MINUTES OF THE
SENATE COMMITTEE ON NATURAL RESOURCES

Seventy-ninth Session
February 28, 2017

The Senate Committee on Natural Resources was called to order by Chair Yvanna D. Cancela at 1:31 p.m. on Tuesday, February 28, 2017, in Room 2144 of the Legislative Building, Carson City, Nevada. The meeting was videoconferenced to Room 4412E of the Grant Sawyer State Office Building, 555 East Washington Avenue, Las Vegas, Nevada. Exhibit A is the Agenda. Exhibit B is the Attendance Roster. All exhibits are available and on file in the Research Library of the Legislative Counsel Bureau.

COMMITTEE MEMBERS PRESENT:

Senator Yvanna D. Cancela, Chair
Senator Mark A. Manendo, Vice Chair
Senator Julia Ratti
Senator James A. Settelmeyer
Senator Pete Goicoechea

STAFF MEMBERS PRESENT:

Alysa Keller, Policy Analyst
Erin Roohan, Counsel
Maria Vega, Committee Secretary

OTHERS PRESENT:

Steve Bradhurst, Executive Director, Central Nevada Regional Water Authority
Mike Baughman, Executive Director, Humboldt River Basin Water Authority
Edwin James, General Manager, Carson Water Subconservancy District
Jake Tibbitts, Natural Resources Manager, Eureka County
Boyd Spratling
David Berger, Director, Nevada Water Science Service Center, U.S. Geological Survey, U.S. Department of the Interior
Bob Marshall
Denise Moyle
Vickie Buchanan
Bob Burnham
Martin Moyle

Russell Conley
Ari Erickson

CHAIR CANCELA:

I call the hearing to order and I am requesting introduction of Bill Draft Request (BDR) 48-736:

BILL DRAFT REQUEST 48-736: Revises provisions pertaining to basin water budget calculations. (Later introduced as Senate Bill 231).

SENATOR RATTI MOVED TO INTRODUCE BDR 48-736.

SENATOR GOICOECHEA SECONDED THE MOTION.

THE MOTION CARRIED UNANIMOUSLY.

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STEVE BRADHURST (Executive Director, Central Nevada Regional Water Authority): I have provided written testimony (Exhibit C) regarding the Central Nevada Regional Water Authority, which was established in 2005. The Authority was created pursuant to *Nevada Revised Statutes* (NRS) 277, the Interlocal Cooperation Act.

The Authority functions to bring government, businesses and environmental communities together on water-related issues to present united positions to the State Legislature, the U.S. Congress and State and federal agencies. The Authority is not only interested in water resource issues in rural Nevada but also in Nevada in general.

The Authority's mission emphasizes that the foundation of rural Nevada's future is in a sustainable water supply for humans and the natural environment. Nevada's worst natural resource fear is the real possibility of a water shortage by the mid twenty-first century. Clark County has been in a drought for many years. From 2000 to 2016, we experienced the driest 17-year period in the 102-year historical record for the Colorado River.

A combined study by research scientists at NASA, Cornell University and Columbia University predicted a megadrought would occur over the next 35 years. The study is titled *Unprecedented 21st Century Drought Risk in the American Southwest and Central Plains.* The U.S. Department of the Interior published the *SECURE Water Act Report.* The report shows a number of increased risks to the western U.S. water resources. Specific projections are temperature increases of five to seven degrees, precipitation increases in the northwestern and north central portions of the U.S., and a decrease in snowpack.

In 2016, the State Engineer presented to the Legislative Commission's Subcommittee to Study Water a presentation on water resource issues. One issue presented was the overappropriation of groundwater resources in at least 84 water basins of which approximately 50 are severely overappropriated. The imbalance between a water basin's appropriated groundwater relative to its perennial yield will likely be exacerbated in a number of water basins. The perennial yield concept provides an overestimate of a water basin's sustainable groundwater resources. The U.S. Geological Survey believes a new perspective for groundwater management is needed. The change from perennial yield to sustainable groundwater management is to change from maximum capture of all groundwater discharge to acceptable groundwater discharge. The perennial yield concept provides an overestimate of how much groundwater can be appropriated by the State Engineer.

Nevada is the driest state in the Nation. Some government land use plans have been developed without consideration of the amount and source of water needed to implement the plans. The Authority recommends the State of Nevada, Nevada Legislature and Nevada's local governments, along with Nevada's business community, discuss Nevada's water future.

There is no question that surface water and groundwater are a single source in many areas. The State Engineer should be required to make sure an application to appropriate surface water or groundwater does not adversely affect surface water or groundwater resources.

Nevada Revised Statute 533.370, subsection 2 states the State Engineer shall reject an application for water if there is no unappropriated water in the proposed source of supply or the proposed use or the change conflicts with

existing rights or with protectable interests in existing domestic wells or threatens to prove detrimental to the public interest.

Nevada's traditional sources of water, surface water and groundwater, are limited. Future water resources for Nevada should include water conservation, reclaiming wastewater, using graywater, capturing rainwater, cloud seeding and desalination of water.

MIKE BAUGHMAN (Executive Director, Humboldt River Basin Water Authority):
I have provided my slide presentation (Exhibit D), an overview of the Humboldt River Basin Authority. We have to move water from the upper basin, where most of the runoff is and most of the snowmelt comes from, to the lower basin, a distance of about 1,000 miles. It is a very difficult system to manage, particularly when we are not getting the quantities of water that historically the water decrees were based on.

We should not forget we will have drought again. We will have severe drought. Everything tells us that the frequency and duration of droughts in the future are going to be more intense. Warming trends and climate change is undeniably going to cause some changes. The long-term trend tells us we will have a reduced snowpack. With warmer climates, we have less snow in the fall and less snow in the spring.

During the last year and a half, the State Engineer has designated every basin in the Humboldt River as requiring special management. All wells are required to have meters, except domestic wells.

South Fork Reservoir of the Humboldt River Basin stores no water for irrigation or downstream usage. It is a recreational body of water. Rye Patch Reservoir is where the principal water storage exists. It is the least effective place to store water in the Humboldt River Basin. We need more storage in the middle and upper Humboldt River. The reason Truckee, Reno and Sparks have such a great drought reserve is storage in the upper basin.

The State Engineer is addressing unpermitted pit lake evaporation. The State Engineer issued a policy to the mining industry. The policy requires all new mines in the permitting process, whether expansion of an existing mine or a new project, must obtain water right permits to cover the evaporative water losses from their pit lakes. All existing mines that have pit lakes or will have pit

lakes are grandfathered in, although they are encouraged to comply with the policy. Marigold Mine is the first project to come under the new policy and filed applications with the State Engineer to cover its pit lake evaporation. Newmont Gold is the first company to voluntarily comply with the policy.

The Authority worked with the Truckee Meadows Water Authority, Southern Nevada Water Authority, Walker River Irrigation District, Pershing County Water Conservation District, Truckee-Carson Irrigation District, and the Carson Water Subconservancy District. These groups had several conference calls and recommended to the Legislature cloud seeding in our State. The State funded cloud seeding from the 1980s through 2008. During the recession, the funding was cut. The Subcommittee elected to request a bill allowing the existing water project grant fund, administered by the Department of Conservation and Natural Resources, to include cloud seeding.

The State Engineer's Office is doing a capture analysis to mitigate the impact of groundwater pumping that is occurring on the base flow of the Humboldt River. Every groundwater right within the Humboldt River Basin is junior to the senior surface-decreed water rights. In order to protect those surface-decreed water rights, there is going to have to be some reduced groundwater pumping.

The Authority would like the Committee to introduce a bill. We do not want an amendment to another bill because this is a controversial issue. The Authority believes this is important because it concerns domestic wells.

Every domestic well has a duty of two-acre feet. There is no water right tied to it, but it is on the books and the State Engineer recognizes it as two-acre feet. The Authority is talking about having to curtail domestic well use and limit indoor use only in some areas. The Humboldt River Basin Authority voted to ask the Legislature to consider a committee bill introduction which would limit the duty to all new domestic wells, especially in our area and certainly within those basins that are overappropriated, to one-acre foot per domestic well. The reason for this is that average consumption has been determined to be not much more than an acre-foot. We are looking at thousands of parcels, existing and to be created over time, that would all be able to get a domestic well. At two acre-feet per domestic well, we are just adding to the problems in the basin.

SENATOR GOICOECHEA:
Marigold Mine is coming into mandatory compliance. I assume the mine operators filed an application for consumptive use of groundwater.

MR. BAUGHMAN:
Yes, that is correct.

EDWIN JAMES (General Manager, Carson Water Subconservancy District):
My slide presentation is on Carson River watershed activities (Exhibit E). The Carson watershed begins in Alpine County. There are two forks, the East Fork and West Fork, that come together in Douglas County, and the Carson River flows through Carson City, Lyon County and into Churchill County. The watershed is almost 4,000 square miles; the river length is 184 miles. We have very limited up-stream storage in the upper watershed. Our largest reservoir is down two-thirds at Lahontan. Upstream we have less than 10,000 acre-feet of storage. Lahontan holds almost 300,000 acre-feet of storage.

In 1989, the Legislature realized there needed to be an agency to supervise on a regional basis which changed the Subconservancy role from managing and developing the water resources of the Carson River to alleviating reduction losses, promoting conservation, and protecting the health, safety, and welfare of the people in the Carson River Basin. In 2000, Alpine County, California, joined the Subconservancy. We now have all six counties in two States, and we are the only agency in the Country that is a bistate and multicounty operation run from the bottom up, dealing with water resources on a holistic approach.

It is important to understand the kind of projects or studies the Authority does. There are environmental, municipal water demand and agricultural issues. All three are very important. If you take care of one, you take care of the other, or the system will no longer be balanced. Any planning the Subconservancy does looks at the impact it may have on the other two resources.

The Subconservancy's mission is to promote cooperative action across agency and political boundaries in the Carson River watershed using integrated water management. Some of the things we deal with are water quality, invasive species, recreation, riverbank stabilization, outreach and education. The Subconservancy also deals with floodplain management and water supply demands.

The Carson River Coalition (CRC) realized one agency could not deal with all of the issues. The CRC is a stakeholders group of different entities throughout the entire watershed and is comprised of federal, State, local, tribal and nongovernmental agencies as well as private citizens and landowners. The information gathered from the CRC is presented to the counties.

A goal of the CRC is to conserve our floodplains. The community came together and said it did not want to see the Carson River channelized. It did not want to become the Los Angeles River and preferred a living river concept. This means floodplains must be kept open. This protection is important because it is less costly than construction alternatives; it causes less property damage and is more environmentally friendly. The State claims ownership of the river to the Carson watershed.

There was a slight increase in temperatures from 1940 to 2000. In 2009, the CRC asked the Desert Research Institute (DRI) to do a study. It reported seeing more flows coming off the watershed than it did historically. This means it is getting drier in the watershed. Agricultural users are running out of water earlier. Municipalities depending upon the river need to have a firm water supply backup because they cannot depend upon the Carson River to provide those resources. Even though we are flooding this year, water supply is something we always have to look at. We also look at changes in runoff.

There are 11 major water purveyors in the watershed. We have a waterline that runs between Lyon County and Carson City that moves water back and forth. We have a waterline that brings water from Minden and provides water to north Douglas County, Indian Hills and Carson City. This line was not put in because of lack of water. It was constructed because water quality standards changed. It was cheaper for the community to put in a regional pipeline than to have residents treat their wells separately.

The issue we deal with is wet water versus paper water. We think the State Engineer needs more tools to be able to deal with the issue of wet water versus paper water. The reality is that the paper water is not there. We need to have proper planning.

You will often hear about pivots or circles. Pivots are centralized irrigation systems for crops. A pivot goes around in circles and creates circular shapes.

Basins are often overappropriated because there have been so many failures in desert land entries. In the 1950s and until 1960, people really did not have any idea how much water was available. The perennial yield had not been established yet.

When land is irrigated for agriculture, it is called net pumping. There is secondary recharge. The secondary recharge occurs when part of the water not used by the crops soaks back into the ground and eventually reaches back down to the groundwater aquifer. What is legal to pump is not necessarily aligned with what is available.

JAKE TIBBITTS (Natural Resources Manager, Eureka County):
Assembly Bill No. 419 of the 76th Session became NRS 534.110, which allows for a Critical Management Area designation. This designation starts a ten-year stopwatch for individuals under this designation to come together and develop a groundwater management plan. If a plan is not developed at the end of ten years, the State Engineer regulates by priority. At the time, A.B. No. 419 of the 76th Session seemed to empower more local approaches to finding solutions and seemed to allow solutions outside of strict junior and senior water rights. During the same period, there were applications for groundwater rights to mitigate declines in vested claims to surface water. This added more issues in Diamond Valley that continue today. This not only created a sense of urgency for many people with water rights in Diamond Valley, but it also created a sense of futility for many of the other residents.

In March 2014, the State Engineer held a workshop in Diamond Valley to explain the new statute. The statute would provide residents the opportunity to come up with local solutions. The residents were told they needed to start making a management plan.

In August 2015, the designation of a Critical Management Area (CMA) order was signed by the State Engineer. This brought people together to talk about solutions. Diamond Valley is the only designated CMA in the State. The Diamond Valley water users involved in developing the plan did not want it to affect anyone else.

Nevada's water law is based on two basic principles: prior appropriation and beneficial use. Prior appropriation of water rights is the legal doctrine that the

first person to take a quantity of water from a water source for beneficial use has the right to continue to use it. This is also known as first in time, first in right. This allows for the use of the State's water resources by granting priority to senior water rights in times of shortage. A water right may only be granted for beneficial uses as provided in NRS 533 and 534.

Incentives were given to farm in Diamond Valley by giving individuals free land. These folks were not hydrologists or water law experts. They applied to do something, and they were granted the right to do it. That was nearly 60 years ago. These families, whether senior or junior water right holders, have invested their livelihood and lives into this community. There has been an entire community built on overappropriation. Tremendous conservation efforts have taken place. These people are using half of the water they are entitled to use. There is an argument that prior appropriation must be followed from the inception of groundwater development: first well, second well and then a third well. Each well should be analyzed going forward so you do not get into a situation like Diamond Valley.

The time to fix this problem through strict prior appropriation was 60 years ago when there was a flood of applications. Now 60 years later, the State Engineer is saying we are going to use strict prior appropriation. This is unworkable for a community.

Exhibit F highlights the Diamond Valley Draft Groundwater Management Plan. The plan builds in some priority where senior water rights will receive more than junior rights. The Plan outlines a very specific reduction plan to get back into sustainability.

BOYD SPRATLING:
Thirteen percent of the State's property is privately owned and mostly dedicated to agriculture. The wetlands are unique in a state like Nevada, as noted in my presentation (Exhibit G). These meadows are very important. They provide habitat for people, wildlife and livestock. In Nevada, we depend on snowpack. Meadows provide floodplains that slow the water down. There are very few meadows left in the Truckee Meadows. As humans, we cannot eat grass, but through cattle, sheep and goats, we can harvest the grass and turn it into a nutrient-dense, high-protein food product. The meadows also act as a fire barrier. Later in the summer as the flows slow down, the water seeps back into the channel so we have continuous flow later into the summer. We have an

infrastructure that is privately owned, maintained and paid for with no cost to the taxpayer. We have the benefit of these green meadows throughout the entire State.

CHAIR CANCELA:
How much of Nevada's entire land is wetlands?

MR. SPRATLING:
I cannot give you an exact figure.

SENATOR SETTELMEYER:
The question opens up a slew of other questions, such as, are these native wetlands or are they wetlands created by irrigating. I would love to see data on both.

SENATOR GOICOECHEA:
Is it correct that the State Engineer's policy does not allow any water rights on the Humboldt to be transferred upstream?

MR. SPRATLING:
Yes.

DAVID BERGER (Director, Nevada Water Science Center, U.S. Geological Survey, U.S. Department of the Interior):
My slide presentation is on water science in Nevada (Exhibit H). The United States Geological Survey (USGS) is a nonregulatory federal agency that provides unbiased earth sciences information to cooperators, stakeholders and the public. The USGS has a variety of science-focused centers across the United States. In Nevada, the focus is on water. Seventy percent of our water sciences activities are from reimbursable funding. This reimbursable funding structure makes us responsive to water resource needs and concerns of our stakeholders in Nevada. The water science that we do in Nevada is generally 60 percent basic data collection and 40 percent interpretative studies. Our data program is extensive, and we monitor approximately 305 sites Statewide.

One program that is unique to the USGS is the Cooperative Matching Funds Program. The Program allows science centers to provide federal dollars to match with cooperator dollars to support water science needs. We have 35 local, State and tribal agencies in Nevada that participate in the Cooperative Matching Funds

Program. Nevada continues to be one of the Water Science Center's most active partners in the Program. Nevada received 50 percent of the matching funds allocation in fiscal year 2016.

The oldest gauge in Nevada is in Carson Valley along the Carson River near Gardnerville. The USGS maintains about 152 real-time stream flow gauges throughout Nevada. The stream flow network is an important component of what the USGS does in Nevada. The National Weather Service relies on this data to forecast flooding. In addition to basic data collection, the Water Science Center also conducts groundwater interpretative studies throughout the State. The importance of reconnaissance studies is they not only evaluate the water quality in these basins in terms of irrigation potential but also help with estimates of water budgets from which the perennial yield estimates were often derived.

CHAIR CANCELA:
What are phreatophytes?

MR. BERGER:
Phreatophytes are plants with taproots that reach down to the water table, such as greasewood or rabbit brush.

SENATOR RATTI:
What is a cone of depression?

MR. BERGER:
When a well turns on, the groundwater starts flowing to the well and defines a cone of depression. It is called that because it is shaped like a cone.

The first hydrologic concept I want to introduce is the groundwater budget. Groundwater budgets are a summary of all the inflows to and the outflows from groundwater systems. Prior to groundwater development, when the system is under natural conditions, the budget is in a state of dynamic equilibrium. This means that the inflows equal the outflows with very little change in storage. Once pumping starts, the volume of that pumped water and the associated change in aquifer storage must be considered in a groundwater budget.

Groundwater and surface water are a single resource. In most of Nevada's large river systems, groundwater and surface water are interconnected and behave as

a single source. When the groundwater level is above the stream stage, the stream is considered a gaining stream because the groundwater is discharged into the stream. Please refer to page 9 of Exhibit H. This is what hydrologists often call base flow in mountain streams after spring runoff. When the stage in the stream is higher than the groundwater levels, the stream is considered to be a losing stream in which the stream flow infiltrates or discharges into the groundwater system.

After a pump is turned on, the water to the well comes from the storage in the aquifer right around the pumping well. After time, pumping begins to intercept groundwater that initially discharged to the stream. This is what we call stream flow capture. After a significant amount of time and pumping, the cone of depression lowers the water table. The phreatophytes die off. All the evapotranspiration (ET) is captured by the pumping, stream flow depletion continues and you get reduced flow from the stream.

The definition of perennial yield is the maximum amount of groundwater that can be salvaged each year over the long term without depleting the groundwater reservoir. Additionally, perennial yield cannot be more than the natural recharge of the groundwater reservoir and is usually limited to the maximum amount of natural discharge. The initial perennial yield estimates for Nevada basins were mostly determined from groundwater budgets estimated from the reconnaissance studies and were designed to be limited to the volume of discharge that could be captured by pumping. The original intent of perennial yield was to capture groundwater that was consumed by phreatophytic vegetation because when these studies were developed, ET by phreatophytes was considered of no beneficial use.

Pumping cannot capture ET without also affecting stream flow and potentially other surface water features, such as springs and wetlands. Other limitations associated with the perennial yield concept are that most streams and large springs are often already appropriated, and they typically provide critical habitat. The protection of senior water right holders is often not considered in the definition of perennial yield.

Groundwater sustainability is the use of groundwater in a manner that can be maintained for an indefinite time without causing unacceptable consequences. Unacceptable consequences are impacts on ecosystems from groundwater development that have evolved over time. Society has now recognized drying

up springs, wetlands and phreatophytic vegetation are affecting other water users, which is not an acceptable impact. We need to ask what are acceptable changes or impacts to the system. We also need to recognize that groundwater and surface water are interconnected and need to be treated as a single resource. We need to fully understand the effects of timing, rates and location of pumping on groundwater systems. Groundwater and surface water interactions are complex. A single value of perennial yield for a basin is no longer an effective way to manage a basin.

The USGS has published reports that address these kinds of questions regarding the sustainability of groundwater resources and understanding and managing the effects of groundwater pumping on stream flow. The most effective approach to the understanding of the complexities of a groundwater and surface water interaction, and the potential effects of groundwater development on these systems, is the application of groundwater flow models. The Nevada Water Science Center is conducting a study designed to evaluate stream flow depletion related to groundwater development along the Humboldt River Basin. This study is in cooperation with the USGS, the State of Nevada and DRI. The general approach of this study is to develop a conceptual model that describes the movement of groundwater and its interactions with the Humboldt River and to describe the hydrogeologic structure that controls this movement of water.

The next step is to construct a numerical flow model that can effectively simulate the components of this conceptual model, including the water budget. This study will give the State Engineer needed information and tools to make informed decisions regarding groundwater management in the Humboldt River Basin and the other basins in Nevada that are dominated by river systems.

Without data, studies cannot be done with any kind of certainity. Capture maps are stream flow depletion maps that are just one of the tools that are planned because of study of the Humboldt River Basin. These maps are designed to characterize the effects of groundwater withdrawals on the timing and rates of stream flow depletion. Capture maps are created by repeated simulations of a groundwater flow model. Each simulation computes the stream flow depletion resulting from pumping at various locations and times.

Groundwater and surface water are connected and need to be treated as a single resource. Groundwater systems in Nevada basins are very complex and need to be studied at more than just a reconnaisance level. The use of

groundwater models is an effective way to understand the complexity of groundwater flow systems and their interactions with stream flow and pumping.

SENATOR GOICOECHEA:
I am not a fan of groundwater models. I am intrigued that you say they are a useful tool.

MR. BERGER:
When you look at sustainability, perennial yield and groundwater flow, there are boundary conditions. The groundwater flow model can look at those kinds of boundary conditions. I agree you have a right to be skeptical about groundwater flow models, but I think it is the best tool to study these complex groundwater systems, especially when the groundwater and the surface water are interacting, like in the Humboldt River Basin and the Carson River Basin.

SENATOR SETTELMEYER:
It is important to point out that there are many other factors that go into this. The Carson Valley cannot be judged as one area. At the bottom of the Valley, the water underneath has been recorded to move up to a rate of 127 feet a day. I agree with Senator Goicoechea, trying to make a general rule for an area is not a good idea.

MR. BERGER:
I was not trying to make a general rule. I was just giving a sense of how perennial yield sustainability comes about. There is a lot more to this than I have presented.

SENATOR GOICOECHEA:
Do you have any data on the Humboldt River Basin study, or is it still too early?

MR. BERGER:
We are still in the process. We have made some progress, but do not have anything to talk about yet.

BOB MARSHALL:
I represent Roger and Judy Allen who have two farms in Diamond Valley in Eureka County. We want to inform people who are not familiar with water law

the basis of Nevada's water law, which is first in time, first in right and the priority system.

Nevada's water law is based on two basic principles: prior appropriation and beneficial use. Prior appropriation, also known as first in time, first in right, allows for the orderly use of the State's water resources by granting priority to senior water rights in times of shortages. Before rights can be taken away or made less valuable, the holders have to be compensated. Every single permit issued is subject to prior rights. That is Nevada's law.

The Allens have senior water rights. They also have some junior water rights. I am concerned about how the proposed Groundwater Management Plan in Eureka County and Diamond Valley does not focus on a meaningful approach to compensating senior water right holders when their rights are denigrated. My client is not against groundwater management plans. I urge you to look at a method of compensating senior water right holders in a way that is consistent with the constitutional principle of not taking property without just compensation.

DENISE MOYLE:
I am an owner/operator and a partner in my family farm in Diamond Valley. Mr. Tibbitts gave a thorough overview of the difficulties the irrigators in Diamond Valley are facing. As an active member of the Groundwater Management Plan, I can tell you that the process has been long and difficult, and our community has persevered. We have come together and created a plan that is the fairest and most inclusive plan that we can put together to create an environment where everybody in the community gets to stay and continue working together. Senate Bill 73 will give us the opportunity to implement the plan and move forward to rectify the problems.

SENATE BILL 73: Revises provisions relating to water. (BDR 48-177)

VICKIE BUCHANAN:
My family is one of three original land entry filers still in operation in Diamond Valley. I am a fully senior water right holder. There is a difference between senior water right holders who have been impacted by the pumping of junior water rights and the ones that have not been impacted. I live in the middle of the cone of depression for the whole valley. When junior water rights were granted was the point in time when priority should have been put into place.

The State Engineer should have said this valley cannot sustain overpopulation and no new permits will be issued. The State Engineer was still issuing new permits on water rights in early 2000.

I feel that to curtail strictly by priority at this point is not going to help me. My water has dropped 300 feet. I have drilled new wells. I have done everything physically possible. Even if three-quarters of the valley goes away, I am not going to survive financially. Some things in the Groundwater Management Plan will give us some help so my family can continue to live and operate in the Valley.

BOB BURNHAM:
The time to use strict prior appropriation concepts in Diamond Valley was 60 years ago. We have to find more flexible, innovative, constructive solutions now. Many other basins in the State are not at this point yet. The community has done a lot of work to come up with a plan that does not affect anyone else.

MARTIN MOYLE:
The CMA designation may give us the opportunity to do some things outside of State law. Critical Management Area designation gives us an opportunity to do some special things that are particular to the area. We are not looking to change State law but to get solutions. Our livelihoods are at stake.

RUSSELL CONLEY:
I am a member of the advisory board for the Groundwater Management Plan. Diamond Valley is mostly comprised of family farming operations. Our local climate enables us to produce very high-quality hay and forage. The farming portion of our operation is completely reliant upon groundwater. Our water rights have been in effect since early 1961. Even though they have been active for the last 55 years, they are still considered junior and would be among those curtailed if the State Engineer is forced to curtail based on priority.

When we purchased our farm, we knew the basin was overappropriated, but we did not know if our water rights were senior or junior. All we knew was that our water rights were in good standing with the State Engineer's Office. Now, ten years later, we face the possibility of losing our water rights to curtailment. If the Groundwater Management Plan is not adopted within the time frame set forth in subsection 7 of NRS 534.110, we will no longer be able to make a living. Even if we went into bankruptcy, we would have very little to show for

our many years of hard work. Our family, like many others in the community, would be forced to relocate and pursue a different livelihood.

Most of the irrigators in the valley have come together to develop the Groundwater Management Plan. The plan is almost complete. I believe it is a strong plan that would bring the basin back into balance. Our plan provides a local solution to our groundwater problem — a problem we did not create. Not all groundwater users in Diamond Valley agree with the development of the local Groundwater Management Plan. Some believe that the prior appropriation doctrine should be strictly adhered to. Let me reiterate, it was the failure to follow the doctrine that allowed the overpumping in Diamond Valley for so many years. Failure to follow the doctrine has allowed people to build their livelihoods, raise their families and create a strong agricultural community. It would be contradictory to suddenly curtail usage with the aforementioned doctrine, not to mention the impact it would have in the surrounding communities. I urge this Committee to give us the tools necessary to implement a Groundwater Management Plan. It is necessary to keep our local economy thriving and our community intact.

ARI ERICKSON:
I went to the Groundwater Management Plan meetings. I listened and learned. The community has come together and developed a plan where everyone wins. This is a very serious problem. The Basin is dying. The community will die if the Basin dies, and we need to address both problems.

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CHAIR CANCELA:
These presentations, not just today but throughout the course of the last three weeks, have been designed to prepare the Committee to take on what are some complex issues.

Seeing no further business before the Committee, this meeting is adjourned at 3:22 p.m.

RESPECTFULLY SUBMITTED:

_____
Maria Vega,
Committee Secretary

APPROVED BY:

_____
Senator Yvanna D. Cancela, Chair

DATE: _____

EXHIBIT SUMMARY				
Bill	**Exhibit / # of pages**		**Witness / Entity**	**Description**
	A	1		Agenda
	B	3		Attendance Roster
	C	10	Steve Bradhurst / Central Nevada Regional Water Authority	Written Testimony
	D	15	Mike Baughman / Humboldt River Basin Water Authority	Slide Presentation
	E	25	Edwin James / Carson Water Conservancy District	Slide Presentation
	F	5	Jake Tibbitts / Eureka County Department of Natural Resources	Presentation
	G	21	Boyd Spratling	Presentation
	H	17	David Berger / United States Geological Survey, Nevada Water Service Center	Presentation