MINUTES OF THE MEETING
OF THE
ASSEMBLY COMMITTEE ON NATURAL RESOURCES

Eighty-Second Session
February 22, 2023

The Committee on Natural Resources was called to order by Chair Lesley E. Cohen at 4:01 p.m. on Wednesday, February 22, 2023, in Room 3143 of the Legislative Building, 401 South Carson Street, Carson City, Nevada. The meeting was videoconferenced to Room 4401 of the Grant Sawyer State Office Building, 555 East Washington Avenue, Las Vegas, Nevada, and to Room 130, Greenhaw Technical Arts Building, Great Basin College, 1500 College Parkway, Elko, Nevada. Copies of the minutes, including the Agenda [Exhibit A], the Attendance Roster [Exhibit B], and other substantive exhibits, are available and on file in the Research Library of the Legislative Counsel Bureau and on the Nevada Legislature's website at www.leg.state.nv.us/App/NELIS/REL/82nd2023.

COMMITTEE MEMBERS PRESENT:

Assemblywoman Lesley E. Cohen, Chair
Assemblywoman Natha C. Anderson, Vice Chair
Assemblywoman Shannon Bilbray-Axelrod
Assemblywoman Tracy Brown-May
Assemblywoman Venicia Considine
Assemblyman Rich DeLong
Assemblywoman Bea Duran
Assemblyman Bert Gurr
Assemblywoman Alexis Hansen
Assemblywoman Selena La Rue Hatch
Assemblyman Howard Watts
Assemblyman Toby Yurek

COMMITTEE MEMBERS ABSENT:

None

GUEST LEGISLATORS PRESENT:

None

STAFF MEMBERS PRESENT:

Nicolas C. Anthony, Committee Policy Analyst
Nancy Davis, Committee Secretary
Cheryl Williams, Committee Assistant

OTHERS PRESENT:

John J. Entsminger, General Manager, Southern Nevada Water Authority
John Zimmerman, General Manager, Truckee Meadows Water Authority
Stephanie Morris, Director, Legal and Regulatory Affairs, Truckee Meadows Water Authority
Adam Sullivan, P.E., State Engineer and Administrator, Division of Water Resources, State Department of Conservation and Natural Resources
Micheline Fairbank, Deputy Administrator, Division of Water Resources, State Department of Conservation and Natural Resources
Jennifer Lanahan, representing Reno-Sparks Indian Colony
Laurel Saito, Nevada Water Strategy Director, The Nature Conservancy
Stacey Montooth, Executive Director, Nevada Indian Commission
Will Adler, representing Pyramid Lake Paiute Tribe
Chaunsey Chau-Duong, Public Affairs, Southern Nevada Water Authority
Thomas Morley, representing Nevada Press Association
Steve Walker, representing Eureka County
Kyle Roerink, Executive Director, Great Basin Water Network
Patrick Donnelly, Nevada State Director, Center for Biological Diversity
Jeff Fontaine, Executive Director, Central Nevada Regional Water Authority; and Executive Director, Humboldt River Basin Water Authority

Chair Cohen:
[Roll was called. Rules and protocol of the Committee were reviewed.] Before we get started, we are going to introduce two bill draft requests (BDR).

BDR 45-339—Authorizes the management of designated terrestrial invertebrates. (Later introduced as Assembly Bill 221.)

I will entertain a motion to introduce BDR 45-339.

ASSEMBLYWOMAN ANDERSON MOVED FOR COMMITTEE INTRODUCTION OF BILL DRAFT REQUEST 45-339.

ASSEMBLYMAN WATTS SECONDED THE MOTION.

Is there any discussion on the motion? Seeing none, we will vote.

THE MOTION PASSED UNANIMOUSLY.

BDR 40-337—Revises provisions relating to water conservation. (Later introduced as Assembly Bill 220.)

I will entertain a motion to introduce BDR 40-337.

ASSEMBLYWOMAN ANDERSON MOVED FOR COMMITTEE INTRODUCTION OF BILL DRAFT REQUEST 40-337.

ASSEMBLYMAN WATTS SECONDED THE MOTION.

Is there any discussion on the motion? Seeing none, we will vote.

THE MOTION PASSED UNANIMOUSLY.

We will now move on to a presentation from the Southern Nevada Water Authority.

John J. Entsminger, General Manager, Southern Nevada Water Authority:
With me today is Andrew Belanger, our Director of Public Services. I will start with our PowerPoint presentation [Exhibit C]. The Southern Nevada Water Authority (SNWA) has five primary missions. We coordinate regional conservation efforts. We do a 50-year water supply plan, every single year, so that we always have a five-decade outlook on planning. We treat up to 600 million gallons of water a day to make sure it is safe for human consumption. We have built a lot of expensive infrastructure; we have built over $4 billion of new infrastructure in the last 15 years, and now we are responsible for operating it. Last is stewardship; we oversee restoration of the Las Vegas Wash, the Springs Preserve, and the Warm Springs Natural Area. Natural resources are very important to us.

No mystery to anybody from down south, Las Vegas is the driest metropolitan area in the United States, which gives us some unique challenges. We get 90 percent of our water from the Colorado River. Said another way, 90 percent of the water for 76 percent of the state's population every day comes out of Lake Mead. The other 10 percent is from the native aquifer underlying the Las Vegas Valley.

But we are not alone; we have a lot of neighbors. Some call the Colorado River the hardest-working river in the world. Just for comparison's sake, the Colorado gets about 12 million acre-feet a year. The Columbia River at Klamath is 280 million a year, and the Mississippi River at New Orleans is 460 million a year. The Colorado River is a very small river with which we have to take care of 40 million Americans, 30 Native American tribes, and 5 million acres of irrigated agriculture.

The Colorado River is a river that is in trouble. Page 6 is the tale of the tape since the turn of the century. Red bars are below average and blue bars are above average; 2002 is still the driest year in recorded history. Years 2012 and 2013 were the driest back-to-back years in recorded history right up until 2021 and 2022. That has had a dramatic impact on the lake

that is in our backyard. We went into this century essentially full, and we now sit at less than 30 percent capacity in the largest reservoir in the country.

What does all this add up to? What it means is there is significant risk. Page 8 shows that if the lake continues to go down to elevation 950 feet, the Hoover Dam stops generating electrical power, and at elevation 895, it becomes physically impossible to pass water through the dam downstream to approximately 25 million Americans in coastal California and Central Arizona. We are working to come to agreements. At the end of January, six states submitted modeling assumptions that we wanted the Bureau of Reclamation to look at as they look to change the operating guidelines between Lake Powell and Lake Mead. California submitted their own plan. I would stress to the Legislature, lack of unanimity at one step in a multiyear process does not represent failure. I was with the governors' representatives from California and Arizona on Friday, and I am talking to them again tomorrow morning. There are a lot of areas of commonality between the two proposals, and it is in all of our best interests if we can close the gaps and come up with a seven-state plan; that is what we are working on right now.

In terms of process, so you know when things are going to pop into public, the draft environmental impact statement (EIS) will be public probably the end of March or early April. You will still be in session when the next round of newspaper articles come out. That goes from draft to a final EIS and a record of decision probably by the end of July.

Page 10 [Exhibit C] shows what have we been doing about the drought. I mentioned infrastructure and planning. This is not sneaking up on us; we have banked enough water over the last 20 years that we now have approximately 10 years of our current demands banked in reserves. I will cover a number of those issues in conservation. First and foremost, everything we do in conservation has to be focused on reducing outdoor use because we got the short end of the stick in 1922. Nevada has a robust 1.8 percent of the legal entitlements on the Colorado River, and that is not going to change. We do have some strategic advantages; one of them is being located upstream of the Hoover Dam. Because of that, we can recycle 100 percent of the water that we use indoors, and we have to focus all of our conservation efforts on reducing our outdoor water footprint.

Page 12 shows that being upstream of the dam also gives us security that no other state has. We have invested $1.5 billion, all local money, without a dime of state money and without a dime of federal money. We built the third intake in the low lake level pumping station, which gives us the redundancy to be able to guarantee the physical security of our customers. Even in the event that we get to that deadpool level where we cannot release water downstream to California, Arizona, and Mexico, we can still pump our water. We can still take care of 2.3 million Nevadans.

Another strategic goal is that we are relatively homogeneous. I know that is a kind of crazy thing to say in politics today, but other states are much more balkanized because they have significantly more tribal interest. Arizona has 22 Native American tribes with claims to the Colorado River. Nevada has one. The Fort Mojave Tribe rights were fully quantified in the

decree in *Arizona v. California*. They also have large agricultural users which we do not have. When I talk of homogeneity, I am talking about the municipal industrial sector and not having to compete within these other sectors as most of the other states are forced to do.

We have also been getting ready for this: 2023 is not the first time we are talking about conservation. We put our first drought plan in place in 2004 and have been literally leading the world in innovative progressive urban water conservation for the last 20 years. All that adds up to this [page 15]. Since 2002, our population is up about 800,000 people, which is 49 percent. Our per capita usage is down over half, and our net depletions off the Colorado River are down by 31 percent. We are a living, breathing example that you can grow your economy, you can diversify your economy, and you can simultaneously use a lot less water.

But we are not done. I think we have to recognize that this is our natural disaster. Nobody ever calls into question earthquake codes in San Francisco or hurricane codes in southern Florida. This is what we are going to have to deal with, and we are going to have to keep moving ahead. In the last 18 months, we have gotten even more aggressive. I will not go through every single one, but we now have a moratorium that takes effect in September on new buildings using evaporative cooling. We have limited new pool size construction to 600 square feet. All of our golf courses are now on even more stringent budgets, and we are sending a pricing signal to the top 10 percent of our water users. We do not want to generate the revenue, we want them to change their behavior and get out there, get in their garage, and change their watering clock.

Page 18 [Exhibit C] quantifies every single conservation measure into gallons per capita per day savings and walks us down from where we were to 86 gallons per capita per day by 2035. We are already moving quickly in that direction; in 2021 we were at 110 gallons, and in 2022 we were at 104 gallons. We reduced our use by 6 gallons per person per day in the last 24 months.

Anybody who has been to Las Vegas knows there are still a lot of cranes, still a lot of construction. Valley-wide, we issued 47,000 new connections in the last three years [page 19]. Durango Station is one connection; each single-family home is one connection. But in that same time period, having issued all of those new permits, we reduced our water use by 12 percent.

Page 20 is directly from our resource plan. On the right, it is showing that the red line is our water demands based upon U.S. Census Bureau population projections. If we use Census Bureau demands, it shows we have plenty of water through the next 50 years. If we bump those demands up, if we raise even above what is projected for population once in 2035 and once in 2055, then on the left, you see us start to access those banked water resources about 20 years from now. The dark blue is our basic allocation off the Colorado. You can see it going down; that is when we are taking those shortages. The blue is a new project that we have with the Metropolitan Water District of Southern California, which is building a $4 billion water recycling project. Right now, California discharges most of their effluent into the Pacific Ocean. The plan is to treat that effluent, distribute it through four different

groundwater basins, recharge it, and then they can take it out and use it for their customers. In return for our contributing up to $750 million to the capital cost of that project, they will leave a piece of California's Colorado River entitlement in Lake Mead for our use.

Page 21 [Exhibit C] shows that we are going to be asking the Legislature to consider a couple of things. I will not go into too much detail because I do not think it is introduced yet, but generally we need to continue to limit septic systems in southern Nevada. If it goes into a septic, we do not treat it; we do not get the return flow credit and it is lost to us forever. We need some slight modifications to Assembly Bill 356 of the 81st Session and some additional conservation enhancements.

Chair Cohen:
Thank you for that informative presentation. I do have questions from the Committee.

Assemblywoman Brown-May:
I have to say thank you to your entire team. I have spent a lot of time over the interim learning about water, water law, water allocation, and your conservation efforts. I think your conservation efforts, particularly in southern Nevada, are remarkable. I think it is important that we get that on the record. I have a constituent who calls me at least once a month, if not many times more than that, about water. It is something visual that we can all see depleting. You talk about water banks and reserves, but water is fluid. Can you explain that just a little bit? How do we know we are going to have reserves somewhere? Where is it banked? I would like something just a little bit more tangible and literal that perhaps I could take back to my constituents to really understand where we are banking water and how we are so sure we are going to have it in 20 years.

John Entsminger:
There are a couple of different categories. I will start with Arizona. From the mid-nineties through about 2010, we were in a partnership with the Arizona Water Banking Authority. Arizona was not using all their Colorado River water at the time, so we paid them to physically inject that water into their aquifers. The water is monitored. You say it is fluid, but we know it is confined and the water levels go up. When the day comes that we want that back, the arrangement is that Arizona will pump that water out, serve their customers, and we take a piece of their water out of Lake Mead.

We did the same thing in the Las Vegas Valley. Starting in the late eighties, we started physically injecting Colorado River water into the aquifer in Las Vegas. In fact, we injected so much water into that aquifer that in the northwestern parts of the valley, we got to within about six feet of the surface and had to stop because we were going to start popping swimming pools out of the ground if we kept pushing water in.

There is also something called ICS, or intentionally created surplus, which is the mechanism between the three lower division states and the federal government that allows us to have unused water left in Lake Mead with the right to take it out at a future date. Even with the declared shortage condition last year and this year, Nevada will actually be leaving some of

our extra water in Lake Mead, helping bolster elevations but also having the legal entitlement to take that water back when the day comes.

Assemblywoman Brown-May:
We have folks who are currently on septic systems and we are not able to reclaim that water; however, they are drawing off of our aquifer. Is that correct? If so, are we reinjecting water to restabilize that? Is that part of the water banking that you are talking about?

John Entsminger:
There are two different scenarios. There are people who are on a well and a septic, in which case, they really do not have anything to do with us. Those people are under the jurisdiction of the State Engineer and the health district. If someone is taking potable water from one of our retailers, such as the City of Henderson, Las Vegas Valley Water District, or North Las Vegas, and is on a septic, then he is putting Colorado River water into that septic system, and we are not getting that return flow credit. That is the piece that we need to address. It is honestly going to take decades. There are about 19,000 existing septic systems in the Las Vegas Valley. It is going to take a while to get all those hooked into the sanitary sewer. We need to begin the process, and we have.

Assemblywoman Bilbray-Axelrod:
I kind of nerd out when you start talking about this stuff because it is so important. As a native third-generation Las Vegan, I remember as a little girl going out and watching the spillways go over; what I would not do to have that problem again. Will you talk a little bit more about the partnership with California and what that project looks like and where it is going to be? I think that is something that is a good conversation to have with our constituency and let them know that we are being proactive with California. I am always telling people that we have been reclaiming our water since the 1990s, and we are so ahead of our time. I think this is another example of Nevada doing the right thing. If you could just talk about that a little bit more, I would appreciate it.

John Entsminger:
The partnership between Southern Nevada Water Authority, the Metropolitan Water District of Southern California, and the Central Arizona Project has been going strong for about 25 years. This is not the first project that we have engaged with them on. We built a small reservoir on the All-American Canal called Drop 2 that prevented over-deliveries of water from Mexico and saved the entire system about 8 million acre-feet of water. In return for that, we each got a little piece of that water. We did a pilot run of the Yuma Desalting Plant. Those three agencies have partnered to make investments in the country of Mexico for laser-leveling fields and lining canals. I have a portion of Mexico's treaty entitlement left in Lake Mead for our use. This wastewater project, they call it pure water, is kind of the next generation of where they are collecting all the sewage effluent that is currently being discharged in coastal California into the Pacific Ocean, capturing it, treating it to a very high standard, and then building a distribution system. You can imagine building a distribution system through the heart of Los Angeles, which is why it cost $4 billion to build recharge facilities and recharge that treated water into the ground that they can then use to pump and

augment their retail supply systems, leaving that piece of California's compact entitlement in Lake Mead for our use in return for our investment. To reiterate, my board has already appropriated $750 million for us to make this investment.

Assemblywoman Considine:
Thank you for everything that you have planned, worked on, and done to bring us to this point. I am wondering about the importance of reclaiming this water. Page 19 [Exhibit C], says that conservation matters, and it says that we are about to 224,000 acre-feet of water usage. How much of that is reclaimed, or what does reclaim add? If we do not have that reclaimed water, where are we?

John Entsminger:
We actually pump out of the lake and deliver to our customers close to 500,000 acre-feet of water. Our system at Lake Mead will actually produce 900 million gallons of treated clean water a day. It is a big system. If we do not have those return flows, then we are effectively losing about half of our water supply. We are allowed to pump as much water as we want. Our compact entitlement and federal law apply to our consumptive use of that water. For example, there are generally a few gray water bills each session. All that gray water would be lost to our return flows, and we would not get the credit and would not be able to pump it back out of the lake. It can also cause serious problems with the operation of the solid waste disposal in the sewage system itself. It would start dewatering the sewage system. It is critical that we capture all the water that is used indoors, treat it, get it down to Las Vegas Wash—where it just happens to be providing world-class habitat for several aquatic and avian species—get it back into the lake, and give it back to our customers.

Assemblyman DeLong:
Where is your return flow measured, at discharge to the pool or is it in the wash?

John Entsminger:
There is a U.S. Geological Survey gauge in the wash just upstream of Lake Las Vegas.

Chair Cohen:
Will you talk a bit about the Rockies? It seems that ten years ago, maybe even less, we used to talk about the snowpack on the Rockies. That is not as important for us anymore, is it? We cannot count on that water getting to us anymore when there are good years of snowpack, is that correct?

John Entsminger:
The snowpack in the Rockies is still critical; that is most of the source. It is not 100 percent of it because their gaining reaches across the Colorado River Plateau, but the big parts of the Rocky Mountains in western Colorado and southern Wyoming are the source of supply for 90 percent of southern Nevada. It is diminishing. Through the twentieth century, average flow on the river was about 15 million acre-feet. The average flow over the last 20 years was 12.3 million acre-feet, and most of the climate scientists are telling us it will be 11-ish by midcentury. We do have to be preparing for a warmer, drier future. Certain continental

dynamics are not changing. There are still going to be storms that come across the Pacific, they are still going to hit the Rocky Mountains, there is still going to be precipitation, and it is going to run downhill. It is not a situation where we are not going to have any water, but it is a situation where those 40 million Americans I talked about and the five million acres of irrigated agriculture, every user in every sector is going to have to do what we have done and make significant investments in water efficiency.

Assemblywoman Hansen:
I am quite impressed with page 19 [Exhibit C], in particular, and the addition of 47,000 new connections, but a decline of 12 percent. That is quite something. I do not know if you have this number handy, but I am curious what the average water bill is for a single-family home. I would like to get an idea of what a water bill was before you had all these measures in place and what the water bill looks like with all these conservation measures.

John Entsminger:
We can certainly supply something in writing, but just to give you an order-of-magnitude feel, if you are looking at the median or the middle 80 percent of the retail customers, it is probably $55 a month. Keep in mind, that could be quite a bit lower in January and higher in July, depending upon how people are using the water. The 12-month average does not mean it is $55 every month, but if you add up what they pay over an entire year and divide it by 12, it is about $55.

Assemblywoman Hansen:
Do you have any idea what that looked like before all these conservation efforts were put in?

John Entsminger:
At the retail level, our rates have generally been tracking inflation, capped, before inflation was crazy. Now I am switching over to the Las Vegas Valley Water District because SNWA does not have any customers, but the Las Vegas Valley Water District has 70 percent of the retail customers in southern Nevada. In 2017, the water district had a 3 percent increase, and a 3 percent increase in 2018. Since then, it tracks the consumer price index so that it is never below 1.5 percent and never above 4.5 percent. This year, with inflation where it is, water rates went up 4.5 percent.

Chair Cohen:
Seeing no other questions, thank you very much. We will move on to a presentation by the Truckee Meadows Water Authority.

John Zimmerman, General Manager, Truckee Meadows Water Authority:
In 2001, Sierra Pacific Power Company notified the community that it was going to sell its water utility [page 2, Exhibit D]. The community leaders of Reno and Sparks in Washoe County stepped up, created Truckee Meadows Water Authority (TMWA), and purchased the water utility. We are governed by a seven-member board of directors from Reno, Sparks, and Washoe County. In 2015, we merged with Washoe County's water utility because Washoe County had various water utilities on the fringes of the developed areas in the Reno-

Sparks area. We merged with them and basically took over their system. We also took over the South Truckee Meadows General Improvement District, which was a very large general improvement district that served several thousand customers in southwest Reno.

Page 3 shows an overview of the Truckee River system. Truckee Meadows Water Authority owns the water in Donner Lake and Independence Lake, and we use that for our drought supply. We refer to the water in there as our privately-owned stored water (POSW). You may have heard about the Truckee River Operating Agreement (TROA). We completely control the water in those reservoirs and use them for our drought storage. There are also the federal reservoirs. The top 6 feet and 1 inch of Lake Tahoe as a reservoir is controlled by the Bureau of Reclamation. Also, Stampede, Boca, and Prosser Reservoirs—all of those are governed by the TROA—we use them to make our water supply and provide our drought storage.

Page 4 gives you an overview of TMWA's water resources. The main point here is that TMWA uses the Truckee River to provide about 80 percent to 85 percent of its water supply. In a drought, and in the summertime when we need water for peaking purposes, we rely on groundwater. We have about 89 groundwater wells in over nine different hydrographic basins. We really focus on our aquifer storage and recovery program: that is active recharge where we are taking treated surface water and injecting it into the ground for future use. Also, there is passive recharge, which is resting those wells so that the aquifers can be sustainable and allow us to rely on them when a drought comes. We also have the Mount Rose Water Treatment Plant that is taking creek water off Whites Creek, treating it, and supplying that to our customers or using that for aquifer storage and recovery.

Page 5 puts in context how much water TMWA consumes from the Truckee River. In a normal year, TMWA is only consuming about 3 percent of the total river supply. The lion's share of it goes to the Pyramid Lake Paiute Tribe. It really shows the compromise under TROA, where in normal to above average years, when TMWA does not need upstream storage, that water spills, and the majority of the water goes down to Pyramid Lake. When you run into a drought year, we need to rely more on the Truckee River. We consume a greater percentage of it; it is the same volume, we are just consuming a greater percentage of it. We are also relying on our groundwater wells to get us through those droughts.

Page 6 [Exhibit D] shows groundwater production, the blue line, compared to Washoe County population. You can see over time that through our conservation measures, through metering and such, our customers are using less water. When there is a drought and there is a call for conservation, customers cut back 10 to 15 percent. Then the next year, when it is a normal year, the customer has already cut back, and his lawn looks the same, he does not automatically start using the same amount of water he used prior to the drought. Year over year there are droughts, drought messaging, and metering. We also have a tiered rate structure where you pay per unit; you pay higher for using more water. All of that has led to reduced water use. Comparing 2001 to 2019 and 2020, our customers are using about the same amount of water even though we gained about 100,000 in population over that same time period. It shows we are using less water.

Page 7 shows drought storage and how rare it is that we use it. We use it when the Floriston rates drop off in the river. When the Truckee River falls below a certain rate, we have to start releasing our upstream storage reservoirs to meet customer demand. We do not use it that often. In 2015, you can see that we started gaining more upstream storage. That is based on TROA and the capabilities that allow us to use water.

Page 8 shows the last 40 years of the Lake Tahoe Basin snowpack. You can see we are in pretty good shape this year, and with more storms on the way, it will get better. We will end the year being quite a bit above normal. However, this page just shows the boom-and-bust cycle on the Lake Tahoe Basin and the Truckee River Basin. That is why we have to rely on our upstream storage, our groundwater, and our aquifer storage and recovery program (ASR) to get us through those drought years. Even though we are in fairly good shape, Ms. Morris will talk about what TMWA is doing now to make sure we are in a good position 20 years in the future.

Stephanie Morris, Director, Legal and Regulatory Affairs, Truckee Meadows Water Authority:

Page 10 [Exhibit D] is a very busy page. Just because we are fortunate enough to have a good water supply outlook with lots of upstream storage, it does not mean that we are not planning and looking at climate change. This shows an extreme climate change scenario. We used the highest emission standards, and we had eight different global circulation models. In this time period, which is 680 years, we took the worst of whatever model it was and what we can see here, of that time period, there were only 25 of the 645 years where we had a shortage. The first shortage was in 2069 at a demand of about 113,000 acre-feet. That is good, but that means we still have work to do. What it tells us is, so far we have done a good job in terms of managing snowpack, but it is likely to change, and we have to look at other ways and strategies to capture that water when it comes, maybe as precipitation, not as snow, which acts as kind of a natural reservoir. We also need to explore other conservation measures. We are continuing to develop and enhance our drought reserves by the ASR, recharging water into the groundwater basin, and optimizing how we manage our groundwater and surface water supplies and integrating that.

Page 12 shows what we have done in the past, which has been a very good strategy. For decades we have been using water efficiency codes, seasonal watering conservation consultants, tiered rate billing structure, education and outreach, and the water usage review program. When we are in times of drought, we can call for increased conservation. Our customers have been fantastic about responding, and that is a great tool for us to continue to use.

What are we going to do into the future? Let us talk about some of the considerations that the Truckee River has. Unlike the Colorado River system in southern Nevada, the Truckee River Operating Agreement requires that treated wastewater be returned to the river. That means it is not a new source of water that we can use to grow. For example, if we were to do residential turf removal, that would not create a new source of water. That water, or any water conserved, would stay in the river; it would not be available for others to use or to meet

other demands. Truckee Meadows Water Authority's process for taking water rights and dedicating them helps developers be efficient. Developers are required to dedicate the water rights needed to meet their projects; it incentivizes them to build projects that use less water. We are seeing a lot more of that. In addition to that, for every acre-foot of water that is needed for a new development, we add an additional 11 percent of water rights that we use to store upstream. That is our drought supply to continue to meet demand.

Page 14 [Exhibit D] shows some future things that are really exciting. Continued conservation is one strategy. Other strategies that we are looking at with regional partners are reservoir reoperations. We have seen changes in snowpack and how the runoff occurs. All the reservoir operations are built on rules; those rules were developed based on old flood curves and they have not been updated. We are working with partners, including the Bureau of Reclamation, for other more efficient ways and tools that we can use, in real time, to manage those reservoirs so that we do not release a bunch of water in anticipation of a storm, the storm does not develop and we cannot recoup that water. That is a very important tool that we are looking at for upstream reservoir operation: expanding the aquifer storage and recovery program and the groundwater banking.

Page 15 is the strategy that I think is most exciting which, as a regional partnership, is advanced purified water. In 2016, regulations were passed for A+ water, that is reclaimed water that is for indirect potable reuse. Truckee Meadows Water Authority, along with all the partners listed, have been looking at, researching, and doing pilot programs, and we are now in the process of seeking the first A+ permit to do the American Flat project.

Page 16 shows the American Flat Advanced Purified Water Demonstration Project, which would create 2,000 acre-feet of water. Most water rights require return flow. The water that goes to this particular system is a mixture of water that has no return flow requirements as groundwater. It would create a drought-proof source of water, and it is helpful in this particular instance because that water is discharged to Swan Lake, which has been prone to flooding. This would take excess water that is not needed to be discharged to Swan Lake and we would inject it into the ground after it is treated to A+, and then pull it out and reuse it. We are sort of embarking on a large public campaign right now to educate people about indirect potable reuse. We are looking at a sort of tiered system for getting this permit, meaning we would prove it up in stages. We have already done that on a small scale, but we would basically treat the water to A+, inject it in the groundwater basin, and monitor it. As time goes on and that all works out, which we are feeling very confident about, we would take it into the groundwater basin, and then we would pump it out and use it for irrigation. Finally, the last step would be to go through the whole process and put it into our distribution system for treatment and delivery. Another project that we are exploring that Mr. Zimmerman is going to talk about is Palomino Farms.

John Zimmerman:
Page 17 shows that the Palomino Farms project is a concept right now. Palomino Valley and Warm Springs Valley are about 30 miles northeast of Reno, just west of Pyramid Lake. What we are exploring there is a groundwater basin banking concept, similar to what

Mr. Entsminger said with the Arizona project. Right now in that basin, there is probably a 45,000 acre-feet hole in the valley just from overpumping. That gives us an underground reservoir slightly larger than Boca Reservoir into which we could inject treated surface water and store it for future drought supply. We are exploring that right now. We would be using our POSW, our water out of Donner Lake and Independence Lake, when we do not need to use it for customers or for drought, and storing it for future use in that groundwater bank. Another component of this, which is more contingent on other parties such as Reno and Sparks, who control the Truckee Meadows Water Reclamation Facility, is sending treated effluent out to the Palomino Farm and substituting that treated effluent for the groundwater they are currently using in order to rest those groundwater wells and improve the aquifer even more. That is just one project we are looking at right now. In the future, there could even be an A+ treatment plant there, where we are treating water to A+ standards and bringing it back into the TMWA service area in Spanish Springs.

Stephanie Morris:
I want to tell you about an exciting thing we have been working on in the last year and a half. Because our drought supplies are stored in California, largely in upstream reservoirs that are surrounded by Forest Service land, we are extremely concerned about wildfire and impacts to water quality and sedimentation from wildfires. We are fortunate enough to not have had that impact our supply, but we have seen other states in the West have severe impacts to water quality because of wildfire. Truckee Meadows Water Authority and the U.S. Forest Service signed a memorandum of understanding to treat 50,000 acres in the Middle Truckee River Watershed, where our reservoirs are located, with partners including the Tahoe National Forest; National Forest Foundation; The Nature Conservancy, Nevada Chapter; and the Truckee River Watershed Council.

Page 19 is an example of what we see from other fires. The pre-burn is on the left. All the algae on the right are largely from sedimentation and increased water temperatures from wildfire impacts. The Middle Truckee River Watershed is about 315,000 acres; about 265,000 of those acres are Forest Service land. By creating this partnership with the Forest Service and other entities, we are looking at increasing the pace and scale of fuels reduction projects, particularly around water reservoirs, the Truckee River, and in the wildlife-urban interface to protect our region. With that, we are happy to answer any questions.

Assemblywoman La Rue Hatch:
I would like a little more clarity on page 13 [Exhibit D], where you talk about the Truckee River Operating Agreement and that you cannot use water from permanent conservation to meet future water supply needs. I am confused. If we are reducing our water consumption, why can we not store it in all of these reservoirs that you have talked about for future use? Is the problem that the water is going down river and it is going to Pyramid Lake, and therefore you have no access to it?

Stephanie Morris:
The Truckee River Operating Agreement is a legally binding agreement that the parties signed. It dictates how the Truckee River is operated. Generally, there would not be a

requirement to return wastewater to the river. As part of that negotiated deal, which allowed TMWA to have a lot of upstream storage, all the parties agreed that the water rights that were treated in the wastewater treatment facilities would return to the river. It is a contractual obligation under TROA that was signed by Congress.

John Zimmerman:
Another piece of that is the history of the TROA. All the water rights that we are accepting for municipal use were once used for irrigation. There was a return flow component for irrigation in the Truckee Meadows. The farmers used a certain amount of water to irrigate in the Truckee Meadows, and probably 37 percent to 40 percent of that returned to the river, which made up the supply for all downstream users.

Assemblywoman La Rue Hatch:
If the water is returned to the river, where is it going? If we increase our conservation, who is getting this increased water supply?

Stephanie Morris:
It is any water users downstream who have a right to divert at the time. Whatever water is not used by those users goes to Pyramid Lake.

Assemblywoman La Rue Hatch:
My second question has to do with the snowpack. We can look outside at this snowfall and know that we have a whole lot, and people get very excited that we have the snowpack. I have heard concerns that with climate change, we tend to get much hotter springs and summers and that snowpack melts faster, and we cannot contain all of the water that is coming. Will you explain some of the challenges with the snowpack?

Stephanie Morris:
That is why we looked at the extreme climate change scenario, because it has a lot of increased temperatures. We were looking at what kind of impact that would have on our system. Now we are looking at adopting strategies in the future, such as the reservoir reoperation, that would help to keep more water in the upstream reservoirs instead of releasing it. In addition to that, there is the Palomino project, which is a large underground storage, essentially acting as a reservoir. The size of Palomino is about 45,000 acre-feet, which is the same size as Boca Reservoir. Obviously, we do not know; we know it is going to change, but we do not know how. We are looking at strategies where we could take it if it comes, not in snowpack, but in runoff, and take our consumptive portion of that and store it for future use.

Assemblywoman Brown-May:
I want to follow up a little bit on some of the conservation efforts. I cannot quite wrap my head around why we would not want to encourage people to conserve water where we can with regard to ornamental turf watering. I heard what you said about the agreement in Congress, and thank you for that explanation. If we are conserving water and it is then going into Pyramid Lake because we are not using the water, who uses the water in Pyramid Lake?

Who eventually would have access to that water? Would conservation be a relatively good idea to start to transition folks to, if we are not in an emergency situation currently?

John Zimmerman:
Any water in Pyramid Lake would benefit the downstream fisheries and the Pyramid Lake Paiute Tribe. It goes back to that legal issue about conserved water in the Truckee Meadows cannot be used for future growth in the Truckee Meadows. It also goes to the physical aspects of conservation being a little bit different in the Truckee Meadows versus Las Vegas. In the Truckee Meadows, a lot of that outdoor irrigation actually benefits aquifers substantially. It adds as much as 25 percent to the aquifers. We rely on those aquifers in drought periods. We also looked at how much turf there might be in our service area, and we estimate there is probably 8,000 acre-feet. Of that, probably 1,200 acre-feet would be considered nonfunctional under the new bill in southern Nevada. Then we need to look at how much might be saved in acre-feet versus how much it would cost. When you cannot use that conserved water for future growth, there is no funding mechanism. That would have to be paid by customers' rates; we would have to increase rates in the Truckee Meadows. There would also be a revenue loss impact from reduced water usage for outdoor irrigation. All those combined make it a little less of a benefit in the Truckee Meadows.

Assemblywoman Brown-May:
What I hear you saying is that there is a negative impact if we stop the groundwater access for the aquifer.

John Zimmerman:
There would be because, again, the outdoor irrigation helps our aquifers with recharge.

Stephanie Morris
When the Truckee River was adjudicated, it was based on the Floriston rates. There is enough water to meet all the water rights that were adjudicated when they are at a certain rate. When that rate is met, it is helpful for the recharge to occur from irrigation for future use. As an example, in the Central Valley in California, there was a big push to take out row crops and grow pistachios and almonds. When you have that demand hardening, you lose flexibility. If there is sufficient water to be able to meet those needs, it has a benefit and that flexibility to call for increased conservation. During 2015 when we were able to do that, our customers responded; that gives us flexibility. If we take out everything and get very tight—and it is not necessary—there would be a lot more water in the river, but it would go to Pyramid Lake and it would not be available for some other users in the region.

Assemblyman DeLong
Under TROA, the discharge from the treatment plant into the river, is that a hard number or is it all discharge?

John Zimmerman:
It is all discharge. Truckee Meadows Water Reclamation Facility has a reclaimed water system. Reno and Sparks both have reclaimed water customers, but in order to send that

treated effluent to those customers, Reno and Sparks have to allocate other water rights in the stream flow in the river.

Stephanie Morris:
There are different sources that come into the treatment plant. When we have summer groundwater, that does not have the return flow elements, and all of that can be used for customers of treated effluent.

Assemblyman DeLong:
If there is water that goes through the treatment plant that does not have to be discharged, is there a system currently in place to reclaim that and put it into a new allocation?

John Zimmerman:
Yes. In the Reno-Sparks area, there is about 7,000 acre-feet of reclaimed water that is used to supply water for outdoor irrigation.

Assemblywoman Hansen:
I have been fortunate that I have been able hear some of these presentations as part of the Subcommittee on Public Lands of the Joint Interim Standing Committee on Natural Resources. I have been completely impressed with the efforts, and also that you highlight there are very big differences in how the water supply and the management differs in northern Nevada and southern Nevada. Nevada is a unique state, and I appreciate the unique approaches to it. You mentioned Swan Lake, which is a part of my district, and I know that has been a huge problem. I was a little bit excited about your mentioning the advanced purified water demonstration project in American Flat. I know you were saying that we will not have to put as much water into Swan Lake. Will you tell me how that is working before that discharge?

Stephanie Morris:
Right now, there are users of the effluent in the summertime; there is a demand for it. Obviously, there is no irrigation demand for that water in the wintertime, and it gets discharged into Swan Lake. By having this treatment plant, an A+ facility, we could take that water when there is no demand and reduce the amount of discharge into Swan Lake.

Assemblywoman Hansen:
Is this on the drawing board, or are you actively doing this right now?

Stephanie Morris:
We are actively doing it. There is a lot of permitting as you can imagine as the first A+ facility. There is also the funding. This is a little over $100 million project and it is a partnership with the city of Reno. We are in design of the facilities right now; we are just under 30 percent designed. Hopefully, by summer we will be at 30 percent and we will continue with permitting and funding for the project.

Chair Cohen:
Seeing no other questions, we will now hear the presentation from the Division of Water Resources.

Adam Sullivan, P.E., State Engineer and Administrator, Division of Water Resources, State Department of Conservation and Natural Resources:
The Division of Water Resources is the state agency that has broad regulatory authority over all groundwater and surface waters of the state with the exception of the Colorado River. We will give a brief overview of how the Division operates from a statewide perspective and some of the challenges that we face and what we are able to do about then. Our mission is to responsibly manage Nevada's limited water resources in accordance with state law and the best available science [page 2, Exhibit E]. We deal with issues of water quantity—the amount of water that is available to divert and use—rather than water quality. The Division of Environmental Protection oversees water quality. When I talk about water management here, what I primarily mean is through the administration of water rights, our principal threshold of determining water availability, and the potential for the use of water to conflict with another use. The Division also has regulatory authority over the distribution of water under state decrees for rivers and streams. We also have regulatory authority over other issues such as well drilling and dam safety.

Water belongs to the public and every use of water, whether through a new appropriation or change of an existing appropriation, goes through our office for review that it meets the statutory standard. There is a really well-developed and specific procedure for establishing and quantifying a water right and to be able to keep that water right in good standing; water law is really good at that procedure. There are tens of thousands of active water right permits across the state. We process about 1,000 applications or change applications per year, and also about 1,000 changes in water right ownership per year. We receive about 6,000 requests for extensions of time per year, either to prevent forfeiture or to extend the proof of beneficial use of a water right.

As a division, we are really at capacity of just managing those foundational processes to serve water right holders. The problems that we face are in managing the existing rights where there is either an assertion or a concern that there is not enough water to go around to meet all the existing commitments. There is an expectation for the Division of Water Resources to be involved in finding a solution for that. That is made difficult because water is a public resource—it belongs to the public, but each individual water right is a protectable private property interest. It is very different than a municipality that holds all the water rights for its customers. Without a municipality like that, each water right is owned and held by the individual user. This is a dilemma and water law is not as well-suited to direct the state on how to resolve it in the long term. We will discuss this in more detail as we go along.

I would like to provide broad statewide context on water resources. Page 3 is a map of average precipitation, with the red being the driest areas of less than eight inches or so per year. The oranges are somewhat wetter, and the blues are over 40 inches per year. The average across the state is about ten inches per year. This year, of course, has greatly

exceeded that, which is great, but in the last 20 years or so, most years are below average, so the median is less than the mean. From a water management perspective, something that I heard someone say once that really stuck with me is, we are always in a drought, occasionally punctuated by a wet year. For planning purposes, it is dry, and that is the natural state that we live in.

Page 4 [Exhibit E] shows the outlines of the state of Nevada that are the administrative basins, which are the framework for groundwater management across the state. Page 5 shows the same delineation of those administrative basins. The basic rules of water rights and prior appropriation were established in the early part of the twentieth century, when the source of water supply was almost entirely surface water diverted for irrigation needs or for smaller needs, such as for mining, for domestic use, and small municipal use. The technology to drill deeper wells and access groundwater for substantial use was developed later in the twentieth century.

Groundwater law was established in 1939, which was generally considered to be ahead of its time compared to most other Western states. At that time, what our predecessors were able to do was to honor the existing law and find ways to adapt to the challenges that they were facing at the time with regard to groundwater. One of the initial questions was, How do you know how much groundwater can be developed? With surface water, you can see it; it is either there or it is not. With groundwater, you can drill a well, you can find water, you experience some drawdown, and you can tell how much is too much. One of the practices that was initiated at that time was to delineate these administrative boundaries and identify areas of concentrated groundwater use, come up with a topographic delineation of those basins, and try to estimate what the water budget was based on the information that they had at the time. That is still how we administer groundwater rights.

Starting in the 1940s and through the 1970s, we developed a series of reconnaissance estimates of groundwater basin scale availability, or the perennial yields. What happened was, even at that time in the 1970s, there were more groundwater rights appropriated than the estimated natural water budget could support. Today, about half of those groundwater basins are in that condition of having more commitments than the long-term average groundwater supply can support into the future. Where that is a problem and how severe that problem is really depends on the location and the circumstances in that area. In some locations, there are very acute problems; some basins have a drawdown of 1 to 2 feet per year consistently. It is a little bit like Lake Mead, but maybe on a smaller scale or just that it is happening underground, so it is not quite as evident. In other locations appropriations may exceed the groundwater supply, but because of the scale or the hydrogeology, it could be decades or centuries before there is a real issue with not having enough water.

This is a situation that we have all inherited. The question into the future is how to manage the water in such a way that we can live within our means in the long term, protect senior rights, and support the public interest through the contemporary needs for economic diversification, for protection of environmental values, and so on. The Division of Water Resources faces questions about this frequently, but we are not staffed or funded or explicitly

directed through statute to do it. However, we are taking steps that will point us in the right direction and set up our successors to be able to address this effectively into the future. It is very gradual; it can be very litigious and frustratingly slow. The term that I heard that I like is that we are crossing the river by feeling the stones. I thought that really applied to how this is developing.

The more data that we get through drilling wells, through groundwater development, and monitoring the impact through hydrologic studies, the more we really understand what that long-term groundwater supply is. Page 5 [Exhibit E] is a map that shows general aquifer types, water-bearing rock types which have different kinds of permeability, different storage capability, and different connectivity with adjacent units. This is just one way to visualize what governs groundwater occurrence and movement in reality besides just topographically delineated basins and a perennial yield.

When addressing complex regional problems in some areas, we need to think of it as regional groundwater flow systems, where groundwater crosses administrative boundaries. In some areas there are extremely deep wells or areas of concentrated pumping that can actually change the local hydrology of the system and can affect water availability, or may have long-term impacts that we still do not understand and we just have to keep monitoring and projecting to the best of our ability.

Administratively, we operate with a pretty simple and straightforward concept of basins and perennial yield. We need that to be able to do our jobs timely and respond to the public. It is a good starting point; it is easy to relate to, much like a checking account. You only have so much coming in and you only have so much going out. It is important to remember that when we are trying to deal with these complex regional groundwater issues, it can be inaccurate or misleading to oversimplify the natural setting. It is important that we keep that in mind in order to be thorough in how we do this to protect senior rights and water users across the state.

Micheline Fairbank, Deputy Administrator, Division of Water Resources, State Department of Conservation and Natural Resources:
Page 6 [Exhibit E] is where we transition to talking about some of the challenges and policies that govern the work that we do. Within the statutory authority, we have certain tools that allow us to reduce commitments and help manage shortages, but those are relatively limited. In terms of reducing commitments, we have the administrative tools of being able to cancel water rights for failure to fulfill statutory obligations to protect that right, meaning doing the works of diversion, drilling the well, and other diversionary works, and then placing the water to beneficial use. State law currently allows you any number of extensions of time so long as that water right holder is demonstrating good faith and reasonable diligence to protect that right.

Other tools we have are forfeiture and abandonment of water rights. Those are more challenging tools for us to exercise. Not only do they require a lot of time and capacity in terms of staff resources to go through those processes, but the statutory standard is also

justifiably a bit higher. For forfeiture, state law currently has established that five successive years or more works a forfeiture, but procedurally we have a lot of work on our end to determine whether the water has been used and whether it has been used in its entirety. We have certain noticing provisions; we have to provide notice and an opportunity for that water right holder to cure their deficiency—their nonuse of water. It is a very time-intensive and staff resource-intensive process.

Abandonment has an even higher standard where we have to through a lot of those same types of processes, but not only do we have to make a demonstration that the water has not been used, but the State Engineer is also obligated to make a showing that there was an intent by the water right holder to abandon that water. It is a very challenging standard to achieve. We understand the basis for that. Those are the limited tools we have presently to reduce commitments. When we are having to manage shortages, the statutory processes are also very limited. We are directed to regulate by priority, otherwise known as curtail by priority. On the surface water system, that is very customary; if the water is available, it gets delivered to you. If you are a priority and you are a senior rights holder, the water comes down the system to get to you. If you are a junior rights holder and there is not enough water to go around, you do not get your delivery. The challenge, though, is in underground systems curtailment by priority. You do not have the immediate acknowledgement and the immediate effect. It takes time for the effect of curtailment to be felt as much as it takes time for the effect of overpumping to be discovered or determined.

Another statutory tool we have is the designation of critical management areas. Presently the law allows either users in the system or the State Engineer to make a determination that if the water use is exceeding the available water supply, a critical management area can be designated. That designation starts a ten-year clock. It gives the community ten years to develop a groundwater management plan that, to the satisfaction of the State Engineer, will serve the purpose of reducing the conditions that created the basis for the designation of the critical management area. In short, curtailment by priority is a very draconian outcome and it has significant impacts on the community and those people who are reliant on the water supply. With the critical management areas, those can be a tool, but if the community does not come up with that groundwater management plan that the State Engineer finds to be satisfactory, then after ten years, we are back to regulation by priority or curtailment by priority. That is the statutory structure that we are working within.

Page 7 [Exhibit E] shows what we have discovered, particularly in the last several years, that actions at the local level do make a significant difference. It is a collaborative and cooperative effort between the Division of Water Resources and our local communities. We have seen these different types of things. We have seen two great examples already where we have conservation measures within our municipalities that are part of that process of tightening water supply and stretching our water budget further. Those are the different types of resources and interactions we have on the local level that we find are very effective and productive.

Requiring dedication and overdedication of water rights through county ordinances is another local tool that really helps work in collaboration with our office in helping to manage resources. One example of that is in the Pahrump Valley basin. That particular community requires an overdedication of 3-to-1 for new development. The community has to dedicate three times the amount of water that is anticipated to be used. That is a way to say, We are going to recognize the conditions and the realities on the ground, and we are going to try to work within our means. Another example is voluntary reductions of irrigation use. In this last season, we saw a concerted effort by many of our users along the Walker River where they engaged in fallowing certain fields to voluntarily reduce the amount of water they were using. They did deficit irrigation and they changed crop types. Those types of community-based, local water user-based activities really work in concert and partnership with the efforts that we are trying to do. Those efforts are fueled by communication and engagement with those members of the public, those water users, and our office. We view our role as complementary to those other entities, those other external water users, to carry out our water laws.

Page 8 [Exhibit E] reviews some things that we are presently trying to do as an agency to build foundations for our long-term needs. When we talk about those statutory tools that we have available to us—cancelations, forfeitures, and abandonments—we have been told to follow the law. We are giving a thorough review of those different types of activities that come before us to assure that those are being done in conformity with the law. It takes additional staff time and resources, but that is what we are committed to doing and that is what we are doing.

We are also in the process of updating and revising the State Water Plan, which has not been done since 1999; it is a little bit overdue, it is warranted, and it is a really good effort. Our State Water Plan is not intended to supplant local water planning, but to be complementary. That is what we are diligently working on through our stakeholder engagement, working with our local entities to make sure that the State Water Plan is complementary and helps to provide an overview and an overarching guidance that is helpful and useful to all.

We are in the process of implementing the Nevada Water Resource Initiative, which is the use of a little over $6 million to fund updating our baseline science that we utilize for water budgets. This funding was directed to our agency from the American Rescue Plan Act (ARPA) funding sources. We have engaged in contracts with Desert Research Institute (DRI) and U.S. Geological Survey (USGS) to begin that work. We are actively in the process of doing that. We are also modernizing our processes and records management. We also received funding through ARPA to digitize our records. It is a long-term process but will ultimately make our records available on the Internet.

Page 9 is a reflection of what we are doing with USGS and DRI. We have also been asked about our water use. Page 10 shows statewide surface water use breakdowns, and page 11 shows statewide groundwater use. We are happy to take any questions.

Assemblywoman La Rue Hatch:
Will you explain the purpose of perennial yield? Who calculates it and how often is that calculation updated?

Adam Sullivan:
Perennial yield is a concept that was developed in Nevada in the 1940s or 1950s when we were contemplating how to quantify the groundwater budget for a region. In short, what it represents is the total amount of water that is fluxing through a defined area; the amount that recharges in the mountains and the amount that naturally discharges through evaporation, through plant transpiration, or through subsurface discharge out of the basin. What that represents is the maximum amount of water that could be diverted for other uses indefinitely. Between the 1940s and the 1970s there was a statewide effort to estimate perennial yield at the basin scale across the state. We still rely on those original numbers in some locations. Those numbers have been updated based on current science or recognition that the initial reconnaissance number was not as accurate as it needed to be.

Assemblywoman La Rue Hatch:
Some of those numbers are still in place from the 1940s and 1950s, but for the ones that are updated, who does that?

Adam Sullivan:
The State Engineer does. It is a tool that the State Engineer uses for water management. It is not a standard in statute.

Chair Cohen:
Thank you both for the presentation. With that, I will close the presentation and move on to our hearing on Assembly Bill 19, which revises provisions relating to water.

Assembly Bill 19: Revises provisions relating to water. (BDR 48-233)

Adam Sullivan, P.E., State Engineer and Administrator, Division of Water Resources, State Department of Conservation and Natural Resources:
I am here to present Assembly Bill 19, which is a bill offered by the Division of Water Resources. The intent of this bill is to assure that tribal communities and nations in Nevada are on equal footing with other governmental entities with respect to eligibility for grant funding through the Channel Clearance, Maintenance, Restoration, Surveying and Monumental Program, more commonly referred to as the Channel Clearance Program. This bill also seeks to afford officers and employees of federally recognized Indian tribes the ability to act as a water rights surveyor without possessing a professional engineering or land surveying license, which is the exact same allowance provided to officers and employees of the federal government.

For the Division, this is a straightforward bill that seeks to remove barriers for tribal nations. This bill simplifies processes and codifies policies of the Division in law. Simply put, I believe this bill represents doing the right thing. There have been recent instances where

tribal governments have not had the same options that are available to other governmental entities.

I will now walk through the specific changes in A.B. 19. Section 1 adds a new section to *Nevada Revised Statutes* (NRS) Chapter 532 providing a definition for "tribal government." Section 2 adds tribal governments as eligible recipients of grant funding under the Channel Clearance Program established in NRS 532.220. Section 3 makes further revisions to Channel Clearance funding provided for in NRS 532.230 in conformity with the changes set forth in section 2. Section 4 revises NRS 533.080 by expanding the exemption in subsection 9 from the requirement to be a licensed professional engineer or professional land surveyor to officers and employees of a tribal government. Section 4, subsection 10 also adds the definition of tribal government. Finally, section 5 establishes the effective date of this legislation as July 1, 2023. Thank you for your attention. I am happy to take any questions from the members of the Committee.

Chair Cohen:
In this program, if there is any damage done to any property, would the tribes still have the same sovereign immunity that any of the state and governmental entities would have?

Micheline Fairbank, Deputy Administrator, Division of Water Resources, State Department of Conservation and Natural Resources:
Yes, the same immunities would apply in this particular instance. The tribal governments would have that same protection from liability.

Assemblywoman Anderson:
Is there a reason why it is not in effect upon passage and signature, as opposed to waiting until July 1, 2023, based upon the fact that it would allow them to have that management earlier?

Micheline Fairbank:
Without going back and looking at the bill draft request, I do not recall whether it was requested to be upon passage and approval or July 1. We are certainly open to it being effective whenever, at the Legislature's pleasure. I do not have recollection as to whether that was a request on our part or a change through the drafting process.

Chair Cohen:
Seeing no other questions, we will move on to those in support of A.B. 19.

Jennifer Lanahan, representing Reno-Sparks Indian Colony:
We want to thank the Division for bringing this bill forward, expanding the rights of the tribes, and we are here in support.

Laurel Saito, Nevada Water Strategy Director, The Nature Conservancy:
The Nature Conservancy supports A.B. 19, allowing tribal communities to be eligible for the funds and helping them to be more resilient in the face of climate change. Thank you for the opportunity to express our support.

Chair Cohen:
Seeing no one else in support in Carson City, Las Vegas, or Elko, is there anyone wishing to provide testimony in support on the phone?

Stacey Montooth, Executive Director, Nevada Indian Commission:
I would like to extend my appreciation to Chair Cohen and the entire Assembly Committee on Natural Resources for this consideration. Thanks also to the State Engineer, Adam Sullivan. This act, expanding the Channel Clearance, Maintenance, Restoration, Surveying and Monumenting Program to include tribal governments in this state as well as providing that officers and employees of tribal governments will be exempt from certain licensing requirements for state water rights surveyors, is supported by the Nevada Indian Commission. As the Executive Director of the Nevada Indian Commission for 3 1/2 years, my role is to be a conduit between our 28 federally recognized tribal nations and the State of Nevada. The addition of tribal governments to programs and services which are already in place, as is the intent of A.B. 19, makes complete sense. Thank you for your time.

Will Adler, representing Pyramid Lake Paiute Tribe:
We are in support of this issue. This Channel Clearance and having access for tribal communities is clearly an oversight, and we are glad it is being corrected today. Thank you very much, and we appreciate this bill.

Chair Cohen:
Hearing no other support, I will move to opposition. Is there anyone in opposition in Carson City, Las Vegas, or Elko? Seeing no one, is there anyone in opposition on the phones? Hearing none, I will move on to neutral. Is there anyone in Carson City, Las Vegas, or Elko in neutral? Seeing no one, is there anyone on the phone? Hearing no one, would the presenters like to make a closing statement?

Adam Sullivan:
Thank you for the opportunity to present the bill. I do not have anything to add at this time.

Chair Cohen:
With that, I will close the hearing on A.B. 19 and open the hearing on Assembly Bill 34.

Assembly Bill 34: Revises provisions relating to water. (BDR 48-235)

Adam Sullivan, P.E., State Engineer and Administrator, Division of Water Resources, State Department of Conservation and Natural Resources:
I am here to present Assembly Bill 34, which is a bill offered by the Division of Water Resources. This bill addresses two distinct issues. The first is challenges related to

publication of certain required notices. The second is the requirement that water right maps be submitted on certain materials.

For the publication notices, the Division seeks to amend the statutory language because of problems in assuring timely and complete publication as required by law. Under existing law, the Division is required to publish certain notices in a newspaper of general circulation for a set interval and duration. However, the Division has experienced, with increased frequency, some newspapers either failing to complete the requested service or, more commonly, not confirming that the publication was indeed within the set interval and for the required duration.

Waiting for confirmation of newspaper publication is inefficient, causes unreasonable and unavoidable delays, causes additional time and work, and may prejudice those affected by the publication. Division staff often expend significant time and resources to contact the newspapers to determine if the publication actually occurred as required by law, many times requiring multiple outreach efforts to secure a confirmation. Generally, this can be accomplished, but if it is determined that the required duration and or frequency has not been satisfied, then the notice must be republished for the entire required duration and frequency. This results in delays in time, which impedes the Division's ability to move forward with its administrative processes and impacts the public who are waiting for the Division to act.

The Division is not requesting to eliminate newspaper publication. We recognize that many Nevadans may not have reliable Internet access or other means to get public notices. However, in order to balance these needs with the practical constraints that we experience, the Division is proposing to continue to submit all the same publications to the newspapers, but limit the reliance on the newspapers responding that a publication was completed as required by existing law, which is a step that we do not have any control over. The Division also proposes an additional form of public noticing in a public location that would provide the same information as the newspaper. Incidentally, the information is also available on our website and in practice, that is what most people rely on. We recognize that we may need to revise the language as proposed in A.B. 34, and we have been working with stakeholders and intend to propose an amendment as a result of those discussions in the coming weeks.

As I walk through the bill, I will address those areas of potential amendment. Section 1 revises the publication requirements relating to the annual notice required by the State Engineer of the December 31, 2027, deadline to submit claims of vested right. The revision in section 1, subsection 2, changes the newspaper publication requirement from requiring that the notice must be published for four consecutive weeks to requiring the State Engineer to submit for publication a notice to be made for four consecutive weeks. If the notice is not made in accordance with the law, but published at least once, the State Engineer is not required to republish the notice. This section also adds a requirement that the State Engineer mail the notice to a public library in each county to be posted, or if there is not a public library, it must be posted at another public location in the county.

The Division has been communicating with stakeholders to explore an alternative to the public library posting as well as to the requirement to post at least once. These provisions will likely be the subject of an amendment.

Section 2 of the bill changes the word "shall" to "must" in subsection 2 and makes the same changes to the newspaper publication and public library posting provisions as set forth in section 1. Again, the State Engineer is obligated to submit the notice for publication, assure the notice has been published at least once, and mail for public posting to the library in the county or counties of the affected stream system.

Moving to section 3, this section simply removes the mylar material requirement for an adjudication proceeding. Section 4 makes a conforming change.

Section 5 makes the same revisions to the publication requirements. As previously stated, the public library posting requirement is the subject of a future amendment. This section also revises the proofs the State Engineer is required to submit to the court in conformity with changes to the publication requirements.

Section 6 revises language for the notice the State Engineer is required to prepare and adds the requirement that the notice establish a date on which the notice was mailed to the public library and the period the notice ends, which must not be less than 45 days after the date of mailing.

Section 7 amends publication requirements for boards of county commissioners to conform to the same requirements of the State Engineer. This section too is the likely subject of an amendment.

Section 8 modifies the starting date of the protest period for a water right application from 30 days from the date of the last publication to 30 days from the date established in the notice described in section 6. This would have an added benefit to the public by providing advance notice of when exactly the protest period begins and ends, rather than relying on confirmation from the newspaper of the final publication date.

Section 9 makes conforming changes to publication requirements to match the revisions made in section 7 of the bill.

Section 10 removes the tracing linen material requirement for certain maps submitted to the Division. Section 11 removes the mylar material requirement from fee schedule for colored plots.

Sections 12 and 13 make similar changes to the publication and library posting provisions consistent with prior revisions and these changes too are encompassed in the language for proposed amendment. Finally, section 13 includes conforming changes. I am happy to answer any questions from the Committee.

Assemblywoman Bilbray-Axelrod:
I understand the want and desire, and I know we have this idea that perhaps our traditional way of getting that news out to people is not the best way anymore. I just worry with something like this that it might be best to do this plus this. I do not know if you currently have anything on your website, but I have been on your website, and I cannot find anything. Maybe that is because it is not there, but I certainly do not find it user-friendly to find information. My concern is that we have people in Nevada who have been looking at the same thing the same way for a long time. I am a little worried that we might be pulling the rug out from under them a little quickly. Should I be able to find something on your website right now or are there just not any notices?

Adam Sullivan:
The information is on the website. We get mixed reviews about the website; some people love it and tell us to never change it; some people say it needs to be completely overhauled. In response to that, we are in the process of modifying our website in ways that we think serves the public as best possible and still gives people access to the archives of records that are available. We are not seeking to change how we notify the public. We will still send these notices to the newspapers. We also want to send a notice to the county to publish in an additional way. The significant change that we seek here is the problem that we experience waiting for a newspaper to respond to us to confirm that a certain publication was made before we can proceed with other water right administrative processes. I understand your point and I entirely recognize the importance of making publicly available options to review applications before our office, and I do not intend on undermining that.

Chair Cohen:
You did raise an issue. Have there been instances where your office did what you were supposed to do? You sent everything to the newspaper, and you thought publication was happening, only to find out that the newspaper did not publish, despite your sending what was supposed to be sent: the payment, the information, and the publication did not occur?

Micheline Fairbank, Deputy Administrator, Division of Water Resources, State Department of Conservation and Natural Resources:
The short answer is yes. The more comprehensive answer is yes. We have had instances where we have sent a publication notice that is supposed to occur for four consecutive weeks: it happens week one, happens week two, week three gets skipped, and week four happens. We have to go back to step one and republish again for four consecutive weeks. Now we are pushed an entire period of time out. We have instances on multiple occasions because many of our newspapers are owned and operated by the same larger organization where we will send publication notice to be printed in one newspaper and it gets printed and published in another newspaper. We do not find out about that until after the fact because not every newspaper will send us a proof copy to approve before it gets published. When we get an affidavit back, it says one newspaper other than the newspaper it was supposed to be published in. Again, we have to go back and republish in the correct newspaper of circulation. In all fairness, it is a difficult trade. We are all dealing with staffing shortages and challenges, but we are seeing increasing occurrences where we are having these different

challenges. We are trying to find that happy medium making sure that we are able to continue to proceed with our business and do things in a way that still is transparent, but also does not behold our office and the public to actions that we do not have any control over.

Assemblyman DeLong:
I am glad to see you are keeping the newspaper publications in the statute, and I completely understand not wanting to rely on the publications, but just the Division sending the notice. You mentioned that you are planning on amendments to the bill to deal with more public noticing, but you did not mention what they are. I am going to suggest a couple. One would be getting it posted at the courthouse in the county or counties, and the other would be at one or more post offices depending on the location.

Micheline Fairbank:
We are absolutely open to suggestions. The library posting was borrowing a prior procedure, but we did not believe that was going to be the panacea. We are open to those types of suggestions and thank you.

Assemblywoman Brown-May:
I am sharing some of the same concerns relative to how we are communicating. I think I am coming at it from a different direction. Because of the decline in newspaper circulation across the country, are we still accessing newspapers to the same degree so that people really are receiving the information that is so pertinent to them? I am a little concerned that we are relegated to just that newspaper and would like to see the notices posted other ways. One of the ways that I receive information is through LISTSERV; I sign up for pieces or subject matters that are important to me. Have you considered managing a list of interested parties as another way to communicate outside of our public postings?

Adam Sullivan:
We do use LISTSERV for some procedures, some processes to keep interested public notified, particularly where there is a subject matter regionally that we are trying to address that takes a long period of time and has a number of different stakeholders that we want to keep updated. On this particular issue, we have talked about that. There are some challenges with hitting the right target audience because, as I said in my presentation earlier, we receive about 1,000 applications per year, and there are a number of other subject matters that need to be publicly noticed. The challenge is capturing the right audience without sending to everyone on the list of multiple emails every day. I do not have the perfect solution, but that has been one of the topics that has come up as we have talked with stakeholders about alternatives and trying to target the people who would be interested or potentially concerned about something that is presented with us.

Assemblywoman La Rue Hatch:
I agree that we need to update, especially with the decline in rural publications and the infrequency with reporting. I also do not know if that many people are getting all of their news from the newspaper anymore. I appreciate wanting to be innovative. I wonder though, is it possible, understanding you have 1,000 applications a year, to mail a notice to the people

who would be impacted, so you are just targeting a specific small group and giving them that direct notice?

Micheline Fairbank:
We are willing to provide whatever notice the Legislature directs us to do. We do believe that public notice is an integral part of what we do on a day-to-day basis. The challenge with doing a mailing is, it would depend on the locality and the cost. Certainly if we have a change application in the center of the Las Vegas Basin and we are sending it to all potentially affected water right owners, that could be a lot of people. It could also be not very many people, depending on the location. There would be a cost associated with that, and who ultimately is the one to bear the responsibility for that additional expense? I know that for sending one mailing out, we calculated the fiscal impact of this particular legislation on our agency and based upon the average number of applications filed a year, we are looking at about a $750 per year fiscal impact, which is not significant; it is something we can absorb. But if you take that 65 cents per mailing and multiply that out to all the water right owners in a basin or in a flow system, that certainly could add up. If that is what we are directed to do, then we will certainly do it.

Assemblywoman Hansen:
I am not as worried about the noticing. I represent five counties that are rural; newspapers are big for that population. The constituent base that I am in communication with are pretty reliant on newspapers because Internet connections are not that great and a lot of them are not real comfortable with email. You talked about four publications, and I get your hiccup with that. I think that is completely reasonable—you attempted, the newspaper drops the ball. You should not be punished with the timeline because they dropped the ball. I am fine with that. Then you say at least one public library, and if there is not a library, it would go to another public place, which was suggested as the courthouse or the post office. Then the suggestion was that you might need to tweak the website. You already publish on the website, so maybe you can make that more comfortable. LISTSERV was mentioned, and social media, perhaps, if you have a Twitter account or a Facebook account or whatever. I think we covered it. For those who are more inclined to use electronics, we have got it covered; for those who are more inclined to read the newspaper or print media, we have it covered. From my perspective, I feel that is a reasonable ask with maybe adding the additional suggestions here today to a means of getting it out there.

Assemblyman Watts:
I have spoken with you about this proposal before. I think it has gotten out, and I think it has been noted by the remarks from my colleague and I think others as well. I just want to make sure it is clear that the discussion really is about trying to enhance public noticing. That is why there has been an addition of other ways of ensuring this information gets out while also addressing some of the issues that you have encountered with newspaper publications. I appreciate your sharing what some of those are. I know we are probably about to hear some opposition. I am also really glad to hear that you are going to be working with the different stakeholders to try and address those concerns. The only comment that I would have on this piece is, when you are talking about some of those examples, I think there is also

some heartburn on that. Ultimately, there may only be one publication instead of four. Hearing some of those examples, maybe there are some additional issues with that consecutive piece. That might be something that could be looked at while we are brainstorming ideas. I just wanted to put those up for consideration.

I did have a question though, and that is in section 8. You discussed the changes in subsection 1 from within 30 days after the date of last publication to this new language. Will you explain in practice what that looks like for how the window would change so that we can understand if that is moving it up or moving it back?

Micheline Fairbank:
The intent is to not shorten the duration of time that protests are allowed to be submitted to the Office of the State Engineer. The idea is to expand that time to try to allow for at least the same amount of time, if not more, but by when the posting and the notices are issued that there is that duration of time that is set out in that notice saying that this is the deadline, the hard and fast date. Presently everything is dependent on once publication is complete which, as we have talked about, can be uncertain. This provides that certainty. This is the starting point and this is the ending point so everybody has clear time frames in which to operate. Those were our most reasonable estimates. Again, we are not married to any particular component of this. It is being the hill we are going to die on. If somebody wants a more expanded period of time, we are open to those considerations. The idea was to have that level of certainty, so we know when we can move an application to ready for action status or ready for protested status and get our processes moving. Currently we are dependent on that uncertain date; that sometimes is a moving target for us.

Assemblyman Watts:
I look forward to seeing what comes out of the ongoing conversations.

Chair Cohen:
Just so that we have a record of this, no one seems to care about the materials of the maps. Do you want to briefly tell us what is going on with the maps and why you want to change the materials?

Adam Sullivan:
Historically, water right maps have been prepared on mylar. It is a very durable material, and it works for water right maps. There is one mention of it in statute in the adjudications portion that says that maps must be submitted on mylar. This is especially targeted by the upcoming deadline to submit any new claims of vested right by December 31, 2027. If those maps are required to be printed on mylar, it could potentially cost a lot. In practice, what happens is the person submitting the information is preparing the map on their computer in AutoCAD, or in some kind of software. He prints the map out on mylar, and hand-delivers it to our office. We review it and then scan it and then we have this scanned image of the map which is the map that most people refer to and sometimes it just loses quality. Going forward, we are investigating the procedure to be able to just have people submit maps digitally and skip that whole process and still be able to preserve that as an original

document. We are not there yet, but this is one step to remove a barrier and remove the requirement that maps be submitted on mylar. With the other mention of tracing linen, that is very archaic and we have not seen a tracing linen map for probably 100 years. It is just a cleanup measure.

Chair Cohen:
Seeing no other questions, I am going to move to support. Is there anyone in Carson City in support?

Chaunsey Chau-Duong, Public Affairs, Southern Nevada Water Authority:
We are in support of this bill. We believe this bill seeks to strive for efficiency and modernization for the State Engineer's Office. That is why we are in support.

Chair Cohen:
Is there anyone in Las Vegas or Elko in support? Seeing no one, is there anyone on the phone? Hearing no one, is there anyone in opposition in Carson City?

Thomas Morley, representing Nevada Press Association:
We are currently opposed at this point. We are working with the proponents of the bill to fix our issue.

Steve Walker, representing Eureka County:
Most residents in Eureka County only know of water-related notices through the newspaper. Eureka County would seek an amendment to the bill, working with county clerks to post in all locations. Notices are posted at Board of County Commissioners meetings and are included in the county website. We can expand it. With that amendment, Eureka County would not oppose the bill.

Kyle Roerink, Executive Director, Great Basin Water Network:
We are not opposed to the intent, but rather the proposed solution here. I think the cart is definitely before the horse, and I think we have all recognized that. It is important to consider why we are even talking about this. We are talking about why these notices are published. Someone wants to drill a new well; someone wants to appropriate large quantities of water; someone wants to move large quantities of water around; changing points of diversion; a number of reasons. This could have an impact on people's property rights. I think what we have not talked about today is due process. That is something that is very important in the consideration of all this. While we are here talking about newspapers not doing well in rural areas, we should be talking about private property rights as well and what this really means. I think doing this right is extremely important for this body. Also as a former newspaperman, I believe that on the sliding scale of transparency, we need to be doing things where we have more transparency, not less transparency, not trading off a guarantee of four publications in a newspaper for one publication and then a promise to post things on corkboards. This is a challenge. I am going to continue to work with the state on this. I understand the need for modernization, but these are really serious issues. I appreciate your time and consideration.

Patrick Donnelly, Nevada State Director, Center for Biological Diversity:
We are opposed to this bill in its current form. You all should have received a letter today with opposition from several environmental groups as well as the Nevada Open Government Coalition, which is a group of entities concerned with open government access and transparency in Nevada [Exhibit F]. They have all agreed that this bill is not acceptable in its current form, primarily because it subverts the current process of posting and notice. People do read newspapers in rural Nevada. In fact, it is really the main conduit of information for many in rural Nevada. The alternative is me and my job. I go on the State Engineer's website once every two weeks and I scour every single application across the whole state to see what might be relevant; I get paid to do that. The concern here is not if it is easy for Patrick Donnelly to access water rights applications; the concern is if it is easy for rural citizens to access this information. In many cases, rural citizens are the eyes and ears of my organization, Mr. Roerink's organization, Mr. Fontaine's organization, and others. The eyes and ears are those rural residents reading those newspapers. It really is not just an academic point. It is quite important for the transparency of government. To answer Assemblywoman Bilbray-Axelrod's question about the website, it is extremely difficult to access that information on the website. There is no section of the website that says, "Hear ye! Hear ye! Here is a water rights application you need to be concerned with." You need to scour a database to find that information. There are elements of this bill I think that are good as far as clarity on protest deadlines and so forth and map materials. I think there are discussions to be had about how to best notice the public about water rights applications, but it seems to us that maintaining four publications in the newspaper is very important.

Jeff Fontaine, Executive Director, Central Nevada Regional Water Authority; and Executive Director, Humboldt River Basin Water Authority:
Both authorities are opposed to A.B. 34 as written. We certainly appreciate the Division of Water Resources' difficulty, but A.B. 34 diminishes the public notification process that has been in effect for decades, and many people rely on that process. We are here to make sure that the public interest is served and that all domestic well owners, farmers, ranchers, municipalities, and businesses are provided the timely notification that they are entitled to, so they can protect their water rights from potential harm. There are many other state agencies and local governments that have similar requirements for consecutive notification in newspapers. I think there are some examples out there and we can work with the Division on trying to address this issue. Many of the suggestions or thoughts that we had about how we can enhance this process, including the website, which, as Assemblywoman Bilbray-Axelrod pointed to, is not user-friendly at all, even for people like me and others who are paid to monitor water right applications that are submitted to the State Engineer's Office. It is not an easy task and certainly not so much for the public. Posting in multiple locations has been brought up and also the discussion about mailing letters to potentially affected water right holders. The Division already has that responsibility in statute to notify owners of domestic wells within a certain distance of proposed large municipal industrial wells; possibly that can be expanded as well. We are committed to working with the Division. We believe we share the same objective. We are certainly on board to keep the conversation going.

Chair Cohen:
Is there anyone else in opposition in Carson City, Las Vegas, or Elko? Seeing no one, is there anyone on the phone? [Also provided but not discussed is Exhibit G.] Hearing no one, is there anyone in neutral in Carson City, Las Vegas, or Elko? Seeing no one, is there anyone on the phone? Hearing no one, thank you. It sounds like there are constructive negotiations going on with A.B. 34. Would the presenter like to make a closing statement?

Adam Sullivan:
Thank you for your consideration. We will continue working with different stakeholders on improving this bill. We are in no way intending to diminish due process or notification of the public. We are just trying to improve processes and government efficiency.

Chair Cohen:
Thank you for that. I will bring our hearing on A.B. 34 to a close. I will now move on to public comment. [There was none.] With that, we adjourned [at 6:12 p.m.].

RESPECTFULLY SUBMITTED:

_____
Nancy Davis
Committee Secretary

APPROVED BY:

_____
Assemblywoman Lesley E. Cohen, Chair

DATE: _____

EXHIBITS

Exhibit A is the Agenda.

Exhibit B is the Attendance Roster.

Exhibit C is a copy of a PowerPoint presentation titled "Managing Drought in Southern Nevada," presented by John J. Entsminger, General Manager, Southern Nevada Water Authority.

Exhibit D is a copy of a PowerPoint presentation titled "Truckee Meadows Water Authority Presentation to Nevada Legislature," presented by John Zimmerman, General Manager, Truckee Meadows Water Authority; and Stephanie Morris, Director, Legal and Regulatory Affairs, Truckee Meadows Water Authority.

Exhibit E is a copy of a PowerPoint presentation titled "Nevada Division of Water Resources Overview," presented by Adam Sullivan, P.E., State Engineer and Administrator, Division of Water Resources, State Department of Conservation and Natural Resources; and Micheline Fairbank, Deputy Administrator, Division of Water Resources, State Department of Conservation and Natural Resources.

Exhibit F is a letter dated February 22, 2023, signed by Kyle Roerink, et al, and presented by Patrick Donnelly, Nevada State Director, Center for Biological Diversity, in opposition to Assembly Bill 34.

Exhibit G is a letter dated February 22, 2023, signed by Tracy Puckett, Co-Chair, Legislative Committee, Sierra Club, Toiyabe Chapter, in opposition to Assembly Bill 34.