NEW MEXICO LEGISLATURE

WATER AND NATURAL RESOURCES COMMITTEE

2019 INTERIM FINAL REPORT

Legislative Council Service
411 State Capitol
Santa Fe, New Mexico 87501
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INTERIM SUMMARY

Water and Natural Resources Committee
2019 Interim Summary

The Water and Natural Resources Committee was created by the New Mexico Legislative Council for the 2019 interim and scheduled five meetings, which were held in Santa Fe, Truth or Consequences, Ruidoso and Silver City.

The committee dedicated time to understanding a number of ongoing water issues in the state, including the planning process for projects on the Gila River being undertaken pursuant to the federal Arizona Water Settlements Act of 2004, the *Aamodt* water rights settlement, the ongoing litigation in *Texas v. New Mexico* and Pecos River Compact compliance and concerns. In addition to other water topics, the committee heard from the state climatologist on the status of drought in the state, received presentations from irrigation and conservancy districts and learned about historic and proposed projects for aquifer recharge, interbasin water transfers and water conservation.

Non-water topics were also given considerable attention during the interim. Issues addressed that are particular to the oil and gas industry included the status of recycling produced water in and out of the oil field, hydraulic fracturing, the state's regulation of methane and remediation of the Carlsbad brine well. The committee also heard presentations on issues concerning game and fish and forest management and had discussions on the State Game Commission's non-navigable water rule, implementation of the Forest and Watershed Restoration Act, Department of Game and Fish species management and legislation to enact an agricultural and natural resources trust fund. Regarding energy topics, the committee heard from various stakeholders on the implementation of the Energy Transition Act and received presentations on wind turbine decommissioning, energy efficiency opportunities for low-income individuals and the structure of rural electric cooperatives and their initiatives to expand renewable energies within their energy portfolios.

While the committee discussed concepts associated with proposed legislation, no bills were endorsed by the committee during the interim.

WORK PLAN AND MEETING SCHEDULE

2019 APPROVED
WORK PLAN AND MEETING SCHEDULE
for the
WATER AND NATURAL RESOURCES COMMITTEE

Members

Sen. Joseph Cervantes, Chair
Rep. Derrick J. Lente, Co-Vice Chair
Rep. Matthew McQueen, Co-Vice Chair
Rep. Abbas Akhil
Rep. Gail Armstrong
Rep. Paul C. Bandy
Sen. Craig W. Brandt
Rep. Christine Chandler
Rep. Joanne J. Ferrary
Rep. Angelica Rubio
Sen. Sander Rue
Rep. Larry R. Scott
Sen. Benny Shendo, Jr.
Rep. Nathan P. Small
Rep. Melanie A. Stansbury
Sen. Jeff Steinborn
Sen. Mimi Stewart
Rep. James R.J. Strickler
Rep. Candie G. Sweetser
Sen. Pat Woods

Advisory Members

Rep. Anthony Allison
Sen. Pete Campos
Rep. Jack Chatfield
Sen. Carlos R. Cisneros
Rep. Randal S. Crowder
Rep. Candy Spence Ezzell
Sen. Gregg Fulfer
Sen. Ron Griggs
Rep. Susan K. Herrera
Sen. Stuart Ingle
Sen. Gay G. Kernan
Rep. Tim D. Lewis
Sen. Linda M. Lopez
Rep. Javier Martínez
Rep. Rodolpho "Rudy" S. Martinez
Sen. Steven P. Neville
Rep. Greg Nibert
Sen. Gerald Ortiz y Pino
Sen. Mary Kay Papen
Rep. Jane E. Powdrell-Culbert
Rep. William "Bill" R. Rehm
Sen. Nancy Rodriguez
Rep. G. Andrés Romero
Rep. Patricia Roybal Caballero
Rep. Tomás E. Salazar
Rep. Debra M. Sariñana
Sen. Antoinette Sedillo Lopez
Sen. William E. Sharer
Sen. John Arthur Smith
Rep. James G. Townsend
Sen. Peter Wirth
Rep. Martin R. Zamora

2019 Approved Work Plan

The Water and Natural Resources Committee was created by the New Mexico Legislative Council on April 29, 2019. The committee will focus on the following topics, as scheduling permits:

A. water management, research, litigation and projects, including:

1. reports required by statute from the Office of the State Engineer and the Interstate Stream Commission;

2. Active Water Resource Management implementation and water banking;

3. Gila River planning process and projects (federal Arizona Water Settlements Act of 2004);

4. *Texas v. New Mexico* litigation;

5. Indian water rights and *Aamodt* settlements;

6. implementation of the Water Data Act;

7. reservoir storage capacities;

8. interbasin transfer of water;

9. aquifer recharge;

10. long-term perspectives on water contamination mitigation;

11. brackish water treatment technologies;

12. updates and overview from irrigation districts;

13. incentives to agricultural interests to transfer water rights;

14. middle Rio Grande water concerns;

15. acequia litigation; and

16. budgetary process, personnel retention and policy reforms for the Office of the State Engineer; and

B. agriculture, land use, natural resources and game and fish issues, including:

1. state parks;

2. Department of Game and Fish species management;

3. watershed health and implementation of the Forest and Watershed Restoration Act;

4. crops and industrial hemp production;

5. a proposed state-level environmental review act;

6. leveraging federal Farm Bill programs;

7. agricultural and food security;

8. agricultural tourism and liability;

9. foreign ownership of agricultural land;

10. possible establishment of an agriculture and natural resources trust fund;

11. outdoor recreation;

12. renewable energy infrastructure;

13. low-income energy efficiency opportunities and national and international trends in accessible and affordable renewable wind and solar energy development;

14. property tax on certain renewable energy systems;

15. cooperative energy power provider options;

16. climate change;

17. implementation of the Energy Transition Act through use of efficiency and conservation strategies;

18. hydraulic fracturing;

19. produced water and water midstream;

20. oil and gas in Sandoval County;

21. methane capture;

22. State Land Office changes in lease and bidding procedures;

23. remediation of the Carlsbad brine well; and

24. Holtec International's proposed consolidated interim storage facility in Eddy and Lea counties.

Water and Natural Resources Committee
2019 Approved Meeting Schedule

Date	Location
June 4	Santa Fe
July 30-31	Truth or Consequences
September 5-6	Ruidoso
October 17-18	Silver City
November 7-8	Santa Fe

AGENDAS AND MINUTES

TENTATIVE AGENDA
for the
FIRST MEETING
of the
WATER AND NATURAL RESOURCES COMMITTEE

June 4, 2019
State Capitol, Room 307
Santa Fe

Tuesday, June 4

12:30 p.m. **Call to Order — Introductions**
—Senator Joseph Cervantes, Chair, Water and Natural Resources Committee (WNRC)

12:35 p.m. (1) **Drought Status, Reservoir Levels, Outlook**
—Dr. Dave DuBois, State Climatologist
—John R. D'Antonio, Jr., P.E., State Engineer

1:30 p.m. (2) **Status Report — Office of the State Engineer**
—John R. D'Antonio, Jr., P.E., State Engineer

3:00 p.m. (3) **Discussion of 2019 Interim Work Plan and Meeting Schedule**
—WNRC Members

4:00 p.m. **Adjourn**

MINUTES
of the
FIRST MEETING
of the
WATER AND NATURAL RESOURCES COMMITTEE

June 4, 2019
State Capitol, Room 307
Santa Fe

The first meeting of the Water and Natural Resources Committee was called to order by Senator Joseph Cervantes, chair, on June 4, 2019 at 12:43 p.m. in Room 307 of the State Capitol in Santa Fe.

Present
Sen. Joseph Cervantes, Chair
Rep. Derrick J. Lente, Co-Vice Chair
Rep. Matthew McQueen, Co-Vice Chair
Rep. Gail Armstrong
Sen. Craig W. Brandt
Rep. Angelica Rubio
Rep. Larry R. Scott
Sen. Benny Shendo, Jr.
Rep. Melanie A. Stansbury
Sen. Mimi Stewart
Sen. Pat Woods

Absent
Rep. Abbas Akhil
Rep. Paul C. Bandy
Rep. Christine Chandler
Rep. Joanne J. Ferrary
Sen. Sander Rue
Rep. Nathan P. Small
Sen. Jeff Steinborn
Rep. James R.J. Strickler
Rep. Candie G. Sweetser

Advisory Members
Rep. Jack Chatfield
Sen. Carlos R. Cisneros
Rep. Susan K. Herrera
Sen. Linda M. Lopez
Rep. Rodolpho "Rudy" S. Martinez
Sen. Gerald Ortiz y Pino
Sen. Mary Kay Papen
Rep. Jane E. Powdrell-Culbert
Sen. Nancy Rodriguez
Rep. Patricia Roybal Caballero
Rep. Tomás E. Salazar
Rep. Debra M. Sariñana
Sen. Antoinette Sedillo Lopez
Sen. William E. Sharer
Rep. Martin R. Zamora

Rep. Anthony Allison
Sen. Pete Campos
Rep. Randal S. Crowder
Rep. Candy Spence Ezzell
Sen. Gregg Fulfer
Sen. Ron Griggs
Sen. Stuart Ingle
Sen. Gay G. Kernan
Rep. Tim D. Lewis
Rep. Javier Martínez
Sen. Steven P. Neville
Rep. Greg Nibert
Rep. William "Bill" R. Rehm
Rep. G. Andrés Romero
Sen. John Arthur Smith
Rep. James G. Townsend
Sen. Peter Wirth

Staff
Shawna Casebier, Legislative Council Service (LCS)
Pam Stokes, LCS
Jeret Fleetwood, LCS
Sara Wiedmaier, LCS

Guests
The guest list is in the meeting file.

Handouts
Handouts and other written testimony are in the meeting file and on the New Mexico Legislature's website at www.nmlegis.gov.

Tuesday, June 4

Welcome and Introductions
Senator Cervantes welcomed everyone to the meeting and invited committee members, staff and audience members to introduce themselves.

Drought Status, Reservoir Levels, Outlook
Dr. Dave DuBois, state climatologist, discussed the current drought status, reservoir levels and seasonal drought outlook across New Mexico. As a member of the American Association of State Climatologists, New Mexico collaborates with other states, tribes and federal agencies to compile data and track drought across the country. Dr. DuBois described the role of the New Mexico Drought Monitoring Work Group in surveilling rainfall, leading monthly meetings and making reports to the United States Drought Monitor and the New Mexico Drought Task Force.

Dr. DuBois provided highlights of snow melt in the Rio Grande, San Juan and Pecos basins, noting that this year's snow water equivalent in each basin is above the median levels measured from 1981 through 2010 and is a sharp increase from last year, which largely followed the minimum levels. He provided a list of water year precipitation data for all of the basins across the state, showing that all basins have experienced above-average rainfall and snowfall this year, with the exception of the Gila and Mimbres river basins. Although the average temperatures across most of New Mexico are below average this year, he stated that the overall trend since 1895 shows an increase in statewide temperature and drought.

As a contributor to the United States Drought Monitor, Dr. DuBois shared that his team collects empirical data on drought conditions across the state but also looks at photos and talks to locals about their experiences to gain a better understanding of the impacts of climate change. He stated that his team is seeing recovery across the state, with the exception of the northwest corner, with conditions moving out of drought into the less serious classification of abnormally dry. In the past 20 months, New Mexico has recovered greatly from drought as a result of El Niño weather patterns bringing cooler, wetter weather. Dr. DuBois emphasized that currently only 19 percent of the state is under drought conditions, with zero percent under exceptional

drought, compared to last year with 99 percent in drought and 18 percent in exceptional drought. The current forecast predicts that El Niño patterns have a 50 percent chance of continuing through the year. The outlook in New Mexico for the next three months is expected to demonstrate below-average temperatures and above-average precipitation, and even the northwest corner of the state is expected to have the drought classification removed.

John R. D'Antonio, Jr., P.E., state engineer, Office of the State Engineer (OSE), provided the committee with an overview of various water management issues in New Mexico, including drought, water rights adjudications, compact deliveries, reservoir storage levels and the ongoing Active Water Resource Management (AWRM) initiative.

Although he confirmed that El Niño conditions brought above-average precipitation this year, Mr. D'Antonio noted that the reservoir storage volumes in the Middle Rio Grande Conservancy District are improving but are still below average. He discussed the role of the New Mexico Drought Task Force, which was created through executive order to evaluate the status of drought throughout New Mexico and to use state emergency funding from the Federal Emergency Management Agency (FEMA) to implement a drought recovery plan with help from the United States Department of Agriculture. He also noted a partnership with the National Aeronautics and Space Administration to collect real-time evapotranspiration rates.

Mr. D'Antonio explained that the AWRM initiative was created by the state engineer in 2003 to provide uniform statewide rules to manage resources during times of drought, protect existing water rights and meet local agreement and compact requirements. He mentioned that the state has spent about $7 million on metering since 2002 in order to provide greater transparency of water use.

Responses to questions and comments from the committee included:

- the term "drought" can refer to meteorological drought, which is more short-term and can be relieved by snowfall and rainfall, or can refer to agricultural and ground water droughts, which are more long-term, and can also generally refer to warmer temperatures;
- the OSE also collects water data on the Canadian River watershed;
- conservation and reuse of water should be a priority;
- instruments to monitor water use and calculate soil moisture would be helpful in ensuring that water rights are being upheld and would more accurately determine if drip irrigation or flood irrigation is more consumptive;
- the OSE only monitors the seven major basins in the state, many of which still require metering infrastructure in order to determine water use by owners and overall;
- ideal storage of water is underground to avoid evaporative loss;
- in the past, the OSE has been limited in its ability to manage water throughout the state and instead can only meter reservoir levels and provide data;
- due to varying district-specific regulations, the OSE must actively work with stakeholders; and

- a bill that was intended to authorize the state engineer to manage and prioritize water use throughout the state during times of drought lacked clarity and led to millions of dollars being spent and many years of litigation before the New Mexico Supreme Court ruled in favor of the OSE in 2012.

Status Report — OSE

Mr. D'Antonio provided the committee with a status report on the OSE. He began by discussing funding for the agency, which currently comes from two trust funds: the New Mexico Irrigation Works Construction Fund and the Improvement of Rio Grande Income Fund, both of which are intended to be used for infrastructure projects but are instead depleted by day-to-day operations, overhead and adjudications. In anticipation of the upcoming 30-day budgetary session next year, Mr. D'Antonio suggested that the agency be included in General Fund appropriations.

Mr. D'Antonio shared that the OSE has a vast range of duties, such as permitting, metering, adjudications, water rights settlements, dam safety, hydrologic surveys, planning and environmental compliance enforcement. Although the vacancy rate in the OSE has improved slightly, it is still at 25 percent, and Mr. D'Antonio expressed the need for visionary leaders and additional staff to fulfill the agency's many duties. He stated that the OSE is implementing cross-training opportunities and mentoring from senior staff for new hires and is actively working on building staff in core competencies, including information technology (IT), real-time monitoring, data collection and action planning.

Regarding the state water plan, Mr. D'Antonio said that the goal is to actively manage the state's water resources by ensuring fair, transparent and equitable use of water through tracking metrics, increasing staff and providing more time for the public to protest or voice concerns. The state water plan will be used as a basis to develop a 50-year plan, and it must be more inclusive of Indian water rights settlements, dam safety inspections and basin studies, he said.

Mr. D'Antonio listed some of the bills from the 2019 legislative session that created projects, such as forest and watershed restoration and advanced aquifer mapping, as well as the Water Data Act, which will allow data collected throughout the state to be shared in an integrated database. He noted the need for additional resources and staff to implement the mandates in each bill as well as to improve IT storage and infrastructure, conduct performance appraisals, tackle the backlog of over 500 water rights applicants, look at water use and conservation practices, conduct over 100 dam inspections annually and review district-specific regulations before projects commence.

Mr. D'Antonio next discussed the emergency action plans in place for some dams and FEMA funding for rehabilitation of certain high-risk dams. He informed the committee of 11 ongoing water rights adjudications, including those with various pueblos, the Navajo Nation and Texas, and emphasized the need for more resources or another team of staff to focus specifically on adjudications. He briefly mentioned diversion tactics for the Gila River; drought contingency plans for the Colorado River; the importance of the San Juan-Chama deliveries and interstate collaboration; and the status of discovery in *Texas v. New Mexico*.

In response to questions and comments from the committee, Mr. D'Antonio stated that:

- the OSE currently has enough funding to decrease the vacancy rate to 16 percent, but the General Fund appropriations would need to be increased for additional hires;
- New Mexico owes almost $200 million in water rights settlements, and the OSE is asking Congress for $137 million because the state has increased funding but the federal government has not; a legislative fix would be to increase the cost ceiling;
- the OSE is trying to improve salaries, especially for engineering and technology positions, but funding is limited and it is difficult to compete with other sectors;
- the OSE requests emergency funding for dam safety and improvements through the governor and the legislature, but it might be more prudent to create a specific dam safety response fund;
- in regard to diversion of the Gila River, the governor has expressed that she does not support diversion and has tasked the Interstate Stream Commission with finding alternatives, although the federal environmental impact statement process is already under way, millions of dollars have already been allocated to Central Arizona Project entities for various diversion projects and over 200 public meetings have already taken place to explore alternative possibilities; and
- capital outlay from the 2019 legislative session allocated $9 million for over 60 acequia projects, but there needs to be a better system for prioritization of projects.

Discussion of 2019 Interim Work Plan and Meeting Schedule

The committee provided feedback and suggestions for the 2019 work plan and meeting locations. The chair explained that meeting dates and locations for future meetings would be worked out with staff prior to presenting the work plan and meeting schedule to the New Mexico Legislative Council for approval.

Adjournment

There being no further business, the meeting adjourned at 3:55 p.m.

Revised: July 24, 2019

TENTATIVE AGENDA
for the
SECOND MEETING
of the
WATER AND NATURAL RESOURCES COMMITTEE

July 30-31, 2019
Truth or Consequences Civic Center
400 West 4th Street
Truth or Consequences

Tuesday, July 30

9:00 a.m. **Call to Order and Welcome**
—Senator Joseph Cervantes, Chair, Water and Natural Resources Committee (WNRC)
—Sandra Whitehead, Mayor, Truth or Consequences

9:15 a.m. (1) **Lower Rio Grande Water Users and Elephant Butte Irrigation District (EBID); Negotiations on Water Management in the Lower Rio Grande and Related Issues**
—John Utton, Attorney, New Mexico State University, Public Service Company of New Mexico and Camino Real Regional Utility Authority
—Jay Stein, Attorney, City of Las Cruces
—Samantha Barncastle, Attorney, EBID
—Tyson Achen, Member, Board of Directors, New Mexico Pecan Growers
—Shayne Franzoy, President, Southern Rio Grande Diversified Crop Farmers Association

10:45 a.m. (2) **EXECUTIVE SESSION (Closed Meeting); Briefing on *Texas v. New Mexico***
—Tania Maestas, Chief Deputy Attorney General, Office of the Attorney General

12:00 noon **Lunch**

1:00 p.m. (3) **Interbasin Water Transfer Policy Considerations**
—Adrian Oglesby, Director, Utton Transboundary Resources Center

2:00 p.m. (4) **History of Elephant Butte Dam and EBID**
—Gary Esslinger, Treasurer and Manager, EBID

3:00 p.m. (5) **Elephant Butte Dam Water Level Impacts on Ecology and Economy**
—Earl Conway, Conservation Director, New Mexico BASS Nation

4:00 p.m. **Recess**

4:30 p.m. **Reconvene at Marina del Sur for Tour of Elephant Butte Dam***
*This tour is invitation-only for legislative committee members and staff.

6:30 p.m. **Recess**

Wednesday, July 31

9:00 a.m. **Reconvene**
—Senator Joseph Cervantes, Chair, WNRC

9:15 a.m. (6) **Middle Rio Grande Conservancy District (MRGCD) Overview; Middle Rio Grande Levee Projects; Federal Endangered Species Act of 1973 Collaborative Compliance Efforts; Cooperative Management of the Middle Rio Grande for Water Deliveries**
—Karen Dunning, Chair, Board of Directors, MRGCD
—Mike A. Hamman, Chief Executive Officer and Chief Engineer, MRGCD
—Rolf Schmidt-Petersen, Director, Interstate Stream Commission

10:45 a.m. (7) **Understanding Water Conservation**
—J. Phillip King, P.E., Ph.D., M.B.A., Professor and Associate Department Head, Department of Civil Engineering, New Mexico State University; Consultant, EBID

12:15 p.m. (8) **Copper Flat Mine Update**
—Jeffrey Smith, P.E., Chief Operating Officer, Copper Flat Mine
—Fernando Martinez, Director, Mining and Minerals Division, Energy, Minerals and Natural Resources Department
—Max Yeh, Researcher, Percha/Animas Watershed Association

1:30 p.m. **Adjourn**

MINUTES
of the
SECOND MEETING
of the
WATER AND NATURAL RESOURCES COMMITTEE

July 30-31, 2019
Truth or Consequences Civic Center
Truth or Consequences

The second meeting of the Water and Natural Resources Committee was called to order by Senator Joseph Cervantes, chair, on July 30, 2019 at 9:08 a.m. at the Truth or Consequences Civic Center in Truth or Consequences.

Present
Sen. Joseph Cervantes, Chair
Rep. Derrick J. Lente, Co-Vice Chair
Rep. Matthew McQueen, Co-Vice Chair
Rep. Gail Armstrong (7/30)
Rep. Paul C. Bandy
Sen. Craig W. Brandt
Rep. Christine Chandler
Rep. Angelica Rubio
Rep. Larry R. Scott
Sen. Benny Shendo, Jr. (7/30)
Sen. Mimi Stewart
Rep. James R.J. Strickler
Rep. Candie G. Sweetser
Sen. Pat Woods

Absent
Rep. Abbas Akhil
Rep. Joanne J. Ferrary
Sen. Sander Rue
Rep. Nathan P. Small
Rep. Melanie A. Stansbury
Sen. Jeff Steinborn

Advisory Members
Sen. Pete Campos
Rep. Randal S. Crowder
Rep. Candy Spence Ezzell (7/30)
Sen. Ron Griggs
Rep. Susan K. Herrera
Rep. Tim D. Lewis
Sen. Linda M. Lopez
Sen. Mary Kay Papen
Rep. William "Bill" R. Rehm
Rep. G. Andrés Romero (7/30)
Rep. Patricia Roybal Caballero
Rep. Tomás E. Salazar
Rep. Debra M. Sariñana
Sen. Antoinette Sedillo Lopez

Rep. Anthony Allison
Rep. Jack Chatfield
Sen. Carlos R. Cisneros
Sen. Gregg Fulfer
Sen. Stuart Ingle
Sen. Gay G. Kernan
Rep. Javier Martínez
Rep. Rodolpho "Rudy" S. Martinez
Sen. Steven P. Neville
Rep. Greg Nibert
Sen. Gerald Ortiz y Pino
Rep. Jane E. Powdrell-Culbert
Sen. Nancy Rodriguez
Sen. William E. Sharer

Sen. Peter Wirth
Rep. Martin R. Zamora

Sen. John Arthur Smith
Rep. James G. Townsend

Guest Legislator
Rep. Rebecca Dow

(Attendance dates are noted for members not present for the entire meeting.)

Staff
Shawna Casebier, Legislative Council Service (LCS)
Pam Stokes, LCS
Jeret Fleetwood, LCS
Sara Wiedmaier, LCS

Guests
The guest list is in the meeting file.

Handouts
Handouts and other written testimony are in the meeting file and on the New Mexico Legislature's website at www.nmlegis.gov.

Tuesday, July 30

Welcome and Introductions
Senator Cervantes welcomed the committee and invited members of the committee, staff and audience to introduce themselves.

Mayor Sandra Whitehead welcomed the committee to Truth or Consequences. She mentioned a few of the attractions in the town, such as Elephant Butte Lake, the downtown area, Spaceport America and the Geronimo Springs Museum.

Lower Rio Grande Water Users and Elephant Butte Irrigation District (EBID); Negotiations on Water Management in the Lower Rio Grande and Related Issues
John Utton, attorney, New Mexico State University (NMSU), Public Service Company of New Mexico and Camino Real Regional Utility Authority; Jim Brockmann, attorney, City of Las Cruces; Samantha Barncastle, attorney, EBID; and Tyson Achen, member, Board of Directors, New Mexico Pecan Growers, discussed various issues regarding water management in the lower Rio Grande (LRG).

Mr. Utton began by describing the *Texas v. New Mexico* litigation as the biggest problem facing the LRG and compared the situation to the Pecos River Compact, which cost the state over $100 million to litigate. He stated that any solution will require a balance between mitigating surface water depletions and ensuring the continued use and protection of the aquifer under Dona

Ana County while still meeting delivery requirements to Texas. In 2008, an operating agreement was entered into by the EBID and Texas, which agreement, Mr. Utton opined, overcompensated Texas and put an unfair burden on New Mexico. The operating agreement shifted thousands of acre-feet of water from the EBID to Texas, of which some amount was appropriate to offset additional ground water pumping in New Mexico, he said, but this agreement put the entirety of the burden to cover efficiency losses on New Mexico, despite pumping by Texas and Mexico. Mr. Utton acknowledged that the EBID was in a difficult negotiating position, but siding with Texas in the litigation made the situation more difficult, he added.

Mr. Utton said that the Lower Rio Grande Water Users (LRGWU) are prepared to establish and fund a ground water management program with the help of the legislature, and he suggested that funding could also come from the water users themselves. He discussed work being done with the Office of the State Engineer (OSE) to map ground water and study the effects of pumping. He stated that even if New Mexico could regain some of the surface water from Texas, total depletions are beyond what is sustainable, noting that the LRGWU have proposed a pilot project to reduce depletions. Mr. Utton also discussed the 2016 settlement framework proposed by the LRGWU and emphasized the need for all New Mexico parties to work together to ensure that Texas receives the water it is entitled to under the Rio Grande Compact.

Ms. Barncastle provided the committee with an overview of the 2008 operating agreement and the 2016 settlement framework. She began by stating that the EBID despises the notion that it sided with Texas. She said that the EBID did not want to litigate against its own state but was forced into that position in seeking to protect the water rights of farmers in southern New Mexico. Despite the EBID originally filing litigation in 1986, there is still no assurance of protection of farmers' rights, Ms. Barncastle said. The 2008 operating agreement sought to offset increased ground water pumping to satisfy delivery obligations to Texas while still ensuring a continued water supply for farmers in the EBID.

Ms. Barncastle explained that the EBID is opposing New Mexico in the litigation because the Rio Grande Compact obligates New Mexico to make water deliveries to Texas at the gauging station just above Elephant Butte Reservoir. Once the water reaches the reservoir, New Mexico and the OSE no longer have authority and the EBID is then responsible for managing the water and allocating the appropriate amount to Texas because the EBID owns the project infrastructure and has authority over releases. She stated that this problem should not fall on water users alone and suggested that the state consider new potential sources of water, such as desalination technology.

Mr. Brockmann addressed the breakdown of water use in the LRG, citing irrigation as the largest portion of ground water diversions at roughly 85 percent, municipal use at around 13 percent and industry use at about two percent. Mr. Brockmann shared that unless a local entity is formed to manage and administer water use, the OSE is responsible for strict priority administration. He noted that variable water supply requires adaptive management to meet

compact deliveries and that this would best be achieved by a local ground water management entity. He also suggested legislation for a system of rotational fallowing to reduce ground water depletions, and he shared plans by the OSE and the Interstate Stream Commission (ISC) to enact a pilot program in the next year.

Lastly, Mr. Achen discussed the importance of water in the LRG to farmers, municipalities and the universities. He discussed his experience with over 30 years in farming, the formation of New Mexico Pecan Growers and some of the initiatives by the farming community to resolve water issues. He said that the operating agreement resolved many issues but needs to be adjusted to address ground water concerns. Acknowledging that priority administration would be detrimental to farmers in the area, Mr. Achen said that farm groups are working with the LRGWU to avoid infighting and resolve these issues to sustain an agricultural livelihood. He also noted that the United States is trying to federalize the state's ground water, which is contrary to New Mexico law and strongly opposed by the farm groups.

In response to questions from the committee, the panelists said that:

- Active Water Resource Management was created as an alternative to priority administration, allowing the OSE to set district regulations with local participation;
- the amount of water to be delivered to Texas is based on index flows at the gauging stations and compact boundary lines;
- although the EBID is not a member of the LRGWU, it is actively engaged in the process to find a solution;
- in order to reduce the state's dependence on ground water, other sources of water will need to be explored and the feasibility of desalination should be evaluated;
- there is a desalination plant located in Alamogordo that will soon be operational, but desalination is very expensive;
- drip irrigation increases crop yield, so is considered more efficient, but because of increased evapotranspiration rates by plants, more water is actually consumed because less water is returned to the aquifer;
- all water users, not just farmers, need to improve water conservation practices;
- New Mexico was one of the first states to recognize the connection between ground water and surface water, but EBID jurisdiction encompasses surface water while the OSE has authority over ground water, as defined in New Mexico statute;
- New Mexico should not be held liable for depletions by Texas and Mexico;
- the special master in the litigation said that the EBID has priority over the water in Elephant Butte Reservoir because it paid for the dam to be constructed; and
- the "buy and dry" policy on the Pecos River adversely affected surrounding farmers and led to abandoned farmland overrun with weeds.

Responding to a question regarding the adjudication of water rights in the LRG, Greg Ridgley, general counsel, OSE, said that about 45 percent of the sub-files have been adjudicated, out of over 14,000 cases.

Executive Session (Closed Meeting); Briefing on *Texas v. New Mexico*

The committee went into executive session to discuss ongoing litigation.

Interbasin Water Transfer Policy Considerations

Adrian Oglesby, director, Utton Transboundary Resources Center, discussed interbasin water transfer policy and issues, examples of interbasin transfers within the state and across the country and past legislative action regarding interbasin water transfers. Mr. Oglesby shared that under current law, the OSE has the authority to approve or deny interbasin water transfers and discussed the proposed ground water transfer from the Plains of San Agustin to the Rio Grande. He shared that the OSE originally denied the San Agustin project on the basis that the application lacked specificity, did not identify an end user and was opposed by multiple entities and individuals throughout the state who felt the transfer would adversely impact their rural, agricultural lifestyle and lead to depletion of ground water supplies. Mr. Oglesby reported that the denial was appealed in district court but the court upheld the decision of the State Engineer. He noted that the OSE must reject applications that are likely to impair existing water rights, hinder conservation goals or harm the public welfare of the state.

Mr. Oglesby stated that large urban cities like Los Angeles, Denver and Phoenix would not exist without interbasin water transfers and that there are many transfers occurring around the world. He noted that a perfect example of a successful interbasin water transfer is the San Juan-Chama Project. He highlighted some current project proposals and the opposition of various community groups to these projects, such as transfers from the Pecos River and the Estancia Basin to Santa Fe. Highlighting past legislative attempts to address interbasin water transfers, Mr. Oglesby discussed House Memorial 13 (1997), which directed the OSE to study interbasin water transfers; Senate Bill 77 (2014), which would have required the OSE to evaluate applications for interbasin water transfers based on 11 explicit criteria; and House Bill 418 (2017), which would have imposed additional requirements on the OSE to consider recharge rates for aquifers and water quality. He shared that the United States Environmental Protection Agency (EPA) has a rule regarding water transfers, which states that if there is no intervening use of the water being transferred, a pollution control permit is not required from the EPA.

Responding to questions from the committee, Mr. Oglesby said that:

- local communities have the ability to participate in the protest process but that it is difficult to legislate a solution for more local involvement;
- when the OSE considers the impact of a water transfer project on the public welfare of any community, it must consider surrounding communities as well;
- there is no need for legislative approval of projects because the state engineer has the ability to apply regulations independently; and
- Senate Bill 77 (2014) addressed water speculation but could have gone further.

Mr. Ridgley responded to a question regarding the Plains of San Agustin court ruling, stating that the judge issued a memorandum opinion but that no conclusions have yet been made.

History of Elephant Butte Dam and the EBID

Gary Esslinger, treasurer and manager, EBID, provided the committee with a history of settlements in the Rio Grande area, the construction of Elephant Butte Dam and the formation of the EBID. He said that shortly after the federal Reclamation Act was passed in 1902, the Rio Grande Project was authorized and construction of Elephant Butte Dam began. He stated that the United States and Mexico signed a treaty to ensure that enough water was allocated to local and downstream farmers on the LRG, while also ensuring that 60,000 acre-feet is delivered in perpetuity to Mexico. Elephant Butte Dam was completed in 1916, and the Rio Grande Compact, authorized in 1938, served as an international compact for surface water allocation among Colorado, New Mexico, Texas and Mexico to ensure equitable distribution of the waters of the Rio Grande.

Mr. Esslinger described the EBID as a "no man's land" because the district is geographically located in New Mexico but falls under Rio Grande Compact accounting for Texas and the surface water is managed by the EBID while the ground water is managed by the OSE. He discussed EBID release and diversion points, climate change response strategies, storage and annual release data from the past 100 years and innovations in water software technology. Mr. Esslinger mentioned that the EBID has 470 field sites and an advance warning system for flood tracking and runoff events. He discussed flood control facilities and the challenges of storing water and stressed the need for funding to restore watersheds. Mr. Esslinger highlighted critical habitat areas designated under the federal Endangered Species Act of 1973 (ESA) and efforts by the EBID to transfer water to habitat restoration sites that do not disrupt local farmers. He also talked about work being done in the district to generate renewable energy through hydroelectric application of irrigation conveyance. Lastly, Mr. Esslinger said that the EBID meters ground water and has seen a net loss in storage in the Mesilla Valley since 2010. He shared the EBID's Aquifer Management Plan goals and suggested that the EBID work collaboratively with the legislature and water users in the LRG to achieve these goals.

Responding to questions from committee members, Mr. Esslinger said that:

- farmers managed to stay solvent in dry years by applying for permits from the OSE for ground water pumping;
- the EBID and others will need to explore new sources of water, such as capturing storm water or the desalination of brackish water sources;
- the EBID supports credit water diversion to Elephant Butte Reservoir because Elephant Butte Lake State Park is one of the most profitable state parks but that the EBID is also concerned about evaporative losses that New Mexico will have to pay for;
- the EBID has two drone operators that track arroyo flows, damages and crops;
- the total demand for surface and ground water has been increasing, as more productive crops require more water; and

- surface water allocations are based on demand and availability in storage, and if availability does not meet a farmer's needs, the farmer must pump additional ground water from wells at the farmer's own expense or purchase water from other users.

Elephant Butte Dam Water Level Impacts on Ecology and Economy

Earl Conway, conservation director, New Mexico BASS Nation, discussed the impacts of water fluctuations in Elephant Butte Reservoir on the ecology and economy of the area. He listed the federal Bureau of Reclamation, the State Parks Division of the Energy, Minerals and Natural Resources Department and the Department of Game and Fish as the key players in management of the reservoir. He discussed daily fluctuations in water levels that threaten fish habitat and said that they are experimenting with different options to provide resilient habitat. He said that precipitation is in nature's hands but that the water managers have the ability to mitigate annual fluctuations. Mr. Conway then went on to list some of the other negative effects of severe water fluctuations, such as increased fish disease and mortality, boating hazards, marina and park operating costs, erosion and sedimentation and interruption of native vegetation propagation.

Mr. Conway warned that the high sedimentation rate could leave the reservoir impaired or inoperable in as soon as 75 years. To address this issue, he suggested re-establishing a conservation pool of San Juan-Chama Project water to hold off sediment movements until a long-term solution is found. He listed additional benefits to creating a conservation pool, including the ability to maintain a quality fishery, expansion of the recreational area of the reservoir and an increase in available water for farmers and other users. He said that the only major downsides to a conservation pool would be increased evaporation rates compared to storage upriver and the need for legislation and additional funding for implementation.

Noting that Elephant Butte Lake State Park is the highest-used state park in New Mexico and that historical trends indicate roughly a 30 percent decrease in visitation during times of decreased reservoir levels, Mr. Conway emphasized the need for a life-extension project for the reservoir to address dam maintenance, sediment prevention and cost-effective channel design and maintenance. He said that among the various plans, compacts and court orders that affect water management in the EBID, there is much misalignment in operational framework.

Mr. Conway provided some ideas for improving management of the reservoir, such as:

- creating a multiyear drought contingency plan;
- controlling the fluctuation of the reservoir to not exceed six inches per day;
- creating better prevention and contingency plans for invasive species;
- working with the federal Bureau of Reclamation to recognize the reservoir as a critical fish and bird habitat and to create conservation pools;
- building attractive recreational facilities and expanding access to the reservoir;
- implementing a watershed approach for sedimentation;
- enacting policies that allow for more water management flexibility; and
- eliminating the "use it or lose it" rule.

Recess and Tour

The committee recessed at 4:00 p.m. for a tour of Elephant Butte Dam.

Wednesday, July 31

Reconvene

Senator Cervantes reconvened the meeting at 9:00 a.m.

Middle Rio Grande Conservancy District (MRGCD) Overview; Middle Rio Grande Levee Projects; Federal Endangered Species Act of 1973 Collaborative Compliance Efforts; Cooperative Management of the Middle Rio Grande for Water Deliveries

Joaquin Baca, vice chair, Board of Directors, MRGCD, Mike A. Hamman, chief executive officer and chief engineer, MRGCD, and Rolf Schmidt-Petersen, director, ISC, presented to the committee on issues and ongoing projects in the MRGCD.

Addressing the history of the MRGCD, Mr. Baca said the district was created in 1923 and works in collaboration with the OSE to provide flood protection from the Rio Grande, to drain swamp lands and to provide irrigation water to farmlands. Mr. Hamman shared that the MRGCD encompasses the Rio Grande Valley, starting at Cochiti Dam and ending at the Bosque del Apache National Wildlife Refuge, and comprises four management divisions: Cochiti, Albuquerque, Belen and Socorro. He listed some of the priorities of the district, including repairing El Vado Dam; constructing levees in urbanizing areas; protecting water rights and using water banking to keep agricultural lands in production; improving system efficiencies to prepare for shortages; and working with the ISC and the OSE to minimize debt under the Rio Grande Compact.

Mr. Hamman discussed hydrology data from the past seven years, five of which had below average annual flows, with 2018 marking the lowest runoff since 1956. He said that the San Juan-Chama Project is a critical tool in supplying the MRGCD with municipal and irrigation water and meeting compact obligations, but project shortages occurred from 2014 to 2018 and the district exhausted all San Juan-Chama supplies in 2018. He noted that the upper Rio Grande has been a highly variable system for a long time and that runoff in 2019 is expected to meet or exceed the third-highest runoff season on record, following one of the lowest seasons on record. This increase in runoff allowed the district to store over 100,000 acre-feet during the spring and create a reserve at El Vado, but 30,000 to 50,000 acre-feet may need to be released to reduce New Mexico's compact debit for the year.

Mr. Hamman stated that the district has reduced water diversions by more than 50 percent since 1997 in response to ESA requirements and drought through operational efficiency improvements, which have allowed for more consistent deliveries to Elephant Butte and more efficient use of stored water. He suggested long-term development of operational efficiency through automation, infrastructure and on-farm improvements. Mr. Hamman said that, cumulatively, New Mexico has delivered 830,000 acre-feet more than required by the Rio

Grande Compact, averaging positive by over 37,000 acre-feet per year and allowing the district to store credits to meet annual demands.

Addressing safety concerns, Mr. Hamman shared that El Vado Dam is leaking because of outdated infrastructure from the 1930s, including the spillway that needs to be replaced as well as other improvements, and currently the dam would fail in an emergency situation. He stated that the MRGCD is not seeking state funding for these improvements but is requesting that the legislature encourage the Department of Transportation to address road safety improvements on New Mexico Highway 112. Mr. Hamman also addressed efforts by the district to meet commitments under the ESA, stating that the MRGCD has made a significant annual financial commitment toward fish passages, habitat restoration and river flow management, but that it needs to improve its monitoring program to be more adaptive. He updated the committee on the progress of various levee projects and levee damage from increased runoff and noted that the MRGCD will continue to act as the local sponsor for these projects but cannot solely provide the cost share. He discussed the role of the MRGCD in its partnerships with the ISC and the OSE.

Mr. Hamman lastly listed requests to the legislature to:

- fully fund the ISC and the OSE budget requests to meet ESA commitments;
- fund other MRGCD activities from the General Fund rather than further depleting permanent funds on operating expenses;
- determine strategies for recurring cost-share funding for levee projects;
- encourage the Department of Transportation to improve the highway and crossing on El Vado Dam; and
- support capital outlay requests to address localized flooding concerns.

Mr. Schmidt-Petersen discussed the Rio Grande Compact and cooperative management in the Middle Rio Grande. He showed the breakdown of the sources of river depletions and noted that the majority of water that passes the Otowi gauge is reserved to meet delivery obligations under the compact. He said that New Mexico was able to store a lot of credit water between 2003 and 2010, which has allowed the state to maintain compliance with the compact, but he highlighted annual variability in supply. He discussed cooperative management of water operations, water rights transfer processes, channel maintenance, flood protection and levee replacements and repairs. Mr. Schmidt-Petersen also shared that the ISC is working with the MRGCD to construct and maintain habitat for endangered species under the ESA, such as the Rio Grande silvery minnow.

Responding to questions from the committee, the panelists said that:

- the MRGCD has broad authority over surface water in the district;
- the Acequias Nortenas and the Rio Chama Acequia Association are the northern equivalents of the MRGCD and the EBID;

- the maximum amount of San Juan-Chama Project water that can be diverted is 1.1 million acre-feet over a 10-year period, or 235,000 acre-feet in any one year, with restrictions;
- there are 60,000 irrigated acres in the Middle Rio Grande and 75,000 in the LRG;
- there is no metering requirement of water users in the Middle Rio Grande;
- cooperation among the EBID, the MRGCD, the ISC and the federal Bureau of Reclamation is critical for New Mexico to optimize water operations management;
- it is better to leave trees in the bosque because the Rio Grande is a shallow system and it is more beneficial to have a full canopy; however, the MRGCD is working with the Forestry Division of the Energy, Minerals and Natural Resources Department on thinning to reduce wildfires;
- the MRGCD is working on a new water-banking program to compensate farmers who are willing to fallow their land on a rotational basis; and
- the federal Bureau of Reclamation manages the San Juan-Chama diversions.

Approval of Minutes

On a motion made, seconded and duly passed, the minutes of the June 4, 2019, meeting were approved as submitted.

Understanding Water Conservation

J. Phillip King, P.E., Ph.D., M.B.A., professor and associate department head, Department of Civil Engineering, NMSU, and consultant, EBID, discussed water conservation concepts and various proposed projects. Dr. King defined water conservation as the preservation, control and development of both surface and ground water and the prevention of pollution through reductions in water use, applied water or depletion. He explained the hydrologic cycle, on-farm irrigation hydrology and the difference between wet and dry water conservation techniques.

Dr. King discussed depletions in terms of New Mexico's obligation to Texas under the Rio Grande Compact. He noted the difficulties in reducing depletions to the system by methods such as planting more efficient crops, deficit irrigation and fallowing. He provided examples to show the correlation between crop yield and water consumption and suggested that conversion to high-efficiency irrigation would lead to increased yield and a reduced amount of applied water but would also increase water depletion. In order to mitigate the increased depletion, he suggested reducing the area of cultivated acres, which would still result in increased yield. Dr. King provided other examples of water depletion, such as municipal use and treatment.

The Depletion Reduction and Offset Program (DROP) was intended to offset the effect of municipal and industrial ground water use on surface water supply for the Rio Grande Project by allowing these users to pay farmers to fallow their land, but Dr. King warned about the threat to the viability of agriculture if fallowing is poorly planned. He said that plaintiffs in the *Texas v. New Mexico* lawsuit are seeking to protect Rio Grande Project water from depletions by non-project users to reduce stress on aquifer systems but that the DROP would allow municipal and

industrial users to become project contractors. Dr. King provided a list of contingencies for the DROP and acknowledged the need to set payments high enough to attract farmers to the program. He suggested alternative sources of water, such as storm capture, imported water and desalination of brackish ground water, and discussed a desalination plant in Santa Teresa proposed by the New Mexico Water Resources Research Institute. He stated that a mix of dry and wet water conservation techniques would improve water management and that there needs to be a delicate balance between depletion management and viability of irrigated agriculture.

Responding to questions from committee members, Dr. King addressed the cost of development of a desalination plant and industrial uses of brackish water.

Copper Flat Mine Update

Jeffrey Smith, P.E., chief operating officer, Copper Flat Mine; Fernando Martinez, director, Mining and Minerals Division, Energy, Minerals and Natural Resources Department; and Max Yeh, researcher, Percha/Animas Watershed Association, reported to the committee on the history, permitting processes, economic benefits and water rights litigation of the Copper Flat Mine.

Mr. Smith said that the Copper Flat Mine is a proposed polymetallic mine and processing facility in Sierra County being developed by New Mexico Copper Corporation (NMCC) that would include an open pit mine, a concentrate flotation plant, tailings storage and waste rock storage facilities. He emphasized thorough plans by NMCC to meet or exceed health, safety and environmental requirements throughout the life of the project, with plans by the company to continue water management, facility closures and long-term site monitoring even after site reclamation is complete.

Mr. Smith discussed environmental studies, initial plans and permit applications submitted to the Mining and Minerals Division of the Energy, Minerals and Natural Resources Department, the Department of Environment (NMED), the OSE and the federal Bureau of Land Management (BLM). He acknowledged the importance of water management and conservation in the state and shared projections that the mine will require 6,100 acre-feet of water per year for operations, which will come from pit dewatering, storm water runoff and the company's ground water wells. NMCC currently only owns 861 acre-feet of adjudicated water rights and is seeking to secure additional rights. Mr. Smith added that NMCC is working with the NMED and the OSE and is currently waiting on approval from the BLM on its pending application for the mine.

Discussing the economic benefits to the area, Mr. Smith said that developing the mine will provide $360 million in construction and start-up costs and 1,300 direct and indirect jobs during construction. During operation, about 270 employees will be needed and many more indirect jobs will result in Sierra County. He said that NMCC has already contributed about $40 million to New Mexico residents, companies and agencies. He stated that hiring preference will go to local community members and individuals from the Jicarilla Apache Nation or individuals willing to become part of the local community. The mine is projected to generate $175 million

in total tax revenue over the 12-year operation of the mine. He mentioned the role of copper in the clean energy revolution, such as providing power generation and energy storage.

Mr. Yeh addressed ongoing litigation more specifically. He stated that the adjudication court divided NMCC's claims into vested and inchoate water rights, of which, the court found, less than 900 acre-feet of vested rights were valid and that no inchoate rights were valid. NMCC appealed the decision regarding inchoate rights. Mr. Yeh explained the serious problem that this litigation has presented. The Constitution of New Mexico mandates that beneficial use shall be the basis, measure and limit of the right to use water in the state, he said, and in the NMCC litigation, the water rights have not been put to beneficial use since 1982. However, Mr. Yeh said that the current laws of the state do not clearly support that constitutional stipulation because the forfeiture statute was revised in 1965 to allow the state engineer to issue a declaration of nonuser, give notice and allow 12 months to remediate the fault, which has presented a loophole for NMCC because the OSE failed to give notice of forfeiture. Mr. Yeh said that the legislature will need to mandate action by the OSE to cut off a nonuser and statutorily address the issue of speculation to ensure preservation of the state's constitutionally mandated water law and efficient use of water rights. He acknowledged the important precedent that will be set by this case because water being claimed for speculative use prevents actual beneficial use and could result in the relinquishment of public ownership of water.

Responding to questions from the committee, the panelists said that:

- copper currently costs about $2.75 per pound;
- Texas is involved in NMCC's litigation because it impacts the LRG;
- the New Mexico Mining Act is designed to be site-specific, so there is no set time line for the permitting of existing mines, but the Copper Flat Mine is considered a new mine, which requires a much lengthier federal permitting process;
- the mine needs water for daily operations to separate the minerals but will do everything possible to conserve and recycle water;
- the ISC expressed concern in the 1990s that the Copper Flat Mine would adversely affect the Rio Grande; and
- NMCC entered into a purchase agreement with the previous owner of the mine for water rights, paying $2.6 million for vested and inchoate rights, but ultimately the adjudication judge only recognized NMCC's right to 861 acre-feet.

Adjournment

There being no further business, the meeting adjourned at 1:30 p.m.

Revised: September 4, 2019

TENTATIVE AGENDA
for the
THIRD MEETING
of the
WATER AND NATURAL RESOURCES COMMITTEE

September 5-6, 2019
Ruidoso Convention Center
111 Sierra Blanca Drive
Ruidoso

Thursday, September 5

9:00 a.m. **Call to Order and Welcome**
—Senator Joseph Cervantes, Chair, Water and Natural Resources Committee (WNRC)
—Lynn Crawford, Mayor, Village of Ruidoso (invited)

9:15 a.m. (1) **Hydraulic Fracturing and the State of Oil and Gas Development in the Permian Basin**
—Kelly Tooker, Director, Oil and Gas Technology, New Mexico Junior College
—Jonathan Smith, Global Director of Production Enhancement, Halliburton
—Bill Brancard, General Counsel, Energy, Minerals and Natural Resources Department (EMNRD)

10:45 a.m. (2) **Produced Water and Water Midstream**
—Robert Huizenga, Water Resources Manager-Engineering, Cimarex Energy Co.
—Michael Skarke, Executive Vice President, Water Infrastructure, Select Energy Services
—Doug White, Executive Vice President, Water Solutions, NGL Energy Partners LP
—Rebecca Roose, Director, Water Protection Division, Department of Environment (NMED)
—Brittany Fallon, Conservation and Legislative Organizer, Rio Grande Chapter, Sierra Club

12:15 p.m. **Working Lunch**

12:45 p.m. (3) **Methane Capture**
—Adrienne Sandoval, Director, Oil Conservation Division, EMNRD
—Sandra Ely, Director, Environmental Protection Division, NMED
—Vanessa Ryan, Co-Chair, Methane Workgroup, New Mexico Oil and Gas Association

2:15 p.m. (4) **State Land Office Priorities and Bid Processes Changes**
—Sunalei Stewart, Deputy Commissioner of Operations, State Land Office

3:45 p.m. (5) **Progress on Remediation of the Carlsbad Brine Well**
—Jim Griswold, Chief, Environmental Bureau, Oil Conservation Division, EMNRD
—John Heaton, Energy Development Coordinator, City of Carlsbad (invited)

4:45 p.m. **Recess**

Friday, September 6

9:00 a.m. **Reconvene**
—Senator Joseph Cervantes, Chair, WNRC

9:05 a.m. (6) **Waste Isolation Pilot Plant Updates**
—Kirk Lachman, Manager, Carlsbad Field Office, United States Department of Energy
—Stephanie Stringer, Director, Resource Protection Division, NMED

10:30 a.m. (7) **Holtec International's Proposed Consolidated Interim Storage Facility in Eddy and Lea Counties**
—Ed Mayer, Project Manager, Holtec International
—John Buchser, Chair, Water and Nuclear Waste Issues, Rio Grande Chapter, Sierra Club

12:00 noon **Adjourn**

MINUTES
of the
THIRD MEETING
of the
WATER AND NATURAL RESOURCES COMMITTEE

September 5-6, 2019
Ruidoso Convention Center
111 Sierra Blanca Drive
Ruidoso

The third meeting of the Water and Natural Resources Committee was called to order by Senator Joseph Cervantes, chair, on September 5, 2019 at 9:12 a.m. at the Ruidoso Convention Center in Ruidoso.

Present
Sen. Joseph Cervantes, Chair
Rep. Matthew McQueen, Co-Vice Chair
Rep. Abbas Akhil (9/5)
Rep. Gail Armstrong
Sen. Craig W. Brandt
Rep. Joanne J. Ferrary
Rep. Larry R. Scott
Sen. Benny Shendo, Jr. (9/5)
Rep. Nathan P. Small (9/5)
Rep. Melanie A. Stansbury
Sen. Jeff Steinborn (9/5)
Sen. Mimi Stewart
Rep. James R.J. Strickler
Rep. Candie G. Sweetser
Sen. Pat Woods

Absent
Rep. Derrick J. Lente, Co-Vice Chair
Rep. Paul C. Bandy
Rep. Christine Chandler
Rep. Angelica Rubio
Sen. Sander Rue

Advisory Members
Rep. Anthony Allison
Sen. Pete Campos
Rep. Randal S. Crowder
Sen. Gregg Fulfer (9/5)
Sen. Ron Griggs (9/5)
Sen. Gerald Ortiz y Pino
Sen. Mary Kay Papen
Rep. Jane E. Powdrell-Culbert
Rep. William "Bill" R. Rehm
Sen. Nancy Rodriguez
Sen. Antoinette Sedillo Lopez
Rep. James G. Townsend
Rep. Jack Chatfield
Sen. Carlos R. Cisneros
Rep. Candy Spence Ezzell
Rep. Susan K. Herrera
Sen. Stuart Ingle
Sen. Gay G. Kernan
Rep. Tim D. Lewis
Sen. Linda M. Lopez
Rep. Javier Martínez
Rep. Rodolpho "Rudy" S. Martinez
Sen. Steven P. Neville
Rep. Greg Nibert

Sen. Peter Wirth
Rep. Martin R. Zamora

Rep. G. Andrés Romero
Rep. Patricia Roybal Caballero
Rep. Tomás E. Salazar
Rep. Debra M. Sariñana
Sen. William E. Sharer
Sen. John Arthur Smith

(Attendance dates are noted for members not present for the entire meeting.)

Staff
Shawna Casebier, Legislative Council Service (LCS)
Tom Kricka, LCS
Jeret Fleetwood, LCS
Sara Wiedmaier, LCS

Guests
The guest list is in the meeting file.

Handouts
Handouts and other written testimony are in the meeting file and on the New Mexico Legislature's website at www.nmlegis.gov.

Thursday, September 5

Welcome and Introductions
Senator Cervantes welcomed the committee and invited members of the committee and staff to introduce themselves.

Lynn Crawford, mayor, Village of Ruidoso, welcomed the committee to Ruidoso. He discussed water issues in eastern New Mexico, stating that Ruidoso has excellent water managers and is considered unique because the village uses a mix of surface water and ground water. He noted that last season was a banner year for the Ruidoso Downs Race Track and that this year has already exceeded last year's revenue.

Hydraulic Fracturing and the State of Oil and Gas Development in the Permian Basin
Kelly Tooker, director, Oil and Gas Technology, New Mexico Junior College; Jonathan Smith, global director of production enhancement, Halliburton; and Bill Brancard, general counsel, Energy, Minerals and Natural Resources Department (EMNRD), discussed oil and gas development in the Permian Basin.

Mr. Tooker presented an overview of the basics of hydraulic fracturing. He discussed well design and the chemical components of the fluid used, stating that there is approximately 0.1% of added chemicals in the fluid, the fluid does not enter the fresh water supply and the

majority of the added chemicals are found in everyday products. He explained the disposal process of produced water and the potential for induced seismicity, noting that the seismic activity observed in Oklahoma is a result of massive injections of produced water rather than the process of hydraulic fracturing itself and that in New Mexico, no seismic events have resulted from hydraulic fracturing.

Mr. Tooker provided a breakdown of New Mexico water usage by category, emphasizing that oil and gas operations account for less than 1.1% of overall water use in recent years and less than 2% today. Mr. Tooker emphasized the importance of hydraulic fracturing for oil and gas production in New Mexico and the United States, citing the energy crisis of the 1970s and decades of oil production decline that have been reversed because of innovations in hydraulic fracturing and horizontal drilling. He said that it is important to continue drilling wells because production from existing wells declines by about 15% every year.

Mr. Smith discussed the history, achievements and global footprint of Halliburton. He outlined the process of oil production and highlighted various technological advancements in hydraulic fracturing that have improved efficiency and safety and minimized environmental impact. He said that horizontal drilling technology has allowed companies to maximize oil and gas reservoir contact, and as a result, the United States has nearly doubled oil and gas production since 2005. He noted that up to 95% of new wells drilled now use hydraulic fracturing.

Mr. Brancard discussed the role of the Oil Conservation Division (OCD) of the EMNRD. He said that the OCD has a statutory duty to regulate oil and gas operations, water quality and produced water disposal wells under the Oil and Gas Act and the Water Quality Act. The Oil and Gas Act was initially enacted in response to the overproduction of oil under the "rule of capture", Mr. Brancard said, noting that over the years, duties have expanded beyond conservation of oil and gas to include oversight of wells, produced water and environmental regulations. He said that horizontal drilling and hydraulic fracturing advancements have increased oil and gas production in the past 10 years, that the productivity decline curve is much steeper in horizontal wells and that the OCD now receives many more drilling and injection permit applications. He noted the shift in water handling procedures with the advent of "midstream companies", which manage all water-related needs of oil and gas production. He said that an issue that has arisen with midstream companies is that multiple well applications often overlap and could possibly induce seismic activity. He stated that although the workload has increased, OCD full-time employee numbers have remained the same since 2016.

In response to questions from the committee, Mr. Tooker and Mr. Smith stated that:

- fracturing fluid uses very little fresh water, is pumped back up with produced water and is treated for reuse or disposed of safely and does not enter the fresh water supply;
- the net gain in the fresh water cycle is a result of chemical combustion of the hydrocarbons in the oil that releases water vapor into the atmosphere;

- oil in the Permian Basin is suitable for plastics manufacturing;
- the fractures themselves are about the width of a grain of sand;
- states are obligated to provide data to the national hydraulic fracturing chemical registry, FracFocus, which outlines all chemicals used in the fluid for each well currently in production;
- upon abandonment of an oil field site, Halliburton seeks to return the site's surface to its previous condition, although cement from drilled wells remains;
- the practice of horizontal drilling started about 20 years ago; and
- the majority of existing wells in New Mexico use hydraulic fracturing, and there has never been an incident of aquifer contamination.

In response to further questions, Mr. Brancard stated that:

- New Mexico is the third-largest oil and gas producer after Texas and Oklahoma;
- New Mexico was one of the first states to require disclosure to FracFocus of the chemicals used in hydraulic fracturing, but nondisclosure of "trade secrets" is a normal and accepted practice;
- New Mexico does not require baseline or post-production testing of aquifers for chemical contamination;
- it is false to claim that no seismic activity has occurred in the state as a result of injection wells because there was an incident north of Carlsbad; however, regulations have since improved and no other events have occurred;
- surface spills are the main concern in oil production and produced water disposal;
- the OCD is reorganizing to deal with increased workloads and staff shortages;
- horizontal drilling and pooling allow for less surface disturbance; and
- New Mexico disposal wells are usually 15,000 to 18,000 feet deep, which is much deeper than the average in Oklahoma and other states.

Produced Water and Water Midstream

Robert Huizenga, water resources manager-engineering, Cimarex Energy Co.; Michael Skarke, executive vice president, Water Infrastructure, Select Energy Services; Doug White, executive vice president, Water Solutions, NGL Energy Partners LP; Rebecca Roose, director, Water Protection Division, Department of Environment (NMED); and Brittany Fallon, conservation and legislative organizer, Rio Grande Chapter, Sierra Club, discussed opportunities and issues regarding produced water and water midstream.

Mr. Huizenga discussed the evolution of produced water recycling technology developed by Cimarex Energy Co. He cited predictions that annual consumption of water for hydraulic fracturing will continue to rise over the next decade and noted the increased use of produced water by oil and gas companies in New Mexico and the subsequent decline of fresh water use in operations. He listed some of the concerns regarding produced water reuse as well as the benefits of improved technologies, such as lower operational maintenance costs and reduced

environmental liability. He concluded by emphasizing that water reuse within the oil field is an evolving process.

Mr. White provided an overview of NGL Energy Partners LP, a full-service, diversified midstream company that provides transportation, storage, blending and marketing for energy producers and end users. He said that NGL has a diverse portfolio of assets across the country, including produced water injection wells, pipelines and recycling facilities; crude oil pipelines, storage and transload stations; propane and butane storage capacity; and refined products and renewable fuels terminals. He discussed various NGL initiatives and projects, such as a solar energy farm in Lea County and a partnership with New Mexico and Colorado research institutions to develop water technology. Mr. White outlined the company's wastewater midstream services; historical water and oil production levels in New Mexico and the Permian Basin; and potential water solutions for New Mexico and Texas. He highlighted NGL's recycling facility in Wyoming, which treats oil field wastewater to either a recyclable standard for reuse in hydraulic fracturing or to a discharge standard for return to the water cycle.

Mr. Skarke discussed work being done by Select Energy Services in the area of full-cycle water management and provided some background on the company and its impact in New Mexico. He said that the mission of Select is to provide environmentally conscious comprehensive water solutions for oil and gas operations in New Mexico, the Permian Basin and across the United States. Highlighting investment in water pipeline infrastructure, job creation, gross receipts tax revenue and environmental protection of public lands, Mr. Skarke emphasized Select's commitment to New Mexico. He discussed the evolution of the industry's approach to water use and the shift to comprehensive midstream companies. As oil and gas operations rapidly increased, he said, demand for water followed, which caused effective water management to become more crucial. He outlined the services covered by Select in providing full-cycle water management, including obtaining all necessary permits.

Ms. Roose provided a brief overview of the NMED's mission, foundation and leadership. The agency's mission is to protect and restore the environment in New Mexico for present and future generations. An important area of focus for the department has been produced water, she said. In 2018, New Mexico became the third-largest oil producing state, she said, and with this increase in oil production, there was an increase in the amount of produced water being generated. Ms. Roose said that produced water contains many salts and chemicals and is primarily disposed of through underground injection wells rather than by being recycled. She discussed House Bill 546 (2019), which enacted the Produced Water Act, and shared some of the key provisions that address this issue, such as encouraging the oil and gas industry to favor reuse and treatment options over reliance on fresh water and closing regulatory gaps to protect water quality.

Ms. Fallon discussed issues regarding the reuse of produced water. She noted that concerns over limited fresh water and an increase in seismic activity from wastewater injection wells has led to the need for alternative solutions and that companies are investigating recycling

options for produced water, both within and outside the oil fields. She said that the stance of the Sierra Club is that New Mexico is not ready to allow discharge of treated produced water outside of the oil field but that recycling within the oil field is viable as long as the potential for spills and leaks is eliminated. She suggested that under the oil and gas waste pit rule, New Mexico should reinstate certain requirements that were largely reversed by Governor Susana Martinez, such as lining wastewater pits to ensure adequate protection of ground water. For use outside of industry, Ms. Fallon listed some of the remaining concerns that will need to be addressed, such as the efficacy of current treatment technologies, the ability to detect potential chemicals, the toxicological risks to human health and the environment and the establishment of adequate water quality targets.

Responding to questions from the committee, the panelists stated that:

- one barrel of oil holds 42 gallons or 7,600 acre-feet;
- fresh water is still being used in oil and gas operations because the treatment of produced water is more expensive and requires significant infrastructure development in proximity to the operating site, but operators are transitioning;
- midstream companies get water from various sources, including industrial wastewater and fresh and brackish ground water;
- produced water can potentially be recycled indefinitely, as long as it is being adequately tested for contaminants;
- less than 25% of the potential chemicals in produced water are testable;
- the Office of the State Engineer coordinates with the NMED on water supply data and ensures that midstream companies are properly permitted;
- NGL has eight patents on its treatment technologies and has, over 10 years, successfully treated and discharged 2.6 billion gallons of produced water from oil and gas operations in Wyoming into the Colorado River, meeting United States Environmental Protection Agency standards;
- the industry is seeking to reduce the cost of wastewater reuse, but in areas such as the Permian Basin, the average water to oil ratio is 8:1, which makes the process costly;
- oil and gas companies do not disclose what chemicals are present in waste products, and discharge permits from the state require testing the waste products before recycling but not for injection into disposal wells;
- the chemical composition of produced water is difficult to determine in New Mexico because of the high salinity in the Permian Basin;
- in the Permian Basin, there is, on average, three times the amount of produced water generated than would be needed for operations;
- California has a food safety advisory board that oversees the use of treated wastewater for irrigation of crops, but wastewater use from hydraulic fracturing operations is still not permitted; and
- the Produced Water Act includes language that will ensure financial liability of the operator, and NGL supports increased bonding requirements.

Approval of Minutes

On a motion made, seconded and duly passed, the minutes of the July meeting were approved as submitted.

Methane Capture

Adrienne Sandoval, director, OCD, EMNRD; Sandra Ely, director, Environmental Protection Division, NMED; and Vanessa Ryan, co-chair, Methane Workgroup, New Mexico Oil and Gas Association (NMOGA), discussed methane emissions in the oil and natural gas industry and new technologies and strategies to mitigate waste.

Ms. Sandoval and Ms. Ely described the collaborative efforts of the NMED and the EMNRD to develop a regulatory framework for methane emissions to protect public health and the environment and to minimize waste. Ms. Ely provided some background on methane, the second most prevalent greenhouse gas emitted from human activities. She noted that in New Mexico, methane accounts for over 30% of greenhouse gas emissions, compared to only 10% nationally, and New Mexico lost approximately $10 million in revenues from vented or flared natural gas in 2018. The presenters outlined the roles of each department, stating that the NMED is responsible for mitigating pollution under the Air Quality Control Act and the EMNRD is responsible for mitigating waste of resources under the Oil and Gas Act. Ms. Sandoval showed a map of active oil and gas wells across the state and gave a breakdown of the various agencies that have regulatory authority over pollution and waste based on land designation.

Emphasizing the need for additional staff to enforce standards, Ms. Sandoval highlighted excessive emissions in Lea, Eddy and San Juan counties and increased crude oil production and venting and flaring of waste reported to the EMNRD. She said that both departments will seek to implement rules that achieve measurable reductions in methane emissions, create regulatory certainty, promote technological innovation and ensure compliance mechanisms. The Methane Advisory Panel (MAP) was formed to help inform this rulemaking process and focuses on regulating processes and equipment. Ms. Sandoval and Ms. Ely discussed the process of developing a statewide methane strategy, beginning with MAP findings, then incorporating stakeholder, tribal and public engagement and, finally, adopting rules.

Ms. Ryan discussed methane emissions in the oil and gas industry and stated that emissions have declined, despite an increase in oil and gas production in New Mexico, due to additional regulations in recent years. She said that the NMOGA was charged with monitoring emissions, which led to the creation of the Methane Workgroup. She explained fugitive emissions, various equipment components and the process of storing, transporting and controlling oil and gas. With the goal of reducing methane emissions from oil and gas operations, Ms. Ryan explained that the NMOGA supports an annual program of instrumented inspections on facilities, with certain exceptions; control requirements for emissions from tanks, with appropriate thresholds; phasing out continuous, high-bleed pneumatic controllers; and on-site best practices to limit emissions from unloading well liquids.

Responses to questions and comments from the committee included the following:

- flaring is the burning off of large quantities of built-up methane, whereas venting is the release of small amounts of unburned gas directly into the atmosphere;
- regulation of methane emissions should not be a one-size-fits-all approach, and the MAP intends to go after the largest emitters and avoid driving out smaller producers by plugging wells prematurely if they are still productive;
- pneumatic devices differ among operators, and larger, centralized oil and gas facilities typically have better controls;
- the MAP has authority over rulemaking and is developing a list of strategies related to different processes and equipment to mitigate methane emissions;
- the MAP is charged with regulating methane emissions from oil and gas activity but not from other sources;
- investment in new technologies and pipelines has reduced the need for flaring, but companies are still struggling to find a market for methane and to work with the state on right-of-way issues; and
- methane is not explicitly regulated but is encompassed under the regulation of volatile organic compounds.

State Land Office (SLO) Priorities and Bid Processes Changes

Sunalei Stewart, deputy commissioner of operations, SLO, provided an overview of the SLO and oil and gas leasing procedures and updated the committee on recent initiatives. Mr. Stewart described the SLO as the largest real estate company in the state, leasing state lands for a multitude of purposes, such as energy development, agriculture, affordable housing and recreational uses. The revenue from these leases benefits public schools, hospitals and charities across New Mexico, he said. He highlighted annual earnings for the Land Maintenance Fund and the Land Grant Permanent Funds, noting that fiscal year 2019 had the highest earnings on record due to increased production in the Permian Basin, and he provided a breakdown of revenue distribution.

Mr. Stewart listed some of the priorities of the SLO under Commissioner of Public Lands Stephanie Garcia Richard, including filling key department vacancies, advancing renewable energy projects, enhancing environmental and cultural protections and streamlining business operations. Some recent efforts and accomplishments of the SLO include a record $1.1 billion in earnings, establishment of the Office of Renewable Energy and a water bureau and a decrease in the vacancy rate from 22% to 10%. Mr. Stewart outlined the oil and gas leasing process, from identifying available land for leasing to holding a monthly lease sale. He explained that royalty rates are set by statute and remain in place for the duration of the lease, and he showed the breakdown of active leases by royalty rate. Mr. Stewart discussed the history of minimum bids and a new approach by the SLO to set minimum bids at an amount that ensures a fair value and incentivizes competitive bidding. He said that there is limited availability of state trust lands remaining for lease and showed the decline in total acres offered at oil and gas lease sales and the increase in the average price per acre over the past few years.

Responding to questions from committee members, Mr. Stewart stated that:

- the Office of Renewable Energy was established to focus on renewable energy projects and to address the issue of transmission of energy produced in the eastern side of the state to the western side, where it is exported out of state;
- royalty rates are established on a company-by-company basis;
- the maximum royalty rate in New Mexico is 20% and is set in statute, compared to Texas, which has a 25% rate;
- New Mexico has a competitive advantage over Texas in well depth limitations, but Texas does not have a property or gross receipts tax, whereas New Mexico has some of the highest taxes;
- 97% of state lands in the Permian Basin area are already leased;
- the majority of the $1.1 billion in earnings for fiscal year 2019 came from oil and gas revenues;
- royalty rates do not apply to lands leased for renewable energy projects; rates are based instead on production or a company's profits;
- the SLO considers subsurface pore space to be owned by the surface land owner;
- leasing of lands for renewable energy projects is time-consuming on the front end, but once approved, requires very little oversight;
- if the SLO is not allowed access to leased land or if the land is not being used for the intended purpose, the SLO will not renew the lease;
- the SLO has title records and maps available online that track land ownership;
- it is difficult to connect eastern New Mexico energy production to western New Mexico export stations because many residents do not want a transmission line in their backyards;
- it is difficult to construct a trans-state transmission line because of a checkerboard of different land ownership; and
- the main objective of the SLO is to generate revenue for public school districts.

Progress on Remediation of the Carlsbad Brine Well

Jim Griswold, chief, Environmental Bureau, OCD, EMNRD, updated the committee on the Carlsbad brine well remediation. Mr. Griswold stated that the OCD was tasked with reviewing brine wells after two wells collapsed in 2008, which led to the discovery of the Carlsbad brine well. This brine well poses a unique challenge compared to the two wells that collapsed because it is located in a populated area near homes, highways and the unlined Carlsbad Irrigation District canal. He explained that brine is created by injecting fresh water into underground salt layers, and the saltwater is then extracted for oil and gas operations, which results in caverns where the salt is dissolved and removed. Mr. Griswold discussed plans to remedy the situation by injecting grout into the voided spaces while simultaneously extracting brine. He explained the cavity filling process and risk management strategies as well as sources of funding, expenditures to date and the overall project status and time line, stating that injections will begin this November. In outlining projected budget costs and funding, Mr. Griswold said that there is an anticipated shortfall of over $8 million.

Responding to questions regarding the budget shortfall, Mr. Griswold said that the state procurement process resulted in three viable bids for the project and that the OCD chose the best option. He stated that certain costs, such as gross receipts taxes, were overlooked when the legislature allocated funds for remediation of the brine well and that the overall cost includes $4.7 million in contingency costs to cover risk and uncertainty. In response to another question by a committee member, Mr. Griswold said that the company that operated the brine well was liquidated.

Recess

The committee recessed at 4:30 p.m.

Friday, September 6

Reconvene

Senator Cervantes reconvened the meeting at 9:07 a.m.

Waste Isolation Pilot Plant (WIPP) Updates

Kirk Lachman, manager, Carlsbad Field Office, United States Department of Energy (DOE), and Stephanie Stringer, director, Resource Protection Division, NMED, updated the committee on WIPP. Mr. Lachman presented a brief history of his work experience with the DOE and underground waste operations. He noted recent accomplishments of WIPP, including attaining an average of eight to 10 shipments per week and over 15 million miles without a major incident. He discussed various capital improvement projects, such as a ventilation system and a road bypass, as well as smaller general plant projects and upgrades. Although the facility was considered to be state-of-the-art when it was built in the 1980s, Mr. Lachman said, WIPP must implement modern technologies to improve performance and safety. He emphasized continued support for WIPP by federal agencies, the state delegation and local officials, as well as good working relationships with regulatory agencies and increased engagement of stakeholders. He said that projected shipments will increase as a result of a new ventilation system being installed and that WIPP expects to receive shipments through 2050 and beyond. He discussed upcoming permit modification requests submitted to the NMED, a 10-year permit renewal application required under the National Environmental Policy Act and the repository's plans for additional storage of waste. He concluded by emphasizing the importance of WIPP to national security and the national cleanup mission.

Ms. Stringer provided a regulatory update on WIPP. She discussed a recent tour of WIPP by the NMED and stated that safety is a clear priority. She explained the geological significance of the site, located near Carlsbad, which is mined into the center of a 2,000-foot-thick salt bed below the earth's surface. She said that WIPP received its first shipment of transuranic waste from Los Alamos National Laboratory in 1999 and has received over 12,000 shipments since. She highlighted the dual regulatory authority of the NMED under the Hazardous Waste Act and the federal Resource Conservation and Recovery Act of 1976 (RCRA) and of the United States Environmental Protection Agency under the Radiation Protection Program. She said that the

main responsibilities of the NMED are to ensure compliance with existing rules; review and issue permit modifications and renewal applications; and observe, review and approve generator site audits. Sharing that WIPP only accepts waste from federal generator sites rather than commercial sites, Ms. Stringer enumerated the total waste shipments from sites across the country in past years. She noted some of the current WIPP permit modifications being processed by the NMED and the 10-year RCRA permit that is set to expire in 2020 and will need to be renewed.

Responding to questions from the committee, Mr. Lachman stated that:

- a large volume of excavated salt is stored in a permanent salt pile that is lined and covered with soil to prevent solvent dissolution back into the environment;
- regulations governing transuranic waste differ between contact- and remote-handled wastes; WIPP stores a variety of materials from gloves to steel that have come in contact with radioactive material;
- in response to the 2014 fire and subsequent release of radiation, WIPP implemented a more rigorous evaluation process involving radiography drones, air quality detectors, audits and additional quality assurance staff;
- WIPP complies with all United States Occupational Safety and Health Administration standards;
- WIPP employs geotechnical engineers to monitor soil contamination;
- uranium mill tailings and contamination in the Navajo Nation are not eligible for storage at WIPP because the uranium mines were commercial operations;
- WIPP has a low employee turnover rate but faces competition from the oil and gas industry because that industry offers better pay;
- WIPP is applying for a permit renewal because the facility has not reached its allowed capacity;
- audits of shipments occur at the source site to ensure safety from the start; and
- the DOE is not aware of any risk to WIPP of seismic activity from hydraulic fracturing in the area.

Holtec International's Proposed Consolidated Interim Storage Facility (CISF)

Ed Mayer, project manager, Holtec International, and John Buchser, chair, Water and Nuclear Waste Issues, Rio Grande Chapter, Sierra Club, discussed the CISF proposed by Holtec. Mr. Mayer provided an overview of the CISF for spent nuclear fuel, to be located in Eddy and Lea counties, and discussed the history, experience, technology and manufacturing capabilities of Holtec that make it the best company to take on construction and operation of the CISF. He highlighted features of Holtec's storage technology, site layout and project time line. He emphasized the national imperative under the federal Nuclear Waste Policy Act of 1982 to provide a repository for spent nuclear fuel. However, because the proposed Yucca Mountain Nuclear Waste Repository in Nevada never opened, he said, spent fuel is being stored at reactor sites, many of which are located near shorelines and densely populated areas. Mr. Mayer expressed confidence that the Holtec site will be safe, secure, retrievable and temporary and will

serve as a complement to a permanent repository, not as a replacement. He detailed the technology and plans for the transport of the nation's spent nuclear fuel, adding that transportation of radioactive material is strictly regulated by the United States Nuclear Regulatory Commission and the United States Department of Transportation. He highlighted financial benefits to New Mexico, the Nuclear Regulatory Commission licensing process and facility regulations and other federal, state and local licenses and permits required.

Mr. Buchser discussed concerns of the Sierra Club regarding the proposed CISF. He addressed the problem of managing nuclear waste, with reactors continuing to produce more waste and increasing on-site storage. He stated that storm intensity and variability have increased due to climate change; as a result, flooding is more frequent at reactor sites and poses the risk of water contamination if spent fuel is stored on-site. He said that the primary concern regarding the CISF is radiation leakage during transport of spent fuel across the country. He addressed issues concerning Holtec's design, a proposal to reprocess waste for future use and the legality of an interim storage facility when a permanent repository location has yet to be decided. He suggested that the state focus its efforts on renewable energy technologies, battery storage and improving the electric grid as ways to mitigate proliferation of nuclear waste. He suggested that the United States delay the ultimate disposition of nuclear waste for as long as possible, as scientific research is still evolving, and he noted that both Sandia National Laboratories and Los Alamos National Laboratory conduct research on nuclear waste challenges and that the University of New Mexico has a nuclear engineering program that will assist in finding a solution.

Responding to questions from committee members, Mr. Mayer stated that:

- the Yucca Mountain Nuclear Waste Repository is not open and that interim storage could be a 30- to 50-year or longer time span;
- current on-site storage is risky and cost-intensive;
- local first responders in the area of the proposed CISF are undergoing training and are confident in their ability to respond to an accident;
- Holtec is focusing on outreach to local farmers, ranchers and community members to educate the public about safety and security measures being taken;
- shipments will come from all over the United States;
- a decommissioning fund has been set aside in the event that another company takes over operations from Holtec or to cover the costs of any remediation;
- testing is done before transport to ensure that there are no leaks, and each train will have security guards and radiologists working to ensure safety during transport;
- there are no nuclear reprocessing plants in the United States, but there is one in France;
- if the NMED does not approve Holtec's permit applications, the alternative site being proposed across the border in Texas would actually be in closer proximity to New Mexico communities; New Mexico would still be required to provide first responders, although Texas would gain the economic benefits;

- any potential seismic activity from oil and gas operations in the area would be nowhere near the intensity of the testing done on the storage containers; and
- Carlsbad and Hobbs and Eddy and Lea counties have passed resolutions in support of the Holtec CISF.

Adjournment

There being no further business, the committee adjourned at 11:56 a.m.

Revised: October 10, 2019

TENTATIVE AGENDA
for the
FOURTH MEETING
of the
WATER AND NATURAL RESOURCES COMMITTEE

October 17-18, 2019
Miller Library
Western New Mexico University
1000 W. College Avenue
Silver City

Thursday, October 17

9:00 a.m. **Call to Order and Welcome**
—Senator Joseph Cervantes, Chair, Water and Natural Resources Committee
—Dr. Isaac Brundage, Vice President, Student Affairs and Enrollment Management, Western New Mexico University
—Evangeline Zamora, First Vice President, Grant County Prospectors

9:15 a.m. (1) **History of the Gila River and the Arizona Water Settlements Act**
—D.L. Sanders, Attorney

10:30 a.m. (2) **Gila River Planning Process, Projects and Alternatives; New Mexico Central Arizona Project Entity (NM CAP Entity) Updates**
—Rolf Schmidt-Petersen, Director, Interstate Stream Commission (invited)
—Anthony Gutierrez, Executive Director, NM CAP Entity
—Joe Runyan, Representing Gila Farms Irrigation Association, NM CAP Entity
—Howard Hutchinson, Representing San Francisco Soil and Water Conservation District, NM CAP Entity
—Pete Domenici, Jr., Attorney, Domenici Law Firm, P.C.
—Harry Browne, Commissioner, District 5, Grant County Board of County Commissioners
—Allyson Siwik, Executive Director, Gila Conservation Coalition

12:30 p.m. **Lunch**

1:30 p.m. (3) **Aquifer Mapping and Managed Aquifer Recharge**
—J. Michael Timmons, Ph.D., Associate Director for Mapping Programs and Deputy Director, New Mexico Bureau of Geology and Mineral Resources, New Mexico Institute of Mining and Technology (NM Tech)

—Daniel Koning, Senior Field Geologist, New Mexico Bureau of Geology and Mineral Resources, NM Tech
—Steven T. Finch, Jr., Vice President and Principal Hydrogeologist/ Geochemist, John Shomaker and Associates, Inc.
—TBD

3:00 p.m. **Safety Briefing and Depart for Tour of Chino Mine***
*This tour is invitation-only for legislative committee members and staff.

5:00 p.m. **Recess**

Friday, October 18

9:00 a.m. (4) **Forest and Watershed Restoration and Health; Reforestation Best Practices; Addressing Fire Risk; Impacts of the United States Forest Service Owl Protection Order**
—Laura McCarthy, State Forester, Forestry Division, Energy, Minerals and Natural Resources Department
—Steve Hernandez, Public Member, Forest and Watershed Restoration Act Advisory Board; Attorney, Carlsbad Irrigation District
—Keven Groenewold, Chief Executive Officer, New Mexico Rural Electric Cooperative Association
—Kent Reid, Ph.D., Director, New Mexico Forest and Watershed Restoration Institute, New Mexico Highlands University

10:30 a.m. (5) **Department of Game and Fish Issues; Native Fish Restoration; Wildlife Corridors; Resident License Draws; Stream Access Rule**
—Michael B. Sloane, Director, Department of Game and Fish
—Jesse Deubel, Executive Director, New Mexico Wildlife Federation
—John Cornell, Southwest Field Manager, Theodore Roosevelt Conservation Partnership
—Marco Gonzales, Attorney, New Mexico Habitat Conservation Initiative

12:00 noon **Adjourn**

MINUTES
of the
FOURTH MEETING
of the
WATER AND NATURAL RESOURCES COMMITTEE

October 17-18, 2019
Miller Library
Western New Mexico University
1000 W. College Avenue
Silver City

The fourth meeting of the Water and Natural Resources Committee was called to order by Senator Joseph Cervantes, chair, on October 17, 2019, at 9:27 a.m. at the Miller Library at Western New Mexico University (WNMU) in Silver City.

Present
Sen. Joseph Cervantes, Chair
Rep. Matthew McQueen, Co-Vice Chair
Rep. Gail Armstrong
Rep. Paul C. Bandy
Sen. Craig W. Brandt
Rep. Christine Chandler (10/17)
Rep. Joanne J. Ferrary
Rep. Angelica Rubio (10/17)
Rep. Larry R. Scott
Sen. Benny Shendo, Jr. (10/17)
Rep. Nathan P. Small
Rep. Melanie A. Stansbury
Sen. Jeff Steinborn
Sen. Mimi Stewart
Rep. Candie G. Sweetser

Absent
Rep. Derrick J. Lente, Co-Vice Chair
Rep. Abbas Akhil
Sen. Sander Rue
Rep. James R.J. Strickler
Sen. Pat Woods

Advisory Members
Sen. Pete Campos
Sen. Ron Griggs
Rep. Susan K. Herrera
Rep. Rodolpho "Rudy" S. Martinez
Sen. Gerald Ortiz y Pino
Sen. Mary Kay Papen
Rep. Jane E. Powdrell-Culbert
Rep. Patricia Roybal Caballero
Sen. John Arthur Smith (10/18)
Sen. Peter Wirth
Rep. Martin R. Zamora
Rep. Anthony Allison
Rep. Jack Chatfield
Rep. Randal S. Crowder
Rep. Candy Spence Ezzell
Sen. Gregg Fulfer
Sen. Stuart Ingle
Sen. Gay G. Kernan
Rep. Tim D. Lewis
Sen. Linda M. Lopez
Rep. Javier Martínez
Sen. Steven P. Neville

Rep. Greg Nibert
Rep. William "Bill" R. Rehm
Sen. Nancy Rodriguez
Rep. G. Andrés Romero
Rep. Tomás E. Salazar
Rep. Debra M. Sariñana
Sen. Antoinette Sedillo Lopez
Sen. William E. Sharer
Rep. James G. Townsend

Guest Legislators
Rep. Rebecca Dow
Rep. Harry Garcia (10/18)
Sen. Gabriel Ramos

(Attendance dates are noted for members not present for the entire meeting.)

Staff
Shawna Casebier, Legislative Council Service (LCS)
Tom Kricka, LCS
Sara Wiedmaier, LCS
Shannon Rodriguez, LCS

Guests
The guest list is in the meeting file.

Handouts
Handouts and other written testimony are in the meeting file and on the New Mexico Legislature's website at www.nmlegis.gov.

Thursday, October 17

Welcome and Introductions
Senator Cervantes welcomed everyone to Silver City and invited members of the committee and staff to introduce themselves.

Dr. Isaac Brundage, vice president, Student Affairs and Enrollment Management, WNMU, welcomed everyone to Silver City and WNMU and recommended that the legislature take time to see the beautiful campus.

Evangeline Zamora, first vice president, Grant County Prospectors, welcomed everyone to Silver City. Ms. Zamora noted the work required to communicate the needs of the community to the New Mexico Legislature. Ms. Zamora introduced herself as well as members of the Grant

County Prospectors and recognized the organizations that sponsored refreshments: Advanced Air airline, Silver City Regional Association of Realtors and Grant County Prospectors.

History of the Gila River and the Federal Arizona Water Settlements Act (AWSA)

D.L. Sanders, attorney, provided the committee with some background on the Gila River and the AWSA. He said that New Mexico became involved in the AWSA because the flow of the Gila River through Arizona subjected New Mexico to jurisdiction in Arizona. In *Arizona v. California*, the United States Supreme Court adjudicated water rights in the lower basin of the Colorado River, which included New Mexico and Colorado. He noted that the ruling limited New Mexico's water rights to existing and historical uses; however, to make up for New Mexico not being entitled to water based on future use, New Mexico was allocated 18,000 acre-feet of Central Arizona Project (CAP) water. Mr. Sanders stated that while Arizona was concerned that New Mexico would build a diversion project to use the 18,000 acre-feet of water, New Mexico was only concerned with getting water to where it needed to be with no intention to make significant diversions.

Gila River Planning Process, Projects and Alternatives; New Mexico Central Arizona Project Entity (NM CAP Entity) Updates

Rolf Schmidt-Petersen, director, Interstate Stream Commission (ISC); Anthony Gutierrez, executive director, NM CAP Entity; Joe Runyan, Gila Farms Irrigation Association, NM CAP Entity; Allyson Siwik, executive director, Gila Conservation Coalition; Pete Domenici, Jr., attorney, Domenici Law Firm, P.C.; and Harry Browne, commissioner, District 5, Grant County Board of County Commissioners, discussed the NM CAP Entity and the projects and alternatives for the Gila River planning process. Howard Hutchinson, San Francisco Soil and Water Conservation District, NM CAP Entity, did not present but answered some questions from the committee.

Mr. Schmidt-Petersen discussed the background of the NM CAP Entity, the ISC's role related to the NM CAP Entity, an update on the filing of an environmental impact statement (EIS) under the National Environmental Policy Act of 1969 (NEPA), the relevant legal authorities and contractual obligations, the ISC's roles related to non-New Mexico units of the CAP and an update on non-NM CAP Entity projects.

The United States Congress provided New Mexico with an annual average of up to 14,000 acre-feet of water from the Gila River, its tributaries, including the San Francisco River, or underground water sources in southwestern New Mexico through the enactment of the AWSA. This water, known as "AWSA water", is in addition to the water allocated to New Mexico by the 1964 United States Supreme Court decree in *Arizona v. California*. The New Mexico unit of the CAP is the project that would divert, convey and store the AWSA water for consumptive use in southwestern New Mexico. The AWSA designated the United States Bureau of Reclamation (Reclamation) as the lead federal agency for environmental compliance related to the NM CAP Entity. The AWSA also allowed the ISC to be designated as joint lead with the Reclamation upon request. The ISC made a request to be joint lead in 2015, and the Reclamation

and the ISC are now joint lead on environmental compliance for the New Mexico unit of the CAP. In November 2014, the ISC voted to send written notice to the secretary of the interior that New Mexico intended to build a New Mexico unit of the CAP. The ISC is in charge of funding and the EIS, while the NM CAP Entity is in charge of everything else, including construction, operation and maintenance of the New Mexico unit.

In June 2018, the Reclamation published a Notice of Intent to prepare an EIS for the New Mexico unit in the Federal Register. After a public scoping period, the Reclamation and the ISC started incorporating details of the NM CAP Entity's proposed action and alternative actions into the EIS. The draft EIS that will be published and available to the public in December 2019 will fully analyze the action alternatives and their impacts on various resource topics, including hydrology, biology and economics, compared to the no-action alternative.

In its work on the implementation of the NM CAP Entity, the ISC is bound by the following legal and contractual obligations: the provisions of the AWSA; the New Mexico Unit Fund statute (Section 72-14-45 NMSA 1978); the 2016 Memorandum of Understanding between the Reclamation and the ISC; the 2016 Interim Advance Funding Agreement between the Reclamation and the ISC; and the 2015 Joint Powers Agreement that created the NM CAP Entity. As of September 2019, New Mexico has expended $13.9 million from the New Mexico Unit Fund.

In addition to authorizing the ISC to fund the NM CAP Entity, the AWSA authorizes the ISC to fund any water utilization project to meet water supply demands in southwestern New Mexico in consultation with the NM CAP Entity. Between 2014 and 2016, the ISC allocated $9.1 million to 16 non-New Mexico unit projects, such as projects for acequia improvement, effluent reuse, water meter placement and aquifer storage and recovery. As of September 30, 2019, about 52% of the total ISC allocation has been requested by the non-New Mexico unit grantees. Only seven of the 16 projects are operational; the rest are in various stages of design and construction. The slow pace is due to technical, legal and procurement issues. As of September 2019, New Mexico has expended $6.2 million from the New Mexico Unit Fund for non-New Mexico unit projects.

Mr. Gutierrez discussed NM CAP Entity history and the Virden alternative project. Early on, the board of the NM CAP Entity and the ISC recognized the need to amend the joint powers agreement to give authority to allow the funding of water projects other than the New Mexico unit. Mr. Gutierrez stated that in the afternoon after the committee meeting, the NM CAP Entity would make a decision to select the preferred alternative from among five. The preferred alternative is the Virden area project. The proposed action would utilize the existing Sunset and New Model diversions, as well as other existing canals without the need for modification. Pump facilities for the delivery of water from ponds back into canals will be constructed, along with two lined gravity-fed storage ponds, for a combined capacity of 550 acre-feet. The maximum potential AWSA water diversion available in the Virden area is approximately 1,277 acre-feet at a capital cost for construction of $7 million. This alternative would not require new construction

on the Gila River. The affected area is a well-established farming community on privately owned land that currently does not store water. Mr. Gutierrez stated that if New Mexico did not store water in the Virden area, the water would end up in Arizona.

Mr. Runyan spoke in support of diversion projects along the Gila River to support irrigated agriculture. Currently, there are three diversions along the Gila. Mr. Runyan stated that the existing gravel berms that are being used tend to have a high profile. Farmers could capture more water with a project that expanded diversion into farm ponds for storage. Farmers in the area support a long-term diversion and storage project in the area.

Ms. Siwik discussed challenges with the implementation of the NM CAP Entity project. Ms. Siwik explained that the AWSA makes an additional $34 million (adjusted for inflation to $56.3 million) available for the NM CAP Entity as long as a record of decision is issued by the secretary of the interior by December 31, 2019. To issue a record of decision, there must be a determination that the NM CAP Entity Gila diversion project complies with the NEPA. The NEPA requires that an EIS be prepared by the applicant detailing the impact the project will have on the environment and proposing alternatives. Because the draft EIS is not scheduled to be published until December 2019, the NM CAP Entity has asked the secretary of the interior for an extension, which may be granted for delays resulting from reasons outside the control of the State of New Mexico. Ms. Siwik stated that it is past time to end work on the Gila diversion of the NM CAP Entity because the project is not technically feasible nor economically viable. Instead, the state should use CAP money to pay for existing projects. One problem with the alternatives proposed for the NM CAP Entity is that the alternatives will be unreliable in years when New Mexico is in a drought and water will not be able to be delivered to Arizona. Also, the CAP business plan does not have a budget or specific source of revenue. The only way to pay for the project is for farmers to convert from low- to high-value crops. Furthermore, the cost estimates for the Virden Valley and the Cliff-Gila Valley are too low. The actual costs in Cliff-Gila Valley could end up being 40 times what is currently being paid for water. Ms. Siwik noted that Governor Michelle Lujan Grisham and the Gila River Indian Community oppose an extension of the deadline for a record of decision to pursue the NM CAP Entity. In southwestern New Mexico, there is approximately $64 million in infrastructure needs in low-income communities that need money now to fund critical water projects.

Mr. Browne, appearing on his own behalf and not on behalf of the Grant County Board of County Commissioners, discussed some of the problems he sees with the Virden alternative. Mr. Browne stated that he would be making very similar comments to those he made two years prior. Mr. Browne expressed suspicion at the last-minute decision to support the Virden alternative because there are still no identified users for the water and there are a lot of technical and economic issues that remain unresolved. According to Mr. Browne, the NM CAP Entity is not capable of undertaking this project, and the delay in getting the EIS to the secretary of the interior may cause New Mexico to lose $50 million in funding. The funds that are allocated for the New Mexico CAP unit would be better used on other water projects. For example, the residents of Hurley, New Mexico, are paying an additional $34.00 per month for water and New Mexico

CAP funds are not yet available for them. The NM CAP Entity project continues despite there being no results. The projected yields for the NM CAP Entity are based on the historic record that does not comport with future estimates. The cost estimate of $200 per acre-foot of water in the Gila Valley is much too low. The real cost is likely to be about $470 per acre-foot. New Mexico is obligated to pay for delivery of water to senior users in Arizona. There are a lot of water projects that need funding right now, and this could be accomplished by freeing up NM CAP Entity funds.

The following points represent information provided by the panelists in response to questions and comments from committee members:

- the NM CAP Entity is funded using New Mexico Unit Fund dollars; Governor Lujan Grisham signed an appropriation for this fiscal year;
- the NM CAP Entity has a meeting planned with the ISC for participants to discuss the Virden alternative, which is the preferred alternative out of the five alternatives;
- the analysis of the Virden alternative includes economic viability, as well as the social and environmental impacts; this alternative appears viable from the EIS analysis, although the costs probably represent the lowest estimate of costs;
- a comment was made that the NM CAP Entity project has been delayed and will miss the upcoming deadline to get a record of decision from the secretary of the interior, but the reason for completing the project should not be just to use water so Arizona cannot use that water; instead of going forward with the NM CAP Entity, the money should be used for other water projects;
- there is a possibility for legislation in the 2020 session to address funding non-diversion projects by requiring the ISC to appropriate money for such projects;
- if an extension is granted by the secretary of the interior, New Mexico will not lose its rights to the 14,000 acre-feet of water, and there will continue to be a search for projects; however, New Mexico could lose $50 million in federal funding;
- originally, New Mexico had rights to 18,000 acre-feet of water, but in 2004, New Mexico exchanged 4,000 acre-feet of water for more funding;
- even if New Mexico only approves projects for a portion of the 14,000 acre-feet of water to which New Mexico is entitled, New Mexico can still access the full 14,000 acre-feet of water at a later date;
- senior Arizona water rights were part of the Globe Equity Decree and the *Arizona v. California* decree;
- diversions can be accomplished by the development of surface and underground water resources;
- the following diversions are on the Gila River: the dam for Snow Lake and Lake Roberts, three diversions in the Gila Valley, two diversions in the Virden area and farmers diverting water for ranches and domestic use;
- it is possible to create more diversions to support recreational use of water resources;
- funding for watershed restoration projects could be leveraged from federal funding as an alternative to aboveground diversion projects;

- there has been a shift from working on large projects that require construction to focusing on the basics and working with water entities that are already in existence; 170 diversion and non-diversion projects were submitted to the ISC, and 16 of those projects were selected; the market should decide whether current projects are viable;
- among the existing diversions, there are three projects that could be made more permanent; the farmers in those areas pay for the water through their irrigation district but those farmers do not have to pay Arizona because these are adjudicated water rights; however, there is a plan to build a structure, pending approval by the irrigation district, that would allow these farmers to take more water, in which case whether the farmers have to pay Arizona for the water would depend on when the water was removed; sometimes the water would be adjudicated water and sometimes it would be AWSA water; the farmers would only pay for what they consume, not what they divert; the farmers would pay a small amount for access to the water — about $25.00 per year for costs associated with evaporation;
- in the upper Gila area, the proposed action would build a single diversion to replace the three diversions that currently exist; this action would have less of an ecological impact than the existing diversions;
- New Mexico is required under the CAP to pay Arizona for water at rates that are set by the CAP, not by New Mexico; these water rates may increase or decrease based on a determination by the CAP;
- currently, about 50% of all adjudicated water rights are being used in the Gila River Basin;
- the AWSA funds are only available in Catron, Grant, Hidalgo and Luna counties; these counties have access to CAP funds while other counties in New Mexico that need funds for water projects do not have access;
- a third party was employed for the hydrological analysis that will be part of the EIS; the analysis considered climate change only by looking at historical data to make sure downstream users are kept whole;
- a concern was expressed that projections on water availability on the Gila River have some of the flows going to zero; therefore, it may not be prudent to use New Mexico and federal funds on projects when the water may not be there in the future;
- the availability of surface water is subject to change; for example, wildfires can cause more runoff in early spring, which makes less water available later in the year; and
- the number-one criteria used by the NM CAP Entity in selecting projects is whether the project is in line with community interests; also, the NM CAP Entity and the ISC work together on determining which project gets funding, but there is little selection criteria in place.

Approval of Minutes

On a motion made, seconded and duly passed, the minutes of the September 5-6, 2019 meeting were approved as submitted.

Aquifer Mapping and Managed Aquifer Recharge

J. Michael Timmons, Ph.D., associate director for mapping programs and deputy director, New Mexico Bureau of Geology and Mineral Resources, New Mexico Institute of Mining and Technology (NM Tech); Daniel Koning, senior field geologist, New Mexico Bureau of Geology and Mineral Resources, NM Tech; and Steven T. Finch, Jr., vice president and principal hydrogeologist/geochemist, John Shomaker and Associates, Inc., discussed aquifer mapping and managed aquifer recharge.

Dr. Timmons discussed the utility of mapping geologic systems and aquifers. The New Mexico Bureau of Geology and Mineral Resources collects data, creates detailed geologic maps and builds conceptual models of the geologic system that are essential to: model the movement of ground water; forecast future conditions; and ultimately serve as a basis for decision making regarding land use planning, allocation decisions and pollution prevention and cleanup. Dr. Timmons explained that geologic history can be seen as a series of processes that shape the landscape. To date, 33% of New Mexico has been geologically mapped. Geologic mapping is used for mineral and energy resource evaluations, water assessments, city planning, hydrologic modeling and hazards assessments. One goal of geologic mapping is to identify areas that store and transmit water in ways that may be useful in managing water resources. Geologic mapping has completely altered the view of aquifers located under the city of Albuquerque. The 1961 view was that Albuquerque was on top of a vast aquifer or underground lake. However, in 1995, a more realistic view based on geologic mapping showed that there is a much smaller aquifer under Albuquerque, representing a considerably smaller amount of water resources.

Mr. Koning discussed managed aquifer recharge, which is the intentional recharge and storage of water into an aquifer for subsequent recovery or for environmental benefit. New Mexico engages in managed aquifer recharge because it saves water for future use, similar to having a water savings account. The geologic conditions in the Albuquerque area are favorable for managed aquifer recharge because of favorable water table geometry, a deep basin filled with sandy sediment and good subsurface geology. Mr. Koning stated that the Albuquerque area is ideal for storing water underground because: there is potential excess water from the San Juan-Chama project; long-term pumping has created an elongated cone of depression east of the Rio Grande; and mapping of the water table indicates that most of the recharged water will stay within the jurisdiction of the Albuquerque-Bernalillo County Water Utility Authority. The use of a three-dimensional geologic model has been essential to determining the suitability of a location for managed aquifer recharge.

Mr. Finch discussed aquifer storage and recovery in New Mexico. Aquifers may be recharged through off-channel infiltration, direct injection, natural infiltration and basin infiltration. The sources of water for recharge include surface water, ground water and reclaimed water. Mr. Finch described two water management projects in New Mexico: the 1956 project in the city of Santa Rosa and the 1997 project in the city of Alamogordo. In 1999, New Mexico passed the Ground Water Storage and Recovery Act to improve water and environmental quality, reduce ground-water level declines and promote conservation of water. The application process,

the hydrologic, technical and financial capability report requirements and the permit terms and conditions for projects authorized under the Ground Water Storage and Recovery Act are set forth in Section 19.25.8 of the New Mexico Administrative Code. The following entities are considered authorized applicants under the applicable law: Indian nations, tribes or pueblos; municipalities; counties; acequias; and irrigation or conservancy districts. There are several challenges presented by aquifer storage and recovery, including that the system must be designed and built before the applicant can obtain a permit, the source water must meet drinking water standards even if the receiving aquifer does not meet the same standards and authorized applicants are limited to governmental entities. Also, Mr. Finch stated that aquifer storage and recovery is best suited for municipalities because smaller entities may not be able to afford the cost of implementation. The benefits to New Mexico from aquifer storage and recovery include conjunctive use management of surface water, ground water and reclaimed water sources and long-term storage for times of drought.

The following points represent information provided by the panelists in response to questions and comments from committee members:

- aquifer storage and recovery is economical and better for the environment because less water is lost from evaporation when water is stored underground;
- more work is needed to identify suitable places where aquifer storage may be possible because only 33% of New Mexico has been geologically mapped in detail;
- the New Mexico Bureau of Geology and Mineral Resources operates on a budget of $300,000 a year, which is not enough to map the entire state; the bureau is prioritizing which areas should be mapped first;
- managed aquifer recharge does not affect water quality and should not degrade water quality in Corrales;
- a requirement that the source water must meet drinking water standards even if the receiving aquifer does not meet the same standards is part of the New Mexico Administrative Code, which could be changed by the Department of Environment in a rulemaking process; and
- approximately $40,000 was spent on mapping the Albuquerque area for suitability; it will cost over $1 million to implement the Albuquerque underground water storage project and take six to 10 years to finalize.

Recess

The committee recessed at 3:05 p.m. for a tour of the Chino mine.

Friday, October 18

Reconvene

Senator Cervantes reconvened the meeting at 9:00 a.m.

Forest and Watershed Restoration and Health; Reforestation Best Practices; Addressing Fire Risk; Impacts of the United States Forest Service Owl Protection Order

Laura McCarthy, state forester, Forestry Division, Energy, Minerals and Natural Resources Department; Steve Hernandez, public member, Forest and Watershed Restoration Act Advisory Board, and attorney, Carlsbad Irrigation District; Keven Groenewold, chief executive officer, New Mexico Rural Electric Cooperative Association (NMRECA); Kent Reid, Ph.D., director, New Mexico Forest and Watershed Restoration Institute, New Mexico Highlands University; Robert Trujillo, regional director, Wildlife, Fish, Rare Plants and Rangeland Management, United States Department of Agriculture; and Brent Racher, Ph.D., president, New Mexico Forest Industry Association, discussed the state of forest and watershed restoration in New Mexico.

Ms. McCarthy discussed restoring health and resilience in forests and watersheds. Climate change has caused an increase in wildfires in the last 50 years. During the 2019 wildfire season in New Mexico, there were 537 statistical fires and 22,125 acres of state and private land affected. Ms. McCarthy said that the 2019 wildfire season was not too severe, but there has been growth of fine dry grasses that could lead to big fires in the future. The number of wildfires in any given year is not a good indicator of forest health because wildfires are also used to keep people and property safe when some fires are intentionally set and allowed to burn. The Forestry Division has completed proactive forest management to prevent forest fires on 35,729 acres since 2014, and there are pending and ongoing projects on 13,267 acres. Ms. McCarthy presented an index of the completed, ongoing and pending projects around New Mexico with information on funding for each project.

Mr. Hernandez presented a different perspective on watershed and forest management by suggesting that, instead of looking at the management of forests and watersheds separately, consideration should be given to forest resilience depending on a healthy watershed with more water in the streams and rivers. To be most effective at managing forests, water agencies need to be included in the discussion.

Mr. Groenewold discussed the NMRECA and its activities to clear rights of way for fire prevention. Since it is a cooperative association, the goal is to minimize costs rather than maximize profits. The members of the NMRECA are elected and not appointed by industry. The NMRECA serves about 88% of the land area and 22% of the population of the state. New Mexico is in Region 3 in the United States Forest Service structure, which includes New Mexico and Arizona. Mr. Groenewold discussed a vegetation removal pilot program established through the 2018 federal Farm Bill to clear vegetation from utility rights of way. He indicated that the NMRECA would be working with the state forester to implement two to three projects. He also highlighted a map of New Mexico showing the areas where ignitions are predicted to impact the wildland-urban interface.

Dr. Reid discussed ways to maintain healthy forests, including that reducing standing biomass, or killing the little trees, is key to reducing fire risk. However, little trees in the right

place can be beneficial. Replanting trees involves a three-stage process: seed collection, nursery management and outplanting. Seeds need to be collected from standing forests from trees with minimal disease present, and trees should not be planted in places that seem very different from where the seed originated. The areas that are currently without trees need to be replanted because without planting trees, these areas will take centuries to regrow.

Mr. Trujillo discussed the injunction on all timber management activities that resulted from litigation over the Mexican spotted owl. In 2013, WildEarth Guardians sued the United States Forest Service and the United States Fish and Wildlife Service for failing to adequately monitor and protect the Mexican spotted owl, in Arizona and New Mexico. The federal agencies created a range-wide monitoring plan to keep track of the owl, but it was technically and financially unfeasible so the plan was never implemented. On October 10, 2019, the United States Forest Service filed a motion with the court to narrow the injunction to exclude timber management activities that do not occur on owl habitat land or are insignificant in their effect. The motion asked the court to allow commercial timber activities, personal and tribal ceremonial use of forest products and collection of Christmas trees.

Dr. Racher discussed how the injunction on timber management activities is affecting people who directly depend on forest products and people who depend on those products for secondary manufacturing.

The following points represent information provided by the panelists in response to questions and comments from committee members:

- there are approximately 11 million acres of forested land in New Mexico, all of which are controlled by the State Land Office;
- a comment was made that New Mexico needs to cut down more trees and thin out more vegetation to prevent catastrophic fires;
- currently, there is no time line for the court to consider a request to lift the injunction as to commercial firewood cutting and a request to lift the injunction as a whole;
- a comment was made that the injunction has hurt residents of Catron County, Socorro and Magdalena because they are involved in projects to cut or thin forests;
- watershed restoration project proposals should be brought to district offices;
- a comment was made that the injunction is overly broad because it is not limited to the Mexican spotted owl's actual habitat;
- the City of Alamogordo is working on reforestation of Bonito Lake, but the panelist was not sure if reforestation work was happening in Nogal Canyon;
- the state is dealing with slash from logging operations by using some for firewood and burning it;
- at least 250 people, but probably closer to 400 or 500 people, have lost work because of the injunction;

- a comment was made that the United States Forest Service is not doing its job and that is why the court issued the injunction; the consideration of an endangered species is proper and this matter should be resolved in the best interests of the people;
- the United States Forest Service is taking steps to protect the owl and other listed species to avoid future lawsuits;
- successful work on forest restoration in the area south of Albuquerque allowed a fire last summer to be controlled and put out; and
- seed collection is mostly done by government employees, although it could be done by private enterprise.

On motion by Representative Bandy seconded by Representative Armstrong, the committee voted in favor of sending a letter to the United States Forest Service in support of its request to limit the injunction prohibiting timber activities.

Department of Game and Fish Issues; Native Fish Restoration; Wildlife Corridors; Resident License Draws; Stream Access Rule

Michael B. Sloane, director, Department of Game and Fish; Jesse Deubel, executive director, New Mexico Wildlife Federation; Marco Gonzales, attorney, New Mexico Habitat Conservation Initiative; and Norm Gaume, New Mexico state board member, American Canoe Association, Adobe Whitewater Club of New Mexico, discussed the restoration of fish and wildlife and river access in New Mexico. John Cornell, southwest field manager, Theodore Roosevelt Conservation Partnership, was going to talk about migration corridors, but since that topic had already been discussed, he only responded to questions.

Mr. Sloane discussed the restoration of fish and other wildlife. The Department of Game and Fish has had some success restoring fish and wildlife species and habitats. For example, bighorn sheep have been delisted and there are currently efforts to get pupfish delisted. Mineral Creek and Whitewater Creek were both affected by wildfires and there is an effort to restore fish in those waterways. The Department of Game and Fish is working with the Department of Transportation to implement the Wildlife Corridors Act. So far, about 800 global positioning system collars have been put on animals across the state and a database for those animals is under development. Regarding river access in New Mexico, Mr. Sloane stated that no person can access water through private property without consent and that nothing shall affect whether water is navigable for Waters of the United States purposes.

Mr. Deubel discussed river access in New Mexico, stating that the State Game Commission has stopped acting on the rule allowing a petition to declare water on private property to be non-navigable. The concern about the adoption of this rule is that New Mexico residents are being blocked from access to waterways by private property owners, some of whom are nonresidents.

Mr. Gonzales also discussed river access in New Mexico and said that the issue is important because it involves constitutional rights and the individual right to own private property.

Mr. Gaume expressed support for protecting New Mexico residents' constitutional rights to access public waters for recreational nonconsumptive use. Mr. Gaume said that he had seen private property owners wielding guns at people who are using public waters for recreation.

The following points represent information provided by the panelists in response to questions and comments from committee members:

- a comment was made that the State Game Commission had no authority to adopt a rule that contradicts the language of the legislation that was passed regarding stream access; a rule cannot exclude the public from accessing public water so long as the public does not trespass, and the term "non-navigable" cannot be used to limit the public's access to public waters;
- there are currently two applications to close public access to portions of streams that run through private land;
- the State Game Commission is currently reviewing implementation of the stream access rule, partly due to the attorney general's opinion;
- members of the public have expressed concern to the State Game Commission that some places may become inaccessible;
- a comment was made that the legislature needs to broaden its statutory authority over the State Game Commission and manage based on the best science available and with the interests of all people in New Mexico; and
- a comment was made that the debate over public access to water and the rights of private landowners should be resolved in the best interests of the people of New Mexico.

Adjournment

There being no further business, the committee adjourned at 12:01 p.m.

Revised: November 8, 2019

TENTATIVE AGENDA
for the
FIFTH MEETING
of the
WATER AND NATURAL RESOURCES COMMITTEE

November 7-8, 2019
State Capitol, Room 307
Santa Fe

Thursday, November 7

9:00 a.m. **Call to Order and Welcome**
—Senator Joseph Cervantes, Chair, Water and Natural Resources Committee

9:15 a.m. (1) **Senate Bill 489 (2019); Energy Transition Act; Implementation and Updates**
—Sayuri Yamada, Executive Director of Public Affairs, Public Service Company of New Mexico
—Representative Nathan P. Small
—Mariel Nanasi, Executive Director, New Energy Economy
—Steve Michel, Deputy Director, Clean Energy Program, Western Resource Advocates

12:00 noon **Approval of Minutes**

12:15 p.m. **Lunch**

1:15 p.m. (2) **Cooperative Energy Power Provider Options and Updates**
—Kathleen Staks, Director of External Affairs, Guzman Energy
—Luis A. Reyes, Jr., Chief Executive Officer, Kit Carson Electric Cooperative
—Duane Highley, Chief Executive Officer, Tri-State Generation and Transmission Association
—Gary Roulet, Chief Executive Officer, Western Farmers Electric Cooperative

3:00 p.m. (3) **Report on Wind Turbine Decommissioning Study Pursuant to Senate Memorial 66 (2019)**
—Daren Zigich, P.E., Manager, Engineering Technology Program, Energy Conservation and Management Division, Energy, Minerals and Natural Resources Department

3:30 p.m. (4) **Low-Income Energy Efficiency Opportunities**
—Ona Porter, Founder Emeritus and Board Member, Prosperity Works
—Gabe Pacyniak, Assistant Professor, Natural Resources and Environmental Law Clinic, University of New Mexico (UNM) School of Law (SOL)
—Julia Shaver, Clinical Law Student, Natural Resources and Environmental Law Clinic, UNM SOL
—Victor Hall, Clinical Law Student, Natural Resources and Environmental Law Clinic, UNM SOL

4:15 p.m. (5) **Proposed Agriculture and Natural Resources Trust Fund Legislation**
—Bob Budd, Executive Director, Wyoming Wildlife and Natural Resource Trust
—Debbie Hughes, Executive Director, New Mexico Association of Conservation Districts

5:15 p.m. **Recess**

Friday, November 8

8:30 a.m. (6) **Pecos River Settlement Lessons and Update**
—A. Nathaniel Chakeres, Attorney, Interstate Stream Commission
—Steve Hernandez, Attorney, Carlsbad Irrigation District
—Aron Balok, Superintendent, Pecos Valley Artesian Conservancy District
—TBD, Intrepid Potash-New Mexico

10:00 a.m. (7) ***Aamodt* Settlement Update**
—Arianne Singer, General Counsel, Interstate Stream Commission

10:45 a.m. (8) **Acequia Policy Considerations**
—Paula Garcia, Executive Director, New Mexico Acequia Association
—Ralph Vigil, Chair, Acequia Commission

11:45 a.m. **Adjourn**

MINUTES
of the
FIFTH MEETING
of the
WATER AND NATURAL RESOURCES COMMITTEE

November 7-8, 2019
State Capitol, Room 307
Santa Fe

The fifth meeting of the Water and Natural Resources Committee was called to order by Senator Joseph Cervantes, chair, on November 7, 2019 at 9:13 a.m. in Room 307 of the State Capitol in Santa Fe.

Present
Sen. Joseph Cervantes, Chair
Rep. Derrick J. Lente, Co-Vice Chair
Rep. Matthew McQueen, Co-Vice Chair
Rep. Paul C. Bandy
Sen. Craig W. Brandt
Rep. Christine Chandler
Rep. Joanne J. Ferrary
Rep. Angelica Rubio
Rep. Larry R. Scott
Sen. Benny Shendo, Jr.
Rep. Nathan P. Small
Rep. Melanie A. Stansbury
Sen. Jeff Steinborn
Sen. Mimi Stewart
Rep. James R.J. Strickler
Rep. Candie G. Sweetser

Absent
Rep. Abbas Akhil
Rep. Gail Armstrong
Sen. Sander Rue
Sen. Pat Woods

Advisory Members
Sen. Pete Campos
Sen. Ron Griggs
Rep. Susan K. Herrera
Sen. Gay G. Kernan
Sen. Linda M. Lopez (11/7)
Sen. Steven P. Neville
Sen. Gerald Ortiz y Pino
Sen. Mary Kay Papen
Rep. Jane E. Powdrell-Culbert
Rep. William "Bill" R. Rehm (11/7)
Sen. Nancy Rodriguez (11/8)
Rep. Tomás E. Salazar

Rep. Anthony Allison
Rep. Jack Chatfield
Rep. Randal S. Crowder
Rep. Candy Spence Ezzell
Sen. Gregg Fulfer
Sen. Stuart Ingle
Rep. Tim D. Lewis
Rep. Javier Martínez
Rep. Rodolpho "Rudy" S. Martinez
Rep. Greg Nibert
Rep. G. Andrés Romero
Rep. Patricia Roybal Caballero

Sen. Antoinette Sedillo Lopez
Sen. Peter Wirth
Rep. Debra M. Sariñana
Sen. William E. Sharer
Sen. John Arthur Smith
Rep. James G. Townsend
Rep. Martin R. Zamora

Guest Legislators
Rep. Brian Egolf (11/7)
Rep. Linda M. Trujillo (11/7)

(Attendance dates are noted for members not present for the entire meeting.)

Staff
Shawna Casebier, Legislative Council Service (LCS)
Jeret Fleetwood, LCS
Tom Kricka, LCS
Sara Wiedmaier, LCS

Minutes Approval

Because the committee will not meet again this year, the minutes for this meeting have not been officially approved by the committee.

Guests

The guest list is in the meeting file.

Handouts

Handouts and other written testimony can be found in the meeting file or on the New Mexico Legislature's website at www.nmlegis.gov.

Thursday, November 7

Welcome and Introductions

Senator Cervantes welcomed the committee to the final meeting of the 2019 interim and invited members of the committee and staff to introduce themselves.

Senate Bill (SB) 489 (2019); Energy Transition Act (ETA); Implementation and Updates

Sayuri Yamada, executive director of public affairs, Public Service Company of New Mexico (PNM), Representative Small, co-sponsor of SB 489, Mariel Nanasi, executive director, New Energy Economy, and Steve Michel, deputy director, Clean Energy Program, Western Resource Advocates, discussed implementation of SB 489, which created the ETA and increased New Mexico's renewable portfolio standard (RPS).

Ms. Yamada stated that under the ETA, PNM shareholders are forgoing profits that would have been earned through the continued operation of the San Juan Generating Station. She discussed securitization, investment in transition and training opportunities for displaced workers and various options for replacement energy being considered by PNM, stating that PNM is seeking the best option for the environment, economy and impacted communities. She provided a time line for legal challenges regarding abandonment, financing and replacement of resources. Representative Small discussed the national, economy-driven trend away from coal and toward natural gas. He emphasized the importance of community input and public support for a just transition plan. He noted that under the ETA, PNM and other public utility companies will be required to produce carbon-free electricity by 2045.

Although New Energy Economy supports the increase to New Mexico's RPS, Ms. Nanasi discussed concerns over provisions of the ETA that may be unconstitutional. The ETA allows PNM to increase rates to its customers without allowing the Public Regulation Commission (PRC) to balance the interests of shareholder investors and ratepayers. She said that this is the only securitization law in the country that allows utilities to set bond amounts without any state oversight or ability to change those amounts. She added that under the ETA, ratepayers are responsible for decommissioning costs and undepreciated investment, while shareholders will recover 100 percent of their investment and will not bear any financial responsibility for the closure of the San Juan Generating Station. Ms. Nanasi cited recommendations by the Office of the Attorney General that the PRC approve abandonment but deny the company's request to recover 100 percent of its stranded costs from ratepayers. She suggested that the legislature amend these unconstitutional provisions to maintain ratepayer protections.

Mr. Michel discussed the various groups that came together in support of the ETA and a just transition of utilities from fossil fuel generation to renewable resources. He highlighted the four main components of the ETA: securitization; economic relief for impacted communities; requirements for clean, renewable energy; and increased coal plant emission limits. He provided a breakdown of securitization costs and the primary energy replacement plan proposed by PNM. He expressed concern that the PRC's refusal to recognize the new law will set a precedent by which any agency that disagrees with the legislature can file a case before a law is enacted to block implementation of the law. He said that the ETA does not hinder the PRC's authority.

Responding to questions from committee members, the panelists stated that:

- the PRC is currently hearing testimony and public comment regarding the validity of the ETA and pending lawsuits;
- the City of Farmington is looking for an investor to buy the San Juan Generating Station and continue operating as a coal-fired power plant with carbon capture and sequestration technology;
- it is not economically viable for PNM to continue operating the San Juan Generating Station and PNM has a dedicated fund for decommissioning and reclamation;
- the ETA caps securitization of reclamation and decommissioning costs at $30 million;

- securitization is a tool to reduce the cost of early abandonment of the plant; and
- the PRC does not have the authority to determine the constitutionality of the ETA, but the New Mexico Supreme Court declined to hear cases filed to determine the issue.

Approval of Minutes

On a motion made, seconded and duly passed, the minutes of the October 17-18, 2019 meeting were approved as submitted.

Cooperative Energy Power Provider Options and Updates

Kathleen Staks, director of external affairs, Guzman Energy, Luis A. Reyes, Jr., chief executive officer, Kit Carson Electric Cooperative (KCEC), Duane Highley, chief executive officer, Tri-State Generation and Transmission Association (Tri-State), and Gary Roulet, chief executive officer, Western Farmers Electric Cooperative (WFEC), discussed cooperative energy power provider options.

Mr. Reyes talked about the history, goals and service area of KCEC. He shared that KCEC switched power suppliers from Tri-State to Guzman Energy because of rate increases and limitations on its renewable energy portfolio by Tri-State. He outlined KCEC's energy portfolio and plans for further development of solar arrays and battery storage to reach 100 percent daytime solar by 2021, which he said will ultimately reduce rates for its members. Mr. Reyes noted the importance of broadband infrastructure in a renewable energy system and efforts by KCEC to provide broadband services in Taos and surrounding communities. He discussed installations of electric vehicle charging stations; workforce development initiatives; and the importance of legislative support for cooperatives to transition their portfolios to renewable energy.

Ms. Staks shared that Guzman Energy is a wholesale power provider that buys and sells energy across the country through power purchase agreements, with the goal of helping rural communities take advantage of different energy options. She said that Guzman Energy has been able to take over some of Tri-State's clients because Guzman Energy allows more renewable energy in its clients' portfolios and offers set rates. She shared that Guzman Energy strives to be a true partner to the communities it serves by working with utilities on outreach programs, scholarships and solar development. She noted the national trend toward more renewable energy and the increasing financial feasibility that has pushed the transition from a legacy energy economy to a renewable and distributed energy age.

Mr. Highley discussed the "new Tri-State" that has been pushed by its member cooperatives to offer additional community solar and noted that in 2018, nearly one-third of energy supplied to its members came from renewable sources. As a wholesale generation and transmission company, Tri-State does not have any retail customers; rather, it provides energy to member electric cooperatives. Mr. Highley shared the numerous changes that the company has made, such as creating more flexibility in member contracts, pursuing rate regulation and

increasing renewable energy options. He stated that as a nonprofit, Tri-State returns money back to its members, which in turn lowers members' bills and the bills of the cooperatives' customers.

Mr. Roulet discussed the member cooperative, service territory and energy generation mix of WFEC. He said that WFEC embraces a balance between adding wind, solar and natural gas to its portfolio and keeping member rates low, adding that WFEC provides some of the cheapest energy rates in the country. He cited projections of increased renewable energy in its portfolio and plans to expand electric vehicle charging stations.

Responding to questions from the committee, the panelists stated that:

- existing solar and wind arrays will need to be coupled with storage capacity to expand beyond daytime functionality, and that batteries offer more flexibility;
- KCEC established a fund to provide bill assistance to low-income customers;
- cooperatives are receiving more complaints regarding broadband access than rates;
- Tri-State has over $1 billion invested in coal but is looking to decommission four coal plants due to the shift in the economy;
- KCEC left Tri-State because of a five percent cap on renewable energy and is now on track to meet a 100 percent renewable portfolio in about 18 months;
- the Colorado Legislature created a Just Transition Office to help impacted communities transition from coal to cleaner sources of energy; and
- by switching to Guzman Energy, KCEC is predicted to save between $50 million and $70 million over the 10-year contract.

Report on Wind Turbine Decommissioning Study Pursuant to Senate Memorial 66 (2019)

Daren Zigich, P.E., manager, Engineering Technology Program, Energy Conservation and Management Division, Energy, Minerals and Natural Resources Department (EMNRD), discussed a study on wind turbine decommissioning. He said that the study involved identifying best practices by other western states regarding the decommissioning of wind turbines and restoration of land to ensure the protection of citizens, landowners and developers. Mr. Zigich noted that in 2018, New Mexico had over 1,000 wind turbine towers, the majority on private lands and each with useful life ranges of 20 to 40 years. He detailed the process and estimated cost of decommissioning and noted that most wind farms will choose to "repower" or reuse other facility infrastructure after retiring a wind turbine. He discussed State Land Office lease requirements, which include a decommissioning surety to cover restoration costs, and noted that some states are seeking financial security and backstop regulations for permits.

Responding to questions from the committee, Mr. Zigich stated that:

- Texas is leading the country in wind energy and requires the developer to provide funds for decommissioning;
- for oil and gas operators in New Mexico, bonding is required for active and inactive wells, and as wind energy production increases across the state, there will need to be

similar requirements to ensure that wind turbines are not just abandoned at the end of their useful lives; and
- much of the material in wind turbines can be salvaged and recycled, reducing the cost of decommissioning.

Low-Income Energy Efficiency Opportunities

Ona Porter, founder emeritus and board member, Prosperity Works, Gabe Pacyniak, assistant professor, Natural Resources and Environmental Law Clinic, University of New Mexico (UNM) School of Law, Julia Shaver, clinical law student, Natural Resources and Environmental Law Clinic, UNM School of Law, and Victor Hall, clinical law student, Natural Resources and Environmental Law Clinic, UNM School of Law, discussed the potential for a low-income energy efficiency grant program administered by the EMNRD.

Ms. Porter stated that an energy efficiency grant program would provide a more long-term benefit for low-income families than the usual bill assistance approach and discussed initiatives with PNM to fund energy efficiency upgrades for low-income households. Mr. Pacyniak shared that the mission of the Natural Resources and Environmental Law Clinic is to assist low-income communities in the transition to a more sustainable future through policy. He said that this grant program would be exempt from the Anti-Donation Clause of the Constitution of New Mexico.

Mr. Hall cited the high energy burden faced by many low-income New Mexicans, emphasizing that energy efficiency investments would reduce bills, improve affordable housing quality and reduce greenhouse gas emissions. He discussed current federal, state and utility-funded low-income energy efficiency programs and noted that the number of New Mexicans in need exceeds the current capacity of these programs. He shared specific proposals that could be funded through the program and highlighted the application and selection process for projects.

Ms. Shaver discussed specific provisions of the proposed Community Energy Efficiency Development Block Grant Act. She said that this grant program would complement existing programs by allowing more flexibility and would direct funds to local and tribal governments in underserved communities to identify and engage energy-burdened households and make targeted energy efficiency improvements.

Mr. Hall then reviewed the Anti-Donation Clause, which prevents the state from providing aid to private organizations or individuals, with certain exceptions, such as infrastructure for affordable housing. He said that as long as the state enacts enabling legislation that meets constitutional requirements, the grant program would not be in violation of the Anti-Donation Clause and that the necessary language is already encompassed in the proposed Community Energy Efficiency Development Block Grant Act.

In response to questions and comments from the committee, the panelists stated that:

- rather than just increasing funding to existing low-income energy efficiency programs, the proposed grant program will complement these programs because it will not be constrained by federal rules;
- the EMNRD will promulgate rules to identify energy-burdened households and needs, ensure benefit of investments and report back to the legislature;
- energy efficiency upgrades under the grant program will include the option to replace appliances; and
- the proposed grant program will target low-income households, provide application assistance, engage community members and provide funding directly to local and tribal governments.

Proposed Agricultural and Natural Resources Trust Fund Legislation

Bob Budd, executive director, Wyoming Wildlife and Natural Resource Trust, and Debbie Hughes, executive director, New Mexico Association of Conservation Districts, discussed proposed legislation for the Agricultural and Natural Resources Trust Fund. Ms. Hughes mentioned that Senator Neville introduced this bill during the 2019 legislative session.

Mr. Budd discussed the creation of a similar fund in Wyoming, which he described as a fair and efficient process that brought together representatives from the oil and gas, mining and agriculture industries, conservation groups and the general public. He noted strong public support for the fund and the mission to preserve the natural resources of the state, with particular focus on river restoration, wetland creation, rangeland species maintenance, conservation easements, research and invasive species removal. Mr. Budd said that the fund is guided by an independent, apolitical board appointed by the governor that works through all agencies to avoid the Anti-Donation Clause, with legislative committee oversight of projects. He mentioned some of the projects that have been funded through this program and emphasized that all people, regardless of background, are in support of the fund because the focus is on preserving the natural resources of the state for current and future generations.

Responding to questions from the committee, Ms. Hughes and Mr. Budd stated that:

- districts can allocate funds without violating the Anti-Donation Clause, as long as the funding serves the public benefit, as is the case with the Water Trust Fund;
- the proposed bill would appropriate money from the General Fund into the trust and grant funds, with the goal of growing to $150 million due to accruing interest;
- oil and gas revenues could be put into the fund to earn matching funds; and
- in Wyoming, a constitutional amendment was passed to allow a higher yield on investments to its fund.

Recess

The committee recessed at 5:14 p.m.

Friday, November 8

Reconvene

Senator Cervantes reconvened the meeting at 8:44 a.m.

Pecos River Settlement Lessons and Update

A. Nathaniel Chakeres, attorney, Interstate Stream Commission (ISC), Steve Hernandez, attorney, Carlsbad Irrigation District (CID), Aron Balok, superintendent, Pecos Valley Artesian Conservancy District (PVACD), Bob Jornayvaz, president and chief executive officer, Intrepid Potash, Inc., Robert Baldridge, general manager, Intrepid Potash-New Mexico, LLC, Charles DuMars, attorney, Law and Resource Planning Associates, P.C., and Lacy A. Daniel, attorney, Law and Resource Planning Associates, P.C., updated the committee on the Pecos River Settlement and claims to water rights by Intrepid Potash, Inc.

Mr. Chakeres discussed the history, objectives and implementation of the Pecos River Settlement. The Pecos River Compact of 1948 established a requirement for New Mexico to deliver a consistent amount of water at the New Mexico-Texas state line, but New Mexico failed to maintain this amount and was sued by Texas. Ultimately, the court ruled in favor of Texas, established a river master to determine annual accounting and disallowed any future debt, which lead to the 2003 Pecos River Settlement to ensure New Mexico's compliance with the compact. He noted issues with the settlement, such as difficulty in meeting delivery requirements in years of sustained drought; unanticipated demand for surface water from increased oil and gas development; and dormant water rights of other users, such as Intrepid Potash, Inc. He discussed the implications of Intrepid Potash, Inc.'s, use of water rights for commercial sales and challenges to Intrepid Potash, Inc.'s, water rights by the ISC, CID, PVACD and others. He said that the parties have agreed to adjudicate these rights in 2020 and allow the state engineer to mediate a settlement.

Mr. Hernandez noted that farmers in the CID all get the same amount of water, but some farmers do not need their full allotment and can choose to lease their water rights to the state to help meet delivery requirements to Texas. He said it is because of these leases that the state has been able to stay above the delivery requirement and accumulate a credit with Texas. He expressed concern over Intrepid Potash, Inc.'s, claim to water rights and direct diversions from the Pecos River, which were not accounted for in the Pecos River Settlement and hinder New Mexico's ability to meet compact requirements. Mr. Balok discussed the history of the PVACD and collaboration with the CID to ensure that delivery requirements are met and to prevent priority calls by the river master. He said that the credit/debit system and priority administration have helped the state meet compact requirements in years of severe drought.

Ms. Daniel and Mr. DuMars then went into further detail regarding Intrepid Potash, Inc.'s, claim to water rights. Ms. Daniel discussed the history of Intrepid Potash, Inc., in New Mexico and the decline in global potash prices that has led to the need to diversify operations and lease or sell water rights to oil and gas operators in the region. She said that the Office of the State

Engineer (OSE) licensed and continues to validate the water rights of Intrepid Potash, Inc., and that the company is committed to developing a long-term solution that will allow New Mexico to continue to meet the Pecos River Compact delivery requirements, while still allowing Intrepid Potash, Inc., to put the full quantity of its water rights to beneficial use.

Ms. Daniel stated that the water being diverted by Intrepid Potash, Inc., is naturally brackish and therefore cannot be used for crop irrigation, but is perfect for use in oil and gas operations until the necessary infrastructure and technological advancements are in place to utilize produced water. She said that Intrepid Potash, Inc., has filed to temporarily change the place and purpose of use of its leased water rights and these applications are currently pending in the OSE, but are being protested by the ISC, PVACD and CID. She explained that water rights are not lost when circumstances beyond control cause periods of nonuse, so Intrepid Potash, Inc.'s, water rights have not been abandoned and the OSE has continually recognized the validity of these water rights. Mr. DuMars said that Intrepid Potash, Inc.'s, water rights will be determined in the adjudication court either by negotiated settlement or trial. He said that settlement and negotiation would be preferable to litigation and provided suggestions for solutions in drought years.

Responding to questions and comments from the committee, the panelists stated that:

- although the water is brackish, diversions by Intrepid Potash, Inc., still affect Pecos River Compact delivery requirements and will cause a shortfall in dry years;
- Intrepid Potash, Inc., filed all the necessary licensing extensions that were approved by the OSE, because under state law, water rights are not required to be put to beneficial use if the water is not available to use, as is the case in severe drought years;
- Intrepid Potash, Inc., did not abandon its water rights because it filed the required licensing extensions that were approved by the OSE;
- the value of water has increased, so some water rights owners are selling rights;
- oil and gas extraction still requires fresh water for operations because the technology to enable use of produced water is still being developed; and
- beneficial use is the basis for maintaining water rights, and an existing right can be lost even if the owner is licensed.

***Aamodt* Settlement Update**

Arianne Singer, general counsel, ISC, updated the committee on the 2006 *Aamodt* Settlement Agreement between the State of New Mexico, the City of Santa Fe, Santa Fe County and the Pueblos of Nambé, Tesuque, Pojoaque and San Ildefonso. Ms. Singer provided a time line of changes to the settlement, which was finally adjudicated in 2017 to provide protections for junior water rights in exchange for construction of a regional water system. The Pojoaque Basin Regional Water System will ensure a clean, reliable surface water supply to Santa Fe County and the pueblos. She discussed negotiations to acquire additional water from the San Juan-Chama Project; funding agreements executed by the settlement parties; updated cost share

amounts; and administrative protections for existing water rights. She noted that the participating pueblos agreed to have the state engineer serve as water master and meter all wells in the district.

Responding to questions from the committee, Ms. Singer stated that:

- the regional water system will serve about 4,000 households;
- New Mexico's congressional delegation introduced legislation this year to provide additional funding and extend the time line for construction of the Pojoaque Basin Regional Water System; and
- the San Juan-Chama Project water was obtained through a United States Bureau of Reclamation contract.

Acequia Policy Considerations

Paula Garcia, executive director, New Mexico Acequia Association (NMAA), and Ralph Vigil, chair, Acequia Commission, discussed the history of acequias and the NMAA and current policies and issues affecting acequias. The NMAA is a membership-based organization that was created in 1989 to provide education and outreach to acequias. The Acequia Commission was created in statute in the 1980s as an advisory board to the state legislature and governor, with the mission of protecting acequia-based water rights and promoting agriculture as part of New Mexico's economy and heritage. Ms. Garcia shared that the NMAA has provided education and technical assistance to over 400 acequias across the state. She discussed some of the resolutions that were brought forward during the 2019 legislative session to address issues affecting acequia communities. She provided a list of recommendations to the legislature, which included amending the Acequia and Community Ditch Fund to allow access to resources for settlement implementation. Mr. Vigil said that the Acequia Commission works to maintain the health of the acequias and watersheds and to oversee water transfers and water quality for the benefit of farming communities and surrounding ecosystems. He said that the commission works with environmental groups to preserve lands while seeking to improve the economic outcome for acequia communities.

Responding to questions from committee members, Ms. Garcia and Mr. Vigil said that:

- the health of acequias and watersheds is highly dependent on the health of surrounding forests; and
- the Acequia and Community Ditch Fund is funded through the New Mexico Irrigation Works Construction Fund and assists communities with engineering design and infrastructure costs.

Update on *Texas v. New Mexico* Litigation

Greg Ridgley, general counsel, OSE, and John R. D'Antonio, Jr., P.E., state engineer, OSE, provided a brief update on pending litigation in *Texas v. New Mexico*. Mr. Ridgley emphasized the importance of the relationship between the OSE and the Office of the Attorney

General, and Mr. D'Antonio discussed the litigation schedule, noting that the trial is expected to commence in 2021.

Adjournment

There being no further business, the committee adjourned at 12:06 p.m.

Legislative Council Service
Santa Fe, New Mexico