stream Commission

Annual Report 2011-2014

New Mexico Office of the State Engineer/Interstate Stream Commission 2011-2014 Annual Report



New Mexico Office of the State Engineer /
Interstate Stream Commission
Annual Reports for
Fiscal Year 2011-2012
Fiscal Year 2012-2013
Fiscal Year 2013-2014

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Mission Statement

The Office of the State Engineer and the Interstate Stream Commission is the preeminent water management agency, which is trusted by the public to effectively and transparently manage, allocate and protect New Mexico's water resources.

THE OFFICE OF THE STATE ENGINEER (OSE) is charged with administering the state's water resources. The State Engineer has authority over the measurement, appropriation, and distribution of all surface and groundwater in New Mexico, including streams and rivers that cross state boundaries.

THE INTERSTATE STREAM COMMISSION (ISC) is a nine-member Commission charged with separate duties including protecting New Mexico's right to water under eight interstate stream compacts, ensuring the state complies with each of those compacts as well as investigating, conserving and protecting the waters of the state, in addition to water planning.

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1 Office of the State Engineer / Interstate Stream Commission Priorities

Active Water Resource Management (AWRM):

AWRM is the State Engineer's critical water management initiative to address continuing drought, increasing variability in New Mexico's water supplies and increasing demand for water. The State Engineer has AWRM tools to:

- Actively manage real-time distribution of water to prevent waste and ensure that water rights owners do not exceed their legal right;
- Implement priority administration of water rights in times of shortage; and
- Ensure New Mexico's continued compliance with interstate obligations.

AWRM promotes locally-developed water distribution solutions. The State Engineer will implement voluntary agreements to distribute water in times of shortage that protect all water right owners, such as shortage-sharing agreements, rotation schedules, and other alternative administration plans.

Next steps include the promulgation of District Specific Rules and the development of administrable lists of water rights and their priorities, beginning in the Lower Rio Grande basin.

Defending New Mexico's water:

Western states are facing increasing efforts by the federal government to assert ownership interests in groundwater and surface water, and to diminish the primary and exclusive authority of the states over groundwater. New Mexico is vigorously defending our water from these claims.

Texas v. NM and CO: In Texas v. New Mexico and Colorado, a suit brought by Texas in the United States Supreme Court, the United States has intervened in the litigation and alleges that certain New Mexico water users in the Lower Rio Grande must obtain a contract from the US Bureau of Reclamation in order to pump groundwater within the boundaries of the Rio Grande Project, a federal surface water project operated by Reclamation. This is contrary to state and federal law, as well as a recent state adjudication court ruling dismissing Reclamation's claims to



Rio Grande Near Las Cruces

groundwater in the Rio Grande Project. The State is represented by the New Mexico Attorney General.

The US Forest Service (USFS): in 2014, the USFS issued a proposed directive on groundwater resource management that asserts USFS authority to manage and administer groundwater, including the ability to require reductions in the pumping of groundwater under water rights developed by private parties under New Mexico law. This is contrary to the

long-standing recognition by Congress and the US Supreme Court that the states own and have exclusive authority to manage and regulate all rights to the use of groundwater within their borders.

Water rights adjudication:

More than 72,000 New Mexicans are involved in the water rights adjudication process across the state. Therefore, completion of New Mexico's twelve pending water rights adjudication suits remains a priority.

- Adjudications are necessary to finally determine all federal and Indian water rights. The federal McCarran Amendment requires a comprehensive adjudication to all water rights in a river system in order to adjudicate water rights held by the federal government or Indian Nations, Tribes, and Pueblos;
- Adjudications provide maximum certainty to water rights owners and thereby support economic development across all New Mexico communities;
- Adjudication of water rights supports the State Engineer's ability to protect senior water rights and ensure compliance with New Mexico's interstate stream obligations.

Streamlining OSE permitting process:

New Mexico water rights are worth an estimated total of \$14-\$16 billion. Streamlining the permitting process to use those rights is critically important both as a drought response tool and as a foundation to our economy. The OSE has seven district offices providing various permits. They are located in Santa Fe, Albuquerque, Roswell, Deming, Las Cruces, Aztec, and Cimarron.

The OSE is reducing the processing time for water rights permit applications and expediting the administrative hearing process where possible. Efforts include:

- Utilizing business process analysis and other approaches to reduce the permit backlog at the district offices;
- Addressing recurrent legal issues to promote consistency in permitting decisions;
- Developing expedited hearing processes to reduce time and expense to the parties in administrative hearings.

State/Regional water planning:

The State Water Plan is a strategic management tool providing policy guidance and the basis for decision making on water use at the state level. In 2013, after a comprehensive review by the ISC of the State Water Plan, the



Town Hall on Water Planning, Development and Use in April, 2014



Town Hall Water Rights work group

agency concluded that a full update of the State Water Plan is necessary.

The ISC is currently supporting regional efforts to update the State's 16 regional water plans. Regional water plans address current and long-term planning issues and link to infrastructure investment priorities. They also serve as the forum for identifying regional solutions in projects, programs and priorities needed to balance supply with demand. The regional water plans, once completed in 2016, will be integrated into an updated State Water Plan.

Building a sustainable water supply:

Ensuring the sustainability of New Mexico's water supply can take several forms, including maximization of existing supply through water conservation and water reuse. Recent water conservation work includes the completion of a guidance document for the preparation of water conservation plans.

Sustainability also includes identifying sources of new supply, such as water desalination, water importation and new sources of water available to the State; for instance, the additional amount up to 14,000 acre-feet of Gila River water available to New Mexico under the federal Arizona Water Settlements Act.

Sustainability also involves managing environmental mandates so that New Mexico's water users are protected and federal and interstate obligations are satisfied.

New Mexico leads in implementing innovative approaches to balancing ecosystem demands, fostering partnerships, while protecting the needs of water right owners and meeting interstate stream compact obligations.

Indian Water Rights:

Unresolved Indian water right claims are one of the largest sources of uncertainty in the New Mexico water landscape. Most Indian water rights are not based on state law and can only be judicially determined in a stream system adjudication. The determination of Indian

water right claims through settlement or litigation in adjudications promotes certainty for all.

- A final determination of Indian water right claims supports the State Engineer's ability to administer water rights
- The negotiated settlement of Indian water right claims allows the parties to negotiate protections to junior water rights, address shared concerns about water uses and supply, and develop agreements for alternative administration that the parties cannot achieve in a litigated outcome.
- The implementation of New Mexico's three federally authorized Indian water right settlements, Navajo, Aamodt and Taos promotes economic development. •



Gila River in Grant County of Western New Mexico

2 Executive Summary

The Office of the State Engineer (OSE) is charged with administering the state's water resources. The State Engineer has authority over the measurement, appropriation, and distribution of all surface and groundwater in New Mexico, including streams and rivers that cross state boundaries. Created as the Office of the Territorial Engineer in 1905, seven years before statehood, the agency assumed responsibility over all surface water in 1907 and was renamed the Office of the Territorial Engineer. In 1931, the responsibilities were expanded again to include all groundwater within declared groundwater basins - now 100 percent of the state - and the office was renamed the Office of the State Engineer.

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

Although separate under state law, the Interstate Stream Commission (ISC) staff members function as a division within the Office of the State Engineer. The State Engineer, appointed by the Governor and confirmed by the state Senate, serves as the Secretary of the Interstate Stream Commission. The Interstate Stream Commission Director serves as the deputy state engineer. The Legislature created the Interstate Stream Commission in 1935 and gave it broad powers to investigate, protect, con-

serve and develop the state's water supplies. Its separate duties include protecting New Mexico's right to water under eight interstate stream compacts and ensuring the state complies with each of those compacts, as well as developing and promoting regional and statewide water planning.

Water Management in New Mexico is guided by several 100-year-old principles in the New Mexico Constitution: (1) All unappropriated water belongs to the public and is subject to appropriation by law. (2) The acquisition or continuation of a water right and where and how much water can be used is determined by how the water is put to beneficial use. (3) Older water rights have priority over more recent water rights. Since 1907, a permit from the State Engineer has been required to divert surface water and put water to beneficial use. Permits are required for diverting groundwater anywhere that the State Engineer has declared a groundwater basin, which is now the entire state of New Mexico.

The Office of the State Engineer processes some 57,000 water rights documents a year, with the overwhelming majority involving groundwater. A third of the applications for new appropriations of groundwater concern domestic or stock uses. Many applications each year draw protests and are then subject to a formal hearing process.

A key activity of the Office of the State Engineer is to legally determine existing water rights through water rights adjudication. This court process is required by statute. The first phase of adjudication is a hydrographic survey to locate, quantify and date water uses within a stream system or underground aquifer. The second, or legal phase, of an adjudication starts with the filing of a lawsuit that names water right owners as defendants and ends with a court order that describes the elements and

of each owner's water right. The process provides the water right owners with opportunities to challenge the validity and determination of their own and each other's water rights before a final determination by the court. The Office of the State Engineer is involved in numerous adjudications, some of which are decades old. •



Pecos/Fort Sumner Irrigation District

3

State of the State's Water: 2012-2014

The period from June 2011 through June 2014 (fiscal years 2012, 2013 and 2014) took New Mexico from one summer of drought to another, and one extreme fire season to the next.

The year 2011 was one of the driest on record for the state of New Mexico. The long-term Palmer Drought Index in June 2011 indicated conditions of severe to extreme drought for all of New Mexico with the sole exception for the northwestern part of the state. Conditions in June 2012 were much the same, and by June 2013 conditions had become even worse. The New Mexico Palmer Drought map for June 2013 (not shown) is all one color, with the entire state under conditions of extreme drought.

The National Drought Monitor map from June 2013 (page 10) shows much of the state under conditions of "Exceptional Drought." According to the associated discussion: "New Mexico continues to forge into uncharted territory with 2011-2013 the driest on record for the state coupled with the past 24 and 36 months coming in as the second driest on record."

Data from June of 2014, however, shows some softening of this alarming trend. While much of the State was still in drought conditions in June 2014, conditions had moderated from "exceptional" to only "severe" or "extreme."

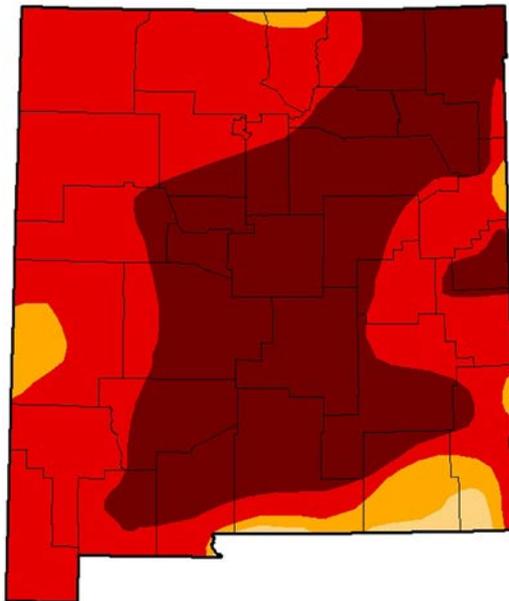
Snowpacks in the winters of 2012, 2013 and 2014 were below average, and the subsequent spring runoff in those years was even worse, as dry ground absorbed much of the snowmelt before it could reach New Mexico rivers. The Pecos River inflow to Santa Rosa reservoir in 2012 was only 21 percent of the 30-year average, and in 2013, runoff dropped to 11 percent of average. The flow of the Rio Grande at San Marcial in 2012 was only 25 percent of the 30-year average, while in 2013 conditions were so extreme that the Natural Resources Conservation Service projection

method failed, and the projected total spring stream flow at San Marcial was a negative value.

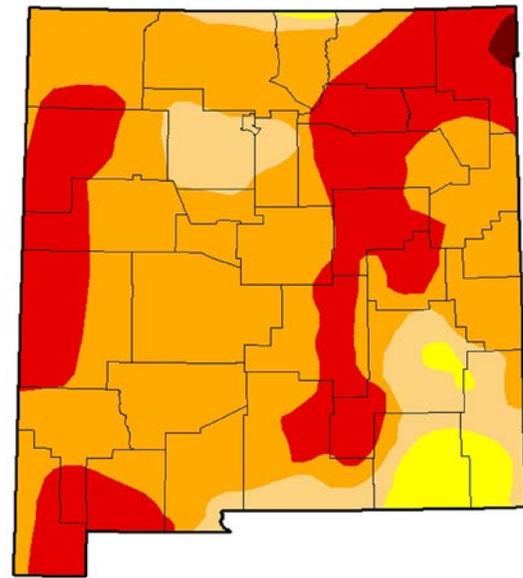
These extremely low streamflows created great difficulties both for water users and for endangered species on the Rio Grande and Pecos River. In recent years, New Mexico water managers have supplemented natural stream flows with reservoir releases when necessary to support endangered fish species. In 2012, and again in 2013, the waters available for this purpose ran out early in the summer. Stretches of the Rio Grande and Pecos River went dry during both years, causing problems for the water and wildlife managers tasked with preserving the Rio Grande Silvery Minnow and Pecos Blunt Nose Shiner. In May 2013, the State Engineer issued a ground-water metering order for the Fort Sumner Irrigation District, citing endangered species issues and seasonal drying of the Pecos River as part of the basis for this action.

Major fires burned in many parts of New Mexico in 2011, 2012 and 2013. During the summer of 2011, fires charred large areas near the towns of Ruidoso and Raton, and in the Gila Forest of southwestern New Mexico. The Las Conchas fire near Santa Fe blew up to 40,000 acres in the course of one day in late June 2011, and ended up as the largest New Mexico wildfire to date, burning 156,000 acres. But the Las Conchas fire kept that record for only one year. During the dry spring of 2012, large fires once again burned in several parts of the state, and by June of 2012 the Whitewater Baldy Complex fire in southwestern New Mexico approached 300,000 acres in size. Fire conditions in 2013 were no better. That spring, fires in the Gila and Santa Fe National Forests charred more than 160,000 acres.

Drought Monitor
June 25, 2013



Drought Monitor
June 24, 2014



The fire season of 2014 was mild compared with the previous three years thanks to heavy rains the previous fall, combined with well-timed winter precipitation.

The large fires of 2011 through 2013 have had an unfortunate effect on New Mexico's surface water resources. Many recent burn areas have since experienced severe flooding and erosion problems, impacting surface water quality in streams and lakes, and in some cases

bringing substantial amounts of sediment into reservoirs. Diversions from the Rio Grande for drinking water by the cities of Santa Fe and Albuquerque were shut down or reduced during times when ash from the Las Conchas fire zone washed into the river. Alamogordo has not been able to use Bonito Lake in the Sacramento Mountains as a drinking water supply source since the summer rains of 2012 washed sediment and debris

| National Resources Conservation Service (NRCS) New Mexico Basin Outlook | | | | |
|---|--|--|--|--|
| Projected Runoff at Downstream Stations | | | | |
| | 2011 End of April (% of average) | 2012 End of April (% of Average) | 2013 End of April (% of Average) | 2014 End of April (% of Average) |
| Rio Grande Basin | 33% | 25% | -8% | 2% |
| Pecos River Basin | 15% | 21% | 11% | 14% |
| San Juan River Basin | 72% | 53% | 40% | 57% |
| Gila-San Francisco Basin | 27% | 38% | 50% | 35% |
| Canadian River Basin | 19% | 28% | 19% | 25% |

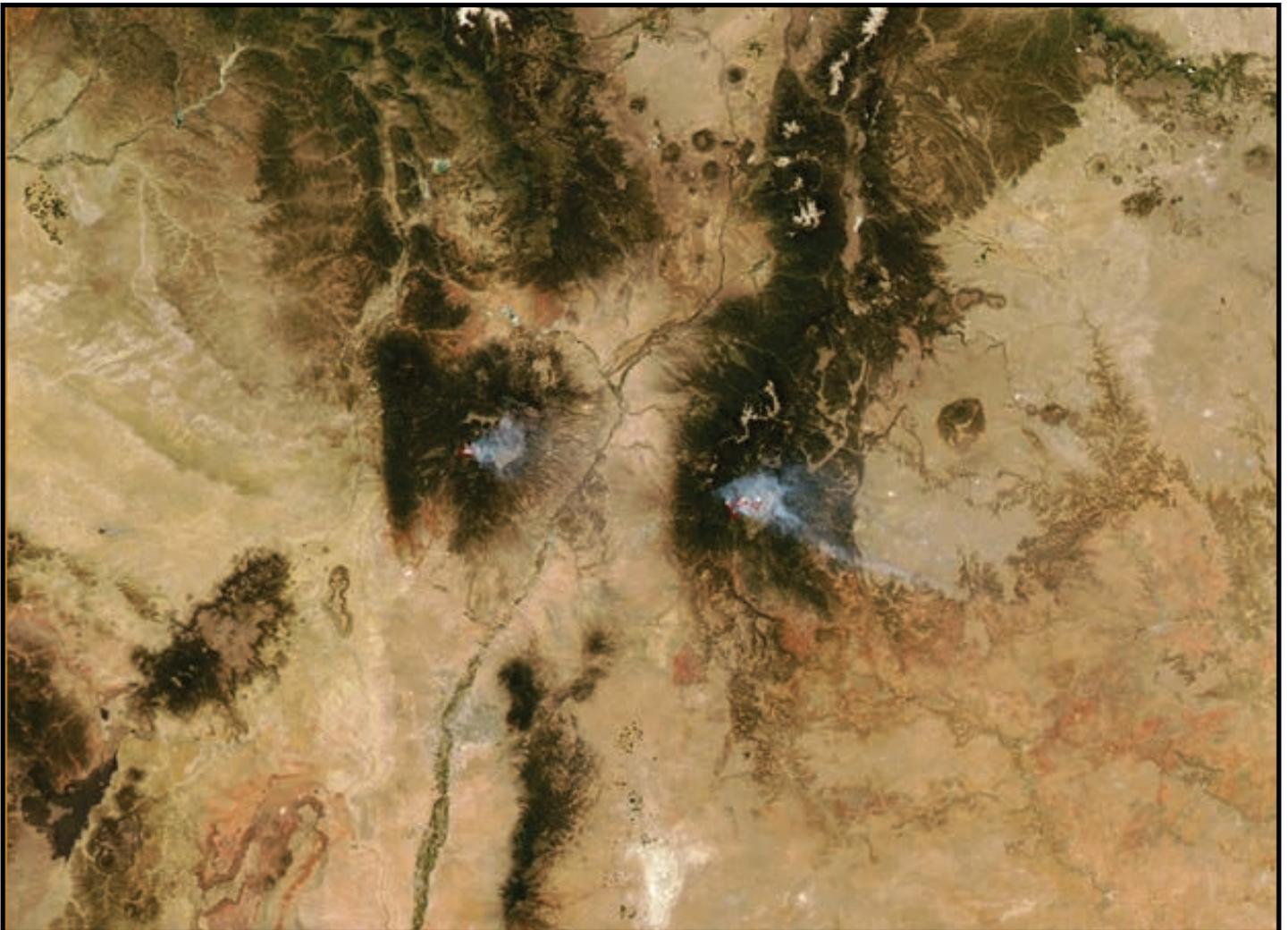
<http://droughtmonitor.unl.edu/MapsAndData/>

down from the Little Bear wildfire's burn area. Throughout 2014, rains have continued to wash debris into Bonito Lake, which has not yet been reclaimed for either recreational use or for water supply storage.

Some relief from stubborn drought conditions came in September 2013 when record storms brought three to six inches of rain to most of New Mexico. Reservoirs on the Pecos River rose rapidly, allowing better supply conditions for the irrigators in the Fort Sumner and Carlsbad irrigation districts in 2014. The September storms also brought flooding to many areas of the state,

New Mexico have moderated since 2013, but far more rain, and years of better snowpack, will be needed in order to fill Elephant Butte, and bring a full supply of water to irrigators on the Rio Grande.

Conditions in the Pacific Ocean are often predictive of New Mexico winter weather. Moderate to strong La Niña conditions prevailed in the Pacific during both the winters of 2010-2011 and 2011-2012. La Niña, the evil twin of El Niño, tends to push the winter storms north, leaving behind warm, dry winter conditions for New Mexico. La Niña dissipated in the spring of 2012, but the



Satellite image at <http://earthobservatory.nasa.gov/IOTD/view.php?id=81267> from June 1, 2013 showing early days of Thompson Ridge and Tres Lagunas Fires in the Santa Fe National Forest to the west and east of Santa Fe, respectively.

causing property damage and prompting emergency declarations, road closures and the evacuation of hundreds of people. The result was welcome water to the Rio Grande, but not enough to refill large reservoirs such as Elephant Butte. Drought conditions throughout

forecast El Niño conditions did not materialize in the fall. ENSO neutral conditions (neither El Niño nor La Niña) have prevailed from the summer of 2012 through 2013 and 2014, with weak El Niño conditions emerging by the end of the 2014 calendar year.

Resiliency is part of the identity of New Mexicans, just as drought is part of our semi-arid climate. As of August 2013, the state had struggled under extreme drought conditions for thirty-six consecutive months, the driest and hottest period in the last 118 years. Then, in September 2013, parts of New Mexico received about a year's supply of rain in a single week or less, which flooded regions across the state as well as filled reservoirs with much needed water.

The current challenge is to strengthen the State's resiliency and lessen our vulnerability to extreme precipitation events. New Mexico continues to implement and adopt water management practices, build secure water infrastructure and enhance water conservation measures to ensure public safety, economic opportunities and growth. State and regional water planning are integral components for coordinating efforts for meeting New Mexico's water needs.

Review of the State Water Plan Directives

The flooding of September 2013 dramatically illustrated New Mexico's dependence upon adequately maintained and properly designed dams and other flood protection infrastructure. The New Mexico Office of the State Engineer assessed flood protection infrastructure and prioritized remedial actions where necessary.

Drought impacts on agriculture included a dramatic reduction in surface water irrigation allotments to farmers. For example, the 2013 surface water irrigation season in the lower Rio Grande was notable for being the shortest on record. Throughout the state, economic impacts to agriculture included loss of crop production, fallowed farmland, decreased crop yield, increased production costs due to supplemental groundwater pumping, increased investment in deepening of existing wells and drilling of supplemental wells.

Economic impacts from drought for livestock producers in New Mexico included worsening range conditions, reduced soil moisture and loss of production, decreases in herd size, increased costs of production

due to higher feed and water hauling costs, tax liabilities from herd liquidations and decreased property tax rolls for counties. Production of rangeland forage was decreased, erosion increased and the threat and establishment of invasive species increased.

The effects of drought are far reaching and include impacts to tourism and recreation that can span all seasons. The most obvious are reductions in recreational activities, such as boating, rafting, canoeing, fishing, snowmobiling or skiing, resulting from lower water levels or snowpack. Indirect drought impacts are more difficult to quantify, but include ancillary economic consequences such as decreased tourism visits, cancellations in hotel stays and reduction in booked holidays.

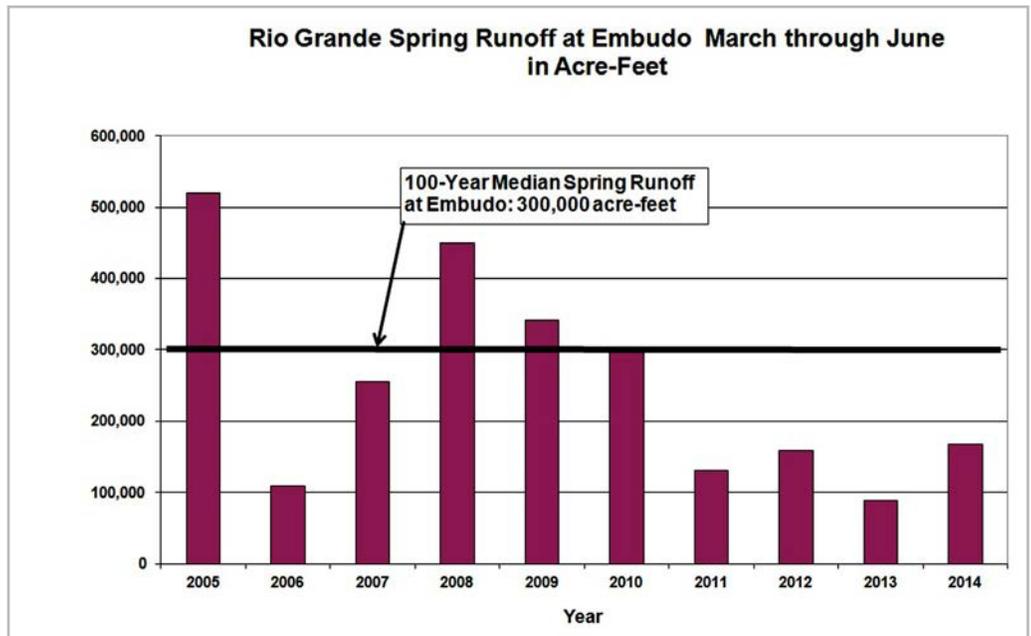
These could stem from negative perceptions of dryness, fire bans, or wildfires burning near vacation destinations. Wildlife viewing or hunting may also be affected, causing reduced revenues for nearby towns and communities. The Ruidoso News reported in June of 2013 that "visitors at state parks over Memorial Day weekend declined 40.6 percent from 2012 to just under 315,000." The ultimate result is decreased tourism and recreation dollars for the local economy and a reduction of sales and hotel taxes. •

Surface Water Supply

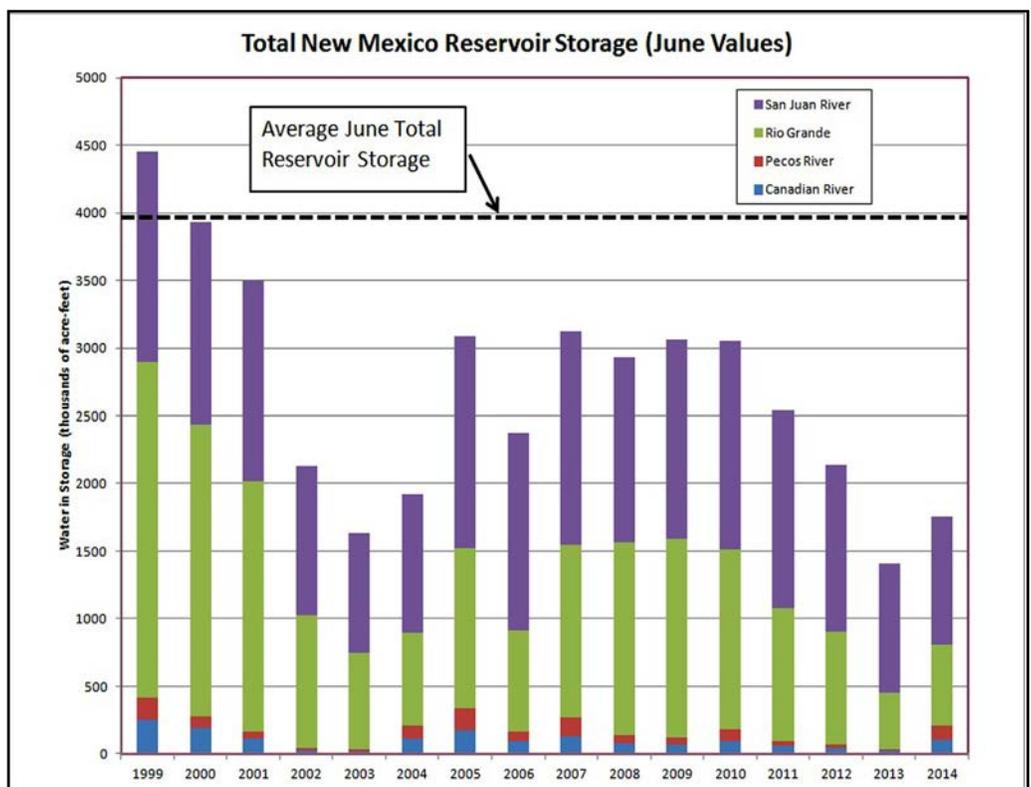
Surface water supply conditions on the Rio Grande have been very low for four consecutive years. The Elephant Butte Irrigation District water allotment to farmers was only 4 inches in 2011 (as compared with a full supply allotment of 3 feet), 10 inches in 2012, and 3.5 inches in 2013. Despite the heavy rains in later 2013, the 2014 EBID irrigation allotment was less than one foot, still far below normal.

On the Pecos River, low surface water supply conditions also affected the Carlsbad Irrigation District (CID). Under the terms of the Pecos Settlement, the State of New Mexico continued to pump the Pecos Settlement Augmentation well field. Even so, CID's allotment was only 1.4 feet in 2011, 0.8 feet in 2012 and 0.4 feet in 2013. The rains of September 2013 brought about 150,000 acre-feet into Pecos River reservoirs, allowing the State to stop pumping the Augmentation well field, and enabling the Carlsbad Irrigation District to allocate a full supply of 3.67 acre-feet per acre to their farmers.

The total amount of water stored in New Mexico reservoirs has been hovering at historical lows. At the end of June 2013 Rio Grande, Pecos and Canadian River reservoirs held less than 20 percent of their 30-year average amounts. Elephant Butte reservoir held 70,000 acre-feet, which is only 6 percent of the average amount. Conditions



were somewhat better on the San Juan River; nevertheless storage in Navajo Reservoir had fallen to below average levels. Conditions were somewhat improved by June of 2014, but the amount of water stored in New Mexico reservoirs was still far below average. •

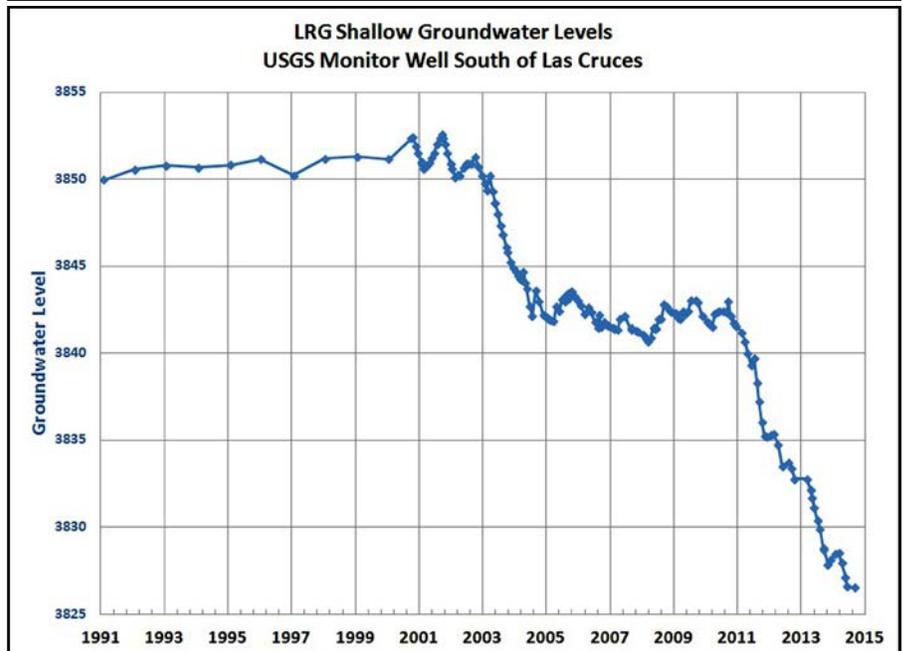
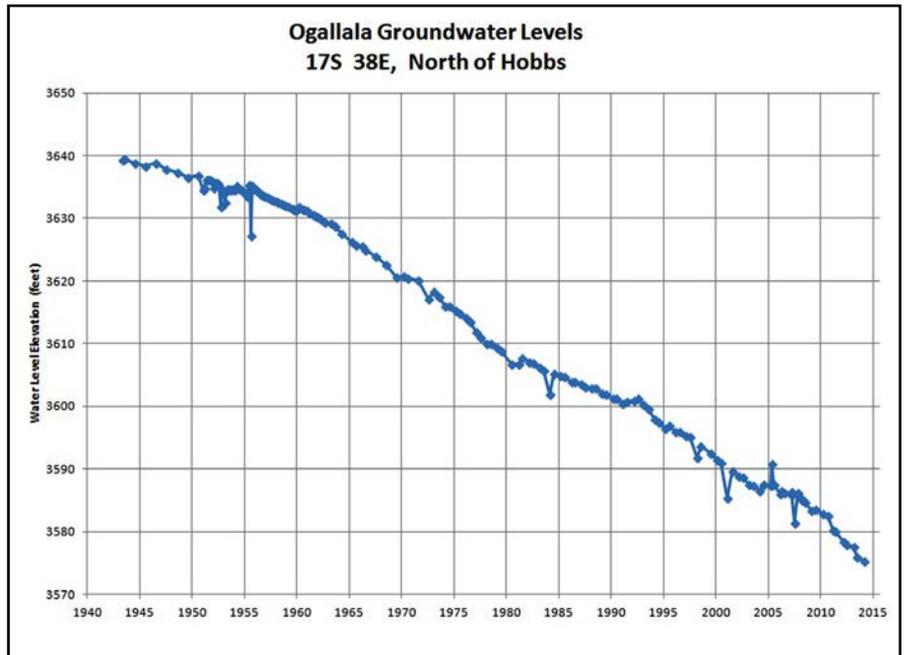


Groundwater

Generally, groundwater levels are less variable because large regional aquifers are not strongly affected by annual or seasonal fluctuations in climate. Nevertheless, drought conditions can affect fractured rock aquifers common in mountainous areas and shallow alluvial aquifers along streams, and wells obtaining water from these sources become less reliable in dry years. However, away from lakes and streams and in upland areas, groundwater can be deep and is less dependent on recharge from surface waters.

Water levels in many wells monitored in New Mexico continued declining trends evident over the last several decades. In the Estancia Basin, and other topographically closed basins in the southwestern part of the state, as well as in the High Plains (Ogallala) aquifer in eastern New Mexico, water levels continue to decline, primarily in response to pumping for irrigation and limited recharge, although water levels are rising in the western parts of Lea and Curry counties. Rising water level trends, generally associated with diminished pumping, also continued in some wells in the southern San Juan Basin.

Water levels in wells near Silver City and Las Cruces continue to decline in response to municipal and industrial pumping. In the Albuquerque area, however, groundwater levels have been recovering during the last several years in response to reduced groundwater pumping by the Albuquerque Bernalillo County Water Utility Authority. Albuquerque's use of surface water from the



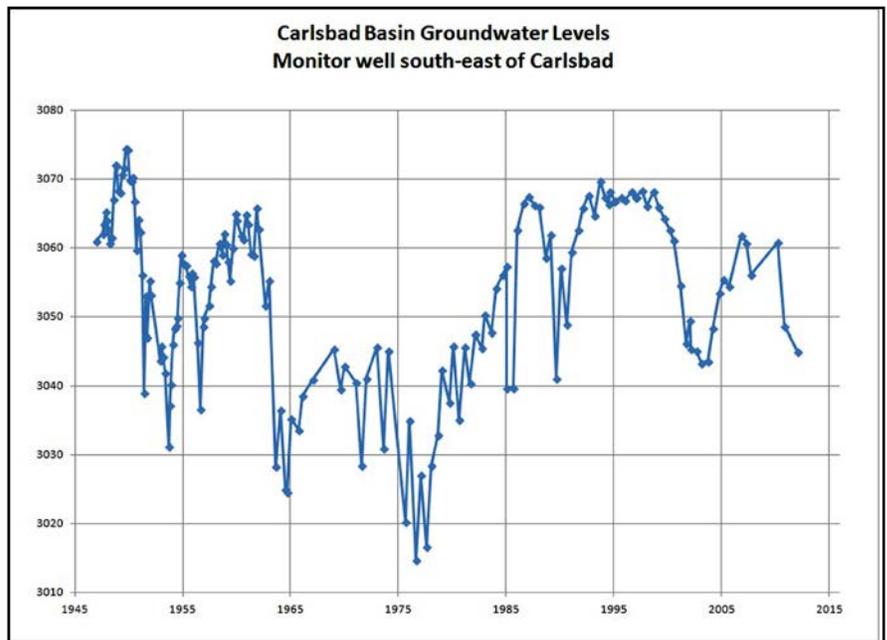
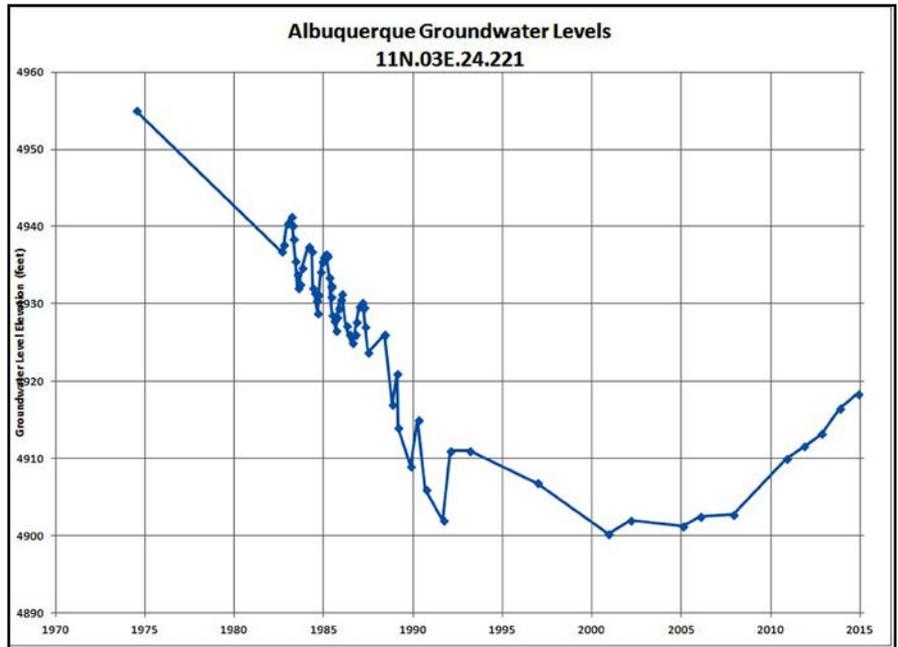
Rio Grande through the Direct Diversion Project has allowed them to give the aquifer a rest by reducing groundwater pumping significantly in recent years.

The inadequate surface water supplies available to irrigation districts such as the Carlsbad Irrigation District and the Elephant Butte Irrigation District have led to increased groundwater pumping. Shallow groundwater levels within the Elephant Butte Irrigation District, which historically have responded rapidly to changes in water supply, have not yet recovered from the drought of 2003-2004. Water levels dropped even more during the 2011 through 2014 period, as low surface water supplies

reduced aquifer recharge and necessitated large amounts of ground water pumping. Ground water levels have also declined in the Carlsbad area, but the available data suggest that ground-water levels have not fallen to the low levels observed during the drought of the 1970s.

Long-term effects of the recent drought on some groundwater supplies may not be evident for some time. If below normal precipitation continues, increased reliance on groundwater pumping is likely to impact water levels in wells in many areas. Wells potentially vulnerable to failure include those in areas of declining groundwater levels, shallow wells in thin alluvial aquifers dependent on surface water recharge and wells in upland fractured rock aquifers.

A number of municipal systems suffered water supply problems in 2012 and 2013. In early 2013 the water distribution system for the village of Maxwell broke down, as shallow wells supplied by recharge from the Canadian River were unable to obtain enough water. The town of Las Vegas had to enact progressive measures to restrict water use, because of severe shortages on the Gallinas River. The village of Magdalena had to haul in water for several weeks in the early summer of 2013 following the failure of the community well, which was a result of declining groundwater levels and infrastructure problems. Similar water supply failures may be expected in the future if drought conditions continue and infrastructure issues go unaddressed. •



4 Program Support

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

Financial Services Bureau

The Financial Services Bureau is responsible for administering, tracking and reconciling all disbursements and accounts receivable, including the disbursement of payments for services under professional services contractual agreements, joint power agreements, joint funding agreements and all building leases for the agency. It is also responsible for administering the expenditures and receipts portion of the agency's regional water planning efforts, Pecos River water rights leases and purchases, the numerous loans and grants issued under the Dams and Ditch Rehabilitation Program, federal grants, special projects and capital projects. This Bureau coordinates all fleet functions to ensure compliance

of all transportation rules and regulations, coordinates maintenance, maintains the inventory of leased vehicles and authorizes use of the gasoline credit cards.

Budget Bureau

The Budget Oversight Bureau has responsibility over budget administration, contract administration, property management, and fixed asset control.

STATEMENT OF ACTIVITIES

For the Year Ended June 30, 2014

Expenses

| | | |
|---|----|-------------------|
| Current | | |
| Personal services and employee benefits | \$ | 22,251,357 |
| Contractual services | | 10,007,789 |
| Other | | 6,682,340 |
| Depreciation expense | | 1,175,250 |
| TOTAL EXPENSES | | 40,116,736 |

Program Revenues

| | | |
|------------------------------------|--|------------------|
| Charges for services | | 3,396 |
| Operating grants and contributions | | 5,926,337 |
| Capital grants and contributions | | 23,367 |
| TOTAL PROGRAM REVENUES | | 5,953,100 |

Net Program Expense (34,163,636)

General Revenues

| | | |
|---------------------------------|--|-------------------|
| General Fund appropriation | | 15,846,400 |
| Investment income | | 10,437,476 |
| Loss on disposal of assets, net | | - |
| TOTAL GENERAL REVENUES | | 26,283,876 |

Other Financing Sources (Uses) & Special Items

| | | |
|--|--|---------------------|
| Transfers in (out) | | |
| Severance tax bond appropriations | | 2,057,412 |
| Interagency transfers in | | 412,100 |
| Reversion to the State General Fund | | (852,157) |
| Interagency transfers out | | (3,344,449) |
| Special Items | | |
| Adjustment to Indian Water Rights Settlement | | (27,144,000) |
| Arizona Water Settlement | | 3,440,900 |
| TOTAL OTHER FINANCING SOURCES (USES) | | (25,430,194) |

Change in net position (33,309,954)

Net position, beginning 150,581,654

Net position, ending \$ 117,271,700

Specific budget-related activities of the Bureau include coordination of the development of the agency’s annual operating budget as well as the annual appropriation request, coordination of the development of the agency’s capital improvement plan and annual capital outlay appropriation request, tracking of agency revenue and expenditure levels in relation to capital and operating budgets, and facilitation of the development and processing of budget adjustment requests.

Contract activities of the Bureau include the tracking and processing of professional service contractual agreements, joint powers agreements, and joint funding agreements; disbursement of payments for services provided under agency agreements; and coordination and processing of all agency purchases.

Property management activities include oversight of the agency’s state-owned and leased facilities and coordination of lease agreements, as well as oversight of the agency’s compliance with occupational, fire and safety codes.

Finally, the Bureau maintains the agency’s fixed asset inventory, which includes the tracking and monitoring of both the status and location of all capital assets of the Office of the State Engineer.

Human Resources Bureau

The mission of the Human Resources Bureau is to develop, deliver and continuously improve the value of human resource services provided to the agency, its

programs and business partners. This is accomplished by providing not only human capital needs but also by ensuring the services provided are sound, based on integrity, and of the quality and breadth necessary for the agency to achieve its short- and long-term objectives. Maximizing employee performance is not the only goal; productivity and job satisfaction are equally important. It is essential to develop a workforce dedicated to the agency’s mission, strengthened by diversity, and able and willing to meet and exceed the highest standards of conduct and performance.

| Statement of Net Assets | |
|---|-----------------------|
| As of June 30, 2014 | |
| ASSETS | |
| Current Assets | |
| Petty Cash | \$ 125 |
| State General Fund Investment Pool | 45,190,224 |
| Receivables, net | 444,579 |
| Prepaid expenses | 492,052 |
| Due from other state agencies | 968,173 |
| Due from federal government | 306,586 |
| Investments | 23,302,877 |
| Settlement due from federal government, current portion | 9,040,000 |
| Total current assets | 79,744,616 |
| Noncurrent assets | |
| Loans receivable, net of allowance | 1,346,614 |
| Settlement due from federal government | 41,120,098 |
| Capital assets, net of depreciation | 102,623,662 |
| Total assets | \$ 224,834,990 |
| LIABILITIES | |
| Current Liabilities | |
| Accounts payable | \$ 3,126,475 |
| Accrued salaries and benefits payable | 515,046 |
| Due to other state agencies | 95,598 |
| Due to state General Fund | 342,777 |
| Compensated absences: | |
| Expected to be paid within one year | 1,127,234 |
| Indian Water Rights Settlement: | |
| Expected to be paid within one year | - |
| Total current liabilities | 5,207,130 |
| Noncurrent liabilities | |
| Indian Water Rights Settlement, long-term portion | 102,356,160 |
| Total liabilities | 107,563,290 |
| NET POSITION (DEFICITS) | |
| Restricted for: | |
| Expenditure in future years | 17,616,604 |
| Ute Dam operating/construction | 530,055 |
| Loans | 1,346,614 |
| Investigation and construction of water conservation projects | 16,428,126 |
| Improvement and increase of surface flow of Rio Grande River | 6,308,581 |
| Water projects in the Gila region | 23,973,080 |
| Indian water rights settlement | 1,189,410 |
| Pecos River Basin land management | 578,745 |
| Unrestricted | (53,323,177) |
| Net investment in capital assets | 102,623,662 |
| Total net position | 117,271,700 |
| Total liabilities and net position | \$ 224,834,990 |

The staff of the Bureau is a customer-oriented team that provides day-to-day support to management and staff by recruiting, employing, retaining, and developing employees; maximizing excellent employee relations; and providing proficient consultation and problem resolution on a wide array of human resource topics.

Information Technology Systems Bureau

The Information Technology Systems Bureau (ITSB) develops software application, supports end-user computing, and maintains network, storage, and related infrastructure to support the mission and objectives of OSE/ISC.

Key activities over the past three years include the following:

- In collaboration with the Water Resources Allocation Program (WRAP), analysis and re-design of key business process, such as well driller and water rights permitting processes, to enable faster and easier handling of applications by agency customers and staff.
- In collaboration with the Litigation and Adjudica-

tion Program (LAP), initial review and analysis of processes and systems to create a road map for modernizing LAP systems.

- Expansion of the Real-Time Measurement Information System (RTMIS), accessible at <http://meas.ose.state.nm.us>, to support Active Water Resource Management (AWRM). RTMIS stations were added in areas served by the agency's Roswell and Cimarron district offices.
- Redesign and launch of the agency's website, www.ose.state.nm.us, with a cleaner, easier to navigate interface for access to a more comprehensive array of information about agency and New Mexico water topics.
- Expansion of geospatial information system (GIS) capabilities, including demonstration programs to deploy GIS capabilities to staff on mobile, smart devices. To enable widespread deployment, the agency negotiated an enterprise site license for GIS software.
- Enhancements to Point of Diversion (POD) information in the agency's water rights database, accessible via the NM Water Rights Research System, <http://nmwrrs.ose.state.nm.us/nmwrrs/index.html>, to enable more reliable identification of PODS by location. •



Otowi Gage Measuring Station on the Rio Grande

Agency Trust Funds

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

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

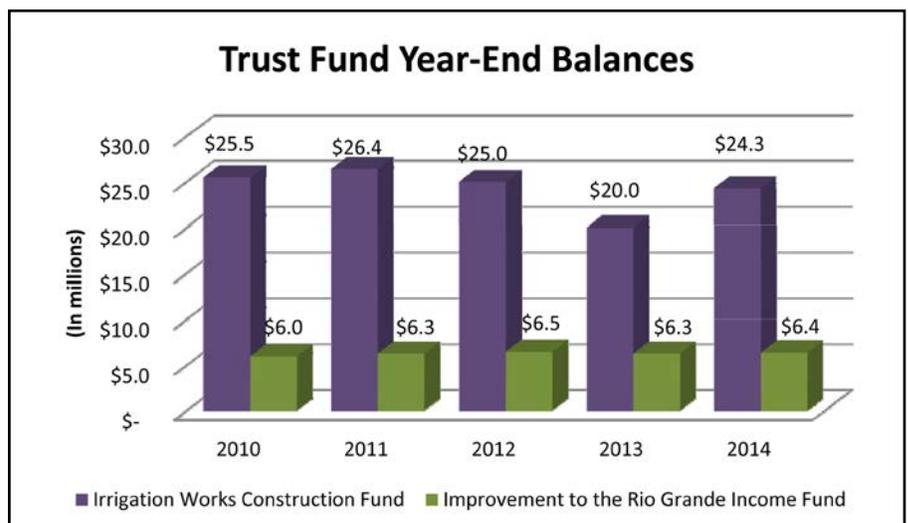
Irrigation Works Construction Fund

The Legislature created the Irrigation Works Construction Fund in 1955 to receive the funds from the trust land acres designated for reservoirs and irrigation works, as well as certain special appropriations. The monies administered by the Interstate Stream Commission make loans to acequias, and, through contracts with irrigation and water conservancy districts, to individual water users for construction and rehabilitation of on-farm irrigation works. The Irrigation Works Construction Fund pays for technical assistance and design improvements for acequias through an annual contract with the Natural Resources Conservation Service of the U.S. Department of Agriculture. Other contracts with the Conservation Service provide for watershed planning, agricultural water conservation demonstration projects, and snow surveys. The Irrigation Works Construction Fund is also a source for the non-federal cost-share required by

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

Improvement to the Rio Grande Income Fund

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



5 Legislation and Policy

The Office of the State Engineer/Interstate Stream Commission works closely with the New Mexico State Legislature to provide information and analysis of proposed bills that involve water issues. The legislature meets for 30 days in even numbered years and 60 days in odd numbered years. Water is always a hot topic in the arid Southwest. Highlights from the past three sessions include the following:

The year 2012 was a relatively quiet year for water related bills. House Bill 55, sponsored by Representative Anna Crook, added \$1,000,000 to the New Mexico Finance Authority's Planning Grant fund to promote preparation of planning documents for water and other projects. House Bill 201, sponsored by Representative Rodolpho Martinez, clarified that wells extracting water over 250 degrees Fahrenheit for geothermal projects do not fall under the authority of the OSE/ISC. House Bill 277, sponsored by Representative Patricia Lundstrom, authorized municipalities to impose a "federal water project tax" of up to one quarter percent on gross receipts for the purpose of paying off federal loans for water projects and for continuing operation and maintenance costs of those projects.

In 2013, the legislature provided \$400,000 to the ISC to update the

state and regional water plans. The money is being used to facilitate regional steering committee meetings with the goal of updating all 16 regional water plans by the end of 2015. The regional plans were completed in the 1980's and 1990's before the creation of the state water plan. One major objective of the updates is to identify water infrastructure projects that will increase sustainability of the regional water supplies.

Also in 2013, Senate Bill 479 and Senate Bill 480, sponsored by Senator Peter Wirth, were signed into law. SB 479 prevents "double dipping" of water rights for subdivisions where the irrigation water right has been severed from the land being developed. The OSE district offices have established tracking systems to better identify lands that have been severed from irrigation water rights. The developer must provide documentation of



Legislative Water and Natural Resources Committee Hearing 2013

adequate water from other sources before the subdivision can be approved. Senate Bill 480 precludes approval of a subdivision with 10 or more lots that proposes supplying water solely from individual domestic wells. The developer must provide proof of adequate water from other sources.

In 2014, Governor Susana Martinez challenged the legislature to invest 60 percent of available capital outlay funds on critical water infrastructure projects statewide. The final capital outlay bill contained over \$85 million for water infrastructure projects around the state. SB 164, sponsored by Carlos Cisneros, was passed and signed into law. This bill allows pueblos to lease adjudicated water rights pursuant to a federally approved settlement agreement. The law was necessary to conform to language in the federal settlement agreements.

The OSE/ISC will continue to support the legislature in improving the administration of water rights in New Mexico in future legislative sessions. •

Drought Task Force

In light of the unprecedented drought conditions of recent years, Governor Martinez directed the Drought Task Force to explore options to mitigate drought impacts. The New Mexico Drought Task Force oversees drought preparedness activities in the state and works to identify and reduce New Mexico's vulnerabilities to drought.

The Drought Task Force is comprised of representatives from the following New Mexico agencies: Office of the State Engineer, Interstate Stream Commission, Environment Department, Economic Development Department, Department of Health, Tourism Department, Department of Agriculture, Finance Authority, Department of Finance and Administration, Homeland Security and Emergency Management, Energy Minerals and Natural Resources Department and the Office of the Governor. The New Mexico Drought

Task Force is chaired by the State Engineer.

The Drought Task Force has two active committees: the Monitoring Work Group and the Impact Assessment Committee. The Monitoring Work Group includes water resource and climate professionals from all levels of government and monitors available climatological, soil moisture, reservoir storage, and other data to assess drought conditions. The Impact Assessment Committee is comprised of agency staff with knowledge of the various economic sectors impacted by drought. This committee reviews and analyzes how drought impacts identified sectors in New Mexico and updates current drought plans to mitigate those impacts.

In early spring of 2013, Chairman Scott Verhines, at the direction of Governor Martinez, created subcommittees to address innovation and economic development, agricultural water conservation, watershed health and management, recoverable water, capital outlay criteria, and the State Water Plan. •

Water Trust Board and Water Project Fund

In 2001, New Mexico passed the Water Project Finance Act, 72-4A-1 et seq. The Water Trust Board and Water Project Fund were both created as a means of vetting and investing the state's resources in assisting public entities. •



Middle Rio Grande Agriculture

6 Tribal Liaison

The Native American Water Resources Program, created by the governor in 1995, is aimed at promoting a spirit of coordination, communication, and good will between tribal and state governments as separate sovereigns. Under a previous administration, a Statement of Policy and Process was signed with the 19 New Mexico pueblos as well as an executive order for 18 executive agencies to adopt a Pilot Consultation Policy to work in good faith to amicably and fairly resolve issues and differences in a government-to-government relationship. This policy and process also extends to other tribes and nations within New Mexico. With the passage of the State-Tribal Collaboration Act in 2009, all cabinet agencies have a formal process for communication and collaboration with tribal governments of the state. In addition, the Office of the State Engineer/Interstate Stream Commission (OSE/ISC) participated in the "Protecting and Promoting New Mexico's Environment" group in cooperation with representatives from other state agencies related to the environment and natural resources.

Rights to water on Indian grant lands and reservations in New Mexico fall within one or a combination of three different doctrines: pueblo historic use water rights, federally reserve water rights, or water rights established under the laws of the State of New Mexico. Water rights administration, litigation and negotiation leading to a settlement of rights to water are exceedingly complex and frequently expensive when Native American water rights are involved. Increasingly, tribes, pueblos and nations are advocating for the protection of their senior water rights.

The Tribal Liaison deals with matters related to adjudication of tribal and pueblo water rights, negotiations regarding these rights, and assistance to individual tribes and pueblos. The liaison's role is to advocate equal protection of all water users, emphasizing conservation and the development of feasible alternative water supplies. An important goal is to resolve disputes between the State of New Mexico and Indian pueblos, tribes, and nations without costly litigation. While the State Engineer

began adjudicating water rights on tributaries to the state's major rivers more than 30 years ago, the water entitlements for most of the state's 22 Indian pueblos, tribes, and nations have not been quantified.

Over the last decade, the agency has worked to maintain effective communications with governments



State-Tribal Water Institute

of tribes, pueblos and nations, has worked extensively with many of the Tribes, Pueblos and Nations. It is noteworthy to emphasize that the agency continues to meet and consult with the Native American communities on issues related to water. The Tribal Liaison's work also includes communications with other state and federal agencies. The Tribal Liaison coordinate with the State Engineer and Interstate Stream Commission Director to provide an environment where there are positive government-to-government relations, communication and collaboration.

Today, New Mexico has three Indian water rights settlements in various stages of implementation. Settlements were signed for the Navajo Nation, four pueblos in the Pojoaque basin, the Taos Pueblo and the State of New Mexico. The passage of federal legislation paved the way for the U.S. Secretary of Interior to sign on behalf of the United States. After the authorization, all three settlements have achieved several milestones such as conformation of the agreements, obtaining funding, authorizing San Juan Chama Project water, Environmental Impact Statement reports and, for the Navajo, court approval processes.

In the Navajo settlement, two construction projects are moving forward simultaneously, the Cutter Lateral and the Navajo-Gallup Pipeline. The Cutter Lateral will run from Cutter Reservoir almost along New Mexico Highway 550 with about 200+ miles of pipeline, which also will include pumps and storage facilities. The larger of the two projects is the Navajo-Gallup Pipeline. This project is one of 14 high-priority infrastructure projects selected by the Obama Administration in 2011 to provide much needed employment in the northwest part of the state. These projects are for the direct benefit to the Navajo Nation and non-Navajo

communities in the San Juan basin.

For the Pueblos of Nambe, Pojoaque, Tesuque and San Ildefonso in the Aamodt Water Settlement, the pueblos have agreed to forbear making priority calls against non-Indian surface water rights except in certain conditions. A regional water system to be located on the San Ildefonso Pueblo will serve pueblo and non-pueblo users with water to be diverted from the Rio Grande and well owners will be given opportunities to stop using groundwater from their domestic wells and connect to the regional system.

In the Taos-Abeyta settlement, the parties are also implementing the terms of the agreement. Notice was provided to the all water rights claimants in the basin in 2013, to allow the users in the Rio Hondo and Rio de Taos stream systems an opportunity to review the proposed decree and settlement, and to file any objections. A deadline for the court to provide a Partial Final decree for the Taos Settlement Act is March 2017, which also includes meeting the state's cost share obligation. •



State Engineer Scott Verhines and Tribal Liaison Myron Armijo meet at the Albuquerque District Office with Pueblo of Acoma representatives in May, 2014.

Fiscal Year 2011-2012

Continued discussions with the Pueblo of Acoma on a Critical Management Area designation for the Horace Springs area – Pueblo also wishes to consult with the OSE on an application for mine de-watering by Roca Honda Mining Corporation.

Updating of the legislatively mandated State Water Plan continues with the 16 planning region throughout the state.

Worked on two Acequia-Pueblo issues for the Pueblo of Pojoaque, one of which was worked out by parties involved without assistance from the Tribal Liaison and the other is still pending and awaiting further information from the parties in the dispute.

Meetings with the Coalition of Six Middle Rio Grande Pueblos (Pueblos of Cochiti, Santo Domingo, San Felipe, Santa Ana, Sandia and Isleta) on the possible leasing of water from the Village of Los Lunas. Water would be used for the Strategic Water Reserve by the Interstate Stream Commission.

Pueblo of Isleta awarded \$1 million by the Water Trust Board for restoration in its reach of the Rio Grande.

Mescalero Apache Tribe requested a meeting with the Office of the State Engineer to discuss the possibility of leasing some of the Tribe's water to neighboring communities.

The State has also been working with the Jicarilla Apache Nation to survey and adjudicate water rights on land that they have purchased since the adjudication of their water rights in the Chama in 1998.

The Water Trust Board awarded Isleta Pueblo \$1 million for a restoration project on Isleta's reach of the Rio Grande.

State Engineer John D'Antonio gave a presentation to the National Congress of American Indians at their fall conference titled Going With the Flow: State-Tribal Collaboration on Water Issues. •

Fiscal Year 2012-2013

The OSE/ISC again attended the State-Tribal Summit in June 2012 at the Mescalero Tribe's Inn of the Mountain

Gods. Governor Susana Martinez has supported \$15 million for the Indian Water Rights Settlement Fund established in 2005. The funding did not get approval from the legislature, so the OSE will continue to recommend to the legislators on the importance of the state providing its share of funding the water settlements.

The Tribal Liaison met with staff of the Pueblo of Isleta Water Resources Department to tour the restoration area just below the Isleta Diversion with funding coming from the New Mexico Water Trust Board. The pueblo has not started the project due to unforeseen problems with permitting from the US Army Corps of Engineers. They do continue to provide reporting to the Water Trust board.

State Engineer Scott Verhines and staff went to meet with the Northern Pueblos Water Tributary Association to discuss domestic water wells in the Pojoaque basin. The State Engineer had an opportunity to meet the Governors in the Aamodt Water Rights Settlement.

In the early fall of 2012, State Engineer Scott Verhines and ISC Director Estevan López went to meet with Governor Terry Aguilar of San Ildefonso Pueblo for a discussion/tour of the proposed site of the diversion off the main stem of the Rio Grande just north of the Otowi bridge for the Regional Water System included in the Aamodt Water Rights Settlement. The tour included the pueblo's water conveyance systems, which are in need of repair.

ISC Director Estevan Lopez provided an update to the All-Indian Pueblo Council on matters pertaining to the on-going drought situation and on the State-Tribal Summit which took place at Mescalero's Inn of the Mountain Gods.

The OSE went to the Pueblo of Acoma to address the Pueblo's position paper given to the agency at the 2012 State-Tribal Summit and the Pueblo's concerns on water and natural resources issues.

The State Engineer and Interstate Stream Commission director attended American Indian Day at the Legislature hosted by the Indian Affairs Department on February 1, 2013 at the State Capitol during the 2013 New Mexico State Legislative Session. Also in 2013, the Tribal Liaison made trips to the Native American com-

munities, including attendance at meetings of the native organizations throughout the state.

The Office of the State Engineer participated in the 2013 State-Tribal Summit. For several consecutive summits, water has been a topic tribal leaders wanted to discuss. Several recommendations came out of the summit and one in particular that resonated with the group and that was to seek funding resources through legislation to provide the necessary cost share of the state for the three pending Indian water rights settlements.

Over several tribal government administrations, the State Engineer has had on-going consultations with the Pueblo of Acoma on many of its concerns with water in the Rio San Jose, including the possibility of establishing a critical management area, the loss of water in the Rio San Jose stream in the Grants area, and permitting for uranium mining in the Mount Taylor area.

Ohkay Owingeh initiated contact with the State Engineer for the purpose of determining whether the state would be willing to participate in settlement discussions. The outcome of that meeting was positive with the State Engineer giving his authorization to his legal staff to participate in such meetings. To date, the parties in the Abbott negotiations continue to meet on a fairly frequent basis to discuss issues such as the pueblo's existing and future water rights claims.

The Tribal Liaison continues the outreach to the Tribes, Pueblos and Nations and will work with the State Engineer and Interstate Stream Commission Director to ensure that there is positive collaboration with all of the Native American communities throughout the state.

Fiscal Year 2013-2014

The agency was a participant in the annual Native American Day for the 2014 state legislative session. State Engineer provided a short presentation on the status of Indian Water rights settlements and the agency's outreach to the native communities by the Tribal Liaison. Many tribal leaders present at the Capitol Rotunda took advantage of the opportunity to meet the State Engineer. Feedback from tribal leaders was positive.

Planning for the next State-Tribal Summit started in February with preliminary results from surveys sent

out the Tribes, Pueblos and Nations. Tribal leaders again expressed an interest in discussing the topic of water at the 2014 Summit. The 2014 Summit was hosted by the Pueblo of Laguna and was held at the Route 66 Hotel and Casino. The staff participating in the Summit included once again, ISC Director Estevan Lopez as the State Engineer was unable to attend.

Outreach continued into 2014 with the Pueblo of Picuris and acequias upstream of the Pueblo including the Towns of Mora and Cleveland. The issue is a trans-mountain diversion and the pueblo and communities on the west face are contending that Mora and Cleveland are taking more of their share of water. This issue was taken to the New Mexico Acequia Commission by the governor of Picuris Pueblo for assistance. The pueblo is approaching this problem using discussions as a means of attempting to get all parties to the table and possibly get to a shortage sharing agreement.

The Interstate Stream Commission sent a letter of request to the governor of San Ildefonso, to ask for permission to access the Otowi gage on the Rio Grande through tribal lands. The governor's office gave its permission to take the stream gauge measurements, providing access to a valuable gaging site to protect New Mexico's water under the Rio Grande Compact and the Commission recognizes and appreciates the cooperation provided by the Pueblo.

Outreach to the tribes, pueblos and nations continues with the tribal liaison attending many of the meetings held by native organizations and also visiting with tribal leaders at their respective offices. •

7

Water Resource Allocation Program

Water Rights Division (2011-2014)

The Water Rights Division administers water rights throughout the State of New Mexico. The division has district offices in Albuquerque, Roswell, Deming, Las Cruces, Aztec, Santa Fe, and Cimarron.

Under New Mexico's Constitution, all ground and surface waters belong to the public and are subject to appropriation under the doctrine of Prior Appropriation which provides earlier appropriations have priority over later appropriations. Anyone wanting to use either surface water or groundwater in New Mexico must have a permit from the State Engineer. Before granting a permit for a new appropriation or to change the place or purpose of use of existing water rights, state law requires that the State Engineer determine that the proposed appropriation or proposed change will not impair existing rights, will not be contrary to the conservation of water within the State of New Mexico, and will not be detrimental to the public welfare of the state. The law also requires the applicant to publish legal notice of the purpose of the application in a newspaper to provide anyone with a legitimate objection the opportunity to protest the application.

During fiscal year 2011-2014, the employees of the Water Rights Division processed 11,317 surface water and 182,342 groundwater documents pertaining to the appropriation and use of surface water and groundwater. Since most surface water in the state has been considered fully appropriated since March 29, 1907, of the recent water rights activity has involved groundwater.

The backlog of pending water rights applications varied over the two years, from a low of 402 applications in September 2010 to a high of 1,518 applications in April 2014. The number of pending applications the following

year was 1,523. During the three fiscal years, a total of 2,488 new applications were received and a total of 1,660 applications were processed.

During the past three fiscal years, the Water Rights Division was actively involved in Active Water Resource Management (AWRM), a program to conjunctively manage both groundwater and surface water within river basins. Water Rights and Water Rights Abstract Bureau personnel participated in interdepartmental teams formed by the State Engineer to implement AWRM in water basins identified as high priority.

Water Rights Division personnel continue to be active in developing district-specific rules and regulations to administer water during times of shortage for the protection of senior water rights. Water Rights Abstract Bureau personnel continue to concentrate their efforts toward abstracting and imaging water rights documents into the Water Rights Research System database in support of the AWRM initiatives.

New applications are directly entered into the system, and resources are dedicated to input the thousands of existing records that must be organized, abstracted and entered into the database. Information from priority areas is being entered first to provide the State Engineer with the information and the tools necessary to administer water. The AWRM priority basins are the Lower Pecos, Lower Rio Grande, San Juan, Rio Gallinas, Mimbres, Rio Chama and Nambe-Pojoaque-Tesuque. When a basin's files are completely abstracted into the Water Rights Research System (WRRS), a complete listing of every water right within that basin will be available to the water rights experts and the general public at the touch of a button. A complete inventory of water rights within the basin – by amount, priority

date, place and purpose of use, etc. – will be immediately available. This information and the speed with which it can be accessed will be invaluable when processing water rights applications and changes of ownership. Considerable effort will be required to keep the WRRS database current. Entering information as transactions occur is a priority for the OSE. •

Active Water Resource Management

Adapting to changes in water supply is critically important to New Mexico. Our economy, environment, and citizens need water management mechanisms that accommodate highly variable hydrologically connected surface and groundwater supplies. The New Mexico Legislature recognized this need in 2003 when it enacted Senate Bill 551, which was codified as section 72-2-9.1, NMSA 1978. The legislation recognized that the water rights adjudication process is slow, the need for water administration is urgent, and interstate compact compliance is imperative. It also directed the State Engineer to adopt rules for priority administration of water rights and to promote expedited marketing and leasing of water in times of shortage.

In response to this legislative mandate, the State Engineer promulgated new rules to provide the framework for statewide implementation of Active Water Resource Management.

The Active Water Resource Management initiative includes a comprehensive set of tools that allow New Mexico to effectively manage water resources, protect senior water rights, and meet interstate delivery obligations.

These tools include metering and measuring diversions, creating water markets and developing a management structure responsive to changing conditions that includes the appointment of water masters by State Engineer defined district, and promulgation of district-specific rules and development of water master manuals to implement those rules. Use of these tools will promote fairness and maximize efficient use of available water supplies.

Active Water Resource Management also allows for water users in a region to work with the State Engineer, and to develop local mechanisms for alternative administration in times of shortage.

District Activity

District I - Albuquerque

The District I Office in Albuquerque administers the underground and surface waters in the Middle Rio Grande, Estancia, Sandia, Bluewater, Gallup and Upper Tularosa Basins. During Fiscal Year 2012, the District I Staff (District I) processed 3,883 applications and related documents and recorded 9,272 meter readings. During Fiscal Year 2013, District I processed 4,623 applications and related documents and recorded 6,873 meter readings. During Fiscal Year 2014, District I processed 3,055 applications and related documents and recorded 7,062 meter readings. In addition to processing applications in the designated basins, District I assisted the District V Office with applications in the San Juan Basin.

District I gained compliance from many domestic well permit holders that were not submitting pumping records in the Estancia, Bluewater, Sandia and Gallup Basins. This achievement involved researching permits, reviewing pumping records and notifying permit holders of violations. District I continued to abstract the converted Middle Rio Grande Basin domestic files into the agency's database and standardize the well locations using NM State Plane Coordinates and latitude-longitude descriptions.

In the Middle Rio Grande Basin, District I processed a large number of water right declarations and applications. In addition, District I participated in administrative hearings related to aggrieved and protested applications. District I continued to administer the Albuquerque Bernalillo County Water Utility Authority's (ABCWUA) Groundwater and Surface Water permits, which requires the cooperation of the ABCWUA, Interstate Stream Commission, U.S. Bureau of Reclamation, U.S. Army Corps of Engineers, and Middle Rio Grande Conservancy District (MRGCD).

The Middle Rio Grande Geodatabase (MRGGDB), which was designed to track transfer and declaration records spanning more than 100 years in several geographic information system layers, continued to be updated. The MRGGDB was also expanded to include tributary

data. UNM-Step interns populated the MRGGDB with declarations, permits, and small holding claims in Placitas, which helps District I to quickly locate declared lands in the Placitas area. La Jara is another area where the MRGGDB was expanded. District I populated the MRGGDB with La Jara declaration maps, hydrographic survey data, small holding claims maps and aerial photography, which enabled District I to process pending changes of ownership. Most of the plats that the land owners provided in the La Jara area differed from the historical maps so this data proved invaluable in resolving discrepancies in the records.

District I assisted Interstate Stream Commission Staff in checking their Land Use Tool designed to estimate Middle Rio Grande basin depletions and Land Use Development Trends. District I envisions this tool providing the public with a cursory review of their lands prior to making a water right claim or submitting an application for permit. District I assisted Interstate Stream Commission Staff with crop classifications throughout the Middle Rio Grande as well.

In the Estancia Basin, District I reviewed all the permits issued before the Estancia Basin Guidelines were adopted to identify compliance problems. This effort produced a list of about 75 non-compliant permits. In coordination with the Administrative Litigation Unit, District I issued notices of cancellation to the non-compliant permit holders.

Results from the annual water level measurements in the Estancia Basin, as in previous years, have been valuable in administering the basin and its critical management areas. The 2012, 2013 and 2014 winter water level measurements showed that water levels continue to drop, with the largest drop occurring in the northwest part of the basin.

In the Bluewater Basin District I was actively involved in the reviews and the permitting of groundwater monitoring wells, groundwater extraction wells and injection wells all part of the Uranium groundwater cleanup efforts. District I also concentrated efforts in permit compliance on water use and metering. District

I also assisted the Hydrology Bureau and the Water Use and Conservation Bureau in the gathering of water use reports in the Bluewater Basin. Data from the reports will eventually be used to develop a basin groundwater flow model. •



The Middle Rio Grande near Albuquerque

District II - Roswell

The District II Office is responsible for administering both surface and groundwater within the Roswell, Carlsbad, Fort Sumner, Hondo, Peñasco, Portales, Curry County, Lea County, Capitan, Jal and Causey Lingo basins. The District II office processed all applications for well driller licenses and renewal of licenses for the entire state until mid-summer of 2013 when the duties were moved to Santa Fe. Personnel from District II have been involved with the implementation of guidelines and rules and regulations pertaining to the administration of groundwater within the state, administration of water rights on the High Plains, statewide policy review, well driller guideline development and AWRM basin-specific development. District II personnel work closely with the Administrative Litigation Unit (ALU) on protested and aggrieved water right applications and provide detailed exhibits and testimony for a number of water right hearings associated with protested applications. District II personnel measured water levels within the Fort Sumner, Roswell, Carlsbad, Peñasco, Hondo, Lea County, and Causey Lingo basins.

On January 25, 2013, the State Engineer closed the Jal Underground Water Basin. The District II staff responded to citizens concerns and pending applications for new appropriations. District II staff continue to work with ALU to resolve aggrieved applications resulting from the closure. District II staff participated in the review and revision of the Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells. The District II staff contribute drilling experience, knowledge of environmental and water well drilling, and comments from drillers on issues/concerns to further improve and enhance the current regulations. During the past year, staff has provided extensive field oversight for 24/7 drilling operations in the Capitan Basin. Also, during the past fiscal year, the Roswell Basin water master's office read 1,700 groundwater meters. Similarly the Carlsbad Basin supervisor and water master read about 300 supplemental and groundwater wells within the Carlsbad Basin with an average of four readings per well per year.

The District II staff handled the permitting and application demands of the Capitan Basin, which included numerous applications for new appropriations and NMSA 72-12-1.3 permits for oil and gas exploration and development. District staff has worked closely with ALU staff as several of these applications were subsequently protested. In addition to the above, District II processed Applications for Notice of Intent in the Capitan Basin for deep wells penetrating the Capitan Aquifer.

On April 16, 2013 the Carlsbad Irrigation District (CID) issued a priority call against upstream users. The original allotment amount for Carlsbad was 0.6 acre-feet per acre till the heavy rains came in September. After the rain, the allotment was increased by 0.4 to 1.0 acre-feet per acre by the CID board. There were various meetings over possible solutions throughout the year. The heavy rains in September and continued precipitation along the Pecos River filled the reservoirs maintained by the District and they are anticipating beginning next year with a 3.0 acre-feet per acre allotment.

On May 23, 2013, State Engineer Scott Verhines signed the Fort Sumner Groundwater Order No. 183 ordering the metering of all groundwater diversions. The order required all metering devices to be installed by January, 1 2014. No diversions of water by water right owners may be made after March 1, 2014 unless the diversions are metered in accordance with Order No. 183. District II personnel began inspecting meter installations after January 1, 2014. District II personnel also check wells for which a variance is requested. A variance to the metering requirement may be issued for a well that is inoperable but still a permitted point of diversion. Water Master personnel installed Sutron electronic recorders and telemetry equipment in 13 surface water diversion monitoring locations from Santa Rosa to south of Carlsbad. This upgrade provides for remote monitoring of the equipment allowing District II personnel to quickly respond to any problems at these stations maintaining constant monitoring of all flows at these points of diversion. Two stations left to complete require repairs to the stilling well other work prior to installation of the new equipment. The stations are in the process of

being connected into the agency's Real-Time Water Measuring System which will allow users and OSE personnel to view diversion records online.

For FY 12, 13 and 14, District II-Roswell processed a total of 482 surface water applications, a total of 44,946 meter readings and 9,770 groundwater applications. •



Flooded Access Road to Brantley Reservoir at South Seven Rivers Interstate Stream Commission Augmentation Outfall

District III - Deming

The District III Office in Deming administers underground and surface waters in the Animas, Cloverdale, Gila-San Francisco, Hachita, Lordsburg Valley, Mimbres, Mt. Riley, Nutt-Hockett, Playas, San Simon, Virden Valley, and Yaqui Basins. During Fiscal Year 2012, the District III Staff processed 2,178 applications or other related documents. During Fiscal Year 2013, District III processed 1,358 applications or other related documents, and 1,031 applications or other related documents during Fiscal Year 2014.

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

Staff members continued to actively administer water usage on the Mimbres River. Plans have been made to have meters installed on the remaining ditches currently not metered. Staff has been working with ditches to obtain written agreements for the state to install meters onto the ditches. Resistance has been encountered from three of the ditches.

Staff members continued to assist water right holders in the Animas Valley Underground Water Basin to complete groundwater declarations and bring existing water right files up-to-date for the ongoing adjudication process in the basin. District III staff continued processing hundreds of declarations in the basin and continued to work to

verify locations of existing wells and current uses using GIS and global positioning system (GPS) technology.

Staff members continued to update and expand the GIS databases for the basins administered by District III, including maintaining the Virden Valley GIS project, the first of this type completed in New Mexico. The Virden Valley GIS was used during the last two years to help residents identify so-called “hot lands” under the Arizona Water Rights Settlement Act (AWSA) requiring additional filings with the federal water commissioner in Safford, Arizona. The Virden Valley project included the reading of meters on current production irrigation wells during the last three fiscal years to further meet the requirements of the AWSA. Staff members will read and report the use of water from these wells quarterly as required under the settlement.

The District III Water Rights Abstract Bureau staff continue to work to complete the population of the WRRS for the Gila-San Francisco Basin, allowing for more efficient water rights administration and easier access to the water right files for staff and water right owners.

Additionally, the District III staff continue to complete crop surveys for the Animas Valley, Playas, Lordsburg, Cloverdale, Yaqui, Hachita and Nutt-Hockett underground water basins and the Mimbres River, and staff members assist with measurements within the district for the cooperative groundwater-level-monitoring program with the U.S. Geological Survey. •



Staff of the District III-Deming Office of the State Engineer Breast Cancer Work

District IV - Las Cruces

The District IV-Las Cruces Office administers water rights in the Lower Rio Grande, Hot Springs, Las Animas Creek, Hueco, Salt and Tularosa groundwater basins. Drought conditions and a severe shortage of Rio Grande Project surface water have resulted in a large increase in well applications. Customer service and assistance to the public continue to be a priority. On August 22, 2011, Final Judgment and Settlement Agreement SS-97-101 CIR, FDR (Settlement Agreement) was filed with the Third Judicial District Court, Doña Ana County, State of New Mexico. The Settlement Agreement gives an FDR of 4.5 acre-feet per acre per year as to the amount of water available to irrigators within the Lower Rio Grande Stream Adjudication. It also provides flexibility by allowing farmers to average their pumping among all the farms they own and/or manage. District IV staff are working closely with State Engineer staff in Santa Fe to implement the Settlement Agreement within the framework of water rights administration in order to properly account for the groundwater pumping.

The Lower Rio Grande Water Master group continues to implement and enforce irrigation groundwater pumping limits as set in the Lower Rio Grande Adjudication Settlement of Stream System Issue No. 101 and they continue to actively pursue the enforcement of the First Amended Lower Rio Grande Metering Order, Order No. 172. Operations under the settlement terms of the 101 agreement are new to the Lower Rio Grande Water Master district and we have been working closely with local farm groups (the New Mexico Pecan Growers Association and the Southern Rio Grande Diverse Crop Farm Association) to develop groundwater administration methods that include all provisions of the Court's Judgment. The goal is to work with area farmers to ensure that they understand the settlement limitations and that we understand their operations in order to enhance everyone's ability to comply with their water rights and our ability to verify compliance.

Voluntary metering compliance within the Water Master district is at an all time high with over 2,400

actively metered wells submitting timely and accurate meter data. This accounts for about 95 percent of all actively metered wells within the district. This high rate of compliance is the direct result of increased efforts by water master staff to ensure that meter readings are turned in more frequently. Those efforts include postcard reminders, more frequent notices of non-compliance, and increased presence in the field. Also, in an attempt to confirm and verify the accuracy of all meter data, the water master staff also continues to actively test the installed accuracy of measurement devices under field conditions utilizing their recently acquired portable ultrasonic flow meter technology. To date, over 300 measurement devices have been tested of which 39 were found to be out of specification and required to be repaired or replaced.

The Lower Rio Grande Basin is home to the Union Pacific Rail Road Intermodal Terminal (UPRR Terminal) located just west of the Santa Teresa Airport and directly north of the United States/ Mexico International Border. Water is provided to a large portion of the Santa Teresa Border Area by Camino Real Regional Utility Authority (CRUUA). The CRUUA was created by way of a Joint Powers Agreement entered into on February 24, 2009 between the City of Sunland Park, NM and Doña Ana County, New Mexico. Construction of the UPRR Terminal began in 2011 and is slated to continue through 2015. The Lower Rio Grande Basin is also home to the Lower Rio Grande Public Water works Authority (Authority). The Authority was created under New Mexico statute NMSA 1978 73-26-1, and is composed of Berino Mutual Domestic Water Consumers and Mutual Sewage Works Association, Desert Sands Mutual Domestic Water Consumers Association, La Mesa Mutual Domestic Water Consumers Association, Mesquite Mutual Domestic Water Consumers and Mutual Sewage Works Association and Vado Mutual Domestic Water Consumers Association; all serving unincorporated communities within Doña Ana County. The Authority serves the residents of fourteen Colonias communities in Southern Doña Ana County, NM and among other important benefits, provides a reliable drinking water source to its members.

District IV staff are working with these entities to ensure all associated groundwater related activities are properly permitted.

In 2003 the New Mexico Legislature passed NMSA (1978) Section 72-2-9.1 "Priority administration; expedited water marketing and leasing; state engineer", which directs the State Engineer to adopt rules for priority administration regardless of whether a water right has been adjudicated or not. As a result, the State Engineer promulgated Statewide Active Water Resource Management (AWRM) Rules, which are to be the basis for Water Master District Specific Rules. The District IV Manager, Lower Rio Grande

Basin Supervisor, and Lower Rio Grande Water Master are working with the State Engineer and his staff to develop the Lower Rio Grande District Specific Rules. Once promulgated, the Lower Rio Grande District Specific Rules will be used in conjunction with the Statewide AWRM Rules to provide alternatives, such as shortage sharing, during strict priority administration.

As an extension of customer service to the public throughout the Tularosa and Salt Basins, District IV staff continues to maintain field office hours on the first Wednesday of each month in Alamogordo. The field office continues to receive a steady flow of customers and has been very helpful to the constituents of Otero, Lincoln and Socorro counties, who would otherwise have to drive a long distance to meet with staff in Las Cruces. The City of Alamogordo, which is located within the Tularosa Groundwater Basin, will soon be home to the Alamogordo Snake Tank Desalination Proj-

ect. The project consists of a well field located in an area of brackish water north of Tularosa, NM and a new water plant designed to remove accumulated solids from brackish water to be used as drinking water. It is to be located next to the Brackish Groundwater National Desalination Research Facility in Alamogordo. The District IV office had previously approved the City of Alamogordo's proposed new appropriation of groundwater for a diversion of up to 4,000 acre-feet per annum from 10 wells within the Snake Tank Well Field.

The Water Rights Abstract Bureau staff in Las Cruces continues to organize, review and electronically catalogue historical abstracting and imaging for the Lower Rio



District IV-Las Cruces Office of the State Engineer shares water-related information with students at the 2013 Water Festival.

Grande and Tularosa Basins, along with keeping the daily abstracting and imaging up to date and working with Water Master Staff to refine the groundwater pumping accounting process in the WATERS database. All of this has allowed for more efficient water rights administration and easier access to the water right data for staff and the public. •

District V-Aztec

The District V-Aztec office administers surface and groundwater rights in the San Juan Basin located in the northwest corner of the state. The basin encompasses waters of the upper Colorado River system within New Mexico, which includes the San Juan, Animas, La Plata, Pine, and Navajo rivers, numerous smaller tributaries of these, and groundwater sources.

District V continued to receive and process a steady workload of non-domestic permit requests to change existing water rights. Applications received to make changes to existing water rights totaled 12 in FY12, 13 in FY 13, and 4 in FY14. Notices for Publication totaled 24 in FY12/FY13 (combined) and 8 in FY14. Final actions on permit applications to change existing water rights included 24 in FY12/FY13 (combined) and 11 in FY14. Applications for domestic and stock wells totaled 45 in FY12, 25 in FY13, and 36 for FY14. After clearing a backlog of Change of Ownerships (283 in FY12 and 260 in FY13), District V staff continued to remain current (no backlog) in processing Change of Ownership requests, completing 148 in FY14. District staff also processed 37 separate permits to drill non-consumptive monitoring wells and 25 individual plugging plan requests in FY14 (actions in this category were not tallied for FY12/13); many of which contained multiple wells in the individual permit/plan. During FY14, the District continued to successfully reduce overall backlogs of pending permit applications and notices of publication for proposed changes to existing water rights.

The two District V San Juan Basin Water Masters continued to handle requests for help with miscellaneous water compliance issues and disputes. The San Juan Basin Water Masters maintained contact with the various community ditch, irrigation district and conservation district entities and ditch/district personnel within the District by attending board meetings, conducting field meetings to review concerns and complaints and responding to information/assistance requests as needed. The Water Masters also continued to monitor and maintain the metering equipment installed on about 30 of the District's irrigation ditches.

After enduring a slow period extending back to about 2009, the energy exploration and production industry in the San Juan Basin experienced a significant increase in drilling activity and water use during FY14. Exploration projects involving horizontal drilling combined with hydraulic fracturing within the San Juan Basin's Mancos Shale used significant quantities of water in the Lybrook area. Interest by cities and other domestic water providers in securing water rights for their systems also has remained high.

Throughout FY12-FY14, District staff have participated in ongoing discussions between the ISC and the U.S. Bureau of Reclamation regarding the development of a Top Water Bank for Navajo Reservoir. Once implemented, the water bank could potentially extend access to excess storage space in the reservoir to water right holders within the basin who are not project contractors in the original Navajo Reservoir storage project. Staff are also working with ISC counterparts for the San Juan Basin to develop an administration protocol for monitoring of Animas-La Plata project water releases within New Mexico.

As with other areas of the state, District V continued to see the impacts and water supply concerns associated with the ongoing drought conditions affecting the region. The District has seen successive years of lower than predicted snowmelt runoff within the primary watersheds feeding the San Juan Basin in New Mexico. In FY14, the U.S. Bureau of Reclamation Navajo Operations Group initially declared an anticipated shortage in the runoff supply for Navajo Reservoir, which would have triggered the recently renewed (FY12 & FY13) San Juan River Basin Shortage Sharing Agreement. However, the shortage was averted when additional snowpack developed and a spring peak release of water from the reservoir was foregone after discussions between the U.S. Bureau of Reclamation and the San Juan Basin Recovery Implementation Program entities. •

District VI - Santa Fe

The District VI-Santa Fe Office administers surface and groundwater water rights within the northern portion of the Rio Grande Basin and the Upper Pecos Basin. Those areas of the northern Rio Grande Basin administered by the District include the areas upstream of Cochiti Dam and Reservoir, the Santa Fe area, the Nambe, Pojoaque, and Tesuque area, the Española area, the Truchas, Peñasco, Dixon and Velarde areas, the drainage basins of the Rio Chama, the Rio Ojo Caliente, and the Taos, Questa and Costilla areas. The areas administered within the Upper Pecos Basin include the headwaters of the Pecos River to Santa Rosa Reservoir, including the Gallinas river tributary.

Staff of the District VI Office have been involved with the development of the Business Process Management System (BPMS) for the implementation of a statewide domestic well application process, AWRM basin development, sorting of the documents to be transferred and imaged, and purging and populating the WRRS database.

District VI personnel served as witnesses providing detailed exhibits and testimony for a number of water right hearings on protested and aggrieved applications. Staff also performed extensive fieldwork associated with processing applications and in the overseeing construction and plugging of shallow and artesian wells. Numerous applications for wells or boreholes to be used for geothermal heat have also been reviewed and acted on. Staff continues to maintain a field office every third Wednesday of the month in Taos, providing the public convenient access to the office.

AWRM activities within District VI include three priority basins: the Rio Gallinas (tributary of the Pecos River), the Nambe-Pojoaque-Tesuque (NPT), and the Upper and Lower Rio Chama. Active adjudications are ongoing for these stream systems and groundwater basins. Staff is currently involved with attorneys in the LAP program, promulgating Rules and Regulations within the NPT Basin. The Water Master is administering the Gallinas River according to a shortage sharing agreement. The Chama Water Masters have also administered the Rio Chama according to a shortage sharing agreed to by the Acequias within the basin in order to prevent a priority call. A total of five water masters continue to work out of the Santa Fe Office in these three AWRM priority basins.

In the implementation of AWRM, a total of 80 measurement stations have been installed with real-time



Rio Tesuque, OSE District VI Santa Fe

capabilities and are currently maintained and monitored by water masters in the 3 priority basins. An additional 40 sites have been identified in the Upper and Lower Rio Chama, Santa Fe Basin, Nambe, Pojoaque, Tesuque Basin

and Gallinas Basin for future installation of measurement stations. Staff is also managing the installation and/or upgrading of measurement stations in other Districts statewide.

In December 2013, the Aamodt adjudication court commenced an expedited inter se proceeding to determine whether to approve the Aamodt Settlement Agreement and enter a proposed Partial Final Judgment and Decree on Pueblos' water rights. It issued an Order to Show Cause and Notice of Proceeding to Approve Settlement which was published and served by mail on almost 6,000 water right claimants in the Pojoaque Basin in January and February 2014. The Order to Show Cause requires that all water right claimants in the Pojoaque Basin be given the opportunity to review the Settlement Agreement and the proposed determination of the Pueblos' water rights and decide whether to accept or object to the Settlement Agreement and to the proposed Partial Final Judgment and Decree on the Pueblo's water rights. The deadline for filing an Acceptance or an Objection form with the Court was April 7, 2014. This created a huge increase in workload for the District VI office. A total of 25 public meetings were held in the evenings within the NPT Basin prior to the April 7 deadline that were attended by NPT water masters. The proceedings also spurred an influx of hundreds of water right owners into the District office for assistance in researching their water rights and filing Change of Ownership forms.

District VI staff has also been handling an increase in applications and issues regarding the Taos Pueblo Water Rights Settlement Agreement. The Taos Pueblo Water Rights Settlement Agreement was developed through multi-party negotiations begun in 1989 between the Taos Pueblo, the State of New Mexico, the Taos Valley Acequia Association (and its 55 member acequias), the Town of Taos, El Prado Water

and Sanitation District (EPWSD), and the 12 Taos-area Mutual Domestic Water Consumer Associations to settle Taos Pueblo's water rights claims to the Rio Hondo and Rio Pueblo de Taos stream systems.

District VI staff continue to work closely with State Engineer hydrologists, the City of Santa Fe, and the public in the adoption and implementation of a monitoring plan to observe water level changes that may occur due to the pumping of several wells that supply the municipal and county water systems. Staff also continue to be involved with the ongoing permitting of water rights and the performance of extensive field inspections and investigations associated with water right transfers and un-permitted water right activities throughout the district. •



An irrigation ditch near Penasco

District VII - Cimarron

The District VII-Cimarron Office has been charged with the duty of administering the water resources and water rights of the Canadian River, Clayton, and Tucumcari basins. The Cimarron-Rayado Water Master works closely with the District VII Manager and the Eagle Nest Dam Caretaker on water right issues concerning the Springer Ditch Company, the Town of Springer, CS Cattle Company, Antelope Valley Irrigation District, Vermejo Park, UU Bar Express Ranch, Philmont Scout Ranch, the Village of Cimarron, the Village of Eagle Nest, the Village of Angel Fire, and many others. The Cimarron-Rayado Water Master is also responsible for conducting the annual snow survey. The data from these snow surveys is used to project an outlook for the Canadian River Basin.

The District VII Cimarron Office continues to participate in community outreach projects in the area. The District VII staff also attends meetings of the Cimarron Watershed Alliance, which discusses and takes action on issues concerning the health of the Cimarron Watershed (i.e. in-stream flows and the Conservation Reserve Program). The Cimarron-Rayado Watermaster attends the Springer Ditch meetings weekly to discuss water right issues, priority, and water in storage.

District VII staff is in the process of setting up GIS projects in the Canadian River, Clayton and Tucumcari Basins. Each of these projects can involve updating hydrographic surveys as well as digitizing and georectifying historical maps.



Cimarron River

The WRAB staff from Albuquerque has worked closely with the District VII Cimarron staff to assist in setting up the files and the procedures for processing water right documents. The District VII Office continues to receive many declarations for surface water, groundwater, and stock tanks in each of the Canadian River, Clayton, and Tucumcari basins. These are being handled in filing date order by entering the declarations into a database, conducting a field investigation, writing a memo recommending either to accept or to reject the declaration, and then finalizing the transaction in WATERS. Many of these declarations for surface water are filed for the Mora area, where there is no water master and very little mapping. This makes it difficult to complete the declaration process. Each declaration will be added to a GIS map for that area as the declaration is finalized.

The District VII staff has been very active in performing field visits based on public complaints of illegal water use in the district. •



The Interstate Stream Commission is charged with operating Eagle Nest Reservoir and administering its water rights.

Statewide Support Group

The Statewide Technical Support Group manages historical agency policies, assists in drafting and revising regulations, and continually seeks new and innovative ways to conduct business. Areas of expertise include business process improvement and GIS. In addition, this group coordinates the Well Driller Licensing program, and statewide enforcement on well driller activities. The OSE has embarked on a mission to eliminate waste using the LEAN philosophy, and is using Six Sigma tools to analyze statistics from data on activities in the district offices through the Reynolds Report. To further support the districts, this group tracks the Notices of Intention to drill deep wells and also coordinates the permitting efforts for the aquifer storage and recovery that has started across the state.

| Well Driller Licensing | | | | |
|------------------------|---------------------------|-------------------------------|-------------------------------|----------------------------------|
| Fiscal year | New Well Driller Licenses | Renewed Well Driller Licenses | Well Driller Licenses Amended | Drill Rig Supervisors Registered |
| FY 12 | 9 | 118 | 2 | 62 |
| FY 13 | 7 | 116 | 1 | 101 |
| FY 14 | 6 | 53 | 31 | 140 |

Water Rights Abstract Bureau

The Water Rights Abstract Bureau is responsible for populating and maintaining the WRRS database, for providing basin-wide GIS water right mapping and for developing electronic information products for water resource management and administration. The Bureau maintains a central office in Albuquerque and has staff in the Las Cruces and Deming offices. In fiscal year 2012 through 2014, staff completed the analysis, abstracting, and imaging of the Lea County Basin NMSA 72-12-1 Domestic well files (over 10,000 files) and about one-third of the Middle Rio Grande Domestic well files and is continuing work on the Lea County Basin Non-Domestic water right files, completing over 4,500 files. The database base has also become a major tool for water masters in the Lower Rio Grande, Chama, Nambe, Pojoaque, and Tesuque basins to monitor settlement agreements and water use.

Water Rights Research System

The Water Rights Research System (WRRS), formerly known as WATERS, was created to make the agency's extensive water right records more readily accessible to staff and the public. The system provides a detailed analysis of water rights in critical water basins throughout the state, a publicly transparent accounting system for over \$16 billion worth of marketable water rights, a more efficient method to process water right applications, a foundation for water rights adjudications, public access to a database providing water rights and water use information, instant access to images of the legal water right documents via the Office of State Engineer website, and protection of the up to 100-year-old water right documents through storage in the State Records Center and Archives. The process is ongoing to analyze

and abstract historical documents basin by basin on a priority schedule that parallels State Engineer schedules for Active Water Resource Management and water rights adjudications.

To date, 31 major water basins and sub-basins have been completed as well as certain critical file sets, such as the cities of Santa Fe, Rio Rancho, Socorro, and Espanola, the Intel Corporation, New Mexico utilities, and the El Dorado development area.

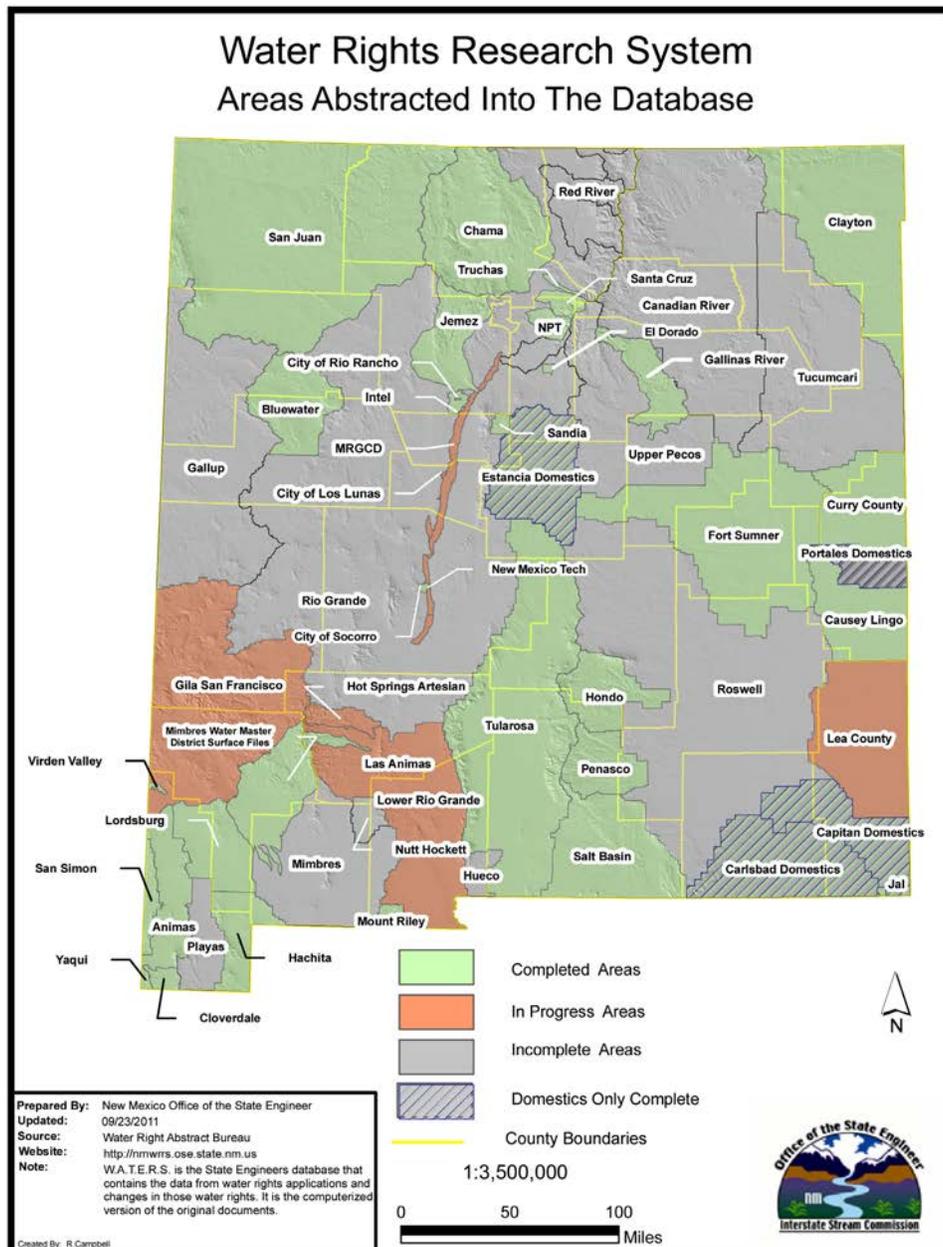
State Engineer staff use WRRS as a critical tool for administering water rights and for active water resource management. New water right applications and other filings are entered and tracked for compliance. The locations and water levels of wells are entered and stored in the database and a meter-reading module allows staff to track metered water use, facilitating Monitoring and enforcement of metered appropriations.

Both State Engineer staff and the public use WRRS to provide information on the history of individual water right claims in New Mexico, court orders and decrees, hydrographic survey reports, and electronic images of

water right documents. Using WRRS on the web, anyone can obtain information concerning water use, including comprehensive data about domestic, irrigation, commercial and other water rights, location of rights, and owners of rights, as well as details of well construction. In particular, users can determine the amount of permitted water use in a water basin, track changes in water use patterns, bring together regional data on water use, and compile and analyze data to build water-use models. WRRS is capable of downloading to a geographic information system to create maps of water rights and water wells. WRRS is fulfilling one of the Governor's ini-

tiatives to fully automate the agency and help implement the vision of active water resource management. It will help enable the state to manage its water both in times of plenty and in times of drought.

To access WRRS from the OSE website, click on "Water Rights Lookup" on the home page. Then, click on "New Mexico Water Rights Reporting System" The WRRS "help" menu provides definitions and explanations of the data. •



Hydrology Bureau

The Hydrology Bureau's 12 employees perform a wide range of activities in support of the Office of the State Engineer (OSE) and the Interstate Stream Commission (ISC). Bureau hydrologists collect hydrologic data, create water resource models, assist in policy development, evaluate water availability, quantify hydrologic impacts, provide expert testimony for litigation and manage technical projects. The Bureau also provides geographic information systems (GIS) services, and operates the agency library.

In support of agency evaluation of water rights applications, Bureau hydrologists conducted a total of 140 hydrologic investigations in 23 different administrative basins during fiscal year 2012 (FY12), 131 investigations in 25 basins in FY13, and 128 investigations in 24 basins in FY14, providing service to all seven agency district offices each year. Of these, 67 (FY12), 56 (FY13) and 63 (FY14) investigations involved protested or aggrieved applications evaluated in cooperation with Water Rights Division (WRD) and the Administrative Litigation Unit. Some of these cases led to administrative hearings where Bureau hydrologists served as expert witnesses. Important hearings in which Bureau hydrologists played key roles included the Aquifer Science case in the Sandia Basin, and the ISC-Seven Rivers case in the Roswell Basin. The Bureau also completed 73 (FY12), 71 (FY13) and 65 (FY14) investigations of unprotested applications submitted by WRD. Activity was high in the Lea County Basin in FY12 and FY13, but dropped off markedly in FY14. In FY14 activity increased notably in the Capitan Basin, where 31 unprotested applications were evaluated as a result of increased water demand to supply oil and gas development.

Hydrology Bureau continues to develop state-of-the-art technical tools and procedures for use in water management and administration. Studies conducted or managed by Bureau staff in FY12-14 included updates to the Lower Rio Grande, Middle Rio Grande and Roswell Basin administrative models. Extensive technical support was provided to WRD in the use of models and graphical

user interfaces for the Animas-Lordsburg, Curry County-Portales, Estancia, Lea County, Mimbres, Roswell and Tularosa Basins. New models were developed for administration in the Clayton Basin and parts of the Capitan and Carlsbad Basins.

Bureau hydrologists assisted in the evaluation of ongoing or proposed pilot-scale and long-term underground storage and recovery projects by Rio Rancho, Albuquerque and Las Vegas. Bureau assistance to WRD in the oversight of exploratory drilling projects to tap deep, nonpotable aquifers in Sandoval, Bernalillo, Lea and Lincoln Counties continued. Notably, in FY12 and FY13 Hydrology Bureau staff reviewed well drilling and testing, and groundwater modeling related to use of deep nonpotable water from the Capitan Reef aquifer for a proposed new potash mine in southeastern New Mexico.

Hydrology Bureau also assisted with the enforcement of agency regulations on well drilling, construction and plugging. During the FY12-14 period, Bureau hydrologists reviewed 212 plans of operation for well construction (62) or plugging (150), involving 838 wells in 20 different basins, and performed 29 field inspections. Bureau staff conducted seven workshops on agency regulations for well driller continuing education credits for a combined 950 attendees at meetings of the New Mexico Ground Water Association, provided in-house agency training at all seven WRD District offices, and actively participated in regulation revisions. In the FY12-14 period, Bureau hydrologists reviewed 101 mining permit applications submitted for OSE review by the Energy Minerals and Natural Resources Department, and evaluated water availability for 22 proposed subdivisions in Bernalillo, Dona Ana, Lea, Sandoval, San Miguel, Santa Fe, Sierra and Taos Counties in support of OSE Water Use and Conservation Bureau.

In the Lower Rio Grande (LRG), Hydrology Bureau staff collaborated with ISC on development of hydrologic databases, and analysis of historically irrigated acreage and data related to the sustainability of Lower Rio Grande aquifers. Bureau hydrologists also continued

development of an Lower Rio Grande surface water model for simulating operations of the Rio Grande Project. Staff analyzed historical and recent operations of the Project, and implementation of the 2008 Project Operating Agreement. Bureau staff coordinated with the office of the New Mexico Attorney General on litigation with the U. S. Bureau of Reclamation related to Project operations, and on U. S. Supreme Court litigation with the state of Texas over the Rio Grande Compact.

Bureau hydrologists continued to support agency adjudication efforts across the state, conducting analyses and participating in settlement negotiations related to adjudications in the Taos area, and in the Nambe-Pojoaque-Tesuque (Aamodt), Jemez River, Rio San Jose, Zuni River and Lower Rio Grande basins. The Hydrology Bureau also continued to provide technical support to the agency’s Active Water Resource Management (AWRM)

initiative during FY12-14. In the Rio Gallinas AWRM area, Bureau hydrologists assisted with the preparation of rotation schedules to distribute Gallinas River water equitably among the various water users, and in preparation of the water master’s reports. In the Lower Rio Grande Bureau, staff actively participated in development of basin-specific AWRM regulations.

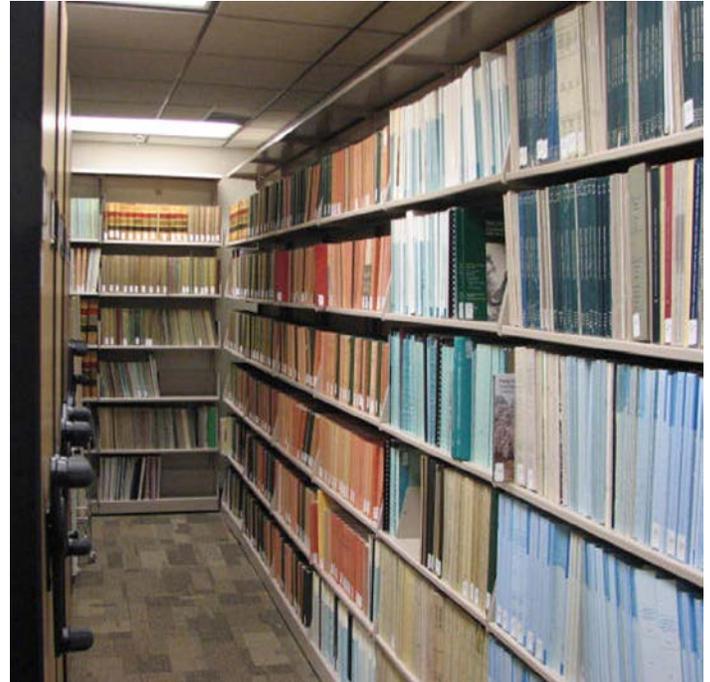
During the FY12-14 period Bureau hydrologists continued to supervise the agency’s statewide groundwater monitoring program, coordinating with the U.S. Geological Survey to reconfigure water-level measurement areas to correspond with water rights administrative basins, significantly increasing program efficiency and enhancing the utility of the data. In FY12-14 Bureau hydrologists revised networks in the Canadian River, Fort Sumner, Gallup, Jal, Las Animas, Lower Rio Grande, Mount Riley, Nutt-Hockett, Roswell, Tucumcari and Up-

Hydrology Bureau Investigations In Support of Water Rights Applications (Fiscal Years 2012 – 2014)

| OSE District | Underground Water Basin | 2012 | | 2013 | | 2014 | |
|--------------|-------------------------|-----------|-------------|-----------|-------------|-----------|-------------|
| | | Protested | Unprotested | Protested | Unprotested | Protested | Unprotested |
| 1 | Bluewater | 2 | 1 | 2 | 1 | 1 | 0 |
| 1 | Estancia | 0 | 2 | 2 | 4 | 0 | 5 |
| 1 | Gallup | 1 | 0 | 1 | 0 | 1 | 1 |
| 1 | Middle Rio Grande | 15 | 3 | 14 | 3 | 14 | 7 |
| 1 | Sandia | 1 | 0 | 1 | 1 | 1 | 0 |
| 2 | Capitan | 2 | 3 | 0 | 8 | 0 | 31 |
| 2 | Carlsbad | 2 | 1 | 2 | 0 | 4 | 3 |
| 2 | Causey-Lingo | 1 | 0 | 1 | 0 | 1 | 1 |
| 2 | Curry County | 1 | 6 | 3 | 14 | 4 | 0 |
| 2 | Fort Sumner | 0 | 0 | 0 | 0 | 0 | 1 |
| 2 | Hondo | 6 | 6 | 2 | 5 | 4 | 2 |
| 2 | Jal | 0 | 0 | 1 | 0 | 1 | 3 |
| 2 | Lea County | 13 | 31 | 3 | 23 | 10 | 3 |
| 2 | Penasco | 0 | 1 | 1 | 1 | 0 | 0 |
| 2 | Portales | 1 | 1 | 1 | 0 | 0 | 0 |
| 2 | Roswell | 4 | 4 | 4 | 5 | 2 | 1 |
| 3 | Animas | 1 | 0 | 1 | 0 | 0 | 1 |
| 3 | Gila-San Francisco | 0 | 0 | 0 | 1 | 0 | 0 |
| 3 | Mimbres | 0 | 0 | 0 | 0 | 0 | 1 |
| 4 | Lower Rio Grande | 4 | 1 | 6 | 0 | 4 | 0 |
| 4 | Tularosa | 0 | 2 | 2 | 1 | 1 | 0 |
| 5 | San Juan | 0 | 2 | 0 | 0 | 0 | 1 |
| 6 | Upper Rio Grande | 2 | 4 | 5 | 1 | 9 | 3 |
| 6 | Upper Pecos | 5 | 3 | 3 | 3 | 1 | 0 |
| 7 | Canadian River | 2 | 0 | 1 | 0 | 2 | 0 |
| 7 | Clayton | 4 | 1 | 1 | 0 | 0 | 1 |
| 7 | Tucumcari | 0 | 0 | 2 | 0 | 3 | 0 |
| | Surface water | 0 | 1 | 1 | 0 | 0 | 0 |
| | Total | 67 | 73 | 56 | 71 | 63 | 65 |

per Pecos Basins, and performed or supervised five-year water-level measurements in these basins and the Mimbres Basin. Bureau staff also performed or supervised annual water-level measurements in the Curry-Portales, Estancia, Santa Fe, Tularosa and Upper Rio Grande areas.

Loss of the librarian position in FY12 resulted in closure of the OSE Library to public use, reduction in hours from full time to an average of 50 hours per month, and significant changes to library services such as interlibrary loan. Nevertheless during the FY12-14 period, 685 requests for information and/or material were processed using staff, contractor and volunteer resources. Catalogers contributed 275 original records to an international database, and used 2,460 existing records to increase the library holdings in the State Library online catalog to over 21,000 items. •



The Office of the State Engineer staff held an Open House In November of 2013 following completion of library remodeling. New books, new rolling space-efficient shelving, and a new table and chairs became part of the refreshed look of the OSE Library.

Dam Safety Bureau

The Office of the State Engineer is responsible for regulating dams in the state of in New Mexico. The Dam Safety Bureau works to ensure regulatory compliance and to assist owners in ensuring that dams are operated as safely as possible. The Bureau carries out a number of activities to ensure compliance and promote dam safety. Some of the Bureau’s main tasks are:

- Dam safety inspections with owner coordination and consultation,
- Review of documentation for dam modifications and rehabilitation or construction,
- Issuing permits for construction or modification of dams,
- Review of dam monitoring data,
- Review and approval of Operations and Maintenance manuals for dams,
- Review and approval of Emergency Action Plans for High and Significant hazard dams,
- Inspections of dam construction and rehabilitation projects,
- Management of state Capital Outlay grants funds for dam rehabilitation and other projects.

Dams are assigned a hazard potential classification that is a measure of the potential downstream damage if the dam were to fail. The failure of a dam classified as High Hazard potential will cause loss of life while a failure of a dam classified as Significant Hazard potential is

expected to cause interruption of lifeline infrastructure and significant property damage but no probable loss of life. Table 1 lists the hazard classification system for dams. The current inventory of New Mexico jurisdictional dams includes 297 dams with 166 in the High Hazard category, 47 in the Significant Hazard category, and 84 that would cause damage only to the owner’s property in a failure event (Low Hazard dams). Ten dams have been reclassified to High Hazard Potential in the past fiscal year as a result of field inspection and preliminary inundation mapping activities performed by the Bureau. The New Mexico jurisdictional dam inventory does not include dams that are operated by the Federal government or dams that are located on sovereign tribal lands.

Dam Safety Inspections and Findings

During the 2012 and 2013 fiscal years, the Bureau inspected 64 and 91 dams, respectively. During FY 2014 the Bureau inspected 107 dams. The budgetary performance goal for the Bureau is 100 dams per fiscal year. The number of inspections was low in prior fiscal years because of vacancies in engineer positions during that time period. Inspections were increased in FY13 partly through the use of contract services that were funded by a grant from the Federal Emergency Management Agency. An engineer position was filled in July 2013 which provided staffing for each of the Bureau’s funded positions. The Bureau has one additional engineer position on its roster that is to be filled in FY15.

On occasion, serious safety deficiencies are observed during an inspection. When the deficiency is an im-

Table 1 -- Dam Hazard Classification Criteria

| Potential Harm in Failure Scenario | Hazard Classification |
|---|-----------------------|
| Loss of life with damage to property, environmental damage | High |
| Damage to lifeline infrastructure, property and/or environmental damage | Significant |
| Damage to the dam owner’s property only | Low |

mediate threat to life and property, the State Engineer will issue a safety order following consultation with the Bureau. The safety order may impose operating restrictions and will require action by the owner to address the deficiency. A copy of the safety order is sent to the New Mexico Department of Homeland Security and Emergency Management to advise that a potential emergency is pending. The Bureau recommended that a safety order be issued in FY14 for one flood control dam, which was issued by the State Engineer.

The Bureau adopted the federal government’s dam condition classification definitions for New Mexico dam inspections in 2008. Dams are given ratings of Satisfactory, Fair, Poor, or Unsatisfactory based upon definition

criteria. Table 2 lists criteria that is used to assess the condition of dams in New Mexico.

Under federal criteria, a dam is classified as being in poor condition if critical documentation is not available. Many of the older New Mexico dams lack documentation on the design and this creates uncertainty that can’t be overlooked. However, this deficiency can be corrected with an engineering evaluation. Table 3 lists the number of jurisdictional dams in the state in the various condition classifications. Dam safety inspections have identified a total of 221 deficient dams. Table 4 provides a summary of the general types of deficiencies found in the New Mexico jurisdictional dams. Of these dams, 121 are in the High Hazard Classification. Thirty-nine of 47 Significant

Table 2 – New Mexico Dam Condition Assessment Criteria

| Condition Assessment | Condition Definition | OSE Spillway Risk Guidelines |
|----------------------|---|--|
| Satisfactory | No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions in accordance with State Engineer rules and regulations for dams or tolerable risk guidelines. | Spillway capacity \geq 70% of the spillway design flood (SDF). |
| Fair | No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range [for the owner] to take further action. | Spillway capacity $<$ 70% but \geq 25% of the SDF. |
| Poor | A dam safety deficiency is recognized for loading conditions, which may realistically occur. Remedial action is necessary. A poor condition is also used when uncertainties exist as to critical analysis parameters that identify a potential dam safety deficiency. In such cases further investigations and studies are necessary. | Spillway capacity $<$ 25% of the SDF. |
| Unsatisfactory | A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution. | |

Table 3 – Condition Rating Summary for Jurisdictional Dams

| Hazard Class | Satisfactory | Fair | Poor | Unsatisfactory |
|--------------|--------------|-------------|-------------|----------------|
| High | 44 (27%) | 29 (17%) | 89 (54%) | 3 (2%) |
| Significant | 8 (17%) | 3 (6%) | 36 (77%) | 0 |
| Low | 22 (27%) | 11 (13%) | 48 (58%) | 2 (2%) |

Table 4 – Dam Deficiency Summary -- New Mexico Jurisdictional Dams

| Hazard Class | Spillway Capacity (percent of required) | Seepage | Outlet and/or Gates | Severe erosion and/or stability | Maintenance needs | Lack of Critical Design Information |
|--------------------|--|---------|---------------------|---------------------------------|-------------------|-------------------------------------|
| High Hazard | 60 dams below 50% capacity 16 dams below 70% capacity | 7 dams | 5 dams | 10 dams | 35 dams | 77 dams |
| Significant Hazard | 12 dams below 50% capacity 5 dams below 70% capacity | | 2 dams | 5 dams | 15 dams | 27 dams |
| Low Hazard | 15 dams below 50% capacity 3 dams below 70% capacity | 2 dams | 13 dams | 13 dams | 27 dams | 33 dams |

geotechnical and hydrologic analyses and construction progress reports. State regulations require owners of High Hazard and Significant Hazard dams to hold and exercise an Emergency Action Plan (EAP) and to develop and use an Operations and Maintenance (O&M) Manual. The compliance rate for this regulatory requirement is

Hazard Dams have deficiencies and 61 of 83 Low Hazard Dams have deficiencies. Many dams have multiple deficiencies. Insufficient auxiliary spillway capacity is the most common deficiency. This deficiency is related to the capacity of the dam to safely endure an extreme rainfall event. Seepage and problems with gates and outlet works are a significant problem for a few dams. Maintenance deficiencies are problematic because they reduce the life and overall safety of the dam. The number of deficient dams can be expected to increase over time for a number of reasons. Many of the dams have reached their design life and are developing problems as a result of age. Some dam owners take a proactive approach to dam operation and perform maintenance that keeps problems from developing. However, a number of entities who own dams do not have sufficient funds or capability to maintain and rehabilitate their dams. Funding for rehabilitation for dams is necessary to bring dams up to a satisfactory and safe condition.

Engineering Review and Permitting

The Dam Safety Bureau reviewed engineering plans and investigations for 34 existing dams during fiscal year 2012, 28 existing dams during fiscal year 2013 and 58 existing dams in fiscal year 2014. These documents include permit documents for rehabilitation or modification,

less than 30 percent for High Hazard potential dams and about 10 percent for Significant Hazard potential dams. Given the number of deficient dams, these two documents are considered critical for addressing the safety of dams. In FY12 and FY13 the Bureau reviewed 35 and 19 breach analyses and EAPs and 27 and 17 O&M manuals, respectively. During FY14 the Bureau reviewed 18 breach analyses and 14 O&M manuals. When these documents are accepted for filing the number of EAPs and O&M manuals will be increased but a significant need remains to develop these documents for other dams in New Mexico. The expense for development of these documents is the most common stated obstacle to compliance.

Capital Outlay Grant Management

The Bureau manages Capital Outlay grant funds that are appropriated for engineering and rehabilitation of dams and for other projects that are given to the Office of the State Engineer for oversight. Management of these funds requires the Bureau to work with grantees to prepare a scope of work, evaluate engineering proposals, review project deliverable items, manage contracts, and coordinate activities and decisions with the dam owner. Twelve Capital Outlay projects were assigned to the State Engineer in the 2013 legislative session and an additional eight were assigned in the 2014 session.

New Dams and Dam Rehabilitation Activities

One new flood control dam was permitted in Bernalillo County and a number of public and private dams were rehabilitated in the FY12-14 time period. Some of the public projects were funded with state Capital Outlay appropriations and required the Bureau to actively manage the grant funds. Some of the dam rehabilitation projects in the state are described below.

Cabresto Dam is in the Carson National Forest in Taos County and is jointly owned by the Cabresto Lake Irrigation Company and Llano Community Ditch Association. The dam provides irrigation water for these acequia systems. The dam had serious safety deficiencies that were corrected by a reconstruction project funded by state Capital Outlay funds. The State Engineer provided full project management services for design and construction of this project in FY12 and 13 through the Dam Safety Bureau. ASI Dam and Water Resources Constructors constructed the project with construction management by RJH Engineering Inc. Construction of the major components of the dam was completed in early 2013 and punch list items are currently being addressed to ensure that the operation of the dam meets design intent.

Los Alamos Canyon Dam is located in and owned by Los Alamos County and it provides water for recreation and irrigation. The rehabilitation project was permitted in FY2011 to correct spillway and capacity issues. Construction of the rehabilitation project was completed in mid-2013.

Town of Springer Dams 1 and 2 are in Colfax County. The two dams provide the drinking water supply for the town. The dams were under storage restrictions due to concerns

with the stability of the embankment. A design was completed and permitted in fiscal year 2011 with a two-phased construction approach. Construction funds were appropriated in the 2013 legislative session and bidding and construction of the improvements took place in FY14. The Bureau was actively working in FY14 with the owner and their engineer to develop a modification to the design to reduce construction costs.

Lake Roberts Dam is located in Grant County and is owned and operated by the New Mexico Department of Game and Fish. It provides recreation and fish habitat. Dam modifications were approved by the Bureau and construction began in August 2013. Improvements include reconstruction of the auxiliary spillway and construction of a raised section for the dam. Construction was completed in FY14.

Talpa Dam in Taos County is a privately owned irrigation dam that had a number of deficiencies. The dam had storage restrictions placed on it because of these deficiencies. The owners of the dam completed rehabilitation construction in 2013 and it was accepted by the



Cabresto Dam construction, 2012

Bureau. The storage restrictions were lifted by the State Engineer following acceptance of the improvements.

Bradner Dam in San Miguel County is owned and operated by the City of Las Vegas. The city is planning to increase the storage capacity of the reservoir and was given an appropriation of Capital Outlay funds to develop the design for the improvements. The Bureau has been active in working with the city and their engineer to provide direction that can keep the project on schedule.

Boca Negra Dam is a new dam in Bernalillo County. The dam provides flood protection on the west side of Albuquerque in the Boca Negra/Mariposa Arroyo system. Construction of the dam was permitted by the Bureau in late 2012 and was completed in FY14.

Dam Safety Regulations

No changes were made to the dam safety regulations in the FY2012-2014 time period. The Bureau is continually reviewing its application of the regulations and may consider amendments in the future.

Outreach and Technical Projects

The Dam Safety Bureau makes efforts to communicate with dam owner groups and with professionals engaged in dam safety engineering. Bureau staff meets with the New Mexico Watershed and Dam Owners Coalition and soil and water conservation districts and groups and has made presentations to these groups on a number of topics. The Bureau has plans to work with owners groups on training activities and other common interest areas.

The Bureau will be undertaking a project to revisit the methodology that is used to design dam spillways. The methods for estimating Probable Maximum Precipitation (PMP) are in need of updating and the Bureau plans to develop and implement a statewide model that can be used by dam owners and their engineers to design efficient spillway upgrades.

The Bureau received one-year grants from the Federal Emergency Management Agency in FY2012, 2013 and 2014 to improve the New Mexico Dam Safety Program. Grant funds were used to sponsor the development

of inundation mapping for a number of dams in New Mexico. The Bureau provided the dam owners with the mapping needed to develop Emergency Action Plan can be developed for those facilities. FY12 and FY13 grant funds were used to contract for dam safety inspections to help the Bureau to try to meet its performance goal while staff positions remained unfilled. Grant funds have also been used to provide training opportunities to dam safety staff. •

Water Use and Conservation Bureau

The Water Use and Conservation Bureau provides expert analysis to quantify water requirements and prepares professional reports for the water resources investigations and adjudication activities of the Water Resources Allocation and Litigation and Adjudication programs. Every five years, the Bureau inventories surface and groundwater withdrawals by category, county, and river basin and publishes the New Mexico Water Use by Categories report. The Bureau assists public water suppliers in planning and carrying out water conservation programs, and develops and distributes educational programs to public water suppliers, businesses, the public, and students. In addition, at the request of county commissions, staff provides opinions of water availability and of water supply plans for proposed subdivisions throughout the state.

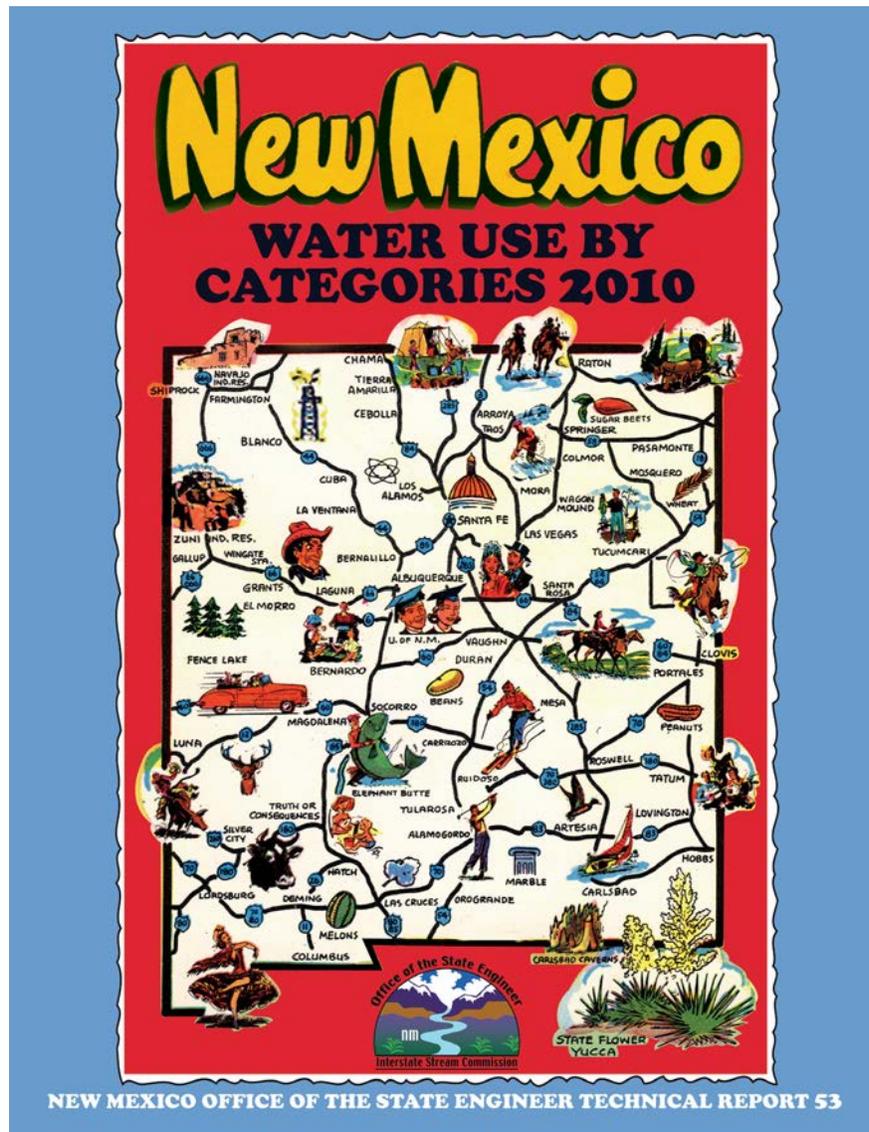
During fiscal years 2012, 2013, and 2014, the Bureau continued to support the Office of the State Engineer Litigation and Adjudication Program through the determination of irrigation water requirements (consumptive irrigation requirement and farm delivery requirement) and preparation of the associated expert reports. Bureau participated in depositions in the Rio San Jose adjudication, provided an expert report for the Animas adjudi-

cation, and completed a farm delivery requirement analysis for the Rio Gallinas.

The Bureau is working on a request from the Water Rights Division to determine an administrative consumptive use value for the Salt Basin for licensing purposes.

The Bureau provided technical assistance and review for 40 year water plans and water conservation plans. Also, the Bureau completed the New Mexico Water Conservation Planning Guide for Public Water Suppliers, Technical Report 53 in the fall of 2013.

The Bureau worked with the Interstate Stream



The New Mexico Water Use by Categories 2010 report

Commission to identify the agricultural water use for the Upper Rio Grande Water Operations Model.

The Bureau participated in the New Mexico Governor's Drought Task Force Drought Monitoring Work Group, prepared online Monthly Status Reports on drought conditions in the state, and assisted with coordination of the Drought Task Force meetings. Governor Martinez issued an Executive Order in May 2012 directing the Drought Task Force to meet each quarter. In FY13, a draft Impact Assessment Report was prepared. Information on the drought status and monthly

reports can be found at ose.state.nm.us/DroughtTaskForce/index.html.

New drought training materials were developed and presented on drought preparedness at the New Mexico Rural Water conferences in Taos and Las Cruces in the fall of 2013.

An important task performed by the Bureau is the review of proposed subdivisions throughout the state. The New Mexico Subdivision Act states that the board of county commissioners shall request opinions from the State Engineer to determine whether the subdivider can fulfill the requirements related to water. In fiscal years 2012, 2013, and 2014, the Bureau reviewed 131 subdivision and development proposals and issued positive opinions on 32 proposals and negative opinions on 62 proposals. Bureau staff also provided technical assistance on 37 subdivision-related activities to county staff, subdividers, developers, consultants, and the public.

The Bureau maintains and updates a database containing a summary of all subdivisions and development reviews. This database can be accessed on the agency website at www.ose.state.nm.us/water_info_subdivision.html. The Office of the State Engineer publication on the requirements of subdivision proposals and review, *Water Conservation and Quantification of Water Demands in Subdivisions: A Guidance Manual for Public Officials and Developers*, is also available online at www.ose.state.nm.us/publications/tech_rpts/rpt-48/rpt-48-toc.html. The Bureau continues to assist drinking water suppliers in implementing the most state-of-the-art approaches for system analysis.

The Bureau received the following US Bureau of Reclamation grants:

- **New Mexico Water Use Census for \$100,000:**
This partially funded the New Mexico Water Use by Categories 2010 report. This report is the most comprehen-

sive, current and useful New Mexico water use data available to the public, and the 2010 report was completed and published in the fall of 2013. The report is published by the Office of the State Engineer every five years. Previous reports can be accessed on the agency website at www.ose.state.nm.us.

- **New Mexico Fix a Leak Campaign for \$10,000:**
The Bureau, along with partners, promoted Fix a Leak Week (FALW) with The Bad Flapper Campaign, consisting of radio and television commercials that aired on KOAT-TV and Estrella TV for three weeks in both 2012 and 2013. The commercials featured a silent spokeswoman set in the roaring twenties who dared to reveal the pent up secrets to saving money and saving water, starting with the toilet flapper. The "Fix A Leak Week" campaign initiated by the US Environmental Protection Agency's (EPA) WaterSense® program included the following partners: Albuquerque Bernalillo County Water Utility Authority (AB-CWUA), City of Gallup, City of Las Cruces, City of Rio Rancho, City of Santa Fe, Los Alamos County, Santa Fe County, Bernalillo County, New Mexico Rural Water Association, New Mexico Water Conservation Alliance, Bureau of Reclamation, and Intel, Corp.



A child is drawn to the colorful waterlilies in the meter testing display set up by the Water Use and Conservation Bureau at the Xeriscape Conference.

- **Improving Crop Coefficients for the Middle Rio Grande for \$150,000:** The project is an assessment of irrigation water use and depletions in the Middle Rio Grande (MRG) that give the agency a better un-



Water Use and Conservation Bureau co-created a "Bad Flapper Campaign" with the commercial airing on television stations throughout the EPA's Fix A Leak Week.

derstanding of agricultural water use.

The Bureau received an Excellence Award from the Environmental Protection Agency for their its FALW campaign activities and the Gold Medal Award for best interactive app-based program for the Interactive Plant List. The Bureau, New Mexico State University's Center for Landscape Water Conservation, and NMSU's Learning Games Lab developed the app on how to xeriscape or landscape with water-smart plants. It is the first of its kind to deal specifically with plants that are both suitable to and commercially available in New Mexico. The app also

earned an Honorable Mention Award for Best Innovative Use of Communication Technology.

The Water Conservation Program coordinates water conservation activities statewide. In fiscal years 2012, 2013, and 2014, the Bureau's active education and outreach programs were aimed at drinking water suppliers and the public. Fix A Leak Week during March is a campaign aimed at reminding citizens that fixing leaks in household plumbing fixtures and irrigation systems reduces the demand on the state's water supply, and also saves money. The 2012 campaign focused on faulty toilet flappers and was promoted with the Bad Flapper Campaign. The 2013 FALW emphasis was on outdoor household leaks in addition to faulty toilet flappers. The 2014 FALW emphasis was on Chasing Leaks and focused on fixing indoor leaks. Leak detection and repair information kits, and dye tablets to identify toilet leaks, were widely distributed in 2012, 2013, and 2014. Joint FALW events were held in Albuquerque, Gallup/McKinley County, Rio Rancho, and Santa Fe/Santa Fe County.

The Bureau also participated in the Santa Fe Children's Water Fiesta in 2014 and provided educational outreach to about 125 fourth graders each day for two days. During 2014, the Bureau participated in the Santa Ana Environment Festival.

The Bureau works closely with several state and federal agencies. Partnerships include annual work with the Department of Finance and Administration and the Environment Department on review of Water Trust Board grant applications. When necessary, the Bureau works with the Energy, Minerals, and Natural Resources Department on the Public Facility Energy Efficiency and Water Conservation Act. •

The Hearing Unit

The Hearing Unit is responsible for conducting administrative hearings and ensuring the expeditious and orderly handling of all administrative and enforcement matters consistent with the requirements of due process, and providing mediation services for the State Engineer on protested and aggrieved water rights applications and on disputed enforcement actions. During FY2012, 2013 and 2014, the number of docketed cases varied, with FY 14 exhibiting a sharp increase in the number of docketed cases.

Fiscal Years 2012-2014

During FY 2012, the Hearing Unit docketed 55 new cases. During the same period, 51 matters were closed. Of the closed matters, the Hearing Unit issued 8 Report and Recommendations, and 43 final dispositive orders. The final dispositive orders included: 28 applications remanded for disposition, and 15 hearings dismissed.

During FY 2013, the Hearing Unit docketed 57 new cases. During the same period, 48 matters were closed. Of the closed matters, the Hearing Unit issued 10 Report and Recommendations, and 38 final dispositive orders. The final dispositive orders included: 15 applications remanded for disposition, and 23 hearings dismissed. The final dispositive orders included: 4 applications granted in whole or in part, subject to conditions, 5 applications denied, and 29 dismissed upon withdrawal.

During FY 2014, the Hearing Unit docketed 152 new cases. During the same period, 61 matters were closed. Of the closed matters, the Hearing Unit issued 4 Report and Recommendations, and 57 final dispositive orders. The final dispositive orders included: 20 applications remanded for disposition, 18 hearings dismissed, and 19 removed from the Hearing Unit docket due to a resolution of issues between the parties.

Electronic Capture of Documents

The Hearing Unit continues to scan all documents within its case files and store the documents in an elec-

tronic repository. The goal is to capture all documents within case files dating back to the inception of the Hearing Unit to ensure that all documents will be available electronically.

Alternative Dispute Resolution

During FY 12, 13, and 14 the Office of the State Engineer continued to utilize the Alternative Dispute Resolution (ADR) component available within the administrative hearing process. The State Engineer's ADR officer, the State Engineer's Hearing Examiners, and other OSE staff continue to review and refine the procedures for ADR so that they complement the administrative hearing process. The Hearing Unit anticipates that ADR will continue to be increasingly important in the hearing process.

Decisions On Appeal

The status of selected State Engineer decisions, referenced in prior annual reports, is as follows:

- Hearing Nos. 13-017 & 13-017, Beckham Ranch, Inc., OSE File Nos. J-25 and J-26.**
Applicant Beckham Ranch appealed the State Engineer's decision of November 5, 2014, declaring that the Applicant failed to show that the proposed appropriations would not impair existing permits and water rights and failure to show that unappropriated water was available to satisfy the Applications. The appeal was filed with the Fifth Judicial District Court on December 1, 2014 (Case No. D-506-CV-201400960). The district court case is pending.
- Hearing No. 12-037, Mohsen and Hengameh Raissy, OSE File No. E-194-B and E-194-C.**
Applicants Mohsen and Hengameh Raissy appealed the State Engineer's decision of July 16, 2013, confirming that the WRD properly denied the Application on the basis that Applicants failed to comply with the conditions of approval for Permit Nos. E-194-B and E-194-C. The appeal was filed with the First Judicial District Court on August 8, 2013 (Case No. D-101-CV-2013-02092). The district court case is pending.

- **Hearing No. 12-020, Waterfall Community Water Users Association, OSE File No. SD-02756.**
Applicant Waterfall Community Water Users Association appealed the State Engineer's decision of September 17, 2013, granting the WRD's Motion for Summary Judgment and rejecting the Application. The appeal was filed with the Twelfth Judicial District Court on October 30, 2013 (Case No. D-1215-CV-201300684). The district court case is pending.
- **Hearing No. 12-011, Vanetta R. Perry and City of Santa Fe, OSE File No. SD-04741 into RG-20516 et al.** Protestant Wild Earth Guardians appealed the State Engineer's decision of December 18, 2012, granting Applicant's Motion for Partial Summary Judgment and declaring that Protestants do not have standing to object. The appeal was filed with the First Judicial District Court on February 14, 2013 (Case No. D-101-CV-2013-00154). The district court case was dismissed for lack of jurisdiction on February 20, 2013.
- **Hearing No. 12-004, Roca Honda Resources, LLC, OSE File No. B-1706 PODS 12 - 31.**
Protestant Pueblo of Acoma appealed the State Engineer's decision of December 10, 2013, directing the WRD to grant the Application and to issue the temporary permit. The appeal was filed with the Eleventh Judicial District Court on February 11, 2014 (Case No. D-1113-CV-2014-00020). The district court case is pending.
- **Hearing No. 11-008, Monterey Water Company, Larry A. Caid, and William I. Giron, OSE File No. SD-04551 into RG-43542 et al.**
Applicant Monterey Water Company appealed the State Engineer's decision of May 23, 2012, which found that the Applicant forfeited the water right at issue. The appeal was filed with the Thirteenth Judicial District Court on June 12, 2012, (Case No. D-1314-CV-2012-00708). The district court case is pending.
- **Hearing No. 11-007, Albuquerque Bernalillo County Water Utility Authority (ABCWUA), OSE File No. SP-4831.**
Applicant ABCWUA appealed the State Engineer's decision of December 12, 2012, declaring that no water was available for appropriation to fulfill the application. The appeal was filed with the Second Judicial District Court on December 28, 2012 (Case No. D-202-CV-2013-00153). The district court case is pending.
- **Hearing No. 10-020, Aquifer Science, LLC, OSE File No. S-2618.**
Applicant Aquifer Science appealed the State Engineer's decision of November 19, 2014, declaring that water was not available to satisfy the Application. The appeal was filed with the Second Judicial District Court on November 19, 2014 (Case No. D-202-CV-2014-07209). The district court case is pending.
- **Hearing No. 09-096, Augustin Plains Ranch, LLC, OSE File No. RG-89943.**
Applicant Augustin Plains Ranch, LLC appealed the State Engineer's decision of March 30, 2012, denying the Application. The appeal was filed with the Seventh Judicial District Court on May 24, 2012 (Case No. D-728-CV-2012-000008). The district court case was appealed to the Court of Appeals on March 26, 2013 (Case No. 32,750). The Court of Appeals affirmed the decision of the district court. A corrected Application has been refiled with the Water Rights Division.

Copies of selected State Engineer hearing decisions and the Hearing Examiner's Report and Recommendation are posted on the agency's website (www.ose.state.nm.us). To view information concerning hearing matters select "Water Information" from the index at the agency's home page. •

8

Litigation and Adjudication Program

The chief counsel serves as the legal advisor to the State Engineer, supervises all litigation in the district courts, and handles all appeals to state and federal appellate courts. The chief counsel also advises the deputy chief counsel, who directly supervises the work of Litigation and Adjudication Program (LAP) attorneys and technical staff in water rights adjudications and administrative proceedings.

LAP attorneys are commissioned as special assistant attorneys general to represent the State of New Mexico in all water rights adjudications in the state and federal district courts. LAP attorneys also represent the Water Rights Division of the Water Resources Allocation Program in all water-related administrative hearings and the State Engineer in appeals of his administrative decisions to the courts. They also conduct legal proceedings on the State Engineer's behalf to prevent illegal uses of water.

LAP's technical staff in the Hydrographic Survey and Mapping Bureau performs hydrographic surveys and provides the foundation documents for all adjudications. Other survey staff are assigned to specific adjudication bureaus and work closely with legal staff to provide technical and field support for ongoing adjudications.

The attorneys, engineers, surveyors, legal assistants, and administrative support staff conducting water rights adjudications are organized into three adjudication bureaus located in Santa Fe: Northern New Mexico, Lower Rio Grande, and Pecos. LAP also maintains an office in Las Cruces, staffed with technical personnel to support the Lower Rio Grande adjudication and serve as a local contact point for water rights owners involved in that adjudication.

Water Rights Adjudications

Water rights adjudications are comprehensive court proceedings required by state law to determine all rights to the use of the state's waters in a particular stream system. Each water rights adjudication produces a single court decree that judicially determines the elements of all water rights, for both surface and groundwater, in the stream system. Adjudication decrees facilitate the State Engineer's ability to actively manage the state's waters to protect senior water rights and ensure that New Mexico meets its interstate stream obligations. The adjudication of water rights also provides certainty for water right owners and promotes the state's ability to maintain administrative authority over its waters.

Under State law, the State Engineer is mandated to perform hydrographic surveys and investigations of each stream system and source of water supply in the state, beginning with those most used for irrigation. Typically, before an adjudication suit is filed, the Hydrographic Survey and Mapping Bureau performs a hydrographic survey to locate, map, quantify, and establish priority dates for all water rights within the geographic scope of the adjudication or within a section of the adjudication. Upon completion of the hydrographic survey, the State Engineer transmits its findings to the New Mexico Attorney General, who then files suit on behalf of the State for the judicial determination of each water right within the stream system. In an adjudication suit, the legal basis and elements of each water right are described in a written offer of judgment or proposed consent order, which is then served on the water right owner. During this "subfile phase" of the adjudication, individual water rights are adjudicated between the State and individual defendants, either through negotiation or litigation.

Once each water right has been initially determined in the subfile phase, defendants may challenge the water rights of others during the inter se (literally “among themselves”) phase of the adjudication. After inter se challenges have been resolved, the adjudication court issues a final judgment and decree defining all water rights within the geographic scope of the adjudication.

Twelve adjudications are currently pending in New Mexico courts, involving water rights within the Rio Grande, Pecos, Upper Colorado River, and Lower Colorado River drainages, and the Animas Valley Underground Water Basin. These adjudications include the Pecos River stream system (from its headwaters east of Santa Fe to the Texas state line), initiated in 1956; several tributaries to the Rio Grande, filed between 1966 and 1983; the San Juan River stream system, filed in 1975; the Lower Rio Grande stream system, filed in 1986; the Zuni River stream system, filed in 2001; and the Animas Valley Underground Water Basin, filed in 2005. Within the scope of these adjudications are federal government agencies, irrigation districts, reclamation and conservancy projects, municipalities, counties, community ditches, and an estimated 75,000 individual water right owners. In addition to the claims of non-Indians based on state water law, New Mexico’s stream systems also are subject to the water right claims of Indian Pueblos, Tribes, and Nations. Indian water right claims are of critical significance because of their claimed early priorities and considerable size. Comprehensive stream system adjudications are necessary to fully determine and quantify these claims. Under the federal McCarran Amendment and related case law, the adjudication by a court of all water rights in a stream system is the only way to determine Indian water right claims so that they can be integrated into a uniform and efficient system of water rights administration.

Hydrographic Survey and Mapping Bureau

Hydrographic survey staff conduct hydrographic surveys and provide technical services in support of water rights adjudications throughout the state. In addition to the Hydrographic Survey and Mapping Bureau, hydrographic survey staff are dedicated to and work in each of LAP’s three adjudication bureaus (Lower Rio Grande, Northern New Mexico, and Pecos).

The hydrographic survey component of an adjudication can be divided into three general phases. The first phase is the compilation of data on water uses in the area to be adjudicated and the preparation of a hydrographic survey report which organizes that data into “subfiles.” During this phase, hydrographic survey staff compile and analyze data from a variety of sources that are found both inside and outside the Office of the State Engineer. This data includes information on the elements and history of each water use, including point of diversion, place and purpose of use, ownership, current and historical aerial imagery, and any other data necessary to legally describe and map the water right. This phase includes fieldwork to collect and verify the data compiled in the subfiles. Each hydrographic survey is unique in that each area being surveyed will have a different history and different types of data available. Hydrographic survey staff adapt this basic approach as needed in response to those local differences.

At the completion of this initial phase, a completed hydrographic survey report for all water rights within the scope of the adjudication, or section of the adjudication, is filed with the State Engineer, and a copy is provided to the special assistant attorneys general who prosecute the adjudication on behalf of the State. The survey report is a compilation of all identifiable water rights, their elements and validity at the time they were surveyed, and a map of the lands to which irrigation rights are appurtenant. This filed survey is presumed to be correct, and any party wishing to dispute that information has the burden of proving that it is incorrect.

The next phase of hydrographic survey work coincides with the subfile phase of the adjudication. During this phase hydrographic survey staff work closely with individual water right owners and the State’s attorneys to resolve disputes related to individual water rights. Survey staff provide technical support to adjudication field offices, meet frequently with individual water right owners, and perform numerous field checks in response to their requests. The significant amounts of fieldwork required make this the most work intensive phase of the adjudication.

When all subfiles are initially adjudicated by court order, the work of hydrographic survey staff transitions into the third and final stage of adjudication technical work. In this phase survey staff produce the documentation needed for inter se proceedings, the entry of a partial final judgment and decree, and the transfer of the final decree data to the State Engineer for administration.

All hydrographic surveys are now based on geographic information systems and computer mapping technologies. Interpretation of aerial imagery is performed using digital ortho-rectified imagery (computer-generated imagery corrected for visual distortions caused by orientation and terrain), and all field measurements are made with global positioning systems receivers. The Hydrographic Survey and Mapping Bureau now uses digital ortho-rectified imagery in all its active surveys.

In coordination with other agency programs, the Hydrographic Survey and Mapping Bureau has been acquiring high-resolution digital aerial imagery. This is a long-term program to replace analog aerial photography with computer-based digital imagery. The first digital imagery was purchased in 1999 for portions of the Lower Rio Grande Hydrographic Survey and for portions of the Rio Chama Hydrographic Survey. In 2001 the OSE acquired statewide 1996 digital aerial imagery. In 2003, imagery for the San Juan, Costilla, and Los Piños/San Antonio areas was acquired. In 2004, imagery for the Peñasco/Mescalero area was acquired. In 2005, the State Engineer and Interstate Stream Commission organized a statewide acquisition of digital aerial imagery. In 2008 the State Engineer acquired digital aerial imagery for the Lower Rio Grande and the Fort Sumner areas, and in 2009, together with the Interstate Stream Commission acquired digital aerial imagery for the Middle Rio Grande area and new imagery for the Lower Rio Grande. In 2011 the OSE acquired state wide digital aerial imagery and is expecting to obtain 2014 imagery in the fall of 2014. The ISC also has acquired imagery in 2013 for the Gila area along with one foot imagery for the Middle Rio Grande area in 2011.

Database applications developed by LAP have significantly enhanced the State's ability to store and analyze

the results of a survey. These computer-based tools also allow the State to readily automate the production of maps and basic subfile pleadings for adjudications, and to effectively track the status of individual subfile proceedings. Closer coordination between LAP technical and legal staff has also improved the efficiency of the subfile phase of adjudications.

Administrative Litigation Unit

Attorneys from the Administrative Litigation Unit (ALU) represent the Water Rights Division in administrative hearings before the State Engineer's Hearings Unit on protested or aggrieved applications for water use permits. The attorney assigned to an application first works with the applicant and anyone filing a protest to informally resolve disputed matters to eliminate the need for a formal administrative hearing. If a matter cannot be resolved informally, the application goes to hearing. The goal is to resolve all applications or have them scheduled for a hearing within nine months of being sent to the Hearings Unit.

ALU attorneys also represent the State Engineer in a variety of proceedings in the district and appellate courts. The attorneys represent the State Engineer when any State Engineer decision, after administrative hearing, is appealed to the courts. In addition, the ALU handles cases in the district courts that involve declaratory judgment actions or petitions for mandamus related to pending applications or rulemaking decisions of the State Engineer.

The ALU also brings enforcement actions in the district courts to help the Water Rights Division address issues such as illegal diversions of water or the metering of wells and surface diversions. ALU attorneys are pursuing enforcement actions along the Rio Chama, the San Juan River, the Pecos River, and the Lower Rio Grande and the tributaries and groundwater basins associated with those rivers.

The ALU receives an average of 120 new cases each year. In recent years several of these cases have involved applications that have been protested by one hundred or more water right owners. These applica-

tions continue to challenge the resources of the ALU, as every procedure in the case takes longer, from serving pleadings to large numbers of protestants to holding hearings, where every protestant has a right to testify. Cases with hundreds of parties present new procedural and logistical challenges that the ALU is meeting by developing new methods to deal with communication, service of pleadings, and discovery in the administrative hearing context.

New Mexico Statutes

72-14-3.1 (D) (1) [State water plan statute]: 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.

72-4-13: The State Engineer shall make hydrographic surveys and investigations of each stream system and source of water supply in the state, beginning with those most used for irrigation, and obtaining and recording all available data for the determination, development and adjudication of water supply of the state.

72-4-15: Upon the completion of the hydrographic survey of any stream system, the State Engineer shall deliver a copy of so much thereof as may be necessary for the determination of all rights to the use of the waters of such system together with all other data in his possession necessary for such determination, to the attorney general of the state who shall, at the request of the State Engineer, enter suit on behalf of the state for the determination of all rights to the use of such water, in order that the amount of unappropriated water subject to disposition by the state under the terms of this chapter may become known, and shall diligently prosecute the same to a final adjudication.

72-4-17: In any suit for the determination of a right to use the waters of any stream system, all those whose claim to the use of such waters are of record and all other claimants, so far as they can be ascertained, with reasonable diligence, shall be made parties.... The court in which any suit involving the adjudication of water

rights may be properly brought shall have exclusive jurisdiction to hear and determine all questions necessary for the adjudication of all water rights within the stream system involved.

72-4-19: Upon the adjudication of the rights to the use of the waters of a stream system, a certified copy of the decree shall be prepared and filed in the office of the State Engineer by the clerk of the court, at the cost of the parties. Such decree shall in every case declare, as to the water right adjudged to each party, the priority, amount, purpose, periods and place of use, and as to water used for irrigation, except as otherwise provided in this article, the specific tracts of land to which it shall be appurtenant, together with such other conditions as may be necessary to define the right and its priority.

Review of 2003 State Water Plan Directives

Completing water rights adjudications is one of the eleven common priorities, goals, and objectives identified in the 2003 State Water Plan. The 2003 plan also sets out four implementation strategies for the completion of New Mexico's 12 pending water rights adjudication suits. These implementation strategies call for the development of plans and the prioritization of resources for the completion of adjudications and periodic reporting to update the public on progress towards completion. In conjunction with the courts, the Office of the State Engineer and the Special Assistant Attorneys General representing the state in water rights adjudications have carried out these strategies over the course of the past ten years.

The courts, the Office of the State Engineer and the state's adjudication attorneys have implemented numerous process and technical improvements to make the adjudication process more efficient and transparent and less adversarial for water right owners. These include:

- New state court procedural rules adopted specifically for adjudications;
- The designation of a single judge assisted by special

masters for all state court adjudications;

- Use of geographic information systems, databases, field GPS units, and other computer-based technical tools to conduct hydrographic survey work and prepare documentation to support final adjudication decrees;
- Use of field offices, individual field visits, and informal negotiation to address and resolve objections of water right owners before resorting to litigation;
- An ombudsman program at the Utton Center at the University of New Mexico School of Law to help water right owners better understand and navigate the adjudication process;
- Enhanced public notice through court web sites and electronic service of documents; and
- Use of mediators to resolve disputes short of trial.

Pursuant to one of the new procedural rules adopted by the New Mexico Supreme Court for adjudications, the attorneys representing the state in adjudications prepare a report each June identifying how the state's available adjudication personnel will be allocated across the twelve pending adjudication suits in the coming fiscal year. The report also identifies, for each adjudication, the matters those personnel will be working on and the matters that were completed in the previous fiscal year. The report is filed in the state adjudication courts and made available to all adjudication defendants. At the beginning of each fiscal year the state's attorneys present and discuss the report in a joint working session with the adjudication judges, special masters and interested parties.

Current Status

Twelve adjudication suits are currently pending in New Mexico courts, involving water rights within the Rio Grande, Pecos, Upper Colorado River, and Lower Colorado River drainages.

Half of these suits are pending in state court, and half in federal court. These adjudications include the Pecos River stream system (from its headwaters east of Santa Fe

to the Texas state line), initiated in 1956, seven adjudications on tributaries to the Rio Grande, filed between 1966 and 1983, the San Juan River stream system, filed in 1975, the Lower Rio Grande stream system, filed in 1986, and the Zuni River stream system, filed in 2001. These adjudications encompass the water right claims of an estimated 72,000 individual claimants, federal government agencies, irrigation districts, reclamation and conservancy projects, large municipalities, community ditches, and most of New Mexico's Indian Pueblos, Tribes, and Nations.

In the decade since 2003, New Mexico has made significant progress addressing all of these different types of water right claims in water rights adjudications. During that period, New Mexico's adjudication courts have entered about 10,000 subfile orders determining the elements of water rights held by individuals.

The courts also have conducted numerous, complex, multi-party proceedings to resolve the claims of irrigation districts, federal reclamation projects, acequias and community ditches, and municipalities.

During that same period, three New Mexico adjudications have addressed the water right claims of the Navajo Nation and five Indian Pueblos. These claims are the subject of three pending Indian water rights settlements: the Navajo Nation Water Rights Settlement in the San Juan River adjudication; the Settlement Agreement that resolves the water rights claims of the Pueblos of Nambé, Pojoaque, Tesuque, and San Ildefonso in the Aamodt adjudication; and, the Taos Pueblo Settlement Agreement that settles the water rights claims of Taos Pueblo in the Rio Pueblo de Taos/Rio Hondo Abeyta adjudication. For each of these three settlements, a settlement agreement was executed in 2005 or 2006 by the Tribe or Pueblos and the State of New Mexico.

After passage of federal legislation authorizing each of the settlements in 2009 and 2010, the Secretary of the U.S. Department of Interior signed all three settlement agreements on behalf of the United States.

The San Juan adjudication court entered Partial Final Judgments and Decrees on the Navajo Nation's water rights in November, 2013. The Aamodt and Taos adjudication courts are currently conducting inter se proceedings to determine whether to enter the Partial Final Judgments and Decrees describing the water rights of the Pueblos pursuant to the Aamodt and Taos settlement agreements.

Each of the settlement agreements provides a final determination of the Nation or Pueblos' water rights and federal funding for the construction of water projects that benefit both the Tribe and Pueblos and non-Indian water right owners in the stream systems. •

The Water Rights Adjudication Process

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

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

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

Acequia/Community Outreach

The Community/Acequia Liaison assists the Water Resources Allocation Program with issues and questions regarding water rights transfers, water banking, and the Active Water Resource Management initiative, and often assist Water Masters with issues in the field. The liaison assists the Interstate Stream Commission's Acequia program with the review of bylaws to qualify applicants for funds under both legislative appropriation and federal cost share programs. The liaison meets with acequias at their meetings to advise them on a number of issues including governance, bylaws, easements, and water distribution. The liaison also attends field offices with staff of the Litigation and Adjudication Program in the Gallinas water rights adjudication to assist water right claimants with questions regarding their claims and related acequia concerns. The liaison has also assisted LAP with contacting claimants that have not responded to their adjudication packets. During these fiscal years, the liaison was very busy educating water users throughout the state on Active Water Resource Management, with special emphases in the northeastern part of the state, an area the is being hit hard by this mega drought.

The liaison was also very instrumental in putting together the first Northeastern New Mexico Regional Water Symposium, which was held on the Luna Community

College Campus in Las Vegas, New Mexico. The purpose of the symposium was to engage leadership in understanding the connectivity of regional water planning efforts, to develop ideas for implementing joint water planning efforts, and to develop a collaborative effort for funding of specific water projects. New Mexico State Senator Pete Campos welcomed the participants to the Luna Community College and the first Regional Water Symposium the state. Senator Campos represents the counties of San Miguel, Guadalupe, Colfax, Mora, Harding, Taos and Quay. The Senator noted that communication and working collectively to address water issues was important for the area if we are going to successfully develop solutions. The Senator was very instrumental in helping organize this symposium. The facilitator for this session was Rosemarie Romero, who has effectively facilitated many regional water planning events.

New Mexico State Engineer Scott Verhines noted that drought impacts have been significant for the state and the region. The State is working on a State Water Plan update and is re-thinking the New Mexico regional water planning program. Others presenters were Office of the State Engineer Water Use and Conservation Bureau Chief John Longworth, a member of the New Mexico Drought Task Force; Dr. Andrew Egan, New Mexico Forest and Watershed Restoration Institute at Highlands University; Neal Shafer, New Mexico Environment Department; and Angela Bordegaray, Interstate Stream Commission Water Planner. There were over 100 attendees including acequia members, ranchers, farmers, school representatives, regional hospital staff and county representatives. The topics discussed were watershed management, statewide policy, congressional support, project development, consolidation of plans, data collection/studies, funding sources, and support of any funding request that could be endorsed by this region. The liaison will continue to meet with the New Mexico Acequia Association and the New Mexico Acequia Commission to inform them of any issues coming from the Office of the State Engineer that might involve them or that might interest them. •



An acequia near the Rio Grande

9 Interstate Stream Commission

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

The Commission's authority under state law includes managing the entitlements and obligations of water deliveries of the interstate stream compacts. New Mexico is a party to eight interstate stream compacts including the Colorado River, Upper Colorado River Basin, La Plata River, Animas-La Plata Project, Rio Grande, Costilla Creek, Pecos River, and Canadian River compacts. Commission staff is responsible for negotiating controversies, and for compliance with provisions of the U.S. Supreme Court decisions governing water allocations on the Pecos, Canadian and Gila rivers. The ISC compiles and maintains the report on consumptive use, diversions, and irrigated acreage in the Gila basin required by the 1964 Decree. Actual adjudicated water usage under the Decree is managed by the OSE. To assure compact compliance, staff analyzes streamflow, reservoir levels, and other data on the stream systems and implements projects both within and outside of New Mexico.

The Commission is also authorized by statute 72-14-3 to investigate and develop the water supplies of the state and institute legal proceedings in the name of the state for planning, conservation, protection, and development of public waters. The Commission promotes the development of regional water plans and is responsible for statewide water planning.

In 1985, the New Mexico legislature enacted a statute giving guidance to the OSE on the process for out-of-state uses of water and this led to the 1987 Regional Water Plan Act.

An adequate supply of water is essential to ensure continued economic vitality and quality of life in New Mexico. To this end, the legislation for a regional water planning program, to be administered by the New Mexico Interstate Stream Commission (ISC), was adopted by the New Mexico Legislature in 1987.

Under the State Water Plan Act, enacted in 2003, the Commission was directed to work with the Office of the State Engineer and the Water Trust Board to develop the comprehensive State Water Plan and to review and update it periodically.

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

New Mexico Statutes

72-14-3.1 (E): The Interstate Stream Commission and the Office of the State Engineer shall consult directly with

the governments of Indian nations, tribes and pueblos to formulate a statement of policy and process to guide 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 final adjudication or settlement of all water rights claims by Indian nations, tribes and pueblos located wholly or partially within New Mexico.

- 72-14-3.3: The Interstate Stream Commission shall establish a strategic water reserve and may purchase or lease from willing sellers or lessors or receive through donation surface water or water rights or storage rights to compose the reserve. Water and water rights in the strategic water reserve shall be used to assist the state in complying with interstate stream compacts and court decrees or assist the state and water users in water management efforts for the benefit of threatened or endangered species or in a program intended to avoid additional listings of species.
- 72-1-11 (B)(1) : The “Indian water rights settlement fund” is created in the state treasury to facilitate the implementation of the state’s portion of Indian water rights settlements. The fund consists of appropriations, gifts, grants, donations, income from investment of the fund and money otherwise accruing to the fund, and shall be used to pay the state’s portion of the costs necessary to implement Indian water rights settlements approved by the legislature and the United States congress. The Interstate Stream Commission shall administer the fund and money in the fund is appropriated to the commission to carry out the purposes of the fund.
- P. L. 108–451 NM Unit (2004 Arizona Water Settlements Act (AWSA): Enacted by the Senate and House of Representatives of the United States Congress, it was created to provide for adjustments to the Central Arizona Project in Arizona to authorize the Gila River Indian Community water rights settlement to reauthorize and amend the Southern Arizona Water Rights Settlement Act of 1982, and for other purposes. The annual average of 14,000 acre-feet of additional water from the Gila basin and the up to \$128M in non-reimbursable federal funding is important for New Mexico.

Review of 2003 State Water Plan Directives

The 2003 State Water Plan strongly emphasizes the value of resolving water conflicts and uncertainties with our Tribes, Pueblos and Indian Nations.

The 2003 plan encourages the state to initiate government-to-government talks with Pueblos or Tribes in an efficient way to identify areas where negotiated settlements to water disputes may be possible. Additionally, the 2003 plan provides the state to obtain and commit resources for negotiations, including hydrographic survey and legal staff. The plan also provides the state to make sustained contributions to an Indian Water Rights settlement trust fund or to a separate trust fund.

The Navajo Nation Water Rights Settlement

On April 19, 2005, the Navajo Nation and the state of New Mexico executed a settlement agreement to resolve the claims of the Navajo Nation for use of waters in the San Juan River Basin in northwestern New Mexico. On March 30, 2009 President Obama signed federal legislation that approved the settlement.

In exchange for a release of the Nation’s potentially larger water right claims, the settlement provides for the funding and construction of the Navajo-Gallup Water Supply Project. This \$1.041 billion project includes a pipeline to be constructed by the United States Bureau of Reclamation to bring a renewable surface water supply from Navajo Reservoir to both Navajo and non-Navajo communities in northwestern New Mexico, including the City of Gallup. Construction of the first phase of the Navajo-Gallup Water Supply Project began June of 2012.

On November 4, 2013, the adjudication court entered the Partial Final Judgment and Decrees of the Navajo Nation’s water rights in the San Juan River Basin Adjudication, finally resolving the claims of the Nation to water rights in the San Juan Basin. The decrees are now being appealed to the Court of Appeals by non-settling parties in the adjudication.

The federal legislation authorizing the Navajo Settlement requires a mandatory \$50 million contribution and a non-mandatory \$10 million contribution by the

state toward non-Indian project construction costs of the Navajo-Gallup Water Supply Project. As a result of funds the state has already contributed that are determined to have reduced overall projects costs, combined with cash contributions totaling \$13.6 million from the Indian Water Rights Settlement Fund (see below) New Mexico is within about \$7 million of meeting its cost share obligation.

Aamodt Settlement with Pueblos of Nambé, Tesuque, Pojoaque and San Ildefonso

On May 3, 2006, the state of New Mexico, the Pueblos of Nambé, Tesuque, Pojoaque, and San Ildefonso, the County of Santa Fe and the City of Santa Fe executed a Settlement Agreement to resolve the claims of the four Pueblos to the use of waters in the Nambé Pojoaque-Tesuque stream system ("N-P-T"). Federal legislation approving the Settlement Agreement was enacted into law on December 8, 2010.

The Settlement Agreement determines the water rights of the four Pueblos in the ongoing adjudication of water rights in the N-P-T. While most of the Pueblos' water rights will be adjudicated with senior priorities, the Settlement Agreement also protects non-Pueblo junior water rights through four major provisions, including the construction of a regional water system by the United States to deliver water diverted from the Rio Grande to Pueblo and non-Pueblo users in the basin. The system is to be funded by the United States, the state, and Santa Fe County, and the Pueblos and the County will operate the system. The state's cost-share obligation for the system is \$50 million.

On February 29, 2012, the Interstate Stream Commission allocated \$5 million dollars to the Aamodt Settlement from the Indian Water Rights Settlement Fund, a fund created by state statute to provide the state's share of the implementation of federally-authorized Indian water rights settlements. 72-1-11. The state is currently within \$45 million of meeting its total obligation under the settlement.

Taos Pueblo Settlement

On May 30, 2006, the Taos Pueblo, the state and several Taos-area water right owning parties executed a settlement agreement to resolve the claims of Taos Pueblo to the use of waters in the Rio Pueblo de Taos and Rio Hondo stream systems. Federal legislation approving the settlement was enacted into law on December 8, 2010.

The settlement, when fully implemented, will adjudicate Taos Pueblo's water rights claims and expedite the final adjudication of non-Pueblo claims to water rights in the ongoing Taos area water rights adjudication suit. In exchange for adjudication of the Pueblo's water rights with senior priorities, the Settlement Agreement provides funding for projects and mitigation mechanisms for offsetting surface water depletion effects of groundwater pumping, preserves existing acequia water uses and historic water sharing arrangements between Pueblo and non-Pueblo acequias, and authorizes the allocation of San Juan-Chama Project water to several of the settling parties.'

According to the terms of the Taos Settlement Act, the total cost of the settlement is \$124 million. Of that amount, the state's cost share contribution is \$20.1 million. Respective allocations are to be made of \$1.4 million and \$5 million, from the Indian Water Rights Settlement Fund, and \$915,000 from earlier appropriations. These allocations put the state within \$12.7 million of satisfying its obligation.

Water Planning

New Mexico has 16 water planning regions and one state water plan. The regional water planning program evolved in the 1990s, following the 1987 Regional Water Planning Act. The 16 regional water plans were developed by the regions themselves, with grant assistance from the New Mexico Interstate Stream Commission (ISC). Then, New Mexico Legislature enacted the state water planning statute in 2003. The ISC, in collaboration with the New Mexico Office of the State Engineer and the Water Trust Board, developed the first state water plan that same year.

Regional Water Planning

In the early 1990's (1987), the New Mexico Interstate Stream Commission (ISC) created the 16-region water planning program. The program was developed for the regions, with funding support from the state, to assess their water supplies and plan for meeting future water demands. Regional water plans address the following: the available water supply for a region, current and projected future water demands, and what steps a region plans to undertake to meet future demand with available supply. All 16 regions have completed plans, accepted by the Interstate Stream Commission. The first plan was completed in 1997. The last plan to be completed was the Taos Regional Water Plan in July 2008, marking a milestone in water planning in the state.

Regional water plans contain valuable information about the region's population, available water supplies, water resource needs and plans to meet those needs. The state has a multi-million dollar investment in regional water plans. To fully realize the benefit of that investment and to maintain and enhance the plans' utility. The plans need to be updated regularly, as conditions change. However, state funding has dwindled, and only a few regional planning groups remain active and many no longer meet regularly.

The New Mexico Water Trust Board, which funds water and wastewater projects, uses funding criteria that give preference to projects identified in or consistent with the corresponding ISC regional water plan. The Water Trust Board's statutory basis, the Water Project Finance Act, names the New Mexico State Water Plan as guidance for the board's decisions. The Interstate Stream Commission has the statutory responsibility for both the regional and state water plans, in collaboration with the Office of the State Engineer and the Water Trust Board.

Regional water plans also are to be integrated with the New Mexico's State Water Plan, per the state planning statute. With the state's first water plan in 2003, an ad hoc group of regional water planners was formed to reconcile policy differences between regional plans and the state-wide water plan. That ad hoc group became the Regional

Water Planning Advisory Council (RWPAC), composed of representatives of the 16 planning regions and was convened and staffed regularly by Interstate Stream Commission planners throughout 2008 and 2009. In addition to continuing its work as directed by the commission to provide advice on how to resolve policy differences between the State Water Plan and regional water plans, the RWPAC also provided necessary regional perspectives for public outreach efforts, to update the State Water Plan, as mandated by the state Legislature.

The regional water plans, along with the Regional Planning Handbook and Interstate Stream Commission acceptance guidelines, are on the Office of the State Engineer website ([ose.state.nm.us/Interstate Stream Commission/Planning Division/Regional Water Plans](http://ose.state.nm.us/Interstate%20Stream%20Commission/Planning%20Division/Regional%20Water%20Plans)).

State Water Planning

New Mexico's 2003 State Water Plan has been reviewed twice: once in 2008 and again in 2013. According to state statute, the State Water Plan should be reviewed every five years and updated as necessary to reflect changed conditions. The 2013 five-year review of the original 2003 plan, indicated there were enough changed conditions to warrant an update. The changes include the state's population surpassing the 2 million mark, growing public awareness and concern over climate variability and drought conditions, legal changes such as court decisions and settlements, aging and deteriorating infrastructure, and proposed inter-basin transfers of water, as well as heightened public interest in conservation.

The Interstate Stream Commission revised its approach for updating the plans in order to meet the challenging water scarcity and limited funding available for plan updates. In 2013, most of the state was in "exceptional drought" status for its first half, yet the latter half of 2013 also saw record-setting precipitation in parts of the state, reinforcing the importance of planning for precipitation extremes and climate variability. Other western states, including neighboring states, have been actively planning for dwindling water supplies.

The state recognized how critical it is to undertake a comprehensive planning process that unites both normal conditions and particular situations when water availability is significantly different from normal conditions.

Regions developed their own water plans over the past 20 years. The State Water Plan was written after the Regional Water Plans. Regions developed plans using different assumptions and methodologies. Regional plans lack consistent assessment methodology. Therefore, existing water plans do not provide the basis for an integrated water plan as anticipated by the decision makers.

ISC developed a new approach for regional planning groups to use to update their respective plans and to identify the policies, programs, projects, and funding needs that will help them address the current drought and other long-term planning issues. ISC calculated water supply and demand for the 16 regions and identified legal issues using a common methodology. ISC developed population projections and economic forecasts for the regions to estimate future water use. OSE is providing a guide to legal and institutional issues affecting water supply and management. These elements comprise a “technical report” developed by the state, with consultant services, for each region, leaving the task of identifying water projects, programs, and policy priorities to the regions, who best understand their needs and conditions. The regions are developing their plans through a stakeholder committee, “Regional Steering Committee” that represents all the various water users in a given region. The Regional Steering Committee’s task is to identify regional water planning priorities that will be more closely linked to the Water Trust Board funding process, as well as all water-funding sources, thus resulting in implementation of water plans.

ISC has updated and revised the 1994 Regional Water Planning Handbook to provide a common technical platform and process for updating the 16 regional water plans simultaneously over a two year time frame. This streamlined approach allows updates to be devel-

oped cost-effectively using a common methodology to ensure consistency between the 16 regions and with state water plan and policy. The updated handbook provides a detailed approach for developing this technical data and updating the accepted water plans, and also identifies the respective roles of the ISC, OSE and the regions in developing necessary information. The State Water Plan will integrate the information from the updated regional water plans when regional water plans are completed.

Beginning in January 2014, the ISC convened the state’s 16 regions to form regional steering committees and explain the revised approach. Round 2 regional meetings will begin in the fall of 2014. Technical and facilitation assistance has been provided to each of the regions to help them get re-established. Regional Steering Committee meetings are planned to continue to take place in June 2015. The ISC will assist each region in developing its public involvement plan and developing a list of policies, programs, and projects that will be the basis of future prioritization. The ISC will continue to support the regions’ development of their respective water plans to address water management issues. •

Canadian River Basin Activity

Interstate Stream Commission Administration

Compact/ Decree/Settlement Administration

Ute Reservoir impounds the waters of the Canadian River 32.1 miles upstream from the Texas border. The Interstate Stream Commission owns and operates the dam and reservoir, constructed in 1962. Originally built with a capacity of 110,000 acre-feet, the construction of a raised spillway in 1984 increased the capacity to more than 246,600 acre-feet. However, the conservation pool is limited to 200,000 acre-feet under the 1993 U.S. Supreme Court decree in *Oklahoma and Texas v. New Mexico*.

At the upstream end of the Canadian River Basin, the Commission is also responsible for regulating flows out of Eagle Nest Reservoir in support of a negotiated settlement of the Cimarron River water users. Eagle Nest Reservoir was purchased in 2002 by the New Mexico Game and Fish Commission. Eagle Nest dam operations are the responsibility of the Interstate Stream Commission under the terms of a joint powers agreement with the Department of Game and Fish.

Permit 71 Settlement Water Users Negotiated Settlement (Settlement) Implementation. In the summer of 2008, planning began for improvements to the Eagle Nest water delivery system, as stipulated in the Settlement. Using a legislative appropriation and private matching funds the Settlement parties decided to begin rehabilitation work on the Cimarroncito Creek diversion structure on the Charles Springer Canal, a set of head gates and emergency spillway originally constructed by Charles Springer in 1916. A contractor was selected and work began after the irrigation season. All work was completed by the beginning of the next season and the historic structure was returned to a fully operational state. This was phase one of the project. Phase two of the project included rehabilitation of the CS Canal diversion structure and two heading structures for the Highline and CS turnouts and was completed in 2012.

Canadian River Compact. Under the Canadian River Compact, New Mexico has a right to impound and use the water upstream of Ute Reservoir. Only when stored volumes in Ute Reservoir and other reservoirs downstream of

Conchas Dam exceed 200,000 acre-feet, must water be released to Texas. In fiscal years 2011-13, this threshold was not reached and no water was released from Ute Dam. In March 2012, the annual meeting of the compact commission was held in New Mexico and the March 2013 compact commission meeting was held in Texas.

Federal Management Issues

Eastern New Mexico Rural Water Project

The Eastern New Mexico Rural Water System is a regional water supply project in east-central New Mexico. The purpose of the project is to provide potable water to eight city and county member agencies and Cannon Air Force Base for municipal, commercial, and industrial use.

The project will replace current groundwater supplies from the Ogallala (or High Plains) Aquifer with a renewable surface water supply (from Ute Reservoir). Construction of Ute Dam began in 1959 and was completed in 1963, creating Ute Reservoir to store water for this purpose.

During 2013 the Eastern New Mexico Rural Water System Project began construction of phase one of the intake structure at Ute Reservoir. Phase one of the intake structure consists of the pump shaft, tunnel, screens and a small facility for operation and maintenance of the intake screens with no large building structures. Construction should be completed in 2015 and the Eastern New Mexico Water Utility Authority will begin working on the Interim Groundwater Pipeline. The Interim Groundwater Pipeline will consist of the infrastructure for the Clovis/Portales and surrounding areas to ultimately receive water to from Ute Reservoir, but in the interim, could receive water from agriculture producers to ensure a sustainable water supply until the treatment facility of Ute Reservoir discharge flows is constructed. This is critical as the aquifer is declining at a rapid rate.

Arkansas River Shiner Management Plan

The Commission continued to support the Arkansas River Shiner Management Plan, an Endangered Species Act agreement among New Mexico, Texas, Oklahoma, and the U.S. Fish and Wildlife Service. The plan applies to the Canadian River from below Ute Reservoir down-

stream to Lake Meredith in Texas and provides for control of salt cedar, maintenance of current levels of base flows, management of activities of off-road vehicle enthusiasts, and other voluntary activities that will maintain and enhance the existing habitat of the shiner. New Mexico Department of Game and Fish is monitoring fish populations from Ute dam downstream to the Texas border to establish baseline population data for the Shiner and other species prior to the Eastern New Mexico Rural Water Systems Project coming online and withdrawing significant amounts of water from the reservoir.

The Commission staff has completed the installation of new measurement devices on the outfall structures of Ute Dam to measure and record the baseline seepage from the reservoir. This data is essential for establishing a baseline range of flows prior to water withdrawals from the reservoir. The Commission has committed to maintaining these baseline seepage flows for the benefit of the Arkansas River shiner.

WATER PLANNING AND DEVELOPMENT

Ute Reservoir Shoreline Master Plan

Commission staff worked diligently on the preparation of a Shoreline Management Plan which governs certain aspects of development for Ute Reservoir. This task was accomplished by conducting public meetings and taking input as to what the plan should entail, keeping in mind the objective of protecting Ute Reservoir as a drinking water supply for eastern New Mexico. This plan was approved by the Commission in September 2010 and the Commission continues enforcement of the Plan. •

Colorado River Basin Activity

That portion of New Mexico west of the Continental Divide resides within the Colorado River Basin. Colorado River Basin water used by New Mexico includes a portion of the waters of the San Juan River and its tributaries in northwest New Mexico, tributaries of the Little Colorado River in west-central New Mexico, and the Gila-San Francisco rivers system in southwest New Mexico. New Mexico is signatory to four interstate compacts that allocate portions of the waters of the Colorado River Basin: the Colorado River Compact, the Upper Colorado River Basin Compact, the La Plata River Compact and the Animas-La Plata Project Compact.

Interstate Stream Administration

Upper Colorado River Basin Compact

The Upper Colorado River Basin Compact, signed by Arizona, Colorado, New Mexico, Utah, and Wyoming in 1948 and ratified by Congress in 1949, created the Upper Colorado River Commission (UCRC) to administer its provisions. The UCRC consists of representatives of the United States and all compact states except Arizona, and has an office and staff in Salt Lake City, Utah. During fiscal years 2012, 2013, and 2014, the commissioners and staff were involved in the continued implementation of coordinated operations of Lakes Powell and Mead on the Colorado River pursuant to the Record of Decision (ROD) on the Colorado River Interim Guidelines (Interim Guidelines) for Lower Basin Shortages and Coordinated Operations of Lake Powell and Lake Mead that was signed by the Secretary of the Interior in December 2007.

The commissioners and staff also worked to support congressional appropriations for authorized projects, participated in salinity control program activities and the Glen Canyon Dam Adaptive Management Program, participated in the preparation and submission of an alternative for the preparation of a Long-Term Experimental and Management Plan and Environmental Impact Statement for the operation of Glen Canyon Dam,

participated in the Bureau of Reclamation's Colorado River Basin Study, participated in meetings of the seven Colorado River Basin states and the U.S. Department of the Interior to discuss water management strategies for Colorado River water delivered to Mexico and how such strategies might relate to operation of Lakes Powell and Mead under various storage conditions, began preparation of an emergency drought management contingency plan to prevent the level of Lake Powell from falling to critically low elevations, and continued discussions on the implementation of compact required curtailment policies and procedures.

La Plata River Compact

The State Engineers of Colorado and New Mexico administer the provisions of the La Plata River Compact. Disagreements between the state engineers over Colorado's stateline deliveries of water to New Mexico under the compact continue to occur from time to time.

The La Plata Water Conservancy District in Colorado broke ground on the Long Hollow Reservoir project in July 2012 and completed construction in June 2014. The District plans to use the reservoir storage for developing supplemental water supply for irrigation uses in Colorado to assist the State of Colorado in making the stateline water deliveries required by the La Plata River Compact.

Federal Management Issues

Operating Plan for Colorado River Reservoirs

The 1968 Colorado River Basin Projects Act requires the Secretary of the Interior, in consultation with the Colorado River Basin states and other interests, to prepare an annual operating plan for the Colorado River system reservoirs. The plans are developed through meetings of the Colorado River Management Work Group and reflect implementation of the Record of Decision (ROD) and Interim Guidelines.

Storage of water in Lakes Powell and Mead remained at relatively low levels at the end of fiscal year 2014. Lake Powell contained 12.6 million acre-feet of storage at the end of fiscal year 2014 (52 percent of capacity),

a gain of 0.8 million acre-feet from the end of fiscal year 2013. Lake Mead contained 10.2 million acre-feet of storage the end of fiscal year 2014 (39 percent of capacity), a drop of 2.1 million acre-feet from the end of fiscal year 2013.

Mexico Issues

The Record of Decision on the Interim Guidelines that was signed by the Secretary in December 2007 contemplated possible Mexican participation in an intentionally created surplus program similar to the program used by water users in the states of the Lower Division (Arizona, California and Nevada). Discussions between the U.S. Interior and State Departments, between the U.S. Department of the Interior and the seven Colorado River Basin states, and between the United States and Mexico regarding possible voluntary shortage sharing, surplus sharing and possible Mexican participation in the intentionally created surplus program were held during fiscal years 2012 and 2013 and are ongoing.

The International Boundary and Water Commissioners for the United States and Mexico in November 2012 signed Minute 319 under the 1944 Water Treaty which established an unprecedented level of bi-national cooperation on water resources between the two nations. Minute 319 established protocols for the sharing of shortages and surpluses between the U.S. and Mexico, storage by Mexico of some of its water in Lake Mead in the U.S., allowing Lower Basin water users to fund projects in Mexico in exchange for some of Mexico's storage in Lake Mead, and set up accounting rules for various storage accounts in Lake Mead and operating rules on when Mexico and Lower Basin users can take water from those accounts.

Minute 319 also established protocols for cooperation on environmental enhancements to the Colorado River riparian corridor within Mexico. In March 2014 a pulse flow event, consisting of water acquired by implementation of conservation projects within Mexico, was implemented providing a surge of water along the river bed within Mexico which eventually traveled all the way to the delta at the Gulf of California.

Glen Canyon Dam Adaptive Management Program

The Glen Canyon Dam Adaptive Management Program (AMP) seeks to (1) restore and maintain populations of native species in the Colorado River between Glen Canyon Dam and Lake Mead; (2) maintain a rainbow trout fishery between the Glen Canyon Dam and the Paria River confluence; (3) conserve sediment resources in Glen, Marble and Grand Canyons to improve recreational experiences and preserve cultural resources; and (4) maintain hydroelectric power generation at Glen Canyon Dam. The Adaptive Management Work Group (AMWG) is a multi-state, diverse-interest committee chartered by the Secretary of the Interior to provide advice to the Secretary on the AMP. The AMWG also directs the efforts of a Technical Work Group (TWG) formed to provide technical support for the AMP. Interstate Stream Commission staff represents New Mexico on the AMWG and the TWG. The Grand Canyon Monitoring and Research Center (GCMRC), organized under the U.S. Geological Survey, operates within the AMP to define research objectives and develop monitoring programs to meet information needs of the AMP.

High flow releases were made from Glen Canyon Dam in 1996, 2004, 2008, 2012, and 2014 to attempt to conserve and enlarge sandbars and backwater areas in the Colorado River between the dam and Lake Mead. Sandbars provide for riparian vegetation, rafter campsites and archaeological site protection. Reclamation, in 2012, completed an environmental assessment on a protocol for high flow releases from Glen Canyon Dam through 2020. The environmental assessment incorporated the preliminary data and analysis from a high flow experiments synthesis report prepared by the GCMRC in 2010. The UCRC participated in the preparation of the environmental assessment as a cooperating agency.

Also In 2012, Reclamation completed the preparation of an environmental assessment for non-native fish control in the Colorado River downstream of Glen Canyon Dam. Past mechanical removal of trout appear to have helped to conserve the population of the endangered

humpback chub in this area.

The GCMRC continues to develop a long-term work plan of monitoring and research in consultation with the AMWG. Experimental research will be coordinated with ongoing monitoring and research projects to maximize cost effectiveness. The monitoring and research plan will be consistent with and implement the actions described in the Long-Term Experimental Plan that include experimental options to protect and enhance the resources and uses of the Colorado River between the dam and Lake Mead. The GCMRC will provide scientific information to support the environmental compliance process.

In July 2011, the Department of the Interior announced that it will develop an Environmental Impact Statement (EIS) for the adoption of a new Long-Term Experimental and Management Plan for the operation of Glen Canyon Dam. This new EIS will update and replace the existing 1995 EIS for operation of the dam. Besides developing a plan of operations, the EIS will determine whether to establish a Recovery Implementation Program for endangered fish below Glen Canyon Dam. Interstate Stream Commission staff participated in the EIS process during fiscal years 2012, 2013 and 2014.

Grand Canyon Trust Litigation

The Grand Canyon Trust (Trust), an environmental non-governmental organization, filed suit in late 2007 against Reclamation in the U.S. District Court in Arizona claiming that Reclamation was violating the Endangered Species Act in its operation of Glen Canyon Dam under the Long-Term Experimental Plan by jeopardizing and taking the endangered humpback chub and destroying or adversely modifying its critical habitat, and by degrading the natural environment within the Grand Canyon National Park and the Glen Canyon National Recreation Area. The suit sought an order of the court declaring that Reclamation violated the Endangered Species Act, the National Environmental Policy Act, the Administrative Procedure Act, and the Grand Canyon Protection Act for the effects of Glen Canyon Dam operations on humpback chub. The seven Colorado River Basin states, along with the Colorado River Energy Distributors Association and

several water districts within the basin states, collectively entered a motion to intervene in the suit and the court granted the motion in June 2008.

The District Court, in September 2008, ruled that Reclamation was not required under the Endangered Species Act to initiate and complete consultation on annual operating plans for Glen Canyon Dam, and that Reclamation had not violated the National Environmental Policy Act when it failed to complete an environmental assessment prior to completing annual operating plans for Glen Canyon Dam. In May 2009, the District Court ruled that Reclamation had not failed to provide adequate public notice and public comment on the environmental assessment for the experimental plan for Glen Canyon Dam releases for 2008-2012 and had not violated the Grand Canyon Protection Act.

In May 2011, the Trust filed notice of appeal of several of the District Court's orders to the Ninth Circuit Court of Appeals. In August 2012 the Ninth Circuit Court of Appeals ruled in Reclamation's favor and found that Annual Operating Plans don't require environmental assessment under either the Endangered Species Act or the National Environmental Policy Act.

Colorado River Salinity

In 1974, the Colorado River Salinity Control Act created the Colorado River Basin Salinity Control Advisory Council composed of members from each of the seven states in the basin. The Advisory Council acts as a liaison between the states and the federal agencies, reviews and comments on reports concerning the progress of the salinity control program, and recommends further studies and projects. One year prior to the creation of the Advisory Council, the Colorado River Basin Salinity Control Forum (Forum) was created by the seven Colorado River Basin states in response to a proposal by the Environmental Protection Agency and promulgation of a regulation (40 CFR 120) on basin-wide salinity control policy that required the states to adopt water quality standards for salinity. The Forum works closely with the Advisory Council. Forum activities include reviewing program progress, recommending and sharing the costs

of salinity control projects, preparing triennial reviews of water quality standards within the basin, and developing future program objectives. The salinity control program is a cooperative effort of federal agencies and the basin states, and Interstate Stream Commission staff represents the State of New Mexico in the activities of the Advisory Council, the Forum, and their technical work groups.

Current studies show that the numeric criteria of the water quality standards for salinity could be exceeded and damages could escalate without future controls and continued implementation of salinity control projects. An economic damages model is used to estimate current and future damages from salinity, most of which occur in the Lower Colorado River Basin. Presently, there is concern that salinity levels in the Colorado River could rise further if the basin-wide drought continues and storage in mainstem reservoirs continues to be low. The purpose of the salinity control program is to meet the objective of maintaining salinity concentrations at or below the numeric criteria established on the lower mainstem of the Colorado River while allowing the basin states to continue to develop their allocations of water from the Colorado River system. Studies throughout the Colorado River Basin will continue to identify the cost-effective areas for implementation of salinity control projects.

The Forum in October 2011 approved the 2011 Review, Water Quality Standards for Salinity, Colorado River System. The 2011 review was subsequently referred to each of the basin states for adoption into their respective water quality standards and approval by the Environmental Protection Agency. The Forum began work on the next triennial review of water quality standards in 2013.

Endangered Species Act Issues on the San Juan River

The San Juan River Basin Recovery Implementation Program is a multi-state, multi-agency effort to conserve populations of Colorado pikeminnow and razorback sucker in the San Juan River Basin while water development and use in the basin proceeds in compliance with interstate compacts and other applicable laws. The reach of the San Juan River from Farmington, New Mexico to

Lake Powell, Utah, has been designated critical habitat for the Colorado pikeminnow, and the reach of the river from the Hogback, east of Shiprock, New Mexico, to Lake Powell has been designated critical habitat for the razorback sucker. Both fish species are listed as endangered under the Endangered Species Act. The U.S. Fish and Wildlife Service in fiscal year 2003 issued recovery plans and goals for the Colorado pikeminnow and razorback sucker. Under the plans, development and maintenance of the San Juan River populations to specific population goals are integral to achieving recovery and delisting of both species. Interstate Stream Commission staff represents the State of New Mexico on the Coordination Committee, which directs program activities and approves budgets for the program's technical committees.

Funding for capital recovery measures was authorized by Public Law 106-392, which authorized the Upper Colorado River and San Juan River recovery programs in federal law. The State of New Mexico by the end of fiscal year 2014 contributed a total of about \$1.482 million of New Mexico's \$2.744 million maximum cost-share obligation for San Juan River capital recovery projects. In March 2009, Congress enacted law the Omnibus Public Lands Management Act of 2009 (Public Law 111-11). The Act amended Public Law 106-392 to authorize an increase in capital expenditures for the San Juan River recovery program from a total of \$18 million to a total of \$30 million and to provide for bank stabilization work to protect critical habitat along the Farmers Mutual Ditch west of Farmington and to cover any needed maintenance or repairs to capital projects implemented under the program that might be needed in the future. No additional state cost-shares are required for these two activities. The Act also extended funding authorities for the program through federal fiscal year 2023 for capital recovery projects. In 2012, Congress extended funding authorities for the program's base funding through federal fiscal year 2019 using Colorado River Project Storage Act hydropower revenues. •

Water Planning and Development

Colorado River Basin Water Supply

Colorado River Basin Water Supply and Demand Study. In December 2012, the seven Colorado River Basin states and the Bureau of Reclamation staff in the Upper Colorado and Lower Colorado regions completed a study quantifying current and future imbalances in water supply and demand in the Colorado River Basin through year 2060 and developed and analyzed potential mitigation strategies to resolve those imbalances. The study quantitatively assessed water supplies and demands throughout the Colorado River Basin with and without possible climate change and identified potential areas of future shortages. The study concluded that demand is projected to outstrip supply by year 2060 by 3.2 million acre-feet, and could range as high as 7.7 million acre-feet in individual years.

Follow-on work commenced in late fiscal year 2013 involving the formation of several workgroups to evaluate certain promising or critical options in greater detail, such as municipal and industrial conservation and reuse, agricultural conservation and transfers and environmental and recreational flows. Additional workgroups led by Reclamation will evaluate data and evaluation tool development, climate science research and tribal water. State-led workgroups will evaluate water banking, water supply augmentation and watershed management.

Weather Modification

The Colorado River Basin states during fiscal years 2012, 2013, and 2014 continued their cooperation in improving the water supply of the Colorado River stream system through wintertime cloud seeding in the Rocky Mountains to improve snowpack in the basin. Cloud seeding programs in the Upper Basin continued to receive cost-share contributions from states of the Upper Division, local sponsors of cloud seeding programs, and water users on the Lower Colorado River. The Interstate Stream Commission in 2007 and again in 2012, entered into a five-year agreement with the Colorado Water Conservation Board to support weather modification activi-

ties in the San Juan Mountains in Colorado. Since 2007, the Commission has contributed a total of \$140,000 to the Colorado Water Conservation Board through fiscal year 2014 for weather modification activities to increase snowpack in the San Juan Mountains and consequent snowmelt runoff in the San Juan River and its tributaries in Colorado and New Mexico for the benefit of water users in both states.

Upper Colorado River Basin Development

Much of the water use apportioned to New Mexico by the Upper Colorado River Basin Compact is put to use through projects developed and operated by the Bureau of Reclamation in the San Juan River Basin. These projects include Navajo Dam and Reservoir, the Hammond Irrigation Project and the San Juan-Chama Project. In addition to operation of these projects, the Bureau of Reclamation completed the initial filling of Lake Nighthorse for the Animas-La Plata Project in early fiscal year 2012, continued to add irrigation facilities to expand the irrigation service area of the Navajo Indian Irrigation Project in accordance with the project authorization, and began construction on the Navajo-Gallup Water Supply Project.

Navajo Dam and Reservoir. Navajo Dam and Reservoir provides river regulation pursuant to the Colorado River Storage Project Act and provides storage for the Navajo Indian Irrigation Project, the Hammond Project, and municipal and industrial uses. Navajo Dam and Reservoir since 1991 also has been operated to produce downstream flow hydrographs that mimic natural spring snowmelt runoff patterns. This operation is believed to benefit endangered fish populations in the San Juan River. The San Juan River Basin Recovery Implementation Program has recommended river flows and reservoir operating procedures that address the needs of both the endangered fish and water users. Operation of Navajo Reservoir to meet the habitat and recovery needs of populations of endangered fish species in the San Juan River provides Endangered Species Act compliance for federal water operations in the San Juan River Basin, including for the San Juan-Chama Project,

the Animas-La Plata Project, the Navajo Indian Irrigation Project, the Hammond Project, and the authorized Navajo-Gallup Water Supply Project.

The Secretary of the Interior in July 2006 signed a Record of Decision (ROD) on Navajo Reservoir operations that calls for operating Navajo Dam to meet the San Juan River recovery program's recommendations for flows to provide for the habitat needs of endangered fish populations in the San Juan River, and also incorporates adaptive management into Navajo Reservoir operating decisions. Under the ROD, releases from Navajo Reservoir may range from a minimum of 250 cubic feet per second to a maximum of 5,000 cubic feet per second as necessary to meet recommended spring peak flow statistics and target base flows specified by the flow recommendations, or reasonable alternatives. Implementation of the ROD began with the development and implementation of the annual operating plan for Navajo Reservoir for 2007.

Navajo Indian Irrigation Project. Construction of additional infrastructure to deliver water and fully develop the Congressionally-authorized lands of the Navajo Indian Irrigation Project continued during fiscal years 2012, 2013 and 2014. The Navajo Agricultural Products Industry, formed by resolution of the Navajo Tribal Council, is responsible for the operation and management of the project's irrigation works and for the farming and marketing activities of the project.

Animas-La Plata Project. The Bureau of Reclamation completed initial filling of Lake Nighthorse in the summer of 2011. Construction activities for the Navajo Nation Municipal Pipeline to convey the Navajo Nation's Animas-La Plata Project water allocation from the Animas River to Navajo communities in the San Juan River valley began during fiscal year 2009 and were substantially completed in 2014.

The Animas-La Plata Project participants in March 2009 entered into an Intergovernmental Agreement establishing the Animas-La Plata Operation, Maintenance and Replacement Association (ALPOMR Association) and providing operational criteria for the project devel-

oped in cooperation with the Bureau of Reclamation. The Bureau of Reclamation and the ALPOMR Association in December 2009 executed a contract for the United States to transfer to the ALPOMR Association the operation, maintenance and replacement responsibilities for Ridges Basin Dam, the Durango pumping plant, and the Ridges Basin Inlet Conduit. Operation of the project is subject to state law and compliance with the Endangered Species Act.

Navajo-Gallup Water Supply Project.

Navajo-Gallup Water Supply Project will deliver water from Navajo Reservoir to the City of Gallup, communities on Navajo Nation lands in both New Mexico and Arizona, and to the southwestern portion of the Jicarilla Apache Nation for municipal and domestic water uses. The project is a key component of the San Juan River Basin in New Mexico Navajo Nation Water Rights Settlement Agreement (Settlement Agreement) signed by the State of New Mexico and the Navajo Nation on April 19, 2005. The Northwestern New Mexico Rural Water Projects Act (Public Law 111-11, Title X, Subtitle B) in March 2009 approved the Settlement Agreement to the extent not inconsistent with the Act and authorized construction of the project. New Mexico and the Navajo Nation subsequently revised the Settlement Agreement to conform to PL 111-11 and re-signed it in December 2010. The conformed settlement agreement includes proposed Partial Final Judgments and Decrees for entry in the San Juan River adjudication, State of New Mexico ex rel. State Engineer v. United States, et al., San Juan County Dist. Ct. No. CV-75-184.

In 2011, the United States and the State of New Mexico entered into a cost-share agreement for the project in which the State will contribute no less than \$50 million in cost-share funding towards the capital cost of the project. The agreement was required by the Act as a precedent to construction of the project. The State of New Mexico cost-share may include cost-share credit for state appropriations expended on construction of Navajo Nation water distribution facilities that can be incorporated into, and otherwise reduce the capital costs

of, the Navajo-Gallup Water Supply Project. The Bureau of Reclamation during fiscal years 2012, 2013 and 2014 continued the development of final project design criteria, and construction commenced in June 2012.

Upper Colorado River Basin Fund. In 2011, the upper basin states of New Mexico, Colorado, Utah and Wyoming, the Colorado River Energy Distributors Association, Inc., the Bureau of Reclamation, the Department of Energy, and the Western Area Power Administration



Navajo Pipeline construction, Phase III

negotiated and executed an agreement on the use of Colorado River Storage Project hydropower revenues to support state development of their Upper Basin water apportionment and to facilitate the operation and maintenance of water storage and distribution facilities in the Upper Basin.

San Juan River Water Administration

The State Engineer in December 2004 approved rules and regulations for the implementation statewide of active water resource management. In accordance with the statewide rules and regulations, the Office of the State Engineer anticipates using a public process

to develop basin-specific rules and regulations and a water master manual for administering diversions in the San Juan River Basin in accordance with water rights priorities and available flows so as to protect water rights and meet New Mexico's commitment under the San Juan River Basin Recovery Implementation Program to protect releases from Navajo Dam made to benefit populations of endangered fish species in the San Juan River. Major water users on the San Juan River early in

fiscal year 2013 endorsed recommendations and principles for the operation of Navajo Dam and the administration of diversions from the river for the period 2013-2016. The water users making the recommendations include the Bloomfield Irrigation District, City of Farmington, Hammond Conservancy District, Farmers Mutual Ditch, Jewett Valley Ditch, Public Service Company of New Mexico, Arizona Public Service Company, BHP Billiton, Jicarilla Apache Nation and Navajo Nation. Under the

recommendations and principles, the water users will share in the water supply available to meet the water use demands from the San Juan River. Interstate Stream Commission staff assisted the State Engineer by facilitating the water sharing agreement, and continue to assist in monitoring water uses in the basin in New Mexico and operations of Navajo Reservoir. •

Gila River Basin and the 2004 Arizona Water Settlements Act

Pursuant to the 2004 Arizona Water Settlements Act (AWSA), the Secretary of the Interior may contract with

water users in New Mexico for water from the Gila River and tributaries in amounts that would permit an annual average consumptive use of 14,000 acre-feet in addition to the consumptive use provided by the U.S. Supreme Court's 1964 Arizona v. California decree; provided, that specific flow bypass requirements in New Mexico and other terms are met.

The AWSA also provides New Mexico with \$66 million in non-reimbursable funding to design and construct a New Mexico Unit for development of the 14,000 acre-feet or to fund other water utilization alternatives in the Southwest Water Planning Region of New Mexico. An additional \$32 million to \$62 million may be disbursed for construction of a New Mexico Unit.

Senior water users will forbear objecting to diversions by the New Mexico Unit as long as the New Mexico Unit is operated in accordance with the Consumptive Use and Forbearance Agreement, ratified by Congress in the AWSA. The terms of the CUFA require the Secretary of the Interior to deliver water from the Central Arizona Project (CAP) to downstream senior Arizona water users in exchange for the additional Gila River water depleted in New Mexico.

The Interstate Stream Commission (ISC) must approve any contract between the Secretary and New Mexico water users, or any expenditure of the non-reimbursable federal funds allocated to the State of New Mexico. The ISC must also determine whether or not to pursue a New Mexico Unit. If the ISC so determines to pursue a New Mexico Unit, it must notify the Secretary of the Interior no later than December 31, 2014.

A regional stakeholder group known as the Southwest New Mexico Stakeholders Group convened for several years to propose projects for use of the AWSA

funds and/or water. However, the stakeholders were unable to reach a consensus on projects, thus compelling the ISC to solicit project proposals submitted by regional stakeholders in a two-tier competitive process. Forty-one project proposals were accepted during FY2011 and evaluated and ranked by a multi-agency panel during FY2012. In FY2013, the ISC directed staff to further evaluate sixteen of the proposals, which included projects such as the New Mexico Unit, effluent re-use, water conservation, watershed restoration, and irrigation conveyance improvements.

In FY2014, engineering analyses for the non-AWSA diversion projects and preliminary engineering studies for a possible New Mexico Unit were completed. In addition, fourteen scientific studies were completed in FY2013 and FY2014 that analyzed a New Mexico Unit's potential effects on the Gila River ecology. By 2014, over 35 studies were completed that focused on technical, cultural, and environmental aspects of a potential New Mexico Unit.

Gila River Basin Water Use Report.

The U.S. Supreme Court's 1964 decree in Arizona v. California requires that the State of New Mexico annually prepare and maintain records of the irrigated acreages, water diversions, and consumptive uses in New Mexico from the Gila River, San Francisco River, San Simon Creek and their tributaries and underground water sources. ISC staff and staff from the OSE District 3 office work cooperatively to prepare these records each year.

Pecos River Basin Activity

Compact Deliveries to Texas

New Mexico's Pecos River administrative activities with interstate delivery obligations are governed by the

| Pecos Compact Accounting Calendar Year | Annual Credit/Debit (acre-feet) | Cumulative Credit (acre-feet) |
|--|---------------------------------|-------------------------------|
| 2011 | 500 | 100,100 |
| 2012 | 1,900 | 102,000 |
| 2013 | -6,300 | 95,700 |

Table 1. Summary of New Mexico's Pecos Compact Compliance Status 2011-2013

1948 Pecos River Compact with Texas. In 1974, Texas sued New Mexico in the U.S. Supreme Court, claiming New Mexico had chronically undelivered water in violation of the Compact. In 1983, the Court ruled in favor of Texas (*Texas v. New Mexico*, 462 U.S. 554 (1983)). In its ruling, the court found that New Mexico had violated the Pecos River Compact by under-delivering water to Texas from 1950 to 1983 by an average of roughly 10,000 acre-feet per year. New Mexico was allowed to clear its accrued water debt with a payment of \$14 million to Texas.

In its 1988 Amended Decree, the Court mandated that New Mexico never again incur a cumulative delivery shortfall. Delivery overages, or credits, are permitted to accumulate without limit. The Court-appointed federal river master annually, on a calendar-year basis, determines New Mexico's compliance with its Pecos River Compact delivery obligations and reports his findings by July 1 of the following year. For calendar years 2011, 2012, and 2013 the river master found that New Mexico maintained a cumulative credit with Texas. New Mexico's Pecos Compact compliance status is summarized in Table 1. The 102,000 acre-feet cumulative credit at the end 2012 was an historic high value.

Water Resource Conservation Project – Pecos River Portion

The New Mexico Legislature, in response to the U.S. Supreme Court order, directed the Commission to purchase and retire adequate water rights on the Pecos River to meet Compact obligations and to avoid the catastrophic economic consequences that likely would result from net delivery shortfalls to Texas. About \$33.8 million was spent for acquisition of water rights and water leases between 1991 and 2004: \$19.4 million for the purchase and retirement of 27,300 acre-feet of water rights, and \$14.4 million for water leases to meet short-term delivery needs. Commission staff estimated that the purchase and retirement of those water rights increased state-line flows by about 8,800 acre-feet per year. The water rights acquisition project helped New Mexico to remain in compliance with its Pecos River Compact delivery obligations.

Pecos Settlement

Anticipating a delivery shortfall in 2001, the Commission created an ad hoc committee of water users known as the Lower Pecos River Basin Committee, comprised of local, state and federal water management agencies, and representatives from water interests throughout the Pecos Basin. Asked to craft a long-term solution to the Pecos River Compact compliance problem, the Committee developed a Consensus Plan that included the purchase of additional land and appurtenant water rights in the Lower Pecos River Basin, short- and long-term augmentation pumping from the Roswell Artesian Aquifer to the Pecos River, and short-term leasing of water and water salvage projects.

A settlement agreement (Pecos Settlement) to adjudicate the Carlsbad Irrigation District's water rights and implement the Consensus Plan was reached in March 2003 between the Carlsbad Irrigation District (CID), Pecos Valley Artesian Conservancy District (PVACD), the U.S. Bureau of Reclamation, the Office of the State Engineer, and the Commission (collectively, the Settlement Parties). Commission staff has continued to work to implement the various elements of the Pecos Settlement. This work has included the purchase of irrigated farmland in the Pecos Valley, the development of well fields to augment the flows of the Pecos River, negotiation and execution of necessary contracts to enable Carlsbad Project water to be released for deliveries to the state line, completion of necessary environmental compliance activities, and sale back of real property (without water rights) acquired as part of water-rights purchases. More than \$70 million has been spent implementing the terms of the Pecos Settlement, and the Commission continues to spend about \$2 million per year for ongoing implementation activities.

The Pecos Settlement required the Commission to acquire water rights associated with a minimum of 4,500 acres in CID and 7,500 acres in the Roswell Artesian Basin. As of June 30, 2014, the Commission had acquired water rights from a total of 11,986 acres: 7,488 acres in PVACD and 4,498 acres in CID.

Augmentation Pumping

Augmentation pumping sites have been developed in three locations. The primary augmentation well field is in the Seven Rivers area. This well field has 10 artesian wells connected to a pipeline that delivers pumped water directly to the Pecos River at Brantley Reservoir. In addition to the Seven Rivers well field, there are two complementary augmentation systems. In December 2004, a pipeline connecting a lateral of the Hagerman Canal to the Rio Felix was completed. The pipeline has the ability to deliver Commission-owned and -leased water to the Pecos River in the winter months. A second pipeline that connects five wells in the Lake Arthur Area to the Pecos River was completed in December 2005.

Pecos Settlement Implementation

On June 11, 2009, the Settlement Parties jointly declared in the Fifth Judicial District Court “that the Conditions Precedent required for implementation of the Settlement Agreement have been sufficiently satisfied such that the Settlement Parties agree that the settlement terms should now be implemented.” With this action, the terms of the Pecos Settlement came into effect and became binding on the Settlement Parties.

Implementation does not mean the Commission has completed its Settlement Agreement work. The Commission has a host of continuing obligations it must now meet in order to comply with the terms of the Pecos Settlement. One of the most significant obligations for the Commission is the augmentation pumping from its well fields when projected surface water supplies for CID are less than the Pecos Settlement’s target supplies for a given target date.

Augmentation pumping is the single most costly aspect of Settlement implementation. The Commission’s cost to provide an acre-foot of augmentation water in 2012 was roughly \$64/acre foot exclusive of major maintenance. In addition, the Commission has fixed costs associated with Settlement implementation irrespective of whether augmentation pumping is required. Those fixed costs include assessment fees to CID and the Hag-

erman Irrigation Company (collectively about \$435,000/year), and an ongoing groundwater sampling and monitoring program at Seven Rivers (about \$140,000/year).

Calendar years 2011, 2012, and 2013 (through June 30) brought exceptional drought conditions over virtually all of the Pecos River Basin. The consequent meager surface water supplies were not nearly enough to meet the Pecos Settlement’s Target Supplies. The Commission therefore initiated augmentation pumping on March 1, 2011. On September 13, 2013, extraordinarily large storms added over 160,000 acre-feet of water to storage in Pecos River reservoirs. Because of the large amount of water added to reservoir storage, augmentation pumping was not required between September 13, 2013 and June 30, 2014.

As of June 30, 2014, the Commission had pumped about 43,925 acre feet for CID’s use. A portion of augmentation water delivered to CID returns to the Pecos River and contributes to New Mexico’s deliveries to Texas and Pecos Compact compliance.

Land Management

The Pecos Settlement and its authorizing statutes originally required the Commission to acquire appurtenant lands when it purchased water rights. The Commission therefore owned over 11,200 acres of land by the start of fiscal year 2010. Most of the acquired properties were previously irrigated croplands that have a high susceptibility to both noxious weed production and erosion. In 2008, legislation was passed allowing the Commission to sell Commission-owned lands and purchase water rights without also acquiring the appurtenant land. During fiscal years 2010 through 2012, the Commission disposed of over 10,700 acres of the land it had purchased. The vast majority of the disposed land was sold back to the original owners, who, in accordance with the legislation authorizing the sale, were given first right of refusal to buy back the property as directed by the 2008 legislation. All disposed properties have restrictive covenants that prohibit any water use on the land, including domestic or stock wells unless the State Engineer approves a transfer of valid water rights

to the property in question.

As of June 30, 2014, the Commission still owns 416 acres of land in two separate tracts. The Commission's staff is in the process of re-appraising the properties so they may be advertised for sale to the highest bidder (with the appraised value as the minimum bid).

Federal Management Issues

Endangered Species Act and National Environmental Policy Act

During fiscal years 2012 through 2014, the Commission continued to collaborate with Reclamation in environmental projects that support the Carlsbad Project Water Operations and Water Supply Conservation Final Environmental Impact Statement (Operations EIS).

Continuing efforts focus on maintaining compliance with the 2006-2016 biological opinion (BO) issued by the U.S. Fish and Wildlife Service (the Service) on the Operations EIS. The Operations EIS commits Reclamation to operate the Carlsbad Project to maintain a minimum target flow of 35 cubic feet per second (cfs) at the Pecos River Below Taiban Creek Gage and to keep the river flow continuous (at least 5 to 10 cfs at the Acme Gauge) to conserve the Pecos bluntnose shiner (shiner), listed as

threatened under the federal Endangered Species Act (ESA).

The BO requires that the U.S. Bureau of Reclamation execute two river channel restoration projects aimed at improving shiner habitat. Commission staff participated in the selection and design process for the Pecos River channel restoration project located at the BLM Overflow Wetlands, near Bottomless Lakes State Park. The Commission continues to collaborate with agencies working in the Basin on solutions to other water management problems. The Commission intends to work with Reclamation in preparation for the new BO due in 2016. Staff also monitors federal projects in the Basin conducted by the Reclamation, the U.S. Army Corps of Engineers, the Service, and the U.S. Bureau of Land Management.

Santa Rosa Fish and Wildlife Pool

In 2008, Commission staff began discussions with Reclamation and the Corps to establish a 30,000 acre-foot fish and wildlife conservation pool at Santa Rosa Reservoir. This pool would be in addition to and not affect the conservation storage pool for the Carlsbad Project that serves CID. Having sufficient water to ensure compliance with the BO will help protect Pecos Basin water-right owners, especially in times of extended drought.

After several years of meetings, correspondence, and evaluation of dam safety considerations, the proposal received formal acceptance from the Corps in a letter to Reclamation and the Commission on January 29, 2013. Reclamation and Commission staffs will work together to complete the NEPA requirements for the project. The project goal is to purchase and/or lease up to 3,000 acre-feet of water rights from willing sellers/lessors and fill the pool over a 10-year period, ideally leasing additional water during wet years.



Seven Rivers Outfall into Brantley Reservoir

Toward that end, in 2014, the Commission leased 1,477 acre-feet of consumptive rights from a Fort Sumner area farmer who approached the Commission about creating a long-term lease of his water rights. Reclamation reimbursed the Commission's lease expenses. Although it was only a one-year lease in 2014, and benefits to the Pecos River were acquired by fallowing previously irrigated acreage, Commission and Reclamation staffs are together working on developing a long-term lease and plan for utilizing the water rights for the fish and wildlife pool.

Depletion Accounting

In 1991, FWS found that Reclamation's operations on the Pecos River were harming the shiner. Reclamation, the Service, the New Mexico Department of Game and Fish (NMGF), and CID agreed to work together to address threats to the survival of the fish. The Commission joined the effort in 1997. Modifications to historical dam operations designed to conserve the shiner resulted in additional depletions of the fully appropriated Pecos River waters.

The Commission, working closely with Reclamation, developed a methodology to compute the impact of incremental depletions due to federal actions to comply with the ESA. Reclamation has been offsetting the additional depletions related to its modified dam operations related to ESA compliance through acquisition and retirement of valid water rights. A formal agreement between Reclamation and the Commission to adopt this computation method and to offset the additional depletions was signed in June 2009. Adherence to the agreed upon computation method has provided a means of ensuring that increased water depletions resulting from Reclamation's environmental operations are properly accounted for and offset.

Strategic Water Reserve Project

A pipeline was constructed (Vaughan Conservation Pipeline Project) by the Commission to convey groundwater from wells to the river to help avoid river drying. The Commission has acquired about 1,600 acre-feet of water for use at the Vaughan Conservation Pipeline

Project. Reclamation purchases the water from the state as a major part of its ESA compliance support activities described above. In October 2008, the pipeline began augmenting flow in the Pecos River by up to 13 cfs. The Vaughan Conservation Pipeline Project is an example of an innovative approach to solving some of the complex water management challenges in the Pecos River Basin. The pipeline has proven itself to be an important tool for Reclamation in meeting the minimum flow requirements contained in the BO. Commission staff, federal and state water and fisheries management agencies, and the CID and the Fort Sumner Irrigation District participate in various activities to coordinate ESA compliance on the Pecos River. •

Rio Grande Basin Activity

Rio Grande Compact

The Rio Grande Compact Commission (RGCC) has not agreed on final annual Rio Grande Compact accounting since 2011. Therefore, there is no approved compact accounting for years 2011, 2012 and 2013. The lack of agreement arose after the U.S. Bureau of Reclamation (Reclamation) released New Mexico and Colorado Accrued Credit Water from Elephant Butte Reservoir in August 2011. The release resulted in litigation filed by New Mexico against Reclamation that is discussed below.

The issue has resulted in individual proposed accounting methods prepared by each Engineer Adviser for consideration of the RGCC. The proposed accounting methods are described in addenda to the 2012 and 2013 Engineer Adviser reports to the RGCC. Under all the proposed accounting methods, New Mexico remains in an Accrued Compact Credit status.

While not coming to consensus on the compact accounting, the Engineer Advisers continue to meet annually, review the federal and state reports relative to streamflow at Compact gaging stations, storage in reservoirs, and other issues related to the Compact and develop a consensus Report. In regard to Compact deliveries, for 2012, the Engineer Advisers concluded Colorado delivered 136,500 acre-feet at the Colorado New Mexico state line with a schedule delivery of 131,700 acre-feet; and New Mexico delivered 239,800 acre-feet to Elephant Butte Reservoir with a schedule delivery of 268,400 acre-feet. For 2013, the Engineer Advisers concluded Colorado delivered 139,600 acre-feet with a scheduled delivery of 136,000 acre-feet; and New Mexico delivered 310,100 acre-feet with scheduled delivery of 249,800 acre-feet.

Compact Compliance Efforts – River and Drain Maintenance

Key projects undertaken by the ISC to aid in Compact compliance include, but are not limited to, maintaining the Elephant Butte Reservoir Delta Channel (a.k.a. the Pilot Channel), continuing river and drain maintenance

activities with Reclamation and the Middle Rio Grande Conservancy District (MRGCD), and supporting levee reconstruction. The Delta Channel work is summarized below. The river and drain maintenance work is described here, in part, and in the Water Planning and Development section. The levee work is described solely in the Water Planning and Development section.

The ISC continued to maintain over 18 miles of the Delta Channel through the exposed sediment bottom of Elephant Butte Reservoir. Maintenance of the Delta Channel is critical to ensure flows in the Rio Grande are conveyed into the active reservoir pool, thus contributing to New Mexico's delivery obligations, instead of spreading out and being depleted within the upstream end of the exposed reservoir sediment bottom via evapotranspiration. Two independent technical estimates indicate that the water saved as a result of this action is on the order of 8,000 to 17,000 acre-feet per year. To put the amount of water savings into perspective, the City of Santa Fe consumes about 6,000-8,000 acre feet of water in a year and the City of Albuquerque consumes about 50,000 acre-feet/year.

The ISC, in collaboration with Reclamation, undertook routine Delta Channel maintenance activities during fiscal years 2013 and 2014. This work included repair of spoil bank levees, sediment plug excavation, and other work necessary to maximize conveyance of winter flows into Elephant Butte Reservoir. Additionally, the ISC utilized its contractor to perform similar maintenance activities between January 2013 and April 2014.

Other projects that ISC and Reclamation collaborated on from late 2012 through early summer of 2014 include maintenance on the Low Flow Conveyance Channel (LFCC) and various drains. ISC and Reclamation continue to work in the LFCC to remove accumulated debris and sediment and thus to increase flow through the LFCC into Elephant Butte Reservoir. It is important to maintain the LFCC infrastructure due to its importance for both maintaining drainage and delivering water to Elephant Butte Reservoir. The ISC and Reclamation also collaborated on completing the maintenance on other important

water infrastructure such as the Unit 7 Drain, San Francisco Riverside Drain, and Elmendorf Drain Extension.

Additionally, the ISC has a standing task order with Reclamation to remove sediment and debris plugs that may form in the middle Rio Grande related to runoff from burn scars associated with wildfires. This standing task order will allow rapid response to deal with sediment plugs that can exacerbate local flooding and inhibit Compact deliveries and water supply for downstream irrigators.

State Parks Collaboration at Broad Canyon Ranch

The Commission continues to work with the New Mexico State Parks Division to construct habitat for the Southwestern willow flycatcher and other neotropical migratory birds at the State Parks Broad Canyon Ranch property located in Selden Canyon in the Lower Rio Grande. This work is being done, in part, to help satisfy



Broad Canyon Ranch Habitat Restoration Project

requirements of the delta channel biological opinion and implement the New Mexico Strategic Water Reserve in the Lower Rio Grande.

During the time period in question, the ISC collaborated with its partners (State Parks, Reclamation, Audubon, and the Fish and Wildlife Service) to conduct burns of salt cedar, complete a soils analysis, monitor groundwater levels, plant native vegetation, and evaluate re-vegetation success. Additionally, a preliminary habitat restoration plan was completed.

Upper Rio Grande Water Management

During FY-2012 through FY-2014, Commission staff continued collaboration with State Engineer staff and water users on the Rio Chama, specifically the Rio Chama Acequia Association (RCAA) and La Asociacion de las Acequias Norteñas del Rio Arriba (Acequias Nortenas), to assist with water resources and address potential compact management issues during the historically dry hydrological conditions that have characterized the Rio Chama Basin the last three years. Commission staff assist-

ed with continuing voluntary alternative administration below Abiquiu Dam when the natural flow of the Rio Chama was less than the diversion rights of the Rio Chama Acequias. Under the voluntary alternative administration process, the Rio Chama acequias continue to divert surface water when the natural flows are less than their diversion right but then, later, reimburse the Middle Rio Grande Conservancy District (MRG-CD) with stored SJCP water (leased from other SJCP contractors) for the depletions in excess of available

native flow. RCAA depletions in excess of the available native water flow were 647 acre-feet in 2012, 415 acre-feet in 2013, and 432 acre-feet in 2014. In each instance, normally in the winter or spring of the following year, the

RCAA reimbursed MRGCD with leased SJCP.

During August and September 2013, the RCAA Alternative Administration process was set aside when MRGCD exhausted its stored water. At that point, Commission staff assisted State Engineer staff and the RCAA with voluntary rotation of surface water irrigation within the RCAA to ensure RCAA members were only consuming the native water available to them and not stored water released for uses downstream. Commission staff met with RCAA and Acequias Nortenas members to summarize the water supply situation and discuss voluntary diversion reduction options, performed multiple discharge measurements in both the Upper and Lower Chama valleys in support of the management activities, and developed a characterization of hydrologic conditions resulting from the drought.

ISC staff routinely coordinates with Reclamation, the Corps, OSE, MRGCD, ABCWUA, and BDD staff over permit activities and river and reservoir operations for compact compliance and other purposes.

The MRGCD operates primarily under two State Engineer Permits, RG0620 and RG1690. In 2012 and 2013, the MRGCD diverted annually about 328,700 and 243,500 acre-feet of water for delivery to irrigated lands of the 6 Middle Rio Grande Pueblos and non-Indian farmers. The MRGCD diverts at four locations along the Rio Grande over a distance of about 100 miles and delivers water to about 50,000 to 60,000 acres of irrigated land.

Diversion of water from the river by the Albuquerque Bernalillo County Water Utility Authority (ABCWUA) for its Drinking Water Project (DWP), that began late in calendar year 2008, continued during 2012 and 2013 pursuant

to State Engineer Surface Permit SP-4830. Commission staff supports the efforts of the State Engineer District I-Albuquerque Water Rights office on oversight of ABCWUA permits. At the DWP, ABCWUA diverted a total of 43,080 acre-feet in calendar year 2012 and 39,929 acre-feet in calendar year 2013; 27,550 acre-feet and 21,335 acre-feet, respectively, was San Juan Chama Project (SJCP) water. The remainder was native Rio Grande water that was accounted as being diverted at the ABCWUA surface water diversion and then returned to the river from the Southside Reclamation Plant.



LaPuente real-time measurement gage located on the Rio Chama

Middle Rio Grande (MRG) Water Management

In the Middle Rio Grande, three entities divert surface water directly from the river: The MRGCD, the Albuquerque Bernalillo County Water Utility Authority (ABCWUA), and the Buckman Direct Diversion (BDD) in Santa Fe.

In January 2010, the Buckman Direct Diversion (BDD) Board began diversion of SJCP water from the Rio Grande for the City and County of Santa Fe and Las Campanas (a private development) from the BDD surface water diversion facility located several miles south of the Otowi Gauge under State Engineer surface permits SP 2847 and SP 4842. BDD continued operations during 2013

and 2014. ISC staff supports the efforts of State Engineer District VI-Santa Fe Water Rights office on oversight of the permit. For the 2013 calendar year, BDD's reported total diversions were about 5,600 acre-feet, of which about 700 acre-feet was native water and roughly 4,900 acre-feet was SJCP. For the 2014 calendar year, BDD diversions were reported to be about 6,300 acre-feet, of which about 1,495 acre-feet was native water and roughly 4,800 acre-feet was SJC. The BDD and ABCWUA direct diversions of SJCP water are meant to preserve groundwater to better meet demand during drought.

Lower Rio Grande (LRG) Litigation

In 2014, the State, through the New Mexico Attorney General Office (NMAGO), is in its second year of litigation against Texas in the United States Supreme Court (USSC) over the Rio Grande Compact, and its third year of litigation against Reclamation in New Mexico Federal district court regarding Reclamation's operation of the Rio Grande Project. In the USSC case, Texas alleges that New Mexico's groundwater pumping in the Lower Rio Grande is violating the terms of the Compact. The case against Reclamation in federal district court involves the 2008 Operating Agreement between Reclamation, Elephant Butte Irrigation District and El Paso Water District Number 1 and the 2011 Rio Grande Compact credit water release by Reclamation.

The lawsuits are directly linked with the work of the ISC as it relates to the Rio Grande Compact and accounting and deliveries of Rio Grande water in the Lower Rio Grande Basin. Accordingly, the ISC has been instrumental in providing technical and legal support for both litigations, that necessarily includes the use of several contractors for expert research, analysis and testimony and legal services due to the complexity and magnitude of this litigation. These contractual resources include experts in the areas of agricultural economics, hydrology, land use, crop evapotranspiration and satellite imagery, as well as legal expertise in reclamation law, interstate compact law and water law.

New Mexico's case against Reclamation also includes a claim that Reclamation failed to properly follow the

National Environmental Protection Act (NEPA) when it entered into the 2008 Operating Agreement. The case has been stayed pending actions by the USSC in the Texas v New Mexico and Colorado litigation. On June 21, 2013, Reclamation released a Supplemental Environmental Assessment ("Supplemental EA") under NEPA for the operating procedures in the Lower Rio Grande. Most ISC concerns and comments were ignored in the final document. The ISC agrees with the need to perform an EIS but continues to disagree with the process Reclamation took in drafting the Supplemental EA and its decision to continue operations under the 2008 Operating Agreement. Reclamation intends to release a draft EIS in the spring of 2015.

In January 2012, Texas filed a motion to file a complaint against New Mexico and Colorado in the USSC. The motion was briefed over the course of more than a year resulting, in part, in USSC issuing an order allowing the United States' to intervene in Texas v. New Mexico and Colorado and for New Mexico to file a motion to dismiss the case. New Mexico filed its Motion to Dismiss both the Texas complaint and the U.S. complaint in intervention on April 30, 2014. On November 3, 2014 the USSC assigned a Special Master to the case. The Court has directed that the parties (New Mexico, Texas, and the United States) pay all expenses of the Special Master at proportions to be determined by the Court.

Federal Management Issues

Lower Rio Grande Salinity Management Coalition

On March 19, 2014 the NMISC entered into the 2nd Amendment to the existing Watershed Assessment Cost Sharing Agreement between the NMISC, the Texas Commission on Environmental Quality (TCEQ) and the United States Army Corps of Engineers (USACE) relating to the Rio Grande Salinity Management Program (RG-SMP). The USACE conducts the work under the authority of Section 729, Water Resources Development Act of 1986, as amended. ISC staff continued to work with the staff of the New Mexico Environment Department and

TCEQ to engage in and guide the work being conducted under the RGSMP as part of the multistate/multiagency Rio Grande Project Salinity Management Coalition ("Coalition").

Phase II of this project, which focused on a detailed site assessment of the distal Mesilla Basin salinity input, was completed in November of 2013. The final documents include the following:

- Alternatives Analysis for the Rio Grande Salinity Management Program;
- Distal Mesilla Conceptual Site Model;
- Refinement of Site Screening Criteria; and
- Review of Findings of Preliminary Economic Impact Assessment (PEIA) and Recommendations for Detailed Agricultural Economic Assessment.

All of these documents are available for download on this website: <http://www.nmenv.state.nm.us/swq/b/LowerRioGrande/>.

The work in 2014 has focused primarily on conducting a detailed economic analysis of the salinity management alternatives for the area from the distal Mesilla in Sunland Park, New Mexico to Fort Quitman, Texas. The result of this work will determine the merit of salinity mitigation and lay the foundation for feasibility study for salinity mitigation in the Lower Rio Grande Basin.

Economic analysis on the siting, construction, operation and maintenance of the salinity management alternatives for the area from the Distal Mesilla in Sunland Park, New Mexico to Fort Quitman, Texas is being conducted by the USACE contractor CH2M Hill. The analysis has been expanded from the original scope of work to include a multi-purpose desalination facility alternative that will combine desalination efforts by the El Paso Water Utilities and the Coalition. Additional cost for the expanded analysis effort is shared by the USACE (75%) and ISC and TCEQ (12.5% in-kind service for each state, respectively).

Middle Rio Grande Endangered Species

The Commission continues to represent itself and State water interests in the Middle Rio Grande Endangered Species Collaborative Program (MRGESCP). The MRGESCP is a federally funded program with a congressionally required nonfederal cost share. The MRGESCP consists of water management agencies, water users, and regulatory agencies working together to improve the status of endangered species and assist in recovery efforts while simultaneously protecting existing agricultural, municipal, industrial, and other beneficial uses of water. MRGESCP actions also help to satisfy elements of the U.S. Fish and Wildlife's (Service) 2003 biological opinion for water operations in the middle Rio Grande; the biological opinion provides 'take coverage' (i.e., protection from Endangered Species Act sanctions due to incidental harm to endangered species) for New Mexico's water uses and users in the middle Rio Grande. If the biological opinion is followed then the potential for water user and ESA conflicts and litigation is reduced.

The MRGESCP in the past several years has been allocated \$2 to 4 million per year of federal funds through Reclamation that must have a 25 percent cost share match from nonfederal participants. The Commission, through work it has funded, has provided the majority of the nonfederal cost share. Commission-led projects have been funded through a variety of sources including regular ISC appropriated funds, grants from the New Mexico Water Trust Board and federal government and through legislative appropriations of capital funds to the Commission.

The Commission's main ESA work priorities continue to focus on addressing the potential conflicts between ESA and water users due to the extended drought and on lessening the impacts of drought on MRG endangered species and their habitats. These include working with water and resource management agencies to manage water adaptively and flexibly. The Minnow Action Team (MAT) was formed in 2013 to provide recommendations to the MRGESCP and water management agencies on flow operations that could be used to improve the species status. This technical group

includes two staff from NMISC and assistance from other NMISC and OSE staff. Forecasts indicated that the spring runoff would be very low in 2014. In 2014, the MAT recommended the timing and duration of a spring spawning and recruitment pulse for the Rio Grande silvery minnow with water that was made available for this purpose through an exchange agreement between ABCWUA, Reclamation, and NMISC, and agreed upon by the Rio Grande Compact Commissioners. The closely monitored spawning pulse, as well as two other spring runoff events, occurred with a peak of 1500 cfs at the Central Bridge for 9 days. Monitoring of the events indicate that fish responded to the change in flows each time there was an increase in the hydrograph. However it is uncertain what the effects were on the species from this management action because the 2014 fall surveys did not show a measurable increase in silvery minnow numbers.

Other Commission projects that prioritize addressing the severe impacts of the drought are habitat restoration projects that provide habitat for endangered species within areas that are expected to remain perennially wetted. The NMISC entered into a cooperative agreement with Reclamation in 2011 to construct

habitat restoration within the City of Rio Rancho. The City of Rio Rancho cooperated with the construction of floodplain modifications that created better habitat for the Rio Grande silvery minnow. Shallow backwater areas and ephemeral channels were constructed. Phase I was completed in spring 2013 and Phase II is being designed and will be funded through an FY2015 grant from the Water Trust Board.

The Commission built and operates the Los Lunas Silvery Minnow Refugium (Refugium), a unique and award winning conservation hatchery. The Refugium operates in conjunction with two other silvery minnow hatcheries to provide silvery minnow for release back to the Rio Grande. Refugium staff is determining the optimum culture capacity for its existing outdoor refugium, tanks, and aquaria. In 2014, the Refugium received about 30,000 silvery minnow eggs in the spring and harvested the surviving fish in the fall for release to the Middle Rio Grande by the Fish and Wildlife Service. They plan to repeat this work in 2014 in an effort to improve survival and, using a capital appropriation, also to begin plans to increase the capacity of the facility to about 50,000 adult fish per year.

The Commission also began planning for habitat restoration projects in the Isleta and San Acacia reaches in 2014. Capital appropriations and other funding will be used to construct spawning and recruitment habitat for the silvery minnow and flycatcher nesting habitat.

The Commission continues to endorse the MRGES-CP's transition to a recovery implementation program (RIP) that uses adaptive management principles to assist in the recovery of the ESA listed species. A new biological opinion must



State Engineer Scott Verhines speaking at the Rio Grande Compact Commission held in Albuquerque in 2014.

first be completed and the RIP has been delayed until consultation is completed. The State of New Mexico, through the Office of the State Engineer and the Commission are providing proposed actions that will be consulted on with U.S. Fish and Wildlife Service. The water users in the Middle Rio Grande are represented through multiple nonfederal members in the RIP, including the NMISC, New Mexico Game and Fish, New Mexico De-

partment of Agriculture, the New Mexico Attorney General, the Middle Rio Grande Conservancy District, Middle Rio Grande Tribes and Pueblos, Albuquerque Bernalillo County Water Utility Authority and the Assessment Payers Association of the Middle Rio Grande Conservancy District. This collaboration of diverse groups will continue to work towards a balanced water use approach.

directly benefit the silvery minnow during spring runoff. The Commission has also continued to actively engage in directing the best science and technology in the MRGES-CP through hydrologic and biological modeling efforts and field studies.

Middle Rio Grande Endangered Species and Water Management Litigation



Los Lunas Silvery Minnow Refugium

In 2013, in accordance with the 60 day notice requirement of the Endangered Species Act (“ESA”) 16 U.S.C. §1540(g) the WildEarth Guardians filed Notices of Intent (NOI) to sue Reclamation, the USACE, the State of Colorado, the State of New Mexico, and the MRG-CD pursuant to the ESA regarding purported violations of the Endangered Species Act in the Middle Rio Grande. With the exception of the State of Colorado, all the parties filed responses to the Notices.

In February 2014, the WildEarth Guardians filed a second NOI against Reclamation related to its Water Management and River Maintenance Activities in the

Middle Rio Grande Basin in New Mexico. The WildEarth Guardians alleged that Reclamation violated sections of the ESA in the following manner: First, by failing to ensure that Reclamation’s water management and river maintenance activities are not likely to jeopardize the continued existence of the silvery minnow, flycatcher, Pecos sunflower, interior least tern, New Mexico jumping mouse, and/or yellow billed cuckoo or result in the destruction or adverse modification of designated critical habitat; second, by making irreversible or irretrievable commitment(s) of resources foreclosing the formulation or implementation of any reasonable and prudent alternative measures; third, by causing ongoing and imminent future take of silvery minnow and flycatcher without a permit authorized by law; fourth, by causing

The Commission is actively engaged in the water management and habitat restoration efforts to ensure that even in prolonged drought conditions that the silvery minnow remain viable. The Commission continues to provide water for depletion offsets for up to 10 years to the U.S. Army Corps of Engineers (Corps) Albuquerque restoration project for elements that

ongoing and future imminent take without a permit authorized by law of silvery minnow and flycatcher by destroying or adversely modifying their designated critical habitat. They also filed an NOI against the U.S. Fish and Wildlife Service.

That NOI alleged the Service violated sections of the ESA by failing to ensure that the water management, flood control and river maintenance activities of Reclamation, the Corps and related non-federal parties in the Middle Rio Grande are not likely to jeopardize the continued existence of silvery minnow, flycatcher, Pecos sunflower, interior least tern, New Mexico meadow jumping mouse and/or yellow billed cuckoo.

Reclamation and the Service filed a joint response to the NOI. They indicated that the emergency drought actions taken in 2013 resulted in conditions that supported the continued existence of the silvery minnow during the 2013 irrigation season. And, in the future, with improved water conditions and expanded water management tools available, the collaborative management efforts demonstrated during the exceptional drought conditions in 2013 can serve to accomplish greater conservation for this species in support of eventual recovery.

Then, in May 2014, in a Supplemental NOI to Reclamation, the WildEarth Guardians alleged that Reclamation violated Section 7(a)(2), Section 7(D), and Section 9 of the ESA in connection with water management and river maintenance activities in the Middle Rio Grande. WildEarth Guardians allege that the Supplemental notice does not supersede the 60-day notices of May 13, 2013 and February 4, 2014. WildEarth Guardians allege that the ESA citizen's suit it intends to file will allege the causes of action described in the Supplemental NOI, as well as causes of action described in the May, 2013 and the February, 2014 NOI's. WildEarth guardians allege the factual and legal bases for claims made in the 2013 and 2014 NOI's are incorporated in the Supplemental NOI by reference.

In its Supplemental NOI WildEarth Guardians allege Reclamation substantively violated Section 7(a)(2) by

failing to use the best available science to operate dams and diversion structures in the Middle Rio Grande. The WildEarth Guardians further allege the deviation from that science imperil the continued existence of the minnow in violation of Section 7(a)(2).

Middle Rio Grande Biological Opinion

The 2003 Biological Opinion for Middle Rio Grande Water Operations and Flood Control Operations was a 10-year biological opinion issued by the U.S. Fish and Wildlife Service (Service) that affords broad Endangered Species Act (ESA) coverage for all federal and nonfederal water users in the Middle Rio Grande. The 2003 Biological Opinion expired on February 28, 2013 but timely submissions of updated biological assessments by the Federal action agencies allow for continued coverage under the 2003 Biological Opinion until a new biological opinion can be issued.

Of critical importance in the process of issuing a new biological opinion is addressing prolonged drought conditions as well as the reduction in the availability of San Juan Chama Project water. Efforts to manage the river during prolonged drought and with reduced stored water availability have made it clear the flow targets in the 2003 biological opinion are not sustainable. Flexible approaches developed by the MAT demonstrate that strategically managing may provide a more sustainable environment for the species.

In 2014 Reclamation began a revision of their 2013 Biological Assessment and sought to provide a more streamlined document to the Service. A revised Biological Assessment is planned to include two new federally listed species, the New Mexican Meadow Jumping Mouse and the Western Yellow-billed Cuckoo. The Commission will remain engaged in this process to ensure the Rio Grande Compact remains intact and that New Mexico's water users are represented.

The schedule for the preparation of Reclamation's biological assessment is mid-2015 with a biological opinion to be provided before the 2016 irrigation season. Litigation by Wild Earth Guardians against Reclamation, the USACE, and the MRGCD is occurring at the same time.

The Commission will remain engaged in this process to ensure compliance with the Rio Grande Compact and State water law and to ensure New Mexico's water users are represented •

Water Planning and Development

Improvement of the Rio Grande Income Fund Programs

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

Work in the 2012 through 2014 fiscal years focused on maintenance of the pilot channel through the sediment delta of Elephant Butte Reservoir, including access roads and heavy equipment staging areas. Additionally, maintaining amphibious excavators and associated equipment is a critical component of pilot channel work. The work is done to ensure efficient conveyance of Rio Grande water into the active reservoir pool. The successful maintenance of 18 miles of pilot channel through the Elephant Butte Reservoir sediment delta effectively conveyed the bulk of the 2012 through 2014 snowmelt runoffs into the reservoir. This assisted New Mexico in complying with its Rio Grande compact delivery obligations. The pilot channel also helped to reduce the potential for a catastrophic breach of the river levees upstream of the reservoir.

The Commission and Reclamation continue to work on analysis, design, and permitting required to optimize conveyance of water to Elephant Butte Reservoir while the reservoir is low. The Commission supported Reclamation in compliance requirements for the biological opinion associated with the pilot channel.

Other water salvage projects performed by the Commission and Reclamation during fiscal years 2012 through 2014 included mowing and removal of vegetation, repair of erosion within select drains, banks and service roads, and removal of flow obstructions in drains and the Low Flow Conveyance Channel. Maintaining and protecting drainage infrastructure is important for both protection of surrounding land and property, but also for Compact compliance and water delivery.

Vegetation Management Agreement

The Commission also continues to work with Reclamation through an annual cooperative agreement, to reduce the non-beneficial consumption of groundwater by invasive phreatophyte vegetation – high-water-use, non-native plants – on up to 11,000 acres of the delta areas at Caballo and Elephant Butte reservoirs. The Commission contributes funding and equipment to the program and Reclamation contributes manpower and equipment. The Legislature has restricted the use of funding for this work to maintenance of previously cleared areas. The primary means of clearing continues to be mowing and the staff finds the work to be of value for water conservation.

Socorro Levee Project

The Socorro Levee Project is part of a larger proposed USACE flood control project involving replacement of the existing spoil bank levee over a distance of about 43 miles with an engineered levee system. The Socorro Levee portion is about 8 miles long and is located adjacent to the town of Socorro. The MRGCD is the primary sponsor and the ISC a cost-share sponsor of the project. The town of Socorro is also providing funding for this portion of the project. This project is located in the southern-most section of the 150-mile-long Middle

Rio Grande Valley. The engineered levee is designed to protect adjacent properties and infrastructure at a level that maximizes net economic benefits. Additionally, the project, once constructed, will provide more flexibility for flood control operations at Cochiti Reservoir and, consequently, for delivery of water to Elephant Butte Reservoir.

The NMISC successfully worked with the USACE and MRGCD to move the project forward. The team has been successful in securing nearly \$6 million on funds to start the first phase of construction work through FY14 and all necessary agreements have been executed between the parties.

Los Lunas Silvery Minnow Refugium: The State Engineer approved the transfer of 2 ac ft. of water rights leased from the General Services Department to the ISC in 2006 for use at the Refugium for Rio Grande silvery minnow rearing and breeding. In 2012, the ISC, State Property Control Division and the Village negotiated a Return Flow Credit Memorandum of Understanding that allows the ISC return flow credits for water discharged into the Village wastewater system. This Return Flow Plan was accepted by District I in 2012. As noted above, District I also approved the transfer of an additional 6 ac ft. into the Refugium permit in 2014.

In 2014, the ISC amended the Memorandum of Agreement to add the project's Phase II restoration sites to the offset agreement. In 2014, the ISC and State Land Office entered into a Memorandum of Agreement under which SLO agreed to pay the ISC \$50,000 to offset up to five ac ft per year of depletions from SLO habitat restoration projects.

San Acacia Surface-Ground Water Monitoring

Commission staff continued to conduct monitoring for a program to characterize surface water and groundwater interaction in the reach of the Rio Grande from San Acacia to Elephant Butte Reservoir and selected parts of the Albuquerque and Belen reaches. This work seeks to improve the understanding of the temporal and spatial interactions between surface water and

groundwater. This is essential for making sound water management decisions related to endangered species management and Rio Grande Compact compliance and in part is a requirement of the Pilot Channel Biological Opinion.

Middle Rio Grande Water Rights Database

During 2012 and 2013, Commission staff worked with staff of the Water Rights Division and the IT-staff to upgrade the Geographic Information System (GIS) application tools and the associated land use and water rights databases. During 2013 the land use and pre-1907 application was refined according to the need of District I staff and to include the 1917 & 1936 joint investigation maps. Staff of District I and ISC tested the new refined tools, and currently the application is being used to evaluate water rights transactions.

Middle Rio Grande Strategic Water Reserve

Los Lunas Lease: In 2011, the Middle Rio Grande Bureau devoted significant staff time and resources to a large water rights acquisition from the Village of Los Lunas (Village). The Agreement, completed in 2011, is for the ISC to lease from the Village 921.328 acre-feet of pre-1907 Rio Grande surface water rights that had previously been transferred to the Village's permit but are not needed in the near future. The District 1 Office granted the permit to transfer water rights into the Reserve in 2012. To date, all of the rights have been put to beneficial use by assisting in compliance with the Rio Grande Compact.

Atrisco Permit: The State Engineer approved the transfer of about 29 ac ft. of water rights leased from the General Services Department to the ISC in 2006 into the Reserve to offset depletions associated with its Atrisco Habitat Restoration Project and for other Strategic Water reserve initiatives in the Middle Rio Grande. The ISC continues to use these rights for the Atrisco project as well as use the remainder for various projects in the Middle Rio Grande. The Atrisco transfer was the first State Engineer application filed by the ISC to transfer water rights into the Middle Rio Grande Reserve. In 2014, District I

approved the transfer of 6 ac ft out of the 29 ac ft to be used for Rio Grande silvery minnow rearing and breeding at the Refugium.

US Army Corps of Engineers New Mexico Middle Rio Grande Restoration Project: The ISC entered into a Memorandum of Agreement with US Army Corps of Engineers in June, 2011 to provide rights from the Strategic Water Reserve to offset project depletions. The restoration project includes the development of a minimum of 60 acres of new or improved habitat. The ISC agreed to offset restoration project water depletions related to meeting Reasonable and Prudent Alternative element "S" in the United States Fish and Wildlife Service, March, 2003 Biological Opinion for water and river maintenance operations, flood control operations, and related non-federal action on the Middle Rio Grande. In 2014, the ISC amended the Memorandum of Agreement to add the project's Phase II restoration sites to the offset agreement.

State Land Office Project: The ISC is working with the New Mexico State Land Office ("SLO") to develop agreements to use the strategic water reserve to offset the depletive effects of existing and planned endangered species habitat restoration projects on two properties (Albuquerque's South Valley and near San Acacia) owned by the State Land Office in the Middle Rio Grande. These agreements will allow the ISC and SLO to combine or share individual agency resources and perform collaborative work to meet the ISC's and SLO's shared goals and objectives to develop and improve riparian ecosystem health and habitat for threatened and endangered species, including the Rio Grande silvery minnow and Southwestern Willow Flycatcher, and thereby enhance education/outreach and recreation opportunities for the citizens of New Mexico. In 2014, the ISC and SLO entered into a Memorandum of Agreement under which SLO agreed to pay the ISC \$50,000 to offset up to five ac ft. per year of depletions from SLO habitat restoration projects.

Forest Watershed Collaboration

In 2013, the ISC became involved in the Rio Grande Water Fund, a collaborative effort led by The Nature Conservancy to restore forested watersheds in the Rio Grande

basin. This effort intends to study and help mitigate severe wildfire that results in degraded watersheds, flooding and debris flows that impact our water quality and supply. In 2014, the Rio Grande Bureau funded a study to investigate potential changes in peak flows, watershed erosion, and sediment transport as a consequence of forest fires in the Rio Grande basin.

San Juan-Chama Project

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

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

The total quantity of water delivered into Heron Reservoir during the 2011, 2012, and 2013 calendar years was about 98,137 acre-feet, 47,222 acre-feet, and 45,760 acre-feet, respectively. At the end of the 2012 calendar year, storage of San Juan-Chama Project water in Heron Reservoir was 167,274 acre-feet, a decrease of 62,137 acre-feet from the end of calendar year 2011. At the end of the 2013 calendar year, storage of San Juan-Chama Project water in Heron Reservoir was about 87,700 acre-feet, a decrease of almost 80,000 acre-feet from the end of calendar year 2012.



Oso Diversion Dam in Colorado that is part of the system of structures that are used to divert water into tunnels that take water under the Continental Divide and into the Rio Chama Basin in New Mexico.

Acequia Rehabilitation Program

Acequias, or community ditches, are recognized under New Mexico law as political subdivisions of the state.

Many of the state’s acequia associations have been in existence since the Spanish colonization period of the 17th and 18th centuries. Historically, they have been a principal local governmental unit responsible for the local distribution and use of surface water in many parts of the state. Acequias have the power of eminent domain and are authorized to borrow money and enter into contracts for maintenance and

improvements. The costs of maintenance and improvements are borne by the individuals served by the irrigation system.

| Acequia Rehabilitation Program Funding Summary | | | | |
|---|-------------------|---------------------------|--------------------|----------------------------|
| FY | USACE 215 Program | 80/20 Program Allocations | Est. Acequia Loans | Capital Outlay Allocations |
| 2012 | \$ - | \$ 154,848 | \$ 39,000 | \$ 552,000 |
| 2013 | \$ 372,557 | \$ 409,846 | \$ 133,000 | \$ 1,391,753 |

| FY | USACE 215 Program | 90/10 Program Allocations | Est. Acequia Loans | Capital Outlay Allocations |
|------|-------------------|---------------------------|--------------------|----------------------------|
| 2014 | \$ - | \$ 619,335 | \$ 69,000 | \$ 1,491,000 |

The Acequia Rehabilitation Program provides financial assistance for the construction and rehabilitation of infrastructure projects. The U.S. Department of Agriculture's Natural Resources Conservation Service and the US Army Corps of Engineers support the program. ISC staff coordinates the involvement of these agencies, supports and advises the acequias, reviews design and construction, and coordinates state and federal funding support in the form of loans or grants.

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

The Acequia Rehabilitation Program includes three ongoing sub-programs: the ISC Loan Program, the ISC 90/10 Acequia Cost Share Program and Legislative Special Appropriations Projects (capital projects).

Loan Program

The ISC loan program makes low-interest loans from the Irrigation Works Construction Fund for construction and repair of irrigation works. Acequia associations may use the loans to pay their share of costs of the 90/10 Cost Share Program. The loans are provided at 2.5 percent annual interest and the usual repayment period is 10 years.

90/10 Cost Share Program

The New Mexico State Legislature appropriates funds from the Irrigation Works Construction Fund to the Commission for grants for improvement and repair work on specific acequias. Ninety percent of project cost can be covered by the grant. Total construction costs for a project under this program are capped at \$167,000.

Acequia Capital Projects

The New Mexico State Legislature appropriates funds to individual acequias for specific projects. Commission staff reviews plans, specifications, and ditch eligibility;

executes contracts and agreements; and inspects the completed projects that are funded through legislative appropriations. •

Interstate Stream Commissioners

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

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

• **Phelps Anderson**, a Roswell businessman, was appointed to the Commission in October, 2011. He is a graduate of New Mexico State University in agricultural economics. Anderson has held numerous leadership roles in corporate, civic, service, and political associations all over New Mexico. He is presently on the State Central Committee for the Republican Part of New Mexico and has been since 1976. He serves on several boards involved with real estate development, and oil and gas exploration and production. Anderson is also currently associated with the Roswell Artist in Residence Foundation, the Boy Scouts Western Region, Loveland Respiratory Research Institute, and Loveland-Anderson Endowment Foundation.

• **Randal Crowder**, a Clovis area home builder and president of the New Mexico Homebuilders Association, was appointed in September, 2011. In addition to his tenure as mayor pro-tem, and commission for the city of Clovis, he has been a representative for the NM Northeast Regional Water Plan Task Force and Ute Reservoir Master Plan Committee. He has served as Water Policy Advisory Committee Chairman and was involved with many homebuilders associations. He is a graduate of Eastern New Mexico University in industrial technology, and is a decorated Vietnam veteran in the US Army-Infantry.

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

• **Blane Sanchez**, resident of Isleta Pueblo, is the first New Mexico pueblo/tribal member to serve on the Commission. His professional work includes facilitation, management of tribal environmental and water quality standards programs, and natural resources management with the Bureau of Indian Affairs. Sanchez earned a Bachelor of Science degree in range science and was the first pueblo/tribal member to receive a master's degree from the University of New Mexico in water resources.

• **Mark S. Sanchez**, of Corrales, serves as the Albuquerque Bernalillo County Water Authority Executive Director. Previously, he served as City of Albuquerque City Council Services Director. He has held executive positions in government and the non-profit sector in the areas of water and wastewater, governmental policy, housing and social services, and community and economic development. He served on the Albuquerque Public Schools Board of Education for six years as an elected official. Sanchez has a Masters of Science degree in business administration from New Mexico Highlands University, and a Master of Arts degree in public administration from the University of New Mexico. He attended the Southwest Leadership Program for Local and State Government in 2003 and the John F. Kennedy School of Government in Cambridge, Massachusetts in 1991.

• **Topper Thorpe** was raised on a farm and livestock operation in southern New Mexico. He operates an irrigated family farm and stocker operation in the Gila Basin. He has been involved in the Southwest New Mexico Water Planning Stakeholders Group since 2007, serving as co-chairman for two years. He also serves as a Gila Basin Irrigation Commission Commissioner and a Fort West Irrigation Association Commissioner and Secretary/Treasurer. He is a New Mexico State University graduate in agricultural business. After service in the US Army, he earned his master's degree in agricultural business from NMSU. He was executive vice-president/CEO of Cattle-Fax, a market information, analysis, research and educational service, for over thirty years.

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

Appendix A - Status of Active Adjudications by LAP

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INTRODUCTION

Twelve water rights adjudications are currently pending in the federal and state courts of New Mexico. These lawsuits were filed to determine the elements of the water rights within the Pecos River stream system, several Rio Grande tributaries, the San Juan River stream system, the Lower Rio Grande stream system, the Zuni River stream system, and the Animas Underground Water Basin. This appendix summarizes the work performed and milestones achieved in New Mexico water rights adjudications during fiscal years 2012, 2013 and 2014, from July 1, 2011 to June 30, 2014. For the history of adjudications prior to this period, please see the Annual Reports for previous fiscal years.

PECOS RIVER STREAM SYSTEM

Pecos River, State of New Mexico ex rel. State Engineer and Pecos Valley Artesian Conservancy District v. Lewis, et al. and State of New Mexico ex rel. State Engineer and Pecos Valley Artesian Conservancy District v. Hagerman Canal Co., Fifth Judicial District Court, Chaves County, Cause Nos. 20294 and 22600 consolidated, involve the adjudication of all ground and surface water rights in the Pecos River stream system. By necessity of scale, this adjudication has been conducted by sections that loosely correspond to the six groundwater basins within the stream system.

Carlsbad Basin. For case management purposes, the adjudication of water rights in the Carlsbad Basin has been divided into: (1) the Carlsbad Irrigation District surface and supplemental rights section (CID); (2) the Carlsbad Underground Water Basin groundwater section (CUB); and (3) the Black River section. The State's focus in fiscal years 2012, 2013 and 2014 was on the completion of the CID surface and supplemental rights section.

CID Surface and Supplemental Rights Section. The State has completed the adjudication of the members' rights in all four Sections of the CID and has given notice of the Proposed Partial Final Judgment and Decree and the inter se process to all surface water rights owners within the CID. The court is in the process of resolving the one inter se objection that was received. The State has addressed most of the late claims to supplemental groundwater rights.

CUB Groundwater Section. The State has continued to work on the hydrographic survey of the CUB and will commence the adjudication when resources become available.

Black River Section. The adjudication of water rights in this section has not been initiated.

Upper Pecos Underground Water Basin. The adjudication of the Upper Pecos Underground Water Basin began with the filing of the Hydrographic Survey Report in 1977. Consent orders for most of the

groundwater rights have been entered. The adjudication of this basin is ongoing with new claims being surveyed and adjudicated as they are identified.

Cow Creek Section. Although surface water rights on Cow Creek were adjudicated in the 1933 Hope Decree, the adjudicated rights were not mapped. Hydrographic survey work has been completed. The State has conducted a series of public meetings to educate potential claimants on the adjudication process, in anticipation of commencing legal proceedings in 2015.

Gallinas River Section. The State has adjudicated more than 99 percent of the surface water right subfiles in this section, including the water rights within the Storrie Lake Irrigation Project (Storrie Project) and the water rights of the City of Las Vegas (City). The State resolved approximately 150 subfiles in the past two years through mediation and litigated eight subfiles that could not be settled through mediation. In 2014, the State negotiated an off-farm conveyance efficiency and project diversion requirement (PDR) that applies to all surface water rights in the Gallinas River. The State also prevailed against a motion to readjudicate the priority dates that were determined in the 1933 Hope Decree, thus maintaining the priority dates upon which Gallinas River water right owners have relied.

Two sharply contested issues that directly impact the pace of the Gallinas section adjudication were decided in 2012. Prior to 2012, each acequia in the Gallinas River Section had filed a claim to a surface water right asking the court to adjudicate a project diversion right (PDR) to the acequia itself along with a water right for stock and domestic uses. After extensive litigation throughout FY 2012, the Court dismissed each acequia's claims and reaffirmed that the right to divert is part of the water right that belongs to each individual water right owner on the acequia and not to the acequia. The Court did rule that each acequia could represent its members in the proceedings to determine the project diversion requirement (PDR) for the Gallinas River Section, determination of a PDR, but that any rights to divert the PDR belonged to, and must be adjudicated to the individuals.

Also in 2012 and 2013, the court affirmed that the 1933 Hope Decree irrigated acreage determination is binding on successors in interest to water rights adjudicated therein. This decision should significantly accelerate the pace of the adjudication by precluding relitigation of acreage already determined by the Hope Decree.

At the end of FY 2013, the court entered a case management and scheduling order negotiated by the parties, that identified the issues remaining in the Gallinas section, and set a trial schedule for resolving them. Proceedings to determine a PDR and proceedings to determine whether claimants are bound by priority dates adjudicated in the Hope

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Decree will take place in FY 2014.

City of Las Vegas Remand Proceeding. Following the New Mexico Supreme Court's 2004 decision rejecting the City of Las Vegas' claim to a water right under the pueblo rights doctrine, the case was remanded back to the District Court to fashion a remedy to compensate the City of Las Vegas for its reliance on the 1958 New Mexico Supreme Court decision recognizing a pueblo water right. Extensive negotiations and litigation have occurred involving the City, the State, the United States, numerous acequias, and the Storrie Project in order to determine the extent of City of Las Vegas' reliance on a pueblo water right. Storrie Project and the United States settled with the City in 2010 and the City entered into protracted negotiations with the community acequias. Negotiations broke down at the beginning of FY 2011 and litigation has resumed. Two week-long evidentiary hearings have been held. The parties are preparing to present their final arguments to the court. This matter is continuing alongside the adjudication of the individual water right claims in the Gallinas section.

Fort Sumner Groundwater Basin. The Court entered subfile orders for 105 groundwater rights between 1980 and 1995.

Fort Sumner Irrigation District (FSID) Section. Negotiations between the State and FSID continue and are focused on the threshold issue of determining how to convert the diversion right recognized for FSID in the 1933 Hope Decree for the irrigation of up to 10,000 acres at 100 cfs (continuous flow) to a yearly volume equivalent based on historic beneficial use. The State and FSID are working to reconcile the amount of assessed acreage with the amount of acreage historically irrigated and to determine irrigation water requirements. The district contains an estimated 150 subfiles.

Rio Hondo Basin. Adjudication of the water rights of the Mescalero Apache Tribe (1993 Final Judgment, 2003 Decree on Mandate), the Lincoln National Forest (1979 Judgment), and the non-Indian water right owners (entry of consent orders) are nearly complete.

Roswell Artesian Underground Basin (RAB). Evaluation of approximately 2,000 "relation-back" claims allowed by State ex rel. Reynolds v. Allman, 78 N.M. 1, 427 P.2d 886 (1967) has resumed. Efforts are also underway to update earlier procedures and maximize use of available resources.

Pecos River Supplemental Section. Since 1982, 33 of the 48 additional surface and groundwater rights claimed to have been omitted from the 1966 RAB Decree have been adjudicated.

Pecos River Miscellaneous Section. Approximately 90 additional miscellaneous unadjudicated groundwater declarations remain in the RAB and Fort Sumner Groundwater Basins. These claims are being surveyed and adjudicated as they are identified.

Rio Peñasco Basin. The adjudication of water rights in this section has not been initiated.

RIO GRANDE STREAM SYSTEM

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

Taos Pueblo Claims. On May 30, 2006, in a signing ceremony at Taos Pueblo, the Pueblo, the State of New Mexico, the Taos Valley Acequia Association, the Town of Taos, El Prado Water and Sanitation District, and 12 Taos area mutual domestic water consumer associations executed a settlement agreement to resolve the claims of Taos Pueblo to the use of waters in the Rio Pueblo de Taos and Rio Hondo stream systems. In addition to resolving the water right claims of Taos Pueblo, the settlement agreement addresses several issues of concern to on-Indian water right owners, including: the preservation of existing

acequia water uses, preservation of historic water sharing arrangements between the Pueblo and non-Indian acequias on the Rio Lucero and Rio Pueblo, and the allocation of San Juan-Chama Project water available for the settlement.

Partial funding for the Taos Pueblo settlement was provided for in the Omnibus Public Lands Management Act of 2009, P.L. No. 111-11. Federal legislation approving the Settlement was enacted into law on December 8, 2010 when President Obama signed the Claims Resolution Act of 2010, Title V of which is the Taos Pueblo Indian Water Rights Settlement Act. P.L. No. 111-291, § 501, et seq. ("Settlement Act").

The settlement implementation team met throughout 2012 to conform the settlement agreement to the Settlement Act, and the conformed settlement agreement was executed by the Secretary of the Interior and the other settling parties in January 2013. The Taos adjudication court then initiated an expedited inter se proceeding to determine whether to approve the Settlement Agreement and enter the proposed Partial Final Judgment and Decree adjudicating the Pueblo's water rights in accordance with the conformed Settlement Agreement. In August, 2013, notice was provided to all water rights claimants in the Rio Hondo and Rio Pueblo de Taos stream systems of their opportunity to review the settlement and the proposed decree, and to file objections, if any, with the court by October 28, 2013. Of the 27 objections received, only 10 remained, and have been briefed before the court. The Settlement Act sets March 31, 2017 as the deadline for a Partial Final Judgment and Decree to be entered by the adjudication Court and become final and non-appealable.

The terms of the Settlement Act provide a total federal contribution for Pueblo benefits and mutual benefit projects of \$124 million. Of that amount, \$88 million will fund the Pueblo Water Development Fund and \$36 million will fund mutual benefit projects necessary to implement the settlement. The local settlement parties will receive \$13.1 million of state funding for the mutual benefit settlement projects and up to \$6.9 million for acquisition of water rights. Up to 2,621 acre-feet of unallocated water from the San Juan-Chama Project will be used for water supply contracts pursuant to the settlement.

Between federal fiscal years 2012 and 2014, Congress appropriated and provided direct funding for the Taos Pueblo Settlement totaling approximately \$83.1 million. On February 29, 2012, the Interstate Stream Commission, by resolution, allocated \$5 million dollars to the Taos Pueblo Settlement from the Indian Water Rights Settlement Fund. This was in addition to the Commission's allocation in 2011 of \$1.4 million for the Taos Pueblo Settlement. The \$5 million allocation was part of a larger, \$15 million appropriation made by the Legislature to the Fund during the 2011 special New Mexico Legislative Session. The State, through the Interstate Stream Commission, is currently making funds available to the non-Pueblo settlement parties from the Indian Water Rights Settlement Fund for water rights acquisition (up to \$6.9 million per the terms of the Settlement). Based on New Mexico's total cash contributions toward the Settlement, including \$915,000 in earlier appropriations, the State is within \$12.7 million of meeting its cost share obligation.

Remaining Non-Indian Claims. With the exception of priority dates, nearly all non-Indian surface water rights have been adjudicated in the Rio Pueblo de Taos and Rio Hondo stream systems.

In February 2002, the Court began the process of acting upon Special Master Zinn's 1993 report on priority dates for non-Pueblo water rights. The Court entered four orders confirming the priority dates of multiple acequias, but the priority dates of certain subfiles on the Des Montes ditches on the Rio Hondo remained unresolved. After conducting additional historical research, the State submitted the affidavit and report

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of its expert historian to resolve the remaining priority dates in 2011. In June 2013, the Special Master filed her report recommending the adoption of the State's proposed priority dates for the Des Montes subfiles and a show cause procedure. The Court served Orders to Show Cause on the individual subfile owners in June 2014, requiring them to show why the priority dates for their subfiles should not be adjudicated according to the State's expert historical report. No responses were filed by the deadline.

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

Nearly all individual irrigation surface water rights have been adjudicated. The State is in the process of adjudicating the remaining subfiles, including a disputed water rights claim on the Arroyo Hondo. Following a trial and a special master's report to which the claimants filed objections, the parties are participating in mediation to resolve the disputed claims, at the Court's request. The City of Santa Fe and the State are working to identify the City's water rights and negotiate a consent order.

Rio Chama. *State of New Mexico ex rel. State Engineer v. Aragon*, et al., U.S. District Court No. 69-cv-7941 BB, involves the adjudication of all water rights in the Rio Chama stream system, including the claims of the United States, Ohkay Owingeh (previously San Juan Pueblo) and the Jicarilla Apache Nation. The suit was originally filed in State court, and then was removed to the federal District Court in 1969. The federal suit incorporates prior State Court orders adjudicating non-federal water rights on the mainstem of the Rio Chama below Abiquiu Dam and on the Rio Puerco, a tributary to the Rio Chama. For purposes of the hydrographic survey and the adjudication, the Rio Chama stream system was divided into eight Sections.

Section 1. Surface water rights in the Rio Chama Mainstream section (Section 1) have been adjudicated in subfiles. In 1985, the Court appointed an expert historian to assist in a redetermination of priority dates for water rights served by acequias and community ditches in Section 1. After this expert completed his historical report, the State served orders on acequias and individual irrigators that required them to show cause why those priority dates should not be revised. Evidentiary hearings were held in 1997 with respect to the disputed priority dates of water rights served by three acequias. In December 2009, the Special Master filed her report and recommended a priority date of 1600 for the three disputed priority dates. The State and the Rio Chama Acequia Association filed motions that the Court adopt this recommendation, but various individual defendants have objected to this recommendation and have asserted that water rights under the Acequia de Chamita should have a priority date of 1598. The State reached agreements regarding the priority date with all but one defendant. Following an evidentiary hearing before Magistrate Judge Lorenzo Garcia in February 2013. In December 2013, the Court entered an order adjudicating a priority date of 1600 for the remaining subfile under the Acequia de Chamita. The State has reached stipulations with the irrigators under all of the remaining ditches in Section 1 on individual priority dates, and the Court has entered final orders approving and adopting those dates.

Section 3. The determination of claims for surface water irrigation use in the Rio Nutrias and Canjilon Creek subsections of Section 3 is complete, with the exception of priorities and irrigation water requirements which were reserved for future determination by the Court. Settlement negotiations for four remaining subfiles are ongoing. A hearing will be set if no agreement is reached. In the Canjilon Creek subsection, the State has moved for approval of a Proposed Scheduling and Procedural Order for Determination of Priority Dates and Irrigation Water Require-

ments, with general and public notice starting the first week of July 2014. In the Nutrias subsection, the Court entered a partial final judgment and decree for surface water irrigation water rights on June 4, 2013. The entry of this order completed the inter se phase of the adjudication proceedings in this subsection.

Section 5. In Section 5 (Rio Gallina), all claims with respect to the amount and location of irrigated acreage in individual subfiles, priority dates, and irrigation water requirements have been resolved. The State commenced inter se proceedings in Section 5 in December 2009. No persons filed objections to the proposed decree, and on April 8, 2010, the Court entered a Partial Final Decree on Surface Water Irrigation Rights in Section 5 of the Rio Chama Stream System.

Section 7. The determination of claims for surface water irrigation use in all subsections of Section 7 (Rito de Tierra Amarilla, Rio Brazos, Rutherford and Plaza Blanca, Cañones Creek, and Village of Chama) is complete, with the exception of priorities and irrigation water requirements which were reserved for future determination by the Court. Following show cause proceedings in the Tierra Amarilla subsection, the Court has entered an Order making a final determination of priorities in that subsection. Show cause proceedings for the determination of priorities and irrigation water requirements in each of the other subsections are currently underway or scheduled.

Federal Claims. The Court entered a consent order adjudicating the reserved water right claim of the United States under the Wild & Scenic Rivers Act below El Vado. A proposed consent order for the United States' claims for stock and wildlife uses in Section 5 was served upon the United States in December 2005. The State is awaiting requested information from the United States on a small number of the claims covered by this proposed consent order. The State has completed its field work in connection with the United States' claims for stock and wildlife uses in Section 3. Further work on a proposed consent order for these claims to be served upon the United States has been postponed until the proposed consent order in Section 5 is resolved.

Jicarilla Apache Nation Claims. The water uses of the Jicarilla Apache Nation are subject to a Partial Final Judgment and Decree entered in April 1998. The Jicarilla Apache Nation made a survey of its uses on lands acquired and placed into trust status after the entry of the 1998 decree and has submitted these claims to the State. The State conducted field inspections in 2008 and 2009, and completed its review of these claims in 2010. On January 14, 2014, the Court entered an order making a final determination of the Jicarilla Apache Nation's state law-based water rights on these after-acquired lands. The entry of this order completed the inter se phase of the adjudication proceedings with respect to the water rights of the Nation.

Ohkay Owingeh Claims. In the spring of 2007, the United States and Ohkay Owingeh filed Subproceeding Complaints for the adjudication of water rights based on past or present uses of the Pueblo. Numerous parties, including the State, filed Answers to the claims of the Pueblo which will be addressed in a stream-system-wide expedited inter se proceeding. A scheduling conference for further proceedings in the Chama adjudication had been scheduled to follow the trial on Ohkay Owingeh's separate claims in the Santa Cruz-Truchas adjudication. The Santa Cruz-Truchas trial was vacated to allow settlement discussions to be pursued, and trial in the Chama adjudication is currently scheduled to begin in October 2018. The United States provided expert reports on Ohkay Owingeh's claims in June 2012, and Ohkay Owingeh served its expert reports in December, 2013 and March 2014. The State's expert reports will be due in October 2015, and the other parties' reports are due in April 2016. Meanwhile, counsel for Ohkay Owingeh have initiated discussions on the possibility of settlement of

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the Pueblo's water right claims in the Chama Adjudication as well as in the Santa Cruz/ Truchas Adjudication.

Rio San Jose. State of New Mexico ex rel. State Engineer v. Kerr-McGee Corp., Cibola County Cause Nos. CB-83-190-CV and CB-83-220-CV, Consolidated, is the general water rights adjudication suit concerning the Rio San Jose stream system.

Pueblo Claims. In September 2002, the Court granted the joint motion of the State and the United States to establish an expedited inter se subproceeding to adjudicate the water rights of Acoma Pueblo and Laguna Pueblo based on past and present uses of water. After the State provided extensive public notice of the expedited subproceeding, approximately 1,200 water right owners filed objections to the claims of the United States and the Pueblos. Of these objectors, approximately 60 have opted to be active parties in the subproceeding. Pursuant to a pre-hearing scheduling order issued by the Special Master, discovery began in 2007 and concluded in November 2013. Visits by the parties and their experts to some of the relevant Pueblo and non-Pueblo sites occurred in 2006, 2007 and 2008. Expert witness disclosures were made by the United States, Acoma and Laguna Pueblos, the State and other parties, as well as the parties actively engaged in several years of discovery, including depositions. After the conclusion of discovery, and before the filing of dispositive motions on significant legal issues, settlement discussions began in March 2014 involving the State, United States, Acoma and Laguna Pueblos, and other significant water users in the Rio San Jose stream system. Trial was scheduled to begin in July 2014, but the Special Master ordered a stay in the litigation schedule through calendar year 2014 to allow settlement discussions to continue.

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

Non-Indian Claims. In 1975, the District Court entered a Partial Final Decree confirming and approving all prior orders adjudicating non-Indian water rights in the Santa Cruz and Truchas stream systems. The 1975 Decree adjudicated inter se the water right claims of 2,500 defendants in approximately 3,500 individual subfile orders. The adjudicated irrigation water rights totaled 5,045.38 acres in the Santa Cruz River System and 2,159.80 acres in the Rio de Truchas system. The decree reserved jurisdiction to adjudicate water right priorities and the water rights of the United States and the Pueblos of San Juan (now Ohkay Owingeh), Santa Clara, and San Ildefonso.

Since the entry of the decree, acequias in Truchas identified additional tracts which they claimed should have been adjudicated irrigation water rights. In the Rio Santa Cruz, approximately 155 water right claimants submitted written requests for correction to subfile orders adjudicating water rights for 186 tracts of land. All but 22 of these claims have been resolved.

At the time the 1975 Partial Final Decree was entered, approximately 13 acequias or community ditches and 300 individuals filed objections to water right priorities adjudicated to other parties in subfile orders. The Court reserved jurisdiction in the 1975 Decree to consider and decide these objections at a later time. The Court appointed two historians to investigate Spanish and Mexican archives to find evidence documenting early irrigation. The historians' draft report was completed in 1986. In 1995, the State filed pleadings describing stream flow

allocation rights between acequias in the Santa Cruz and Truchas systems. The State also took the depositions of individuals who have knowledge of stream flow allocation. The parties fully briefed the issue of the water allocation customs and priorities of the five Truchas acequias in 1998, and the Special Master filed her report in April 2010. The State filed a Motion to Modify the Special Master's Report, and the Acequia del Llano de Abeyta filed objections to the Special Master's Report. These have been fully briefed, and the Court ruled on the State's Motion in December 2011.

Pueblo Claims. The water right claims of the Pueblos within the adjudication are now being addressed in a series of subproceedings defined by a procedural order entered by the Court's Special Master. In Pueblo Claims Subproceeding 1, certain water right claims of the Pueblos of Nambé and San Ildefonso were resolved by a negotiated settlement agreement filed on March 15, 2002 and a consent order filed on September 12, 2005. Subproceeding 2, involving Pueblo claims based on past or present uses of diverted water on the lands of Ohkay Owingeh (formerly San Juan Pueblo), was initiated in March 2005 by the filing of subproceeding complaints by the United States and Ohkay Owingeh. The State, Santa Clara Pueblo, the City of Española, Santa Cruz Irrigation District, and acequia associations from the Truchas and Santa Cruz areas filed their Answers to the subproceeding Complaint in 2005. The parties served expert reports from 2006 through early 2009. The parties conducted an extensive series of depositions of the numerous expert witnesses in the case through the end of 2009, and dispositive motions were filed and fully briefed in 2010. Trial was originally set to begin in January 2011. However, Ohkay Owingeh requested appointment of a federal water rights negotiating team in November 2010 to discuss possible settlement, and the court granted the Pueblo's contemporaneous motion to vacate the trial. Litigation has been stayed since November 2010, following the untimely death of Ohkay Owingeh counsel that month. No proceedings are currently scheduled.

Jemez River. United States v. Abousleman, et al., U.S. District Court No. 83-cv-1041 MV, was filed by the United States on its own behalf and on behalf of the Pueblos of Jemez, Santa Ana and Zia to adjudicate water rights in the Jemez River system. On December 1, 2000, the Court entered a Partial Final Decree for the water rights of non-Pueblo, non-federal parties in the Jemez stream system.

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

United States Claims. All the proprietary claims of the United States have been adjudicated. The Court entered a Partial Final Judgment and Decree on the United States' Wild and Scenic River reserved water right in October 2008.

Pueblo Claims. Litigation over the claims of the Pueblos of Jemez, Zia, and Santa Ana, and of the United States on behalf of those Pueblos, dates back to the 1980's. In proceedings addressing claims based upon the historic and existing uses of the Pueblos, the Special Master held evidentiary hearings in July and December 1988. The Special Master filed his report and recommendation to the Court on these claims in October 1991, and the United States and the Pueblos filed objections to that report. The Court did not rule on the 1991 Special Master's report.

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

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

Pursuant to a November 2004 Scheduling Order, the Pueblos provided proposals for the settlement of their claims to the State and non-Indian parties in June 2005. In the spring of 2007, the parties agreed to engage in a time-limited phase of settlement discussions through the end of 2007. The parties then hired a neutral mediator who performed an assessment and presented his conclusions and recommendations to the parties. After application by the parties and approval by the Court, negotiations continued and the parties successfully met an October 2008 deadline to develop agreed-upon settlement principles. However, negotiations broke down in February 2012 and the parties returned to litigation of the Pueblos' water rights claims for historic, existing, and future uses. In April 2012, the parties proposed litigation plans to the Court identifying five threshold legal issues to be briefed:

Issue No. 1: Have the Pueblos ever possessed aboriginal water rights in connection with their grant or trust lands, and if so, have those aboriginal water rights been modified or extinguished in any way by any actions of Spain, Mexico or the United States?

Sub-issue: Did the Acts of 1866, 1870 and 1877 have any effect on the Pueblos' water rights and, if so, what effect?

Sub-issue: Did the Pueblo Lands Acts of 1924 and 1933 have any effect on the Pueblos' water rights and, if so, what effect?

Sub-issue: Did the Indian Claims Commission Act have any effect on the Pueblos' water rights and, if so, what effect?

Issue No. 2: Does the Winans doctrine apply to any of the Pueblos' grant or trust lands?

Issue No. 3: If the Pueblos have aboriginal water rights or Winans reserved water rights, what standards apply to quantify such rights?

Issue No. 4: Do the Pueblos have Winters reserved rights appurtenant to their trust lands and, if so, how are those rights to be measured?

Issue No. 5: Are the Pueblos entitled to any riparian rights?

In July 2012, the Court set a schedule for briefing threshold legal issues 3, 4, and 5 concurrently with conducting additional factual development and discovery on issues 1 and 2. The parties identified expert witnesses and exchanged expert reports in December 2012 and March 2013, while briefing threshold legal issues 3, 4, and 5. Following discovery and depositions, an evidentiary hearing was held on threshold legal issues 1 and 2 in April 2014. Additional briefing on the issues is scheduled for later in 2014.

Rio Pojoaque. State of New Mexico ex rel. State Engineer v. Aamodt et al., U.S. District Court No. 66-cv-6639 MV, was filed in 1966 and involves the adjudication of all water rights in the Nambé-Pojoaque-Tesuque ("NPT") stream system, including the rights of the Pueblos of Nambé, Pojoaque, Tesuque, and San Ildefonso.

Global Settlement. Beginning in August 2000, the parties engaged in discussions aimed at resolving, through a global settlement, all remaining issues in the case, including the claims of the Pueblos. On May 3, 2006, at a ceremony held in the office of Governor Richardson, the Aamodt settlement agreement was signed by all governmental parties, with the exception of the United States.

The Settlement Agreement settles the water right claims of the four Pueblos and provides for the conclusion of the adjudication by the entry of a Final Judgment and Decree finally determining all water rights in the NPT. While most of the Pueblos' water rights will be adjudicated with senior priorities, the Settlement Agreement protects non-Pueblo junior water rights through four major provisions. First, the Pueblos have agreed to limit the amount of their water rights for which they can make priority calls, thereby protecting existing surface water uses in the NPT. Second, the United States is acquiring up to 2,500 acre-feet per year (AFY) of additional water from outside the basin for the Pueblos' economic development. Third, a regional water system will be constructed by the United States to deliver the additional water diverted from the Rio Grande to Pueblo and non-Pueblo users in the basin. The construction of the system is to be funded by the United States, the State, Santa Fe County, and the Pueblos. The County will operate the system. Fourth, non-Pueblo parties currently using domestic wells will be given incentives to stop using groundwater and instead connect to the regional water system for their domestic water uses.

Partial funding for the Aamodt settlement is provided for in the Omnibus Public Lands Management Act of 2009, P. L. No. 111-11. Federal legislation approving the Settlement Agreement was enacted into law on December 8, 2010, when President Obama signed the Claims Resolution Act of 2010, Title VI of which is the Aamodt Litigation Settlement Act. P.L. No. 111-291, § 601, et seq. ("Settlement Act"). The settlement parties then engaged in public settlement implementation meetings to conform the Settlement Agreement to the federal Act, and the conformed Settlement Agreement was executed by the Secretary of the Interior and the parties on March 14, 2013. The Cost Sharing and System Integration Agreement ("Cost Sharing Agreement") was also conformed to be consistent with the Settlement Act, and was executed by the settlement parties in March 2013. The Cost Sharing Agreement sets out the funding obligations of the governmental parties to the settlement agreement and establishes the fundamental operational agreements among the parties that will be operating the regional water system.

The adjudication court has entered an order scheduling an expedited inter se proceeding to determine whether to enter the proposed Partial Final Judgment and Decree adjudicating the Pueblos' water rights according to the terms of the conformed Settlement Agreement. An Order to Show Cause providing notice of the proceeding to all water rights claimants in the NPT stream system of their opportunity to accept or object to the settlement and the proposed Partial Final Judgment and Decree was published and mailed to close to 7,000 water right claimants in the basin in January and February 2014. Over 750 objections were filed by the deadline of April 7, 2014 and nearly 400 acceptances. The court has set a schedule through February 5, 2015 for parties to file briefs regarding the proposed settlement and the objections. The Settlement Act requires that a Final Judgment and Decree on both Pueblo and non-Indian water rights be entered by September 15, 2017.

Funding for the Regional Water System

Preliminary revised cost allocation figures show a total 50-year cost for the regional water system of \$250.2 million, of which the proposed federal cost-share would be \$174.3 million. The proposed non-federal

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cost-share would be \$75.4 million, \$25.4 million of which would be borne by Santa Fe County, and \$50 million by the State. The non-federal funding would pay for the non-Indian portion of the proposed pipeline that would deliver potable water from a purification plant near Otowi through the Nambé-Pojoaque-Tesuque valley to each of the Pueblos and non-Indian communities along its route. Up to 1,079 acre-feet of unallocated water from the San Juan-Chama Project will be used for water supply contracts pursuant to the settlement.

Between federal fiscal years 2012 and 2014, Congress has appropriated to and provided direct funding for the Aamodt Settlement totaling approximately \$83.1 million. State Contribution. The Aamodt Settlement Act requires a State contribution to the non-Pueblo portion of the settlement of \$50 million, plus increases based on the Bureau of Reclamation's construction cost index. Of the \$50 million, \$45.5 million is allocated for initial construction of the non-Pueblo portion of the regional water system, subject to increase based on construction cost inflation indexing. Of the remaining \$4.5 million, \$4 million will be reserved for paying the costs of connecting non-Pueblo users to the County of Santa Fe part of the system, but this cost will not be indexed. \$500,000 of the State's contribution will be reserved for mitigation of possible impacts to non-Pueblo wells from Pueblo uses. This cost also will not be indexed.

Non-Indian Claims. The State is working to adjudicate the remaining water rights to meet the deadline of September 15, 2017 for entry of a Final Judgment and Decree on all water rights imposed by the Settlement Act. Hundreds of domestic well water rights remain to be adjudicated, and inter se proceedings, as between claimants, must be conducted.

On June 14, 2007, the Court lifted its stay pertaining to adjudication proceedings regarding post-1982 domestic wells, which represent the vast majority of the remaining unadjudicated groundwater rights. The State then began joining claimants of water rights from wells permitted after 1982 and serving them with proposed Domestic Well Orders. The adjudication of those water rights continues.

On August 2, 2012, the Court lifted its stay pertaining to adjudication proceedings regarding pre-1983 domestic wells, including pre-basin wells, which, with the exception of those identified above, represent the only other remaining unadjudicated groundwater rights. The State has been conducting field investigations and mapping of these water rights, and joining and serving claimants with proposed domestic well orders.

On April 9, 2008, the Court lifted its stay pertaining to the adjudication of surface water right priorities. The State served all surface water right claimants by way of publication and direct mail with a Notice and Order to Show Cause why the Court should not adjudicate individual surface water right priorities according to the priority of the acequia or community ditch which serves the right. Several objections to the State's proposed priority dates were timely received, and resolved without a trial. The State has now filed a motion to have the final determination of priority dates applied to the individual subfiles.

The State is also reviewing individual subfile orders entered in the adjudication and filing motions to correct errors in preparation for an inter se proceeding to be conducted for the Court to enter a Final Judgment and Decree on both Pueblo and non-Indian water rights.

LOWER RIO GRANDE STREAM SYSTEM

Lower Rio Grande. State of New Mexico ex rel. State Engineer v. Elephant Butte Irrigation District, Third Judicial District Cause No. CV 96-888, was originally filed in 1986. This suit involves the adjudication of all rights to the surface and ground waters of the Lower Rio Grande (LRG) stream system. The hydrographic survey divided the stream

system into five sections: Nutt-Hockett, Rincon, Northern Mesilla, Southern Mesilla, and Outlying Areas. As of July 1, 2014, the Lower Rio Grande hydrographic survey had identified 13,947 subfiles, the majority of which involve claims to water rights within the Elephant Butte Irrigation District. As of that date, provisional adjudication of subfiles was 98 percent complete in the Nutt-Hockett Basin, 85 percent complete in the Rincon, 29 percent complete in the Northern Mesilla, 40 percent complete in the Southern Mesilla, and 63 percent complete in the Outlying Areas. In total, 5,833 subfile orders had been entered in the adjudication, 42 percent of all subfiles.

In addition to individual subfile adjudication, the State has devoted considerable resources to the resolution of stream system issues since the completion of universal joinder of all subfile defendants in 2008.

Those designated by the court after motion by a party include:

Stream System Issue 101, Consumptive Irrigation and Farm Delivery Requirements for all Crops in the Lower Rio Grande, designated July 31, 2009;

Stream System Issue 102, EBID's Claim to Underground Waters on 90,640 Acres of its Members' Land, designated December 23, 2009; Stream System Issue 103, Priority, Transferability, and Beneficial Use Elements of a Domestic Well Right, designated December 23, 2009; and

Stream System Issue 104, the interests of the United States deriving from the establishment of the Rio Grande Project, designated January 8, 2010.

The Court also designated, on February 1, 2011, an expedited inter se proceeding related to Stream System Issue 104 to resolve the claims of the Nathan Boyd Estate for diversion rights superior to those of the United States.

Stream System Issue No. 101, involving both a direct challenge to the pecan settlement agreement entered into in fiscal year 2009 and the question of water requirements for all other crops, was resolved in August 2011. Mediation of the stream system issue had failed to produce a settlement, so after extensive trial preparation, including written discovery and expert depositions, the issue went to trial on June 6, 2011. Within three days, however, the main participating parties had reached a settlement of the issue, which they presented to the Court. The Court entered a final judgment substantially incorporating the terms of the settlement on August 22, 2011.

Stream System Issue No. 102, concerning EBID's state law claims to certain groundwater, was settled on October 4, 2010, after briefing on cross-motions for summary judgment. That settlement recognized an EBID groundwater right to 9,500 acf from five deep wells, which can be used during times of short surface water supply for the irrigation of assessed lands in the district, with a priority date of 1973.

Stream System Issue No. 103, the domestic wells issue, is currently on hold.

Stream System Issue No. 104, the United States' rights in the Rio Grande Project, is being litigated in sub-parts based on the elements of the rights. Litigation began in May 2012 with dispositive motions on the United States' claim to groundwater as a source of water for the Project. The State was one of seven New Mexico parties moving to dismiss the United States' groundwater claim, with the United States joined by two Texas entities, the City of El Paso and El Paso County Water Improvement District No. 1, in pressing its claim to groundwater in addition to surface water in a motion for summary judgment. On August 16, 2012, the court granted the State's motion and denied the United States', holding that the federal government has no claim to groundwater in the Rio Grande Project. The court next addressed summary judgment motions from various parties on the question of the

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amounts of Project water and the Project's priority date(s). On February 14, 2014, the court granted the State's summary judgment motion as to the amount of water. The court denied all parties' motions regarding priority date, however, and the matter is set for trial in August-September 2015. In the related inter se proceeding on the Boyd Estate's claims, the court ruled against the Estate, granting a United States' motion for summary judgment. An appeal by the Estate was certified to the N.M. Supreme Court on December 30, 2013, and is awaiting decision.

Other stream system issues have been proposed to the court as well. In April 2013 the court rejected a proposed stream system issue seeking to adjudicate the rights of claimants to pre-Rio Grande Project rights before adjudicating the rights of the United States in the Project. And the court scheduled a hearing for August 2014 on a motion to designate a stream system issue addressing the water rights associated with the Copper Flat mine.

The LRG adjudication also is in varying stages of litigation on five contested subfiles, four involving questions of abandonment of water rights. An additional 12 subfiles currently have been referred to court-sponsored mediation under Judge James J. Wechsler. Judge Jerald Valentine, who had presided over the LRG adjudication since its inception, resigned from the bench effective December 31, 2010. By special designation he continued to preside over Stream System 101 to its conclusion, with Judge Wechsler succeeding to preside over the remainder of the case.

The Lower Rio Grande Adjudication Bureau currently has one vacant attorney position and one vacant position on its hydrographic survey support team in spite of these vacancies, the bureau is pressing forward with the ongoing adjudication of individual water rights. As of July 1, 2014, the State had served offers of judgment for water rights in 8,419 subfiles, 60 percent of the total number of subfiles ultimately expected to be served.

UPPER COLORADO RIVER STREAM SYSTEM

San Juan River. State of New Mexico ex rel. State Engineer v. United States, et al., San Juan County Cause No. D-1116-CV-7500184, is a suit to adjudicate all water rights in the San Juan River stream system. The non-Indian, non-federal water rights of the stream system were adjudicated by the Echo Ditch Decree in 1948 based on a hydrographic survey performed in the late 1930's. However, no Indian or federal water rights were adjudicated in that decree. The State Engineer conducted a partial survey of water rights in the San Juan stream system in the early 1980's, and the Hydrographic Survey & Mapping Bureau is updating that survey using all available current and historical data.

The adjudication of subfiles in the La Plata section commenced in August 2006, and consent orders have been entered for almost all surface water rights in the section. The State is working to resolve the remaining surface water rights in the La Plata section and conduct an inter se proceeding on the La Plata section before commencing the adjudication of subfiles in the other sections of the San Juan River system.

Navajo Nation Claims. On April 19, 2005, the Navajo Nation and the State of New Mexico signed a settlement agreement to resolve the Navajo Nation's water rights claims in the San Juan River Basin in northwestern New Mexico. The Navajo Settlement will provide water development projects for the benefit of the Navajo Nation and non-Indian communities in exchange for a release of the Navajo Nation's claims to water that potentially could have displaced existing non-Indian water rights in the basin. One of the primary elements of the settlement is the Northwestern New Mexico Rural Water Supply Project (also known as the Navajo-Gallup Water Supply Project) that includes a pipeline to be

constructed by the Bureau of Reclamation to bring a renewable surface water supply from Navajo Reservoir to Navajo and non-Indian communities in northwestern New Mexico.

The Omnibus Public Lands Management Act of 2009, approving the settlement, was passed by Congress on March 19, 2009, and signed into law by President Obama on March 30, 2009, becoming Public Law No. 111-11 ("Settlement Act"). On December 17, 2010, the United States executed the Navajo Settlement Agreement in a signing ceremony. Since May 2009, the State has been actively participating in the Navajo Settlement Implementation Team with the Bureau of Reclamation and other stakeholders to implement the Navajo Settlement. In August 2009, the settlement parties filed a motion to establish a proceeding for the Court to enter a Partial Final Judgment and Decree adjudicating the Navajo Nation's water rights. After conducting an expedited inter se proceeding to allow all other water right claimants in the San Juan River stream system the opportunity to file objections to the proposed adjudication of the Navajo Nation's rights, the adjudication court entered two Partial Final Judgments and Decrees ("decrees") adjudicating the water rights of the Navajo Nation on November 1, 2013, before the statutory deadline set by the Settlement Act of December 31, 2013. The decrees resolve the water rights claims of the Navajo Nation to the waters of the San Juan River stream system in New Mexico pursuant to the terms of the Settlement Agreement. In December 2013, four parties to the adjudication filed notices of appeal of the decrees and a related order of the court. The appeals are currently pending before the New Mexico Court of Appeals.

On May 21, 2014, a petition for writ of mandamus was filed in the New Mexico Supreme Court on behalf of three New Mexico legislators and a water right owner against the Interstate Stream Commission, the Office of the State Engineer and State Engineer Verhines. The petition alleged that the Settlement Agreement was void for lack of legislative approval and requested the Court to declare it a nullity and prohibit the state defendants from taking any action to implement the Settlement unless, and until, it was approved by the Legislature. On May 30, 2014, the Supreme Court granted the State Engineer's request to deny the petition because the issue is pending before the Court of Appeals. In addition to the legal proceedings, the State has also been working with the Bureau of Reclamation to implement other terms of the settlement. This includes the construction of the Navajo-Gallup Water Supply Project, which began in earnest in 2012. The first phase (or "reach") of the Project, consisting of laying four miles of the main pipeline near Gallup, has been completed. Design of the intake diversion works on the San Juan River for the San Juan Lateral portion of the Project is at the appraisal level, and is under review by the city of Gallup and the Nation. Construction has commenced on the Tohlati Pumping Plant, the Project's first pumping plant, north of Gallup. The Settlement Act authorizes the appropriation of \$870 million by the federal government to plan, design and construct the Project. This amount has now increased to approximately \$1.08 billion based on Reclamation's 2014 Construction Cost Estimate for the Project. For federal fiscal years 2010 to 2014, Congress has appropriated to and provided mandatory funding for the Navajo-Gallup Water Supply Project totaling \$307.5 million.

The Act also requires a \$50 million cost share contribution by the State toward Project construction costs. Additionally, the State may, but is not obligated to provide \$10 million for non-Indian ditch rehabilitation. On June 7, 2011, the ISC certified to the Board of Finance the sale of bonds from the Indian Water Rights Settlement Fund in the amount of \$10 million, at least, 8.6 million of which will be used for

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Navajo Settlement implementation and will count towards the State's cost share contribution.

On June 27, 2011, the State and the federal government executed a cost-share agreement for the State's portion of Project construction costs; that is, \$50 million less funds the State already has contributed that are determined to have reduced overall Project costs. To date, the State has appropriated approximately \$40.04 million toward elements of the Project through direct capital appropriations and grants made by the Water Trust Board for the Navajo Nation and the City of Gallup.

The United States, through the Bureau of Reclamation, has represented to ISC staff that it anticipates that the State will receive credit for at least 75% of these appropriations. In the spring of 2012, the State, through the Interstate Stream Commission, submitted to Reclamation New Mexico's first cost share credit request of \$8.8 million. Reclamation has represented that the State will receive full credit pending New Mexico's submission of additional documentation supporting its request. Commission staff submitted an additional cost share credit request of \$6.4 million in FY14.

LOWER COLORADO RIVER STREAM SYSTEM

Zuni River. The Zuni River adjudication suit, *United States v. A&R Productions, et al.*, U.S. District Court No. 01-CV-0072 BB, was filed by the United States on January 19, 2001. The State was realigned as a plaintiff in 2003. The hydrographic survey was conducted by the United States' contractor, but to the specifications and under the supervision of the Hydrographic Survey & Mapping Bureau of the Office of the State Engineer.

By the end of 2006, the United States' contractor had completed the survey for all non-Indian claimants in the Zuni River stream system. The United States conferred with the State on the survey, and filed the survey reports and maps with the Court.

The United States then prepared, and the State reviewed, proposed consent orders for all water right claimants identified by the survey.

The United States has since served them on the claimants. In all, there are over 800 total subfiles, of which approximately 80% were resolved by June 30, 2011 by the entry of either a Court approved consent order or a default judgment.

Consultation between claimants contesting the offers contained in their consent orders and the State and the United States continue to take place on a regular basis in an effort to settle disputes and resolve the remaining subfiles.

Zuni Tribe Claims. On May 11, 2007, the United States filed its Subproceeding Complaint and Statement of Claims for Water Rights on Behalf of, and For the Benefit of, the Zuni Indian Tribe and Zuni Allottees in Subproceeding 1, Case No. 07cv00681-MV/WPL. Subsequently, the Zuni Tribe timely filed its own Supplemental Subproceeding Complaint. The State and other parties answered those claims and made initial disclosures on the Tribe's claims based on past and present permanent works, and the United States, the Tribe, and the State made their expert witness disclosures. Discovery on these claims was scheduled to commence in April 2013, with dispositive motions to be filed in April 2014, and Trial to begin in January 2015. However, in December 2013, at the parties' request, the trial schedule was stayed to allow the parties to pursue settlement on all the Tribe's claims. The parties have formed a technical subcommittee which has conferred on several occasions, including meetings on February 24, 2014 and May 15, 2014, and is initiating work on a hydrologic model to be used to facilitate settlement discussions. Counsel for the parties have drafted a Negotiation Process and Confidentiality Agreement governing settlement discussions, which counsel expect to finalize in the near future. The claims, of the Navajo Nation and Navajo Allottees were

filed on December 13, 2012 and April 30, 2013 in Subproceeding 2, Case No. 12cv1298 MV/WPL. Over 200 notices of intent to participate were subsequently filed but the Court vacated the Scheduling Conference set for November 26, 2013. The Navajo Nation has been participating in the settlement discussion on the Zuni Tribe's claims, and the schedule on the Navajo Nation's claims may also be stayed to allow settlement to be pursued.

ANIMAS VALLEY UNDERGROUND WATER BASIN

Animas. *State of New Mexico ex rel. State Engineer v. Rosette Inc., et al.*, Sixth Judicial District Cause No. CV 2005-0054, is a suit to determine all rights to the use of the waters of the Animas Valley Underground Water Basin. In 2004, Rosette Inc. filed a complaint against the United States in the form of a petition for a general adjudication of groundwater rights, complaining that the federal government did not have jurisdiction over heat that is found in certain public underground waters in the State of New Mexico and therefore could not collect royalties from Rosette. The state District Court granted summary judgment for the United States and dismissed the case for lack of jurisdiction. In the order dismissing the case, the Court found that a general adjudication of water rights could be pursued because the State Engineer had received funding for a hydrographic survey of the Animas Valley Underground Water Basin ("Animas Basin"), and ordered the filing of a complaint for a general adjudication of the basin. On October 21, 2005, the State of New Mexico filed a complaint for a statutory general adjudication of all rights to the use of the underground waters of the Animas Basin.

The State Engineer declared the Animas Basin, located in the southwest "boot heel" of the state, on May 5, 1948, pursuant to NMSA 1978, § 72-12-20, and extended the basin boundaries on February 23, 1956, and on September 23, 2005. The majority of groundwater rights in the Animas Basin are subject to State Engineer licenses and permits issued after the State Engineer declared the basin. The LAP Hydrographic Survey and Mapping Bureau (HSMB) initiated preliminary survey work in December 2005, and began compiling additional data for its preliminary hydrographic survey during 2008. In conjunction with survey activities, in 2007 and 2008 the State conducted a series of public meetings to provide information and progress reports to local communities and potential water rights claimants. During fiscal years 2010 and 2011, the HSMB and the Deming District Office coordinated data collection and analysis activities in order to present a final survey report for litigation purposes. The survey report for irrigation and associated other uses in Sections 1, 3, and 4 (Northern Area, Village of Animas, and Southern Area) was completed in 2012. The final hydrographic survey report for irrigation and associated other uses in Section 2 (Cotton City) was finalized in December 2013 and filed with the court in February 2013. The remaining stock and domestic wells in all four sections will be addressed in a separate hydrographic survey report. In fiscal year 2013, the adjudication judge issued a Case Management Order and established procedures to identify and determine basin-wide issues. Basin-wide issues were heard by the court during fiscal year 2013, and the court issued its Order Making Final Determination of Basin-Wide Irrigation Water Requirements on July 24, 2013. During fiscal year 2014, as a result of workshops with the State and the Special Master, the adjudication judge has also established adjudication procedures in order to begin the joinder of water rights owners and the service of proposed subfile final judgments. The court issued its Procedural Order on subfile procedures on April 22, 2014. The State began joining subfile claimants in Section 1 on May 30, 2014, in accordance with the Procedural Order. As of September 22, 2015, proposed Subfile Final Judgments have been sent for 57 subfiles, and 21 Judgments have been signed.

11 Appendix B - Status of Hydrographic Surveys

INTRODUCTION

The surveyors and other technical personnel in the Hydrographic Survey and Mapping Bureau (HSMB) of the Litigation and Adjudication Program (LAP) conduct hydrographic surveys and provide the foundation technical documents for water rights adjudications. Other survey staff are assigned to LAP's three adjudication bureaus (Northern New Mexico, Lower Rio Grande, and Pecos) and work closely with legal staff in their respective bureaus to provide technical and field support for the 12 ongoing adjudications pending throughout the state. The survey staff in the Lower Rio Grande bureau are located in Las Cruces to support the Lower Rio Grande adjudication and serve as a local contact point for water rights owners involved in that adjudication. All other survey staff are located in Santa Fe.

This Appendix summarizes the hydrographic survey work performed and milestones achieved during fiscal years 2012, 2013, and 2014, from July 1, 2011, to June 30, 2014. For the history of hydrographic surveys prior to this period, please see the Annual Reports for previous fiscal years.

PECOS RIVER STREAM SYSTEM

Fort Sumner Basin. This hydrographic survey will consist of two distinct surveys: the Fort Sumner Irrigation District and the remaining water uses other than domestic uses, within the boundaries of the declared underground water basin. During fiscal year 2012 and 2013, Pecos hydrographic survey staff continued preliminary data collection, including a review of historical documents and aerial photography, county assessor data, and field visits.

Carlsbad Irrigation District. This hydrographic survey involves approximately 1,000 owners of tracts irrigated by surface water, supplemented by ground water. The survey has been divided into four separate geographic areas by township, with those tracts within CID and Township 24S comprising Section One, Township 23S comprising Section Two, Township 22S comprising Section Three, and Township 21S surveyed as Section Four. The survey has been completed for all four sections, and signed consent orders have been filed with the Court for all subfiles. During fiscal years 2012, 2013, and 2014, Pecos hydrographic survey staff were engaged in evaluating late claims for ground water rights supplemental to adjudicated surface water rights. Hydrographic survey staff completed preparing all maps and documents to support a final inter se proceeding and the entry of a partial final decree.

Carlsbad Underground Basin. This survey will report all the remaining water uses within the Carlsbad Underground Basin. During fiscal year 2012, Pecos hydrographic survey staff continued preliminary data collection of well data in preparation for the future compilation of the hydrographic survey. Hydrographic survey work will continue when resources become available.

Gallinas River. In 1991, the State filed with the Court the five-volume Gallinas River Hydrographic Survey Report for surface water rights. In June 2008, successful mediation efforts between the State, the City, and 12 community acequias resolved extensive litigation over procedural matters that had stayed the adjudication progress for one-and-a-half years. Service of adjudication packets on individual subfile claimants commenced immediately thereafter, and service on the remaining subfiles has been completed. In fiscal years 2012 and 2013, Pecos hydrographic survey staff continued to perform the field and technical work needed to support the resolution of disputed subfiles. This included field checks, review of historical documents and aerial photography as well as mapping. Members of the hydrographic survey staff also provided expert testimony in 2014 in several trials where subfile claimants disputed the amount of irrigated acreage recognized by the State. By the end of fiscal year 2014, most disputed claims had been resolved. However, a handful of claims will need to be resolved in fiscal year 2015.

Cow Creek subsection. Although surface water rights on Cow Creek were adjudicated in the 1933 Hope Decree, the adjudicated rights were not mapped. Hydrographic survey work began on upper Cow Creek in 2012 and continued into fiscal year 2014. Most field work was completed in 2014 with minimal updates projected for fiscal year 2015.

RIO GRANDE STREAM SYSTEM

Taos. The three sections of this hydrographic survey (Rio Pueblo de Taos, Rio Grande del Rancho, and Rio Hondo) were completed and filed with the Court in 1969. Hydrographic survey staff and the Court's data manager conducted a thorough review process to prepare for issuance of an interim order for non-Pueblo water rights, in preparation for an inter se proceeding. This process identifies and addresses apparent discrepancies between adjudicated subfile orders and hydrographic survey maps.

Santa Fe. The two volumes of the Santa Fe Hydrographic Survey were completed in 1978. Hydrographic survey staff are now working to support the adjudication of the remaining unresolved subfiles.

Rio Chama. The entire Rio Chama stream system has now been surveyed. A partial final decree on surface water irrigation rights in Section 5 (Rio Gallinas) was filed on April 8, 2010. HSMB staff are now working with legal staff to review all subfile orders entered in Section 7 (Rito de Tierra Amarilla, Rio Brazos, Rutherford and Plaza Blanca, Cañones Creek, and Village of Chama), and are preparing maps and documents to support a final inter se proceeding and entry of partial final decree on surface water irrigation rights in the Rio Nutrias Subsection of Section 3 (Rio Nutrias, Rio Cebolla and Canjilon Creek). Work is ongoing to finalize the data and reports on the other areas of Sections 3 and 7 to prepare for inter se and partial final decrees. Hydrographic survey staff also evaluated the claims of the Jicarilla

Appendix B - Status of Hydrographic Surveys

Apache Nation on lands acquired and placed into trust status after the entry of the 1998 partial final decree.

Rio del Oso. This is a subsection of Section 1. The majority of the fieldwork has been completed. Subfile maps and orders were being created.

Rio San Jose. Hydrographic survey staff participated in the depositions of experts for the United States, the Pueblos, and other parties who prepared reports on the water use claims of Acoma and Laguna Pueblos.

All depositions were completed in November, 2013.

Nambé-Pojoaque-Tesuque. The hydrographic survey was completed in 1964. Hydrographic survey staff are now engaged in surveying and supporting the adjudication of post-1982 domestic wells, which represent the vast majority of the remaining unadjudicated groundwater rights. This involves extensive research of the WATERS database as well as county ownership records to catalog all the wells that need to be surveyed. Once wells are identified, field inspections of the wells are performed, and documents are prepared to adjudicate the rights associated with the wells. Hydrographic survey staff are also beginning a comprehensive review process to prepare for a partial final judgment and decree of the non-Pueblo water rights, prior to an inter se proceeding. This process identifies and addresses apparent discrepancies between adjudicated subfile orders and hydrographic survey maps.

LOWER RIO GRANDE STREAM SYSTEM

Lower Rio Grande. In 2000, a contractor working under the direction of the HSMB completed the five sections of this hydrographic survey (Nutt-Hockett, Rincon, Northern Mesilla, Southern Mesilla, and Outlying Areas). A supplemental survey was completed in 2001 to determine the extent of the water rights of approximately 6,500 domestic and small agricultural water users within the Elephant Butte Irrigation District. Hydrographic survey staff located in Las Cruces are now performing the surveying and technical work needed to support the adjudication as it proceeds.

LOWER COLORADO STREAM SYSTEM

Zuni River. In 2001, the federal government filed a lawsuit to quiet title of the water rights within the Zuni River stream system. The form of this action has since been changed to a water rights adjudication and is proceeding in federal court with the State realigned as a plaintiff. The State informed the Court that the State did not have the resources to perform the necessary hydrographic survey work. The Court then ordered the United States to provide those resources and hire a contractor to survey the non-federal and non-Indian water uses. In 2006, the United States' contractor completed the survey to the specifications and under the supervision of the HSMB, and filed the survey reports and maps with the Court.

The State's survey staff are now working to support the adjudication of the remaining unresolved subfiles. Hydrographic survey staff have also been analyzing the hydrographic surveys and water use claims made by the Zuni Indian Tribe.

UPPER COLORADO STREAM SYSTEM

San Juan River. The non-Indian, non-federal water rights of the San Juan River stream system were hydrographically surveyed in the late 1930's and adjudicated by the Echo Ditch Decree in 1948. However, no Indian or federal water rights were adjudicated in that decree. The State Engineer conducted a partial hydrographic survey in the early 1980's, and the HSMB updated that survey for the La Plata Section using all available current and historical data, including infrared aerial digital imagery. In fiscal years 2012, 2013 and 2014, the HSMB focused on mapping and fieldwork in support of subfile phase proceedings in the La Plata Section. HSMB staff also analyzed hydrographic survey work performed for the Navajo Nation by the United States and advised on

other technical issues related to the Navajo Settlement.

ANIMAS UNDERGROUND WATER BASIN

Animas. On October 21, 2005, the State of New Mexico filed a complaint for the adjudication of all rights to the use of the underground waters of the Animas Valley Underground Water Basin. The majority of groundwater rights in the basin are subject to State Engineer licenses and permits issued after the basin was declared by the State Engineer. The HSMB initiated preliminary survey work in December 2005, and began compiling additional data for its preliminary hydrographic survey in 2008. During fiscal years 2010 and 2011, the HSMB and the Deming District Office coordinated data collection and analysis activities in order to present a final survey report for litigation purposes. During fiscal year 2012, the survey report for irrigation and associated other uses in Sections 1, 3, and 4 (Northern Area, Village of Animas, and Southern Area) was completed. During fiscal year 2013, the Hydrographic Survey Bureau continued drafting the hydrographic survey report for Section 2 (Cotton City). The remaining stock and domestic wells in all four sections will be addressed in a separate hydrographic survey report thereafter. Also during fiscal year 2013, the State and Special Master worked on developing procedures for adjudicating individual subfile claims beginning in 2014. The Water Court judge issued a Case Management Order and Basin-wide issues were heard and determined by the Water Court in fiscal year 2013.

12 Appendix C -

Surface Water Documents Processed

July 1, 2011-June 30, 2012

| Surface Water Documents Processed - July 1, 2011 through June 30, 2012 | | | | | | | | |
|--|------------|------------|------------|------------|------------|------------|------------|--------------|
| Document Type | District 1 | District 2 | District 3 | District 4 | District 5 | District 6 | District 7 | STATE TOTALS |
| Application for Extension of Time | 43 | 25 | - | - | 22 | 2 | 2 | 94 |
| Certificate of Construction | - | - | - | - | - | - | - | - |
| Change of Ownership | 134 | 22 | 117 | 12 | 278 | 221 | 15 | 799 |
| Change Point of Diver & Place/Purp of Use | 5 | - | 18 | - | 5 | 6 | 3 | 37 |
| Combine & Comingle | - | - | - | - | - | - | - | - |
| Declaration | 90 | 3 | 286 | - | - | 1 | 2 | 382 |
| Dedication of Retired Rights | - | - | - | - | - | - | - | - |
| Emergency Authorization | - | - | - | - | 6 | - | - | 6 |
| License to Appropriate or to Change Place and/or Purpose of Use | 3 | - | 460 | - | - | - | - | 463 |
| Livestock Impoundment Declarations | 50 | - | - | 2 | - | - | - | 52 |
| Livestock Impoundment Permits | - | - | - | - | - | - | - | - |
| Meter Readings Processed thru WATERS | - | 225 | - | - | - | 139 | 16 | 380 |
| Miscellaneous Surface Water Permits | - | - | - | - | 1 | - | - | 1 |
| Notice for Publication | 15 | 5 | 24 | 2 | 20 | 3 | 1 | 70 |
| Notice of Intent to Appropriate | - | - | 1 | - | - | - | - | 1 |
| Permit to Appropriate | - | 1 | - | - | - | - | - | 1 |
| Permit to Change Place and/or Purpose of Use | - | 4 | 3 | 2 | 3 | 2 | 1 | 15 |
| Permit to Change Point of Diversion | 1 | 9 | - | - | - | 1 | - | 11 |
| Permit to Change Point of Diversion from GW to Surface | 1 | 3 | - | - | - | - | - | 4 |
| Proof of Application of Water to Beneficial Use | - | 2 | 6 | - | - | 1 | - | 9 |
| Conservation Plan | - | - | 3 | - | - | 1 | - | 4 |
| Proof of Completion of Works | - | - | 1 | - | - | 1 | - | 2 |
| Supplemental | - | 7 | 4 | - | - | - | - | 11 |
| Totals | 342 | 306 | 923 | 18 | 335 | 378 | 40 | 2,342 |

12 Appendix C -

Surface Water Documents Processed

July 1, 2012-June 30, 2013

| Surface Water Documents Processed - July 1, 2012 through June 30, 2013 | | | | | | | | |
|--|------------|------------|------------|--------------|------------|------------|------------|--------------|
| Document Type | District 1 | District 2 | District 3 | District 4 | District 5 | District 6 | District 7 | STATE TOTALS |
| Application for Extension of Time | 3 | 13 | 1 | - | 2 | 1 | 2 | 22 |
| Certificate of Construction | - | - | - | - | - | - | - | - |
| Change of Ownership | 112 | 68 | 125 | 12 | 255 | 227 | 4 | 803 |
| Change Point of Diver & Place/Purp of Use | 1 | 1 | 6 | 1 | 9 | 3 | - | 21 |
| Combine & Comingle | - | - | - | - | - | - | - | - |
| Declaration | 137 | - | - | 8 | - | 10 | 4 | 159 |
| Dedication of Retired Rights | - | - | - | - | - | - | - | - |
| Emergency Authorization | 1 | - | - | - | 3 | - | - | 4 |
| License to Appropriate or to Change Place and/or Purpose of Use | - | - | - | - | - | - | - | - |
| Livestock Impoundment Declarations | 14 | - | - | - | - | - | - | 14 |
| Livestock Impoundment Permits | - | 1 | - | - | - | 9 | 5 | 15 |
| Meter Readings Processed thru WATERS | - | - | - | 6,291 | - | - | - | 6,291 |
| Miscellaneous Surface Water Permits | - | 2 | - | - | - | 1 | - | 3 |
| Notice for Publication | 18 | - | 9 | 1 | 10 | 5 | 1 | 44 |
| Notice of Intent to Appropriate | - | - | 1 | - | - | - | - | 1 |
| Permit to Appropriate | 2 | 8 | - | - | 1 | - | - | 11 |
| Permit to Change Place and/or Purpose of Use | 14 | 7 | 4 | - | 3 | 2 | 1 | 31 |
| Permit to Change Point of Diversion | - | 1 | 1 | - | - | 1 | - | 3 |
| Permit to Change Point of Diversion from GW to Surface | 1 | - | - | - | 1 | - | - | 2 |
| Proof of Application of Water to Beneficial Use | - | - | 5 | - | - | 5 | 1 | 11 |
| Conservation Plan | - | - | - | - | - | - | - | - |
| Proof of Completion of Works | - | - | 5 | - | - | - | 2 | 7 |
| Supplemental | - | - | - | - | - | - | - | - |
| Totals | 303 | 101 | 157 | 6,313 | 284 | 264 | 20 | 7,442 |

12 Appendix C -

Surface Water Documents Processed

July 1, 2013-June 30, 2014

| Surface Water Documents Processed - July 1, 2013 through June 30, 2014 | | | | | | | | |
|--|------------|------------|------------|------------|------------|------------|------------|--------------|
| Document Type | District 1 | District 2 | District 3 | District 4 | District 5 | District 6 | District 7 | STATE TOTALS |
| Application for Extension of Time | 8 | 8 | 2 | - | 26 | 19 | 1 | 64 |
| Certificate of Construction | - | - | - | - | - | - | - | - |
| Change of Ownership | 135 | 47 | 122 | 3 | 146 | 477 | 24 | 954 |
| Change Point of Diver & Place/Purp of Use | 5 | 2 | 5 | - | 4 | 10 | - | 26 |
| Combine & Comingle | - | - | - | - | - | 1 | - | 1 |
| Declaration | 102 | - | 1 | 1 | - | 3 | 12 | 119 |
| Dedication of Retired Rights | - | - | - | - | - | - | - | 2 |
| Emergency Authorization | 2 | - | - | - | 1 | 3 | - | 6 |
| License to Appropriate or to Change Place and/or Purpose of Use | - | - | - | - | - | - | - | - |
| Livestock Impoundment Declarations | 9 | - | - | - | - | 10 | - | 19 |
| Livestock Impoundment Permits | 3 | 2 | - | - | - | 2 | - | 7 |
| Meter Readings Processed thru WATERS | - | - | - | - | 167 | 17 | - | 184 |
| Miscellaneous Surface Water Permits | - | 3 | - | - | 2 | 22 | - | 27 |
| Notice for Publication | 9 | - | 6 | - | 7 | 20 | 1 | 43 |
| Notice of Intent to Appropriate | - | - | 1 | - | - | - | - | 1 |
| Permit to Appropriate | 2 | 4 | - | - | - | - | - | 6 |
| Permit to Change Place and/or Purpose of Use | 2 | 7 | 3 | - | 2 | 4 | - | 18 |
| Permit to Change Point of Diversion | 2 | 1 | 3 | 1 | - | 2 | - | 9 |
| Permit to Change Point of Diversion from GW to Surface | 19 | - | - | - | - | 1 | - | 20 |
| Proof of Application of Water to Beneficial Use | 1 | - | 10 | - | - | 5 | - | 16 |
| Conservation Plan | - | - | - | - | - | - | - | - |
| Proof of Completion of Works | - | - | 3 | - | - | 4 | - | 7 |
| Supplemental | - | - | - | 1 | - | 2 | 1 | 4 |
| Totals | 299 | 74 | 156 | 6 | 355 | 602 | 39 | 1,533 |

13

Appendix D - Groundwater Documents Processed July 1, 2012 - June 30, 2013

| Groundwater Documents Processed - July 1, 2012 through June 30, 2013 | Appl for Alt Pt of Div | Appl for Extension of Time | Appl for Supp'l Well | Appl to Appr 0 Domestic, Stock | Appl to Appr 0 Irrig., Mun., Ind., Com. | Appl to Appr 0 Oil Well Drill. | Appl to Change Loc. of Well | Appl to Change Pl and/or Purp. of Use | Appl to Change Point of Div, PI/Purp of Use | Appl to Change Point of Div, PI/Purp of Use SW to GW | Appl to Change Well Loc, Place/Purp | Appl to Combine Wells, Uses | Appl to Repair Deepen | Application to Amend Permit | Application to DeWater | Certificate and License | Change of Ownership | Change Point of Diversion: Sfc to GW | Compliance Order / Water Master Orders | Declaration of Water Right | Emergency Authorization | Meter Readings Processed thru WATERS | Misc. (Block System) | Monitor Wells | Notice for Publication | Notice of Intent | Plugging Plan of Operations | Pollution Control Recovery | Proof of Beneficial Use | Proof of Completion of Well | State Engineer Order | Test or Exploratory Wells | Well Driller Licenses 0 Renewals | Well Driller Licenses 0 New | Well Driller Licenses 0 Amended | Well Driller Licenses 0 Drill Rig Supervisor Registration | Well and/or Plugging Record | Basin Totals | |
|--|------------------------|----------------------------|----------------------|--------------------------------|---|--------------------------------|-----------------------------|---------------------------------------|---|--|-------------------------------------|-----------------------------|-----------------------|-----------------------------|------------------------|-------------------------|---------------------|--------------------------------------|--|----------------------------|-------------------------|--------------------------------------|----------------------|---------------|------------------------|------------------|-----------------------------|----------------------------|-------------------------|-----------------------------|----------------------|---------------------------|----------------------------------|-----------------------------|---------------------------------|---|-----------------------------|--------------|-----|
| Bulwer | - | 8 | 2 | 26 | - | - | 1 | - | - | 1 | - | - | 1 | - | - | - | 6 | - | - | 1 | 100 | - | 9 | 3 | - | 21 | 2 | - | - | - | - | - | - | - | - | 75 | 258 | | |
| Estancia | - | 156 | 10 | 149 | - | - | 26 | 10 | 1 | - | - | - | 6 | 1 | - | - | 97 | - | - | 1 | 3 | 654 | - | 1 | 24 | - | 34 | - | 1 | 4 | - | - | - | - | - | 161 | 1,342 | | |
| Gallop | - | 1 | 1 | 52 | - | - | 1 | - | - | 22 | - | - | 7 | - | - | - | 22 | - | - | 2 | 253 | - | 5 | - | - | 3 | - | 3 | - | - | - | - | - | - | - | 65 | 416 | | |
| M Rio Grande | - | 134 | 28 | 774 | - | - | 68 | 4 | 5 | 20 | 2 | - | 10 | - | 1 | - | 343 | - | - | 31 | 5,454 | 2 | 36 | 46 | - | 21 | - | 5 | 3 | 8 | - | - | - | - | - | 128 | 8,404 | | |
| Sando | - | 3 | 6 | 117 | - | - | 14 | - | - | - | - | - | - | - | - | - | 59 | - | - | 1 | 412 | - | 2 | 1 | - | 2 | - | - | - | - | - | - | - | - | - | 8 | 765 | | |
| U. Uterosa | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 14 | | |
| District I Totals | - | 302 | 47 | 1,121 | 2 | - | 110 | 14 | 6 | 21 | 2 | - | 24 | 1 | 1 | - | 528 | - | - | 36 | 3 | 6,873 | 2 | 53 | 74 | - | 397 | 7 | 4 | 12 | - | 42 | - | - | - | - | 1,517 | 11,199 | |
| Caridan | 1 | 2 | 2 | 48 | 4 | 18 | 3 | - | 1 | - | 1 | - | 1 | - | - | - | 1 | - | - | 2 | 1 | 1 | 2 | 12 | 12 | - | - | - | - | - | - | - | - | - | - | - | 1 | 137 | |
| Carlsbad | 5 | 6 | 6 | 53 | - | 18 | 3 | 6 | 2 | 2 | 6 | - | 2 | - | - | - | 85 | - | - | 1 | 375 | 13 | 20 | 36 | - | 17 | - | 3 | 1 | - | - | - | - | - | - | - | 3 | 694 | |
| Causey/Lugo | 1 | 1 | 3 | 6 | - | - | - | - | - | - | - | - | 6 | - | - | - | - | - | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 20 | |
| Curry County | - | 8 | 9 | 26 | - | 4 | 1 | 2 | 1 | 2 | - | - | - | - | - | - | 96 | - | - | 22 | 399 | 10 | 2 | 21 | - | 2 | - | 2 | 1 | 1 | - | - | - | - | - | - | 2 | 626 | |
| Fl. Simmer | - | - | - | 14 | - | - | 1 | - | - | - | - | - | - | - | - | - | 19 | - | - | - | - | 5 | 1 | 5 | - | 2 | - | - | - | - | - | - | - | - | - | - | 2 | 51 | |
| Hondo | 1 | 5 | 1 | 61 | 1 | - | 3 | 3 | 2 | - | - | - | 6 | 2 | - | - | 32 | - | - | - | - | 645 | 4 | 5 | 12 | - | - | - | 3 | - | - | - | - | - | - | - | - | 766 | |
| Idal | - | - | 1 | 2 | 3 | - | - | - | - | - | - | - | - | - | - | - | 5 | - | - | 1 | 3 | 8 | 10 | 142 | 96 | - | - | - | 5 | 12 | - | - | - | - | - | - | 18 | 902 | |
| Lea County | 9 | 70 | 48 | 202 | 7 | 27 | 22 | 18 | 2 | 13 | 2 | 1 | 48 | 1 | - | - | 12 | - | - | 1 | 3 | 8 | 10 | 142 | 96 | - | - | - | 5 | 12 | - | - | - | - | - | - | 18 | 902 | |
| Persim | 2 | - | 6 | 19 | 4 | - | - | - | - | - | - | - | - | - | - | - | 12 | - | - | - | - | - | 2 | 1 | 2 | - | - | - | 1 | - | - | - | - | - | - | - | 53 | | |
| Poncha | 7 | 67 | 9 | 40 | 7 | - | 3 | 1 | 1 | - | - | - | - | - | - | - | 105 | - | - | 1 | 250 | 10 | 1 | 45 | - | 1 | - | 4 | 10 | - | - | - | - | - | - | - | 1 | 563 | |
| Posada Artesan | 8 | 53 | 21 | 140 | 2 | 3 | 10 | 34 | 8 | 12 | 2 | - | 2 | - | - | - | 172 | - | - | 2 | 13,555 | 13 | 49 | 96 | - | 11 | - | 4 | 2 | - | - | - | - | - | - | - | 10 | 14,029 | |
| Well Driller Licenses | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 280 | |
| District II Totals | 34 | 212 | 103 | 608 | 34 | 70 | 46 | 64 | 17 | 27 | 11 | 1 | 65 | 3 | - | - | 637 | - | - | 29 | 3 | 15,037 | 70 | 234 | 329 | - | 33 | - | 21 | 27 | - | 123 | - | - | - | - | 37 | 17,975 | |
| Alamos | - | 15 | 2 | 8 | - | - | 2 | 1 | - | - | - | - | 4 | - | - | - | 55 | - | - | 13 | 2 | - | 1 | - | 4 | - | 5 | - | 1 | - | - | - | - | - | - | - | 12 | 129 | |
| Cloverdale | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | |
| Chis. SF | - | 22 | 5 | 25 | - | - | 7 | 1 | 12 | - | 1 | - | 15 | - | 1 | - | 100 | - | - | - | - | - | 2 | 27 | - | 15 | - | 21 | 26 | - | - | - | - | - | - | - | 62 | 377 | |
| Hatch | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 10 | | |
| Hatcha | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 77 | | |
| Lordsburg | - | 4 | - | 6 | - | - | - | 1 | - | - | - | - | - | - | - | - | 11 | - | - | 6 | - | - | - | 2 | - | 21 | - | - | - | - | - | - | - | - | - | - | 2 | 77 | |
| Mimbres | - | 2 | 6 | 110 | - | - | - | - | 1 | - | - | - | 19 | - | - | - | 134 | - | - | - | 1 | - | 30 | 16 | 4 | - | 30 | - | - | - | - | - | - | - | - | - | - | 147 | 508 |
| Mt. Riley | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 8 | | |
| Ninth-Hockett | - | - | 2 | 3 | - | - | - | - | - | - | - | - | 2 | - | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 22 | | |
| Papas | - | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 42 | | |
| San Simon | - | 3 | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | 4 | - | 5 | - | - | - | - | - | - | - | 3 | 21 | |
| Virgin Valley | - | - | - | 5 | - | - | - | - | - | - | - | - | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | | |
| Yavapai | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| District III Totals | - | 46 | 15 | 161 | - | - | 9 | 4 | 12 | - | 1 | - | 40 | - | 1 | - | 321 | - | - | 19 | 3 | 31 | 18 | 37 | - | 75 | - | 26 | 28 | - | 75 | - | - | - | - | - | 279 | 1,201 | |
| Hot Springs | - | 2 | - | 19 | - | - | - | - | - | - | - | - | - | - | - | - | 5 | - | - | - | - | 351 | - | - | - | 2 | - | 1 | - | - | - | - | - | - | - | - | 3 | 386 | |
| Hueso | - | 3 | 1 | 2 | 3 | - | 2 | - | - | - | - | - | 2 | - | - | - | 8 | - | - | - | 3 | 270 | - | - | 5 | 1 | 1 | - | 1 | - | - | - | - | - | - | - | 2 | 304 | |
| Las Animas | - | - | - | 1 | - | - | - | - | - | - | - | - | 10 | - | - | - | 2 | - | - | - | - | 104 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 118 | | |
| L. Rio Grande | - | 48 | 91 | 119 | - | - | 224 | - | - | - | - | - | 5 | - | - | - | 345 | - | - | 70 | 138 | 312 | 20,120 | - | 5 | 259 | 5 | 7 | 52 | - | - | - | - | - | - | - | 231 | 22,048 | |
| Uterosa | - | 15 | 5 | 52 | 6 | - | 7 | - | - | - | - | - | 1 | - | - | - | 61 | - | - | 10 | 12 | 2,133 | - | 4 | 15 | 4 | 4 | 2 | 3 | 3 | - | - | - | - | - | - | 29 | 2,367 | |
| Salt | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 5 | - | - | - | - | 98 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 105 | | |
| District IV Totals | - | 68 | 97 | 195 | 9 | - | 233 | - | - | - | 5 | 6 | 13 | - | - | - | 424 | - | - | 73 | 148 | 327 | 23,076 | - | 9 | 279 | 13 | 10 | 56 | - | 21 | - | - | - | - | 265 | 25,328 | | |
| San Juan | - | 3 | - | 24 | 1 | 1 | - | - | - | - | - | - | 5 | - | - | - | 5 | - | - | 2 | - | - | - | 14 | - | 9 | 1 | - | - | - | - | - | - | - | - | - | 34 | 105 | |
| N. Rio Grande | 1 | 17 | 6 | 361 | - | 33 | 1 | 1 | 1 | 1 | - | - | 2 | - | - | - | 436 | 2 | - | 11 | 2 | 3,910 | - | 151 | 21 | 2 | 59 | 2 | 5 | 1 | 206 | - | - | - | - | - | 167 | 5,386 | |
| Upper Pecos | 1 | 9 | 1 | 91 | - | - | 10 | - | 11 | 1 | - | - | 26 | - | - | - | 26 | - | - | 1 | 292 | - | 2 | 2 | 15 | 1 | - | - | - | - | - | - | - | - | - | 75</ | | | |

