NEVADA LEGISLATURE
JOINT INTERIM STANDING COMMITTEE ON NATURAL RESOURCES

(*Nevada Revised Statutes* [NRS] 218E.320)

DRAFT MINUTES

May 10, 2024

The fourth meeting of the Joint Interim Standing Committee on Natural Resources for the 2023–2024 Interim was held on Friday, May 10, 2024, at 9 a.m. in Room 4401, Grant Sawyer State Office Building, 555 East Washington Avenue, Las Vegas, Nevada. The meeting was videoconferenced to Room 4100, Legislative Building, 401 South Carson Street, Carson City, Nevada.

The agenda, minutes, meeting materials, and audio or video recording of the meeting are available on the Committee's meeting page. The audio or video recording may also be found at https://www.leg.state.nv.us/Video/. Copies of the audio or video record can be obtained through the Publications Office of the Legislative Counsel Bureau (LCB) (publications@lcb.state.nv.us or 775/684-6835).

COMMITTEE MEMBERS PRESENT IN LAS VEGAS:

Senator Julie Pazina, Chair
Assemblywoman Natha C. Anderson, Vice Chair
Senator Pete Goicoechea
Assemblywoman Shannon Bilbray-Axelrod

COMMITTEE MEMBERS PRESENT IN CARSON CITY:

Assemblyman Rich DeLong
Assemblyman Bert Gurr
Assemblywoman Selena La Rue Hatch

COMMITTEE MEMBER ATTENDING REMOTELY:

Senator Melanie Scheible

LEGISLATIVE COUNSEL BUREAU STAFF PRESENT:

Jann Stinnesbeck, Principal Policy Analyst, Research Division
Becky Peratt, Senior Policy Analyst, Research Division
Lisa Creamer, Senior Research Policy Assistant, Research Division
Erin Sturdivant, Senior Principal Deputy Legislative Counsel, Legal Division
Jeffrey Chronister, Deputy Legislative Counsel, Legal Division
Adam Drost, Principal Program Analyst, Fiscal Analysis Division

Items taken out of sequence during the meeting have been placed in agenda order. [Indicate a summary of comments.]

AGENDA ITEM I—OPENING REMARKS

Chair Pazina:

I would like to call this meeting to order and wish everyone a warm welcome to the fourth meeting of the Joint Interim Standing Committee on Natural Resources for the 2023-2024 Interim.

[Chair Pazina asked the Secretary to call the roll. Roll call is reflected in Committee Members Present.]

Our agenda today includes presentations on interstate wildfire compacts, the Nevada Shared Stewardship Agreement, and many presentations related to water, including groundwater availability and water rights retirement.

[Chair Pazina noted the public can receive electronic notifications of the Committee's agendas, minutes, and final report by signing up on the Nevada Legislature's website. She also discussed meeting guidelines for Committee members, presenters, and those providing public comment.]

We have arrived at the point in the interim where we will begin to think about which bill draft requests (BDRs) we want to put forward as a Committee for the next legislative session. If you have BDR ideas that you would like to suggest for consideration, please submit your recommendation along with appropriate background information by Wednesday, July 31, 2024, at 5 p.m. Additional instructions and a form for submitting BDR requests that include information to help us consider these recommendations may be found on the Committee's web page.

AGENDA ITEM II—PUBLIC COMMENT

Chair Pazina:

Let us get started with public comments.

Tracy Bower, Desert Research Institute (DRI):

I am here today in advance of the presentation from the Nevada Division of Water Resources (DWR) on the Nevada Water Initiative (NWI). The DRI's team of hydrologists are working with the State Engineer's Office and the United States Geological Survey's (USGS) Nevada Water Science Center to update the State's understanding of groundwater resources. Starting in the 1940s, the Nevada Legislature provided funds to the State Engineer's Office to work with USGS and what would later become DRI for systematic investigations of Nevada's groundwater. It was called the Nevada Groundwater Program, and the studies from that Program have been foundational and used for water resource decision-making for nearly 80 years. Since that time, numerous scientific advancements and tools are now available to allow water planners and the State Engineer to better gauge groundwater availability and to make decisions about water resources based on the best available science. The current NWI Project was originally funded through the State using dollars from the American Rescue Plan Act (ARPA), which provided immediate funding to begin the work. Limitations on time for spending the ARPA dollars meant that they cover just a fraction of the basins that needed updated groundwater assessments. The DRI is supportive of the continuation of this Project in future years to provide the best data

possible for water resource decisions, and we ask the Committee to please consider how to continue this work that is vital to the State's future. Thank you.

Jaina Moan, Director, External Affairs, The Nature Conservancy in Nevada:

Thank you for hearing presentations on groundwater rights retirement at today's meeting. We appreciate the conversations around potential tools for resolving conflicts with existing water rights holders and detriments to natural resources. As with anything related to water, developing tools that will be effective for reducing consumptive use while benefiting long-term water sustainability is challenging. Learning from other states' experiences is important as well as learning from our own experiences here within Nevada. We are grateful to the Legislature, the State, and the Department of Conservation and Natural Resources (DCNR) for the use of ARPA funds to permanently retire groundwater rights with the Nevada Water Conservation and Infrastructure Initiative (NWCII). This onetime funding opportunity provides an excellent chance to implement groundwater rights retirement to see if it will work in Nevada. If the State is to move towards adding voluntary groundwater rights retirement to its toolbox of options for bringing water use to sustainable levels, it is important that we learn as much as we can from this experience. We therefore advocate for the preparation of a public report on the use of NWCII funds to retire groundwater rights. We submitted a written comment that expands on what such a report can include. We believe this report would be most useful if prepared ahead of the 2025 Legislative Session, and The Nature Conservancy is willing to assist with or prepare this report and to do this without compensation. Thank you for this opportunity to provide public comment and for your service on this important Committee.

[Ms. Moan submitted a letter written by Mauricia M. M. Baca, State Director, The Nature Conservancy in Nevada (Agenda Item II).]

Doug Busselman, Executive Vice President, Nevada Farm Bureau Federation:

My comments today are directed in support of Item IV [III]—the Nevada Shared Stewardship Agreement. Given the exposure that our members have in rural Nevada to the risk of massive wildfires, we are very pleased with the progress that has been taking shape over the past several years through the Nevada Shared Stewardship Agreement. This ongoing partnership between State and federal agencies has been extremely successful to this point and have gone a long way in carrying through strategically planned and cooperative projects to deal proactively before wildfire begins. The most beneficial way of dealing with wildfire is to properly manage fuel loads to prevent them from burning and turning into massive fires to start with. We are aware that through the Nevada Stewardship Agreement, federal and State agency partners are also providing opportunities for engagement of counties, tribes, conservation districts, fire protection districts, nongovernmental organizations (NGOs), and private property owners—all working collaboratively to identify and implement priority projects. One possible improvement area could come in consistent investment by the State of Nevada. This funding would allow the Shared Stewardship partnerships to address unmet treatment needs. They would also assist with assurance of financial resources for ongoing maintenance—lack of protection for State and private lands—as well as providing for local capacity to support implementation. Lastly, this approach for consistent funding would improve the opportunities to tie in with matching funds from federal investments. We encourage the Committee to consider, favorably, the proposals that are brought forward in connection with the Shared Stewardship Program. Thank you.

Dave Cochran, Chief, Reno Fire Department; and President, Nevada Fire Chiefs Association:

We represent all the local fire service agencies throughout the State of Nevada. I would echo the comments you just heard regarding the Shared Stewardship Agreement. That is what I am speaking to and, in particular, its relationship to the local agencies like mine. Local agencies, collectively, have always been the largest resource for fighting fires for the suppression side of things. In recent years, we have adopted and recognized the value of being proactive. That is the prevention side of things, which is where the Shared Stewardship Agreement targets. You have seen local agencies hire on their own crews to do fuels mitigation, to get out there in the wildland urban interface (WUI) and be proactive in terms of preventing wildfires or mitigating the effects of those wildfires. Whether it is crews or, for example, a project that we are doing in Reno sponsoring private agencies to do the same work to either harden the infrastructure or harden the areas around individual residences in that WUI, which we have a lot of here in the north. Those are all super valuable, not only in the federal and State, but on the local level. The last thing I would add—in Reno, we have the concept in our Strategic Plan of sending the right resource to the right call at the right time. The Shared Stewardship Agreement has a similar concept. It says, "Do the right work in the right place[s] at the right scale," and what that speaks to is being effective, appropriate, and efficient with the resources we have, and the support that this Committee can offer in favor of the Shared Stewardship Agreement would advance those causes. Thank you.

[Chair Scheible asked Broadcast and Production Services (BPS) to open the phone lines for public comment.]

Lydia Teel, Vice President, Nevada Bighorns Unlimited:

We are the largest nonprofit wildlife conservation organization in Nevada with over 3,500 members who are primarily sportsmen and outdoor enthusiasts. We are calling in today in support of the Nevada Shared Stewardship, and we strongly believe it provides a positive impact towards Nevada's natural habitat and wildfire restoration. We would like to thank all the agencies involved for collaborating together on such an important program. Thank you.

Chair Pazina:

[Chair Pazina noted an additional public comment period will occur at the end of the meeting.]

AGENDA ITEM III—UPDATE ON THE NEVADA SHARED STEWARDSHIP AGREEMENT

Chair Pazina:

We are going to go to Item III—an update on the Nevada Shared Stewardship Agreement. We have a number of individuals from both State and federal agencies joining us to present from their respective agencies. Presenting today are Cheva Gabor, Nevada Liaison, Forest Service, Intermountain Region, with the U.S. Forest Service (USFS), and Kacey KC, State Forester Firewarden with Nevada's Division of Forestry (NDF).

Kacey KC, State Forester Firewarden, NDF, State Department of Conservation and Natural Resources (DCNR):

We are very excited to be here before you today. We have been before this Committee talking about Shared Stewardship, but we recognize some [are] new, so we are going to go through a little bit of the background on the Shared Stewardship Initiative in Nevada (Agenda Item III A-1).

[State Forester Firewarden KC shared a video.] There is no audio, but it is News Channel 2 talking about an interagency burn that we did in Elko using the pack mules from the USFS. This was one of many of the interagency burns that we do to reduce the fuel loads. It was a cool 30 second snippet. We will send it to you.

Cheva Gabor, Nevada Liaison, Intermountain Region, USFS, U.S. Department of Agriculture (USDA):

One of the highlights of the snippet was that the agencies are working together on this project, as are so many others, under the Nevada Shared Stewardship Agreement. The Agreement was originally signed in October 2019. It is a five-year agreement. It is going to be expiring, and we are going to be renewing it this fall. We are excited about that and what the new agreement will look like. This is a State and federal agency agreement. It was the ninth one in the country, and because we need to do things our way in Nevada, it was the first one to be inclusive of multiple agencies. You will see on all of our slide banners that it is multiple federal agencies, many of whom are represented in the room here today as well as our State partners from Nevada's Department of Agriculture, DCNR, and Nevada's Department of Wildlife (NDOW). We are adding Natural Resources Conservation Service (NRCS) as a signatory. If you look on the website and look at the Agreement, you will see that they are not signed on, but they joined us soon after, and we are pleased to say they will be signing, formally, this fall.

Shared Stewardship is around all three tenants of what we call the National Cohesive Wildland Fire Management Strategy. You heard about that from the commenters this morning—effective fire suppression, fire-adapted communities, and finally, resilient landscapes, which is the piece we are primarily speaking to today. Shared Stewardship around the other two aspects is through different bodies. There is the Fire Board around fire suppression and, of course, the State Forester works closely through her Department with the Fire Adapted Network. Today, we will focus on resilient landscapes. You may be asking, "How is this different from all the other federal and State initiatives that we have?" This takes our partnerships to the next level. This is beyond only partnering to collaborating at the highest level starting from the State office level to the field to prioritize work together. Beyond only partnering and identifying a project and reaching out, we are looking at what needs to be done on the landscape. We are reaching out to the partners who can do that work. We are setting those priorities together. As Chief Cochran said, it is about ". . .the right work in the right places at the right scale," not just fuels reduction and forest thinning, but ecosystem restoration and restoring our landscapes to more of a resilient nature so that they can resist and recover from wildfire.

State Forester Firewarden KC:

The Agreement deliverables that were originally addressed in the first Agreement—the first thing we had to do, to Cheva's earlier point, "How is this different?" We found that we have been trying this. I have been working here for 23 years, and we tried this many times to work. We have worked well together as partners, but the difference was we recognized

we had to do something different in how we address our staff to work differently together. We set up an Executive Committee; that was one of the first charges. We also have a Technical Advisory Committee made up of all of the agencies you see behind [me] and on the screen.

The point was to direct our staff that, "Though you guys have worked well, collaboratively, in areas where it is worked in the past, now we want you to start planning together and implementing together in these areas of highest risk, and then, you need to define those areas of highest risk." That was another one of the early deliverables. What are we targeting? Where are we targeting these areas? We had to pull a lot of data to figure out the areas of need. We will go into that in the next slide. We did decide that we had a couple of things we wanted to hit in the deliverables. One was increasing the annual acres [treated] by 50 percent by 2025. You will note we are not there yet, but we have overshot that target. I will tell you of the numbers here in a couple of slides. Everything that we agreed to do in the deliverables has been done. Now it is time to relook. We are working together to say, "What do the next five years look like in this Agreement?"

Ms. Gabor:

On this slide, you will see the priority landscapes. We set 13 of those to start with. Those are identified based on wildfire risk to our shared values. Those values are detailed in the Agreement. They include communities, watersheds, wildlife habitat, tribal and cultural values, rangeland forage, recreation access, transportation and energy infrastructure, and industry infrastructure, among others. If you like to hunt or hike, if you live near a wildland community, if you graze livestock or work in mining or tourism, if you drink water, these are areas that are important to protect from unwanted wildfire. We did not start from scratch.

There has been a lot of work, as State Forester KC said, to identify some larger areas to begin with. The NDF's Forest Rangeland Watershed Health Action Plan was one of the early planning efforts that identified priority landscapes. These are a bit tiered down, and we revisited the data that was used for those, collaboratively, with all the partners—looked at new data to incorporate and chose smaller landscapes where we felt that we could make a difference quickly. These are not set in stone. We adapt them through discussion as needed, but they are a way to focus our efforts and try to get these areas to what we refer to as "maintenance condition" rather than dispersing our efforts. We are committed to the Shared Stewardship approach across the State in all of our work, but these were ways to focus efforts. If everywhere is a priority, nowhere is a priority. It is a first tier to get work done.

One thing to know is these landscapes have proven very successful in terms of leveraging funding, and you will see that in the next example that Kacey presents on the Paradise Landscape. What we have done for each of these landscapes, and what was called for in the Agreement, was to stand up interagency groups. While the Agreement itself is State and federal, the landscape level planning groups incorporate a multitude of other partners—counties, conservation districts, homeowners' associations, NGOs, private landowners, and fire protection districts. Anyone that is interested in getting work done on the ground is invited to engage at the landscape level and help us determine what work needs to be done, and how to move that forward.

State Forester Firewarden KC:

First, I want to say for those of you who have [not] heard this presentation, this was the biggest feat in my 23-year career. We had tried to do this in an earlier planning effort when I was very brand-new. We did not call it Shared Stewardship back then. I think it was called

Fire Planning Analysis. It is a bad word; nobody says it anymore. We could not even agree on the problem, let alone the areas in which we were going to agree to work. Flash forward—this was a very easy process.

I do want to highlight that there are other terms that you heard today, and you might be hearing in the news—the USFS' Wildfire Crisis Strategy Landscapes and the Bureau of Land Management's (BLM) Restoration Landscapes. It is not by whim that those actually align very perfectly, although they are a little bit larger based on their jurisdictional areas. To Cheva's earlier point, this was the first initial drawing of these boundaries at the ground level. They are there to identify and re-create the shapes—what makes sense for what they are doing on the ground.

We wanted to highlight a couple areas of success. The first is our Paradise Landscape outside of Winnemucca, Nevada. This was a high priority area, obviously, for annual invasive grass species. We have had a lot of fire and disturbance in this area. We have lost a lot of it over time. The more fire we see, the less natives we see coming back into those ecosystems, so this was a high priority landscape for us. This is an area where we brought together a long list of funding. I am not going to read them all off for you. You can see them on there, but this was an area where we took limited funding sources, limited crews, and limited staffing, and actually made a very large project that is going to be highly impactful. The point of this effort is to take our limited assets, both in funding and staffing and contractors, and get the biggest bang for our buck regardless of whose land it is that we are treating.

Ms. Gabor:

I want to point out that, speaking on behalf of the USFS briefly—both for Paradise Landscape, which we received a Joint Chiefs' Landscape Restoration Partnership Grant, and for the Wildfire Crisis Strategy Landscapes—there is no accident that those are in the Shared Stewardship Landscapes. That is part of what we use to justify our proposals and to leverage that funding. It is something that the Agency takes very seriously. Our shared priorities—State and federal—are looked at seriously for funding investments. I think other agencies in the room could share that as well.

Another example is in Spring Mountains-Pahrump down in the Las Vegas area—Mount Charleston and the surrounding area. There are a couple aspects to this project. I am not going to read everything on the slide, but I am going to highlight that, again, it is a collaborated effort. We have the local fire department, we have BLM, NDF, and the Humboldt-Toiyabe National Forest.

There is another collaborative effort there funded by the Southern Nevada Public Lands Management Act (SNPLMA). That is a case of using existing financial support but incorporating the approach. I want to make one acknowledgment around this slide. One thing we are always striving to do is bring the wildlife and habitat side of our house and the fire suppression/fire prevention side closer together. That is something we need to continue to work on in terms of the language we use in bringing NDOW and the U.S. Fish and Wildlife Service (USFWS) into our efforts. We are all working for the same goals. Sometimes we talk about those goals differently, but this really is not just about fuel breaks, it is about restoration and resilience. One thing we continue to strive with is to make sure they are engaged. That is particularly important in some of these fuels assessments to make sure we are engaging agencies that are not traditionally thought of as wildfire related.

State Forester Firewarden KC:

The exciting part of the slideshow presentation—accomplishments. We do not [only] say we are doing it. We are actually going to show you we are doing it. This is an acreage treatment area. This is not all of the acres we have treated in the State of Nevada, but these are the focused acres we have treated in Shared Stewardship. The key point here is—I told you earlier that we had tried—one of our goals was to increase by 50 percent year over year. In the first two years of the Agreement, we were at about 74 percent average increase, year over year. Last year, we were [at a] 109 percent increase over 2022 in acres treated, and the year before—in 2022—we were 350 percent over the 75 percent. I am not a math whiz, so I am not going to tell you exactly how all that worked, but we are doing what we said we were going to do. Hopefully, as we head into a potentially large fire season, those investments we have put in place will actually protect communities and ecosystems and help them be more resilient. We know fire is going to occur. We are trying to slow the progress of fire and make it less catastrophic. We have overshot our 50 percent target. We are very proud of that, but we do not [only] treat acres.

The other things we are doing through this—we have talked housing. We have talked employee development. We have talked interagency strategies for training. We did provide a Shared Stewardship Science seminar, which had about 60 people in participation. The purpose was to take the science—there is a lot of science and data out there—and how do we, as practitioners, use that at the ground level? That is something we are very proud of. In addition to that, we have prevention team members—all of us—so we sent out prevention specialists to try to prevent human caused fires and help with natural resource management and resilient landscapes. We hit over one million Nevadans with this increased awareness program. We are very proud of that.

Ms. Gabor:

We want to talk about what our needs are into the future. One of the things we asked the landscape planning groups to do was create five-year programs of work. That is very government speak. But essentially, it means looking at what needs to be done, what projects need to be happening, what management needs to occur on the ground. We ask them to get together, bring their individual agency plans, make those into a Shared Stewardship program of work, and then we ask them to put numbers to that. That is what you are seeing on this slide.

We have 7 active landscapes of the 13. We are about to activate the eighth. In some cases, it is the same planning, and the same staff handling more than one landscape because we have capacity issues in terms of our staffing. We have the same players handling multiple landscapes—but seven are active, and we are about to go likely to the eighth. They get together collaboratively, prioritize their work, and again, at this level, it is not just federal and State—counties, tribes, all those partners I mentioned earlier. As long as they are looking to put work on the ground, they are welcome to engage.

These documents are living documents. They will revisit them every year. The purpose is to ensure that we are addressing shared priorities, identify our out-year planning and funding needs, identify opportunities to engage additional partners, and obtain efficiencies of scale. By putting these programs that work together and looking at them, it helps us understand if a funding opportunity comes along. Where is the need? How do we match that funding up with the opportunity on the ground? You will see we have quantified it. Again, this is for the seven active landscapes—910,000-plus acres identified for treatment at a total estimated

cost of over $64 million. That gives you an example of the need in those landscapes in particular. There is a need for increased capacity, including local capacity, to collaborate.

State Forester Firewarden KC:

Finally, what are the support opportunities that this Committee could assist us with? One is a resolution in support of the Nevada Shared Stewardship Program and Agreement for wildfire risk reduction and ecosystem resilience. We, as Agency leads, recognize the importance of this, but we may not always be here. We hope this continues throughout the life of our Agencies, and that is one thing a resolution could help us with.

In addition to that, there has been a significant investment. That is awesome in a State that is 87 percent owned by the federal government—$117 million, primarily for federal land treatments. We knew we had a lot of those areas that needed treatment, so we are very excited to get that land treated. We would like to match those on the State and private side. The federal government has invested about $9 million for those types of treatments. At this time, we would be looking for State funding to match that federal funding to continue that work on the other side.

We have the Executive Committee in full membership, I believe, behind us. We would be happy to take any questions.

Chair Pazina:

Do we have [any questions]? We will start with Senator Goicoechea.

Senator Goicoechea:

You were talking about a match. Are we talking 50/50 match or 10/90? What kind of match are you looking for, Kacey?

State Forester Firewarden KC:

Anything you could provide. There are match requirements on some of these funds. In the infrastructure bill, we were able to waive some of the match requirements. Some of the $117 million that you see does not require a match. Whatever the State could provide would be a great investment to help us long-term—a continued source of funding that could be available to match any grants that require a match.

Senator Goicoechea:

As a follow-up, to comment on your identified future needs and looking at that picture, I am very familiar with the area. I can tell you they were chaining that 60 years ago, and we are still fighting the issue. So yeah, we need some help.

Assemblyman Gurr:

Where in Elko County were you doing this treatment of 73,000 acres? Where did you do that, specifically?

State Forester Firewarden KC:

We have done multiple treatments across [what] we call the "Elko Front"—at this time up into Lamoille. It is Spring Creek, Lamoille, and Elko. There are multiple treatments in that

landscape, including the Spring Creek Homeowners' Association (HOA) up into the Lamoille Canyon and all the way in between.

Assemblyman Gurr:

Do you use herbicides on the Spring Creek HOA?

State Forester Firewarden KC:

Yes, we did use herbicide application in those areas.

Assemblyman Gurr:

Are there any public-private projects that you are aware of going on in Nevada today or proposed to go in Nevada?

Ms. Gabor:

In Elko, in particular—we are using Spring Creek HOA as an example—the federal and State entities there are partnering with Spring Creek to identify needs and get those accomplished. If that is a good example—anywhere we have those opportunities, yes, we are doing them. That would include leveraging NGO funding—that type of thing.

Assemblyman Gurr:

Are you familiar with a project called SixCo in Lincoln County?

State Forester Firewarden KC:

Yes, I am familiar with that; I am aware of that partnership. The Pinyon-Juniper (PJ) removal on the railway partnership is SixCo.

Assemblyman Gurr:

I just found out about it two weeks ago. It sounds like quite a project to get the PJ encroachment cut back a lot. Have you worked in the Overland Pass area for reductions?

State Forester Firewarden KC:

Yes, we have worked in that area, jointly. To answer your earlier question, public-private partnerships—they are everywhere. That is part of what we are talking about. There is a mill here in the Sierra Front area. That is the whole point of this exercise. If we just treat the private land and the federal land directly adjacent does not receive treatment, we have not really affected how fire is going to move through that ecosystem. The point of a Shared Stewardship exercise is to minimize random acts of conservation and change how fire moves through. All of these projects we are talking about are adjacent to and working through public-private partnerships. And we are making sure those are at a scale large enough, not just little areas where we might affect a small fire, but where large fires are coming through, we are really changing that behavior.

Assemblyman Gurr:

I will leave my last question for later in another presentation.

Assemblywoman La Rue Hatch:

Looking at the priority landscapes, I was very heartened to see the Tahoe Basin is on there. That is very close to us. I hear concerns about fire in the Basin from a lot of constituents, especially with evacuating an area that does not have a lot of ways to get out. I have a twofold question. One, when we are dealing with spaces like that—that cross the State boundaries—are you coordinating with California agencies? And two, are you coordinating with the Nevada Division of Emergency Management (DEM) in any way? I know they have a lot of money as well for prevention.

State Forester Firewarden KC:

'Yes,' to coordinating with the State of California. The Tahoe Basin is actually covered by the Tahoe Fire and Fuels Team. It came out of the Angora Fire and the two Presidents coming together—and early, recognizing that we had an issue in the Tahoe Basin. Our Shared Stewardship boundaries engulf that. They have been practicing this for quite some time. It was the model for the rest of the State—we were trying to get that model to work elsewhere. There is a plan. They coordinate across the Basin. Obviously, these issues that we have—insects and disease, fire, invasive species—they do not know state boundaries; they do not know political boundaries. The coordination with DEM—yes, we are doing that. We have community wildfire protection plans. They have hazard mitigation plans. We are trying to put those together. They do have funding from the Federal Emergency Management Agency (FEMA). We are trying to navigate the complications of FEMA funding and get that onto the ground in the most appropriate areas.

Assemblyman DeLong:

I actually have two questions. The first one—in the five-year program, what are the seven landscapes?

Ms. Gabor:

The landscapes that are active right now are the ones highlighted in green on that slide—Elko-Spring Creek-Lamoille; South Rubies-Smith Creek, and they are under one landscape planning group; Spring Mountains-Pahrump, and we are likely about to activate Virgin Muddy under that group as well; Paradise; Sierra Front; Carson-Walker—Sierra Front and Carson-Walker are being planned by the same basic group of staff—and then Basin and Range. The Tahoe Basin is not highlighted because of what State Forester KC just said. They have a lot of existing structure; they had a lot of existing funding. One of our immediate tasks is to talk with groups in the Basin about how they would like to integrate into this effort, but they are essentially activated because of existing structures.

Assemblyman DeLong:

That actually leads into my next question. Nevada is experiencing a homeowners' insurance crisis right now for homes that are in the urban interface with the forest, particularly in Washoe and Douglas Counties. What specific treatments are being done to help address that issue to make sure our homeowners can get homeowners' insurance, so they do not have to sell their homes?

State Forester Firewarden KC:

There is a lot being done. The homeowner crisis—the insurance crisis—is nationwide, unfortunately. Also, in Elko County, they dropped a lot of policies there as well. They are

looking at risk. Our goal was to try to reduce that risk at a large enough scale where there is impact, both through treatment areas, through Shared Stewardship, and other programs that all of us as agencies operate, and also through a Fire Adapted Nevada program—educating communities, getting them into Firewise USA. That is often recognized by some insurance holder companies that provide discounts for people who are in a Firewise community recognized and in good standing.

In one of the legislative sessions, we were charged with working with the Insurance Commission[er]. We did—in the State of Nevada, at the Insurance Commissioner level—adopt a series of ways that insurance companies could utilize the information that is happening and give discounts and/or continue to insure. Unfortunately, insurance is a private industry, so there is no way to fully make that work. There are programs in the State of California that we looked at but did not adopt in the State of Nevada, so there is still work to be done on that. Those were the best incentives we could come up with. There are a couple of companies in the State that are still writing for those areas, and they do have those incentives.

Vice Chair Anderson:

As we go down this rabbit hole of so many important things, are you available for us to do some more of that one-to-one discussion, if necessary, about very specific issues that unfortunately, I think we all experience in our different districts?

State Forester Firewarden KC:

Yes, of course.

Assemblyman Gurr:

Let me make a comment about what the USFS and the Elko Fire Department people have been doing. They have been going out and inspecting properties under the insurance problem and writing letters to the insurance companies. They have been a big help. It has been a positive that way. The real question was—when you do the mitigation programs out in the habitat, are you coordinating that with NDOW to reseed it into the proper seeds, and what we need for wildlife?

Ms. Gabor:

Yes. We are coordinating at the landscape levels. Like I said, something we are continuing to work on improving is making sure we are integrated with NDOW. They are a Shared Stewardship partner. Director Jenne is here if he would like to add [to this].

Alan Jenne, Director, NDOW:

Specifically, to Elko, there are really good examples in that landscape. If you remember that Corta Fire, that was right there—Harrison Pass. That took out a whole bunch of important wildlife habitat—saw pretty nasty invasive weeds called medusahead come back into it, and we have gone out there working with this group using herbicide to get control of that, both on public and private, and also reseeding and trying to bring back that shrub component—that bitterbrush component for the mule deer herd that often relies on that for winter range. We are working with that. The total intent of this whole Shared Stewardship Program is to contemplate the treatments and also the future management of that, ensuring the wildlife benefits are still on that land.

Chair Pazina:

I was looking at the priority landscapes. Thank you so much for highlighting in green the seven priorities. You mentioned maybe an eighth was coming online, and I was curious what that would be, and if there was more work being done to add to the priority landscapes looking into the future.

Ms. Gabor:

Yes, Virgin Muddy. Fire Management Officer Brock Uhlig is here from the BLM, so I will defer to him if he wants to add anything here. That Spring Mountains-Pahrump group has let us know they are looking at being ready to move into the Virgin Muddy Landscape and have that under the auspices of their planning group. That would be initiated—would turn green in this list. Essentially, to share what the issue is, it really is the capacity issue. We made a very conscious decision—the Executive Committee did—to take a phased approach to activation so that we did not fail, to put it bluntly. We are concerned about not succeeding. We are concerned about trying to go into all those landscapes at once without determining how it was going to work. We started with Elko-Spring Creek-Lamoille and Spring Mountains-Pahrump. We activated another few after that, and now, as we see that we have the capacity and can keep them going, that is where we are adding. Virgin Muddy is likely to turn green as an activated landscape, and I think there is going to be one or two others right behind that until we have them active in the full 13.

This approach is not limited, and we are continuing to revisit both the boundaries of the priority landscapes and where we are working with those landscapes. That is another point I want to highlight, NDOW's work—work they are doing with mule deer corridors; work they are doing with sagebrush core habitat. Anything we get along those lines as we move forward comes into this prioritization effort. We can adjust boundaries. If we find we are succeeding in all 13 areas, we can pick off other areas. We are working through this list first, and it really is a capacity issue more than anything.

If I might cheat a little bit, I would like to add more to Assemblyman Gurr's question as well in terms of private partnerships. The NRCS is another partner. I think that is a good place to point to those partnerships. Environmental Quality Incentives Program (EQIP) funding—it is a source we have where we can work with private landowners, and there are a number of others, the USFWS has some as well. Direct work with landowners is another way we are engaged in public-private partnerships.

Chair Pazina:

As the Vice Chair shared, we may be reaching out with questions at a later date.

[State Forester Firewarden KC and Ms. Gabor submitted a document with additional references pertaining to the Nevada Shared Stewardship Agreement (Agenda Item III A-2) for the record.]

AGENDA ITEM IV—PRESENTATION ON INTERSTATE WILDFIRE COMPACTS

Chair Pazina:

That will move us to Item IV—our presentation on interstate wildfire compacts. Staying with the NDF, we will have State Forester Firewarden Kacey KC presenting today on interstate wildfire compacts.

Kacey KC, Previously Identified:

I wanted to introduce the idea of wildfire compacts (Agenda Item IV). Back in the early 1950s, the U.S. Congress allowed states to enter into wildfire compact agreements that allowed assets to move state to state, not just federal to state. For some reason, and for lots of reasons, there are five states that did not join—California, Nevada, Utah, New Mexico, and Hawaii were the five states that were out. Every other state in the United States is in, including the Canadian provinces.

We are wanting to join. The reason I am here before you today is I do not know how to join. I am asking [for] your expertise and guidance to help me through. Some states have actually adopted [them] in law, so [they] have created a bill during the Legislature to adopt the actual language of these compact agreements. Others have simply asked. I think through my statute in NRS [Chapter] 472, I have the ability to enter into these types of agreements, but we are trying to verify. For the purposes of entry, we are going to enter two compact agreements.

The Northwest—I have listed for you who is in, but it is many of the Canadian provinces, Washington, Oregon, Idaho, Montana, and Hawaii was the most recent joiner—just a couple of weeks ago following their initial review on the Maui fire—they are in the Northwest. Nevada would like to join that one. The issue with the Northwest Compact—it was the first compact that was agreed upon in the United States, so they were allowed to mobilize within those compact states and the Canadian areas, but they cannot mobilize anywhere else. They cannot go to the Southwest. They cannot go to the Northeast, and they cannot go to the Great Plains. It did not have reciprocal language, so Congress may change that over time.

The Great Plains, which is weird that we would be in the Great Plains or the Northwest, but it does not matter really. We would go into the Great Plains as well. That is North Dakota, South Dakota, Wyoming, Nebraska, Colorado, Kansas, New Mexico, and Saskatchewan. We would love to see Nevada in that list. That does have reciprocal language, and one of the things that is important to note in these wildfire compacts is the web—I think you will hear at a later date, we have an auditor sitting, looking at our wildfire suppression account. The web of agreements that is necessary to mobilize assets into our State and out of our State is astronomical.

We are trying to minimize the number of contracts. We have done a good job of incorporating local government in the State of Nevada into the State's agreement with our federal partners, which allows us to mobilize to federal lands outside of the State and to bring fed assets into the State when we need them. But in order for us to get to any other State assets, we have to have individual state to state agreements with that State agency. We do have them with many of them. This, if we are able to join the compacts, would greatly reduce the number of individual agreements. We would be able to move state to state, and also be able to bring them in in a much quicker fashion.

That is my brief conversation about wildfire compacts. It is important for not only wildfire suppression but also the mobilization of assets if we are looking to address our Shared Stewardship issues, and we are doing that through mitigation. These also mobilize assets for prescribed fire, for risk reduction projects, for resiliency projects. So, if we had an aerial seeding application, we could bring folks into the State on these agreements as well for that. With that, I would be happy to take any questions.

Chair Pazina:

We will definitely have our phenomenal team at LCB do research into this. Do we have any questions?

Assemblyman DeLong:

What states do we have individual agreements with?

State Forester Firewarden KC:

That I am aware of right now, we have California, Wyoming, Colorado—we did not need a Texas one; that went through our federal agreement—Idaho, and Washington. Those are the ones that are coming off the top of my head, but I could get you the exact list.

Assemblyman DeLong:

That would be great.

Senator Goicoechea:

I know we share a lot of resources with Utah, Arizona, and New Mexico. We are probably not truly considered a compact state with them, but we do share resources back and forth. The big question is, as always, the billing issue. I know you said you are talking to the auditors, but the more we open it up, maybe the deeper we get.

State Forester Firewarden KC:

I do not know if it was a question, but I would like to give an answer. Arizona, New Mexico, and Utah all are doing the same thing we are doing. They are planning to join this, so every adjoining state will be in. California is also planning to join. California was one of the big reasons the "Big 5," I call us—did not join before because nobody wanted California in. They were afraid they would take all of the resources, and nobody would get any. They were kind of banned from the process, but it is important to have California in because we actually do utilize the resources often, and we need them to come into the State of Nevada to help us.

I would like to point out that we do actually go into these states on a federal fire. We can go in right now. We also do go in currently on state-to-state. It is not a money issue. It is that we have to immediately get that state-to-state in order to send, so it causes a little bit of work up front. This makes it a lot less complicated from a billing perspective because then our dispatch centers are not wondering, "Do we have these agreements in place already before we can mobilize assets?" As you all are aware, the quickness of the response is very important. For us, it is not so much that we want to mobilize our staff out—although we do from a training perspective, [we] always want to get them different experiences. Last year, we had 1,300 acres burned in the State of Nevada. It was unseasonably low, the lowest in recorded history. If we had not sent our firefighters out-of-state, we would not have qualified firefighters in-state to fight our fires this year. It is critically important. For us, more importantly, is when we have a big fire season, we need these other states to come here, and this would allow for that.

Chair Pazina:

We will be back in touch after we learn a little bit more from our phenomenal staff in regard to how to join a compact, so we will certainly be in touch.

AGENDA ITEM V—PRESENTATION ON GROUNDWATER BASIN MAPS

Chair Pazina:

We are going to move to Item V—a presentation on groundwater basin maps. First up, we are going to hear from our State Engineer, Adam Sullivan, from the DWR to present on new maps demonstrating groundwater supply conditions in Nevada.

Adam Sullivan, State Engineer, DWR, DCNR:

We talk a lot about groundwater supply and concerns about the groundwater supply, and questions often come up about what this means and where, geographically, the problems are. This is a map series (Agenda Item V) that was put together by DWR staff to help make an accessible display to help communicate groundwater supply conditions across the State. In part, this was driven by a map that we created first for the 2019 Session that showed some of this data. It was a red, white, and blue map; and it showed the ratio between perennial yield and commitments, and it got a lot of circulation. It kept coming up, and I always felt like it needed a lot of explanation and qualification because it was a simple display. There was so much more to say about how you characterize groundwater supply. These maps have a lot more of that content, and I am happy to share this with you.

I will go through each one of these—a series of six maps—and what they show. At the end, I will touch a little bit on how to address some of the issues and problems that come out on these exhibits. First, I will say that the map series is available on our website. All the data displayed is based on publicly available numbers without additional interpretation of what it might mean or projection about what we should do about it. Each one of these maps on the series is accompanied with a one-page explanation of what it means, how it was derived, and what are the limitations. That is an important accompaniment because there is always a story behind the color display.

This first map shows basin groundwater level trends over 1984 through 2021. This is showing where groundwater levels are dropping and at what rate at the basin scale. The darker the color, the greater the decline, with red being over one foot and a half per year on average. It also has additional information here, including where groundwater levels are affected by mine dewatering, which is intentional drawdown. It is important to acknowledge what that is, and that is shown with the hatched pattern. This was generated by data—a groundwater level trend analysis that was done by The Nature Conservancy who is also here today. They were using publicly available data from the USGS and DWR. What we see—the greatest groundwater decline rates are in the central basins where there is also some mine dewatering. Other things that stand out on this map to me—irrigation dominated basins in Humboldt County, and other localized basins around the State. I want to point out Clark County because—and this is for referencing for another map that I am about to show later on in the series—we see it is relatively stable groundwater levels and moderate decline in Pahrump. I am pointing that out for the reference. The other thing is there are a lot of gray basins on this map, and that indicates insufficient data for this analysis.

This is a second map, which shows potential capture of surface water rights by groundwater pumping. This is important because it is showing where there is the highest likelihood of conflict—potential conflict among water rights. It is important because the surface water typically has the most senior rights. They are also the first rights to be affected by regional drawdown because small changes in water levels can have a big impact on base flow in springs or streams. Again, the darker color is showing where there is the greatest potential for cumulative capture, and we see the greatest potential where the perennial streams are

and where there is a concentration of groundwater rights. Notably, in Western Nevada, along the Humboldt River Corridor and it is tributaries in the south. We see the White River, Pahranagat, the Muddy River, and also Las Vegas Basin shows up on this, which is interesting. What that is representing is predevelopment, there was a lot of perennial spring flow in Las Vegas that has been fully captured.

This is an updated version of the map that I was talking about initially—the old red, white, and blue map. This is showing the ratio of groundwater commitments to perennial yield. Commitments represent all the permitted groundwater rights plus exempt domestic use plus vested and reserved claims. Perennial yield is a basin scale estimate of the groundwater budget, and most of those perennial yield numbers are originated from reconnaissance level analyses that were done between the 1940s and 1970s. This is where alarms can go off because there is a lot of red, and the darker colors are the higher ratio. Red here indicates that commitments are over 350 percent of the perennial yield. So yes, that is a problem, but the magnitude of the problem, and what is being done now to address it, and what the needs are, really depend on the localized condition. The point being that there is a lot more than just perennial yield that needs to be considered.

This map shows actual groundwater pumpage versus perennial yield. The previous one was commitments versus perennial yield, and it paints a much bigger picture. The combination of looking at this different series of maps starts to tell more of a story for any particular area. Some examples that jump out here—Fallon jumps out to me, Las Vegas jumps out to me—and the thing about those is that, compared to the previous maps, we saw that those are places where groundwater levels are really stable. Even though this pumping to perennial yield is way out of whack, what is happening requires a little closer look at what the hydrology of those basins are and what the groundwater management is. For instance, with Fallon that is the terminus of the Carson River, so there is a huge recharge source that is not represented in just the basin scale perennial yield. In Las Vegas, there is a very active groundwater management plan in place, so the impact on the resource is managed.

The last map in this series is showing domestic well usage as a ratio or compared to perennial yield. Domestic wells are always a challenge because they are exempt from requiring a water right permit but are still drawing on the same common water resource. It can be a management challenge, and it is important to consider in this type of a display. Again, Fallon jumps out here, and that is for the same reason that I described before. It is just the ratio. There are a lot of wells there. The perennial yield is really low, so it shows up, but it is not necessarily a problem. There is much more of a concern when it comes to domestic wells with some areas, such as in the north valleys, which you can see on the inset on the bottom left. Silver Springs Valley, Pahrump—those are areas where domestic well issues are most acute.

This final map is a composite of all the other five. Everything is equally weighted, so again, there is no additional interpretation. It is one way to exhibit as a visual tool where there are problems or there are likely to be in the near future. It is meant to be a visual tool. It is a way of communicating the data publicly. As I see it, [this is] kind of a kickoff to closer analysis of what is happening in any particular area. I guess with this one, even though it is unweighted aggregate of all the other data—doing a reality check, it does capture pretty well, realistically, where the biggest issues are around the State.

What these maps really help bring forward is where there is the highest potential for conflicts among water rights and water users, whether that is now or the near future or the long-term. Some closing thoughts here—this is something that all western states are dealing with. It is not a new issue. The question is, "What do we do with this kind of a map

base as a reference point?" I find it helpful for public communication to help us be objective and explain and prioritize what the Agency is doing. I want to close with a couple of these driving objectives for what we are trying to accomplish. To a certain extent, all of these things are part of our regular workflow, but there is also opportunity in here for some cautious adjustments to water law to help achieve these objectives. Reducing committed water rights—we know that there are a lot of basins around the State that have more committed than, in the long-term, will be able to be supported.

There is a number of ways to reduce these commitments. Ideally, it is in a way that is least harmful to the community affected. We are going to be hearing more about water right buybacks coming up, and that is one strategy that makes sense in some areas and can be effective. At a larger scale, it does have some limits. It is not a statewide solution, necessarily, for all of our issues. Protecting the existing rights—this is a foundational principle of water law within the context of priority and water availability. Preventing speculation is important. Water is a public resource. The water right is the right to use the resource when it is available, and when it is in priority. Speculating on the value of a permit is a problem without the actual need to use that water. We also need to encourage water conservation and incentivize conservation and not unintentionally penalize someone for conserving water because of the potential for losing that water right. That is a consideration. These last two points are getting practical, and what really matters to water right holders. We strive to reduce paperwork, streamline our efficiencies, and we are always working on that to some degree. Recently, we did get funding to help advance what we are doing internally, but there is still more to do there. I would be happy to take any questions about that.

Chair Pazina:

We are going to start in the south with Vice Chair Anderson.

Vice Chair Anderson:

I have one question, although the statistic of what the commitments are—350 percent of the yield—is alarming. My question has more to do with "streamline and increase NDWR efficiencies" [on] the last slide. What is the current staffing and openings at this time? I know that has been a problem. The second question on that—what are some possible ways that we, as a legislative body, could help you with those streamlines? Or is that currently being discussed within the Department?

Mr. Sullivan:

Our staffing level is actually pretty good right now; we are at approximately 10 percent vacancy. We are also at capacity within our Office, so we do not have any vacant desks. We have some vacant positions but nowhere for them to sit. We are also working on that, and we have a near-term plan to accommodate everybody. As far as attracting good, qualified employees and retaining employees, we are in a good state. The second question was about ways that we need help with improving efficiencies. There are a number of our processes, and I will get specific. Some of the ways we handle certificates, handle forfeitures, look at beneficial use and consumptive use in water right change applications—there are fairly simple adjustments that we could make but would need, in my view, legislative weigh-in that we could not necessarily do [only] as an administrative process. There are certain things that we do where we follow the letter of the law, and the product is not necessarily as helpful to the public as I think it was intended to be. Generally speaking, those are the areas where I think the Legislature can help.

Vice Chair Anderson:

I am sure you will be working with Chair Pazina on possibly bringing forward some language—or with others—for our next session. That way we can try to make those changes easier, because there has got to be some way that we can streamline some of these things.

Chair Pazina:

We always encourage everyone as we did at the beginning of today's meeting. The Solicitation of Recommendations is available on the website. I believe there was a challenge with the link this morning, but it has been resolved, and we hope we hear from you.

Assemblywoman La Rue Hatch:

I think you have presented several times to this Committee about the recent court case—the need for conjunctive management and updated science. I was alarmed to hear that some of the science upon which we are basing these maps has not been updated in almost a century. I want to know what your Office needs in the way of resources in order to update that baseline science upon which we are making these decisions.

Mr. Sullivan:

That leads perfectly into our next presentation, which is addressing exactly that question. I am glad you brought it up because I see it as an absolute priority for what we do.

Assemblyman DeLong:

A couple of questions, and I am going to reference the groundwater level trend map, which I think is a useful one to talk around. Are these trends a result of pumping of groundwater and consumptively using it?

Mr. Sullivan:

Yes.

Assemblyman DeLong:

As a follow-up on that, you have identified dewatering in a number of basins, which does occur in very discreet locations. Does the State Engineer view dewatering as a consumptive use?

Mr. Sullivan:

Not necessarily. A lot of the dewatering water is reinjected into the aquifers, so it is not consumptive, and that is why we hatch it there on the map to make it clear what is happening. What the map is showing is actual drawdown measured in wells. One of the considerations around dewatering sites is that the data tends to be concentrated around where the drawdown is happening because that is where the monitoring is going on, so it can look skewed. That is explained, as I said in that one, in the one-pager that goes along with the maps.

Assemblyman DeLong:

Is it not a requirement of the dewatering water rights to return that water to the basin?

Mr. Sullivan:

In some cases, yes. Often it is written into the permit terms that an operation is allowed to pump a certain amount but only consume some fraction of that.

Senator Goicoechea:

Your last basin status assessment is very intriguing to me. I assume with this data you have on here you are looking at some basins across the State a little differently now. The other thing that really piques my interest is the basins with shared perennial yield. How did you come up with that? This is the first time I have seen a lot of this actually defined on a map.

Mr. Sullivan:

There are a number of groups of basins where there is an assigned perennial yield and, generally, that goes back to the original studies that were done in that area that either did not break out the basins by each having a specific perennial yield or just did not identify it. The State Engineer at the time used the best available science to estimate what the water budget was for that larger area, so there is no common answer. There are several places around the State where they have a shared perennial yield.

Senator Goicoechea:

As I look at your map though—I see six—there is a dozen of them that now show shared perennial yield, which is interesting and yet, in many cases, it does not even recognize the surface water connections in them. When I look at the long piece from Steptoe Valley down through Lincoln and all that groundwater condition is high, then you are probably not issuing many permits in those areas. Looking at your map—it is very intriguing to me. I assume you are looking at your own data and saying, "Okay. Well, these areas where it is high . . ." You are probably not really interested in seeing any new applications.

Mr. Sullivan:

There are a number of basins around the State. Generally speaking, all those basins where the existing appropriations greatly exceed the perennial yield, there is a State Engineer Order in place that is curtailing any new appropriations within that basin.

Senator Goicoechea:

I did not have time to do the math, but between the dark orange and the red—at least 30 percent of the basins are very high or high.

Assemblyman DeLong:

Just a follow-up on Senator Goicoechea's [comment]. Have you calculated there, you know, "X" number of basins in the State? And looking at the groundwater commitment versus perennial yield map, how many of those are in excess of 100? Have you done the math?

Mr. Sullivan:

Yes, we have those numbers. I can provide the exact numbers if you would like.

Assemblyman DeLong:

I would appreciate that.

Chair Pazina:

That will move us into the next presentation, which brings us to presentation VI.

AGENDA ITEM VI—PRESENTATION ON THE NEVADA WATER INITIATIVE: ADVANCING UNDERSTANDING OF NEVADA'S GROUNDWATER AVAILABILITY

Chair Pazina:

Next, we are going to hear about the NWI, the current status of the initiative, and the work being done toward understanding Nevada's water supply.

Adam Sullivan, Previously Identified:

I am pleased to give this presentation about the NWI (Agenda Item VI). I appreciate the public comments in support of this and Assemblywoman La Rue Hatch's question. It leads well into this. This is an ongoing project. We are about a year and a half into this. I want to give you updates about what is happening, what has broadly been accomplished, what the next steps are, and what needs to be done next. It is a cooperative effort among DRI, the USGS Nevada Water Science Center, and the State Engineer's Office. I will be giving this as an overview presentation. It is not technical. It does represent the work of many others. We have a number of the participants and the technical leads here in the audience. If there are questions in that direction at the end, I will have them come up and join. Also, before I forget, if there is an interest in having more of a technical presentation at some other time, the technical leads would be available and happy to do that.

I am excited about the progress that has been made on this in just a year and a half. I see this effort as one of the most valuable foundational work products that we really need now for long-term water security in Nevada, not only in the efficiency and accuracy in administering water law, but also to help counties with water resource plans to help water right owners protect existing rights, protect the natural environment, and have as much certainty as we can about resource appropriation around the State. In the last session, and before, we heard a lot about, "We need the data. We need the data to be able to do this work." This is it; this is what we are getting out of this project.

To start with, there is some important historical context to be aware of. In the 1930s and the 1940s, Nevada was really at the forefront of groundwater science and incorporating groundwater science into water law. By that time, surface water resources were all spoken for—were all appropriated—well technology was advancing rapidly, and the new water resources were all groundwater sources. At the time, there was a recognition that were resource limited, and we did not have a good way of understanding and quantifying how much water was available for the long-term.

Thankfully, the Legislature funded joint work between the State Engineer, DCNR, the USGS, and the State to embark on what turned out to be pioneering studies in the understanding of groundwater budgets and in arid regions. These were done with a limited amount of data at the reconnaissance level; nevertheless, it was good work, and it was the origin of the perennial yields that we still rely on, at least as a reference point or a real guideline in determining water availability. The authors of these reports, at that time, often talked about the need and necessity for revisiting these studies over time—once pumping has occurred, once we have stressed the aquifer, once we have some data and understand what is going on, that was integral with their thinking at the time. That is where we are at.

This initial investment yielded substantial returns, saving the State significant long-term costs. Even at that reconnaissance level, having that baseline data has helped Nevada to not be in a much more over-appropriated condition than we already are. Some of our neighboring states—specifically, I am thinking about California and Arizona—did not have that kind of a history integrated in how they administered water rights. Consequently, they are talking about billions of dollars to get that back and get their arms around it—and a lot of uncertainty—we are not even close to being in that much of a hole, and in large part, it is due to this work that was done long ago. We do not want to get where they are.

The NWI is a continuation of the work that we need to really address the challenges that we face now and will be increasing in the future. We talked about the map series (Agenda Item V). That is a helpful reference and is showing the current conditions of the resource, but we face escalating economic growth, development pressures, and questions about the reliability of the aging science. These old studies are challenged simply because they are old. That is part of it, but we also know that some of that work was too cursory for our current needs. As a State agency, we are often in a reactive mode to try to catch up to that with a small staff and many conflicting demands. In general, there are concerns about potential overuse of water resources or improper use of this critical resource and concerns that future resource appropriation will be driven by other interests rather than good science and basic principles of water law. We have the capability to get ahead of this now. We need to update the baseline science to meet current and future needs using contemporary data and advanced scientific methods. This is foundational to how groundwater is administered.

In January 2023—a year and a half ago—Nevada authorized $6.4 million in ARPA funds to launch the NWI. It is a collaborative effort with the Nevada Water Science Center and DRI. This work is being done by Nevada-based experts in hydrogeology who have no vested interest in the outcome except for doing good science and doing the right thing for the State. This table on the right shows the breakdown of the current funding. The equally split ARPA funds between DRI and USGS for $6.4 million—both have matched to a certain amount, which has enhanced our capabilities. The total has been $9.2 million for a four-year project. That goes through the end of Calendar Year 2026.

Progress is really fast. This slide sort of talks about what is being done or is currently in progress now. There was a quarterly update meeting just the other day. There are over 20 scientists working on different aspects of this and working together. There is a lot of momentum. There is a lot of synchronicity, and it is exciting to be a part of. These statewide data sets for groundwater discharge, for measuring consumptive use, and historic pumping are well underway. Optimizing the methods to quantify groundwater recharge, to quantify inter-basin flow, are building on the proven methods that have been shown to work in this sort of a setting. We want to learn—take what we have learned and apply it in a consistent manner going forward. We are applying these methods in a couple of demonstration basins to build out a full water budget analysis and demonstrate the utility, and all this work will be published. It is peer reviewed and will be publicly available through bulletins and web-based resources.

The two demonstration basins are these two: in Pine Valley, mostly in Eureka County, also at the headwaters of the Humboldt region; and then Railroad Valley, which is mostly Nye County, at the base of the Quinn Range along the east and has a vast playa in the middle of the Railroad Valley. That is an important area of study. This work all started with extensive public outreach so that people who live there, and hold water rights there, and farm and ranch there know what is going on and are part of it. It has been well received.

The NWII is foundational for what we need for future groundwater administration. There are two primary criteria for reviewing water right applications. Is water available, and would its use conflict with existing rights? These are fundamentally hydrologic questions and also administrative questions. We need good science to make those determinations and support these kinds of needs of the public understanding consumptive use, developing budgets, ensuring water availability for different municipal ag industrial uses, safeguarding future public health, and economic prosperity. It is vital that we have good science.

The next phases of the project are to apply these methods to further priority basins or regional groundwater flow systems. On our part, as the State, making this work applicable to the administrative processes that we need and communicating publicly about what that means and how that works. We have 2.5 more years of funding from the ARPA allocation, which is part way through the next biennium. We, as the State and the Department, are pursuing a couple of opportunities for federal funding going forward, and that is in the works. We also dedicate some of the nondiscretionary funds that the Division has available for DWR's part in the work where it benefits the basins that pay into those funds. As a State, we need to continue to invest in groundwater science, both for efficiency and government services and certainty for resource appropriation. The return on the investment is really high, and I point to work that was done in the 20th century for how much we benefited from that, as an example. The cost of not doing this is debilitating in the long-term because these problems continue to get more difficult.

Some closing thoughts—Nevada is the most water-limited, driest State in the nation. We know there is not enough water to go around to meet all the desires and demands. This puts our Division in a tough spot, and it is getting harder for us to continue to have a high functioning Division and make accurate and defensible decisions about groundwater supply into the future. We need this work to continue. I am excited about what is being done so far, and I really feel that we are heading in the right direction and doing the right thing for the State.

With that, I would be happy to take any questions. If you want more technical details, I can draw on the technical experts that are here today too.

Chair Pazina:

I believe Assemblyman DeLong had one and then Assemblyman Gurr.

Assemblyman DeLong:

I have two quick questions. First, I would like to state I am in complete agreement that this is needed, and it is essential that we get a handle on this issue. My first question—that federal funding you mentioned, is there going to be a required State match to get those federal funds?

Mr. Sullivan:

I do not have a clear answer on that. It depends on how the funding proceeds. In some ways, it goes both ways, like if we have the State funding available, then we are more likely to get federal funding and sometimes vice versa.

Assemblyman DeLong:

My second question is, how are you going to prioritize which basins, as you march through the 200 or whatever? I cannot remember the number of basins. As you go through those, how are you deciding which ones to do first, second, and third, et cetera?

Mr. Sullivan:

It is a part of the ongoing discussion among the people who are working on this. In part, it depends on how the funding looks going forward and what our capacity is, because it is somewhat scalable. The priority basins, or the regions we are looking at, are those where we either have questions about the current estimates that we have, or doubt, or we recognize that the numbers need to be updated. Other considerations are—is there a likelihood of development pressures in the near future? That would be a place that would benefit more than say an area that is fully developed already, and we already have a lot of ongoing work done and groundwater management in place. We are looking at where the work would be most beneficial for the area.

Assemblyman Gurr:

I agree with Assemblyman DeLong. It is a very necessary forward-thinking process. My question is really simple and probably really old. Early in your presentation on this particular item, you alluded that most of the surface water has been adjudicated in the State of Nevada?

Mr. Sullivan:

Yes, all the major surface water sources in the State have been adjudicated.

Assemblyman Gurr:

Some of the minor ones like 036 and 037—have you adjudicated those units yet? There are ranches in there with streams and water rights. I am not sure they really have them, according to State record.

Mr. Sullivan:

It might depend exactly on the source. Sometimes there are claims of vested right on small perennial streams that have not yet been adjudicated, so that could be the case in some places. Those have been appropriated through the permitting process. I do not know exactly what site you are talking about, but oftentimes, this gives me an opportunity to point out that in those places where, say, there is one ranch on a single source, and it has not been adjudicated yet—there is a statutory deadline for filings of claims of vested right by the end of 2026. If you know anyone among your constituency who uses a water right and it has been in continuous use since before water law was enacted and they do not have a claim of vested right, they need to file that claim.

Assemblyman Gurr:

That answers it, but Ruby Valley was one of them that I was aware of too. Most of those ranchers out there, for years, said, "We just use the water. We do not have any vested water right in it according to the State of Nevada." I do not know if that is true or not, but it is a question.

Mr. Sullivan:

That is actually a really good example. Ruby Valley has not been adjudicated, and it is one of the places where—you characterized it well—there is a lot of surface water, especially along that northwest portion of the basin. The adjudication has been initiated. I would not say it has been at the top of our list because of the staff capacity.

Assemblywoman La Rue Hatch:

I think our Northern delegation is all in agreement that this is essential, and I am glad you are presenting this and doing this work. I am going to repeat my earlier question, which is, "What do you need from us for next session?" Are you looking for a continuation of the funding level you got last time? Are you looking for an expansion? What can we do to help you get this done?

Mr. Sullivan:

Like I said, the current funding expires most of the way through the next biennium. As a target, we are looking at $4 million per biennium going forward to continue the work. That could change depending on other funding sources and matching opportunities. It is also somewhat scalable, but that is a good amount. We are more limited by staffing and time than dollars. It is not a lot of money. That can go a really long way. Having some consistency and some reliability in that funding source is really important because what it enables, let us say the USGS, to do is to bring on staff and keep those staff knowing that they will have a reliable source of funding, so we get that continuity and a lot more efficiency in the products.

Senator Goicoechea:

Mr. Sullivan, I really appreciate that. There is no doubt we need to move forward with the NWI. My only question is—and I have been wondering about it since you came up with the demonstration basins—why did we end up there other than we have two basins that combined will not have 1,000 people in them. There is no real growth or demand on them. Why did we not take one on the western side of the State that was witnessing some growth? How are these demonstration basins? Both are predominantly ag. If you take Duckwater out of it, there would not be 50 people in both basins. Why use those as a demonstration?

Mr. Sullivan:

There are a number of reasons, and the group spent a lot of time considering different possibilities, and the examples you brought up were among those options. These basins represent some characteristics that we see in a lot of different places around the State. By doing this work in those areas, it can be transferable to other locations—so hydrogeologic setting. Also, you mentioned there are very few people, but there are also a lot of, I would say, anticipated development demands on those areas, or areas that have similar characteristics. They are also pretty big areas. They have some interesting dynamics with adjacent basins with underlying different bedrock aquifer materials and different kinds of development that was not even conceived of, let us say in the 1950s and 1960s, where we were able to reach different kind of depths in the basin. We are actually seeing impacts at the surface that we do not have good explanations for, so there are a lot of lessons to be learned in those areas and a lot of opportunity. It was not an easy decision to pick what the

demonstrations would be, but that is where the group landed for a variety of different reasons.

Senator Goicoechea:

It sounds like it is way over my pay grade, but I was concerned that we are not dealing with a bunch of domestic wells, which is an issue across a lot of this State. I would have thought a demonstration basin might have incorporated a piece of that with maybe a more ag centered [basin] like Pine Valley or something. The impacts are different from what we are seeing across the State as a whole in those two basins. Again, we need to move forward, and I am not sure what is down there under the ground.

Chair Pazina:

Some of us may reach out at a later time as well if we have any more questions arising from today's presentation. That will close Item VI.

AGENDA ITEM VII—PRESENTATIONS ON OTHER STATES' EXPERIENCE WITH WATER RIGHTS RETIREMENT

Chair Pazina:

That moves us to Item VII on today's agenda—the presentation on other states' experiences with water rights retirement. I would like to thank Senator Goicoechea for bringing legislation last session, which led to a number of the presentations that we have here today, and we appreciate his legacy on water here in Nevada. He will be very missed on this Committee, both during session and during the interim. We have three presentations under this item.

A. REPRESENTATIVES OF THE NATURE CONSERVANCY

Chair Pazina:

First, we will hear from Laurel Saito, the Nevada Water Strategy Director with The Nature Conservancy, who we also enjoyed hearing from during the legislative session.

Laurel Saito, Ph.D., P.E., Director, Nevada Water Strategy, The Nature Conservancy in Nevada:

We thank you for this opportunity to share information about groundwater rights retirement as a potential tool for addressing water sustainability in Nevada. The Nature Conservancy's mission is to conserve the lands and waters on which all life depends, and water resources in our water limited State are a critical aspect of achieving that mission. We analyzed groundwater level trends in over 6,500 wells with sufficient data across the State and found that 39 percent had significantly declining groundwater level trends between 1984 and 2021. We know that impacts of groundwater overuse are already being seen in some places in Nevada. Policy strategies may be helpful for managing and sustaining groundwater dependent ecosystems in Nevada, including having a toolbox of options to resolve conflicts with existing water right holders and detriments to natural resources, to provide flexibility and multiple benefits.

We have shared materials to accompany the presentations on groundwater rights retirement in Colorado and Kansas that we will hear shortly. The first is a memo that was prepared by Debbie Leonard at Leonard Law. That is part of our packet (Agenda

Item VII A), and this addresses the question of whether NRS already has a mechanism by which groundwater rights can be permanently removed from use and rendered unavailable for future appropriation. Ms. Leonard concluded that a statutory change is probably warranted and suggests some language in her memo. We also attached a two-page handout, and I have extra copies if people are interested, that summarizes groundwater rights retirement programs and legislation in other states, including Oregon, Colorado, and Kansas. Today we will hear about groundwater rights retirement programs in Kansas and Colorado.

B. REPRESENTATIVES OF THE KANSAS DEPARTMENT OF AGRICULTURE

Laurel Saito, Previously Identified:

I would like to introduce the next speaker now, and that would be Director Steve Frost who is the Executive Director of the Kansas Department of Agriculture [Division of Conservation]. He has over 17 years of experience with the Department's Division of Conservation and has worked with groundwater retirement programs for over a decade. He has also served as the Department's Water Commissioner and later the General Manager of Groundwater Management, District 3. He is going to share Kansas' experience with groundwater rights retirement.

Steve Frost, Executive Director, Division of Conservation, Kansas Department of Agriculture:

As Laurel indicated, I am the Director of the Kansas Department of Agriculture's Division of Conservation in Manhattan, Kansas. The Division has a number of voluntary financial assistance programs dealing with water quality, soil health, watershed dams, and a number of other water-related conservation projects, including water right retirements. That is the subject that I am here to visit with you about today (Agenda Item VII B). I will move forward and try to be very brief.

Currently, the State of Kansas has two operational water right retirement programs. One is called the Upper Arkansas River Conservation Reserve Enhancement Program, which is a CREP project—a joint effort between the federal and state government with USDA. [There is] also a solely State driven project called Water Transition Assistance Program (WTAP).

I am going to talk about the CREP project first. It is probably the larger one at the moment that that we are working with. The CREP is an enhanced version of the popular Conservation Reserve Program (CRP). It is implemented through a federal and State partnership with the Farm Service Agency (FSA) and the State of Kansas to address specialized resource concerns, specifically, in this case, groundwater depletion. I think there are about five different states now that have this type of groundwater conservation resource concern integrated into a CREP project. In these particular programs, the State partner must provide at least a 20 percent match and 10 percent of that must be in direct cash payments to producers. In this case, the Division of Conservation is the primary project coordinator, and NRCS is the provider of technical services to the FSA and producers that are implementing CREP/CRP contracts under the enrollments. In our case, there are many, many other State agencies; local conservation and groundwater management districts; and NGOs, such as The Nature Conservancy, [which] are contributing to the projects and goals and objectives of the effort.

In every case, it is a voluntary incentive-based program. It allows producers to enroll their eligible irrigated acres. I think these are all specifically concentrated into irrigation-based

groundwater users. We are working with landowners that can enroll in 14 to 15-year contracts with FSA, and in return for the enrollment, at a special FSA irrigated rental rate. These are not the typical kind of dryland rates, but they are very special, enhanced irrigated rental rates. They [also] provide additional cost share opportunities in the enrollment for certain cost share practices, and the State provides an upfront signing payment from the Division of Conservation. In return for that, the producer agrees to provide some type of a conservation cover, which is typically a native grass. It could be a wildlife habitat; there are several options available on those enrolled acres. And then permanently retire the associated State irrigation water rights on that same acreage. This Program has been in effect since 2007, and during that time, we have enrolled 172 water rights totaling over 48,000 acre-feet of annual water right appropriations, retiring water from 215 wells on almost 24,000 acres, which have been enrolled to date.

Here is a picture of the project area that we are working with—kind of a synopsis of where these water right enrollments are occurring. On the left side of the picture of the map is the Colorado-Kansas State Line. It basically involves about 13 counties in the River Corridor that goes all the way to the area around Great Bend, Kansas. We recently added this area here called Rattlesnake Creek, which is the subject of a major water right controversy between the State, landowners, and a USFWS wildlife refuge called Quivira National Wildlife Refuge. We have added that and an attempt to try and deal with some of these groundwater consumption issues with voluntary CREP enrollments in a project like this.

Here is a quick example of how the payment structure works. A person that has a full quarter—160 acres—[which] has an irrigated center pivot on it—that would be about 130 acres. The rental rates that we are seeing in a typical county right now are $174 per acre from FSA. That is about $22,000 per year. Over the 15-year life of the contract that would be $339,000. If they have dryland corners that they have been farming, and they can show that to FSA and their farm records, they can include that—might involve another $19,000-plus. Adding the State incentive signing payment would give the producer an additional $48,000 for about a total of $407,000 altogether for the 15-year enrollment of the acreage plus the permanent retirement of the irrigated water right.

I know this will not make a lot of sense to you, but it is important to recognize—for states that are contemplating a CREP type of a project—the irrigated rental rates from FSA can go up, and they can go down. From a producer's standpoint, they never know exactly from year to year what they might be looking at if they wait. Is this the best time, or would it be better to wait? Our project is based on the history of recent pumping over the last five years of recorded water use. If there is a situation where, for some reason, they are not pumping, they might lose the opportunity to be eligible just based on the fact that they have not. Again, [I] want you to know the rates are variable, and they are based on what are called county National Agricultural Statistics Surveys (NASS)—rates. Our State retains a consultant to help us provide alternative rental rates because the FSA does not always consider other types of income that factor into county rental rates, such as government payments. We are able to significantly raise some of these rates a lot higher than they would be normally proposed by FSA. [It is] something to be aware of if you think you might be moving forward.

On the financial part of how this project works, we had 140 approved contracts that represent about $1.8 million of those direct payments by the State of Kansas to the producers. Those are the State's sign-up incentive payments. To meet the match requirements for the federal government—in the program, there has been about $17 million of both direct and indirect expenditures and other in-kind costs from state, local, private

partners in support of the project to match an estimated total of, to date, $56 million in federal costs. That is basically the payments to producers for the annual CRP payments.

I am going to move quickly to our other program in Kansas, which is the State driven one—WTAP. It is also a voluntary incentive-based conservation program designed to manage aquifers and streams that are in critical need of restoration by compensating landowners for the permanent retirement of irrigation water rights. There are only a few targeted areas around the State. It is not available on a statewide basis either. What is a little different about this State driven one is that, in this case, the cost share grants can be provided for partial water rights. It does not require the entirety of the water right to be retired, which is attractive. We found that people have not utilized it very much yet, but there is certainly a lot of potential that they could reduce some of their allocation and then go with limited irrigation. Another thing that is really important to people here is that dryland farming is permitted after the retirements because, in contrast to the CREP Program where it is a CRP program requiring a conservation cover, this one does not. Naturally, you would not be limited to [only] raising grass. You could go on with dryland farming of some other type of row crops or whatever the soil and the precipitation circumstances will allow. I know that is going to be different from state to state.

The way that it works—in contrast to the CREP Project where it is a continuous enrollment—if you meet the eligibility requirements, you can get in, and this one, we have a couple of enrollment periods each year, usually one in the fall and then any bids or applications that we get are ranked on the basis of competitive bids on which the landowner would be willing to accept in terms of a dollar per acre-foot of the historic consumptive use and how much they would be willing to accept if their application is approved. Then we will rank those based on the impact to the local water system that we are trying to protect and evaluate those among all of the competing bid proposals and see exactly how much that would cost and which ones would provide the greatest consumptive use reductions to the target area. We have established a maximum eligible bid rate in each of the target areas, which range in some cases from $2,750 to $4,000 per acre-foot of historic consumptive water use. There are a few stipulations, of course, that the water rights must be in good standing, that they have not been abandoned, that they have not had any penalties on their water use, or other types of things as far as noncompliance. We watch that very closely.

Here is an example of the one particular target area that we are working in right now. It is based on a couple of small municipalities in far Western Kansas, very close to the Colorado border. The idea here is that we are trying to protect the municipal water supplies, which are suffering a lot of depletion effects from the nearby irrigation all around these towns. The towns are not pumping that much water, but the irrigators around them are, and historically, the water tables have dropped so much that it is endangering these public water supplies. We have been concentrating some of the enrollments these last few years around these particular areas, and we are getting a lot of response. I think it is doing a nice job of focusing the effort into a small area where we can see some benefit.

Here is a little summary of what we have experienced so far. This Program has also been operating since 2007. There has not been funding from the Legislature each and every year, but for the about ten years that we did have good funding, we retired about 5,750 irrigated acres and 34 irrigation water rights; and 2,700 acre-feet of historic consumptive water use has been retired, which represents about 8,000 acre-feet of the approvable or permitted water appropriation rights. The average cost, to date—and things started out a lot lower, so this average is to be taken in with a little bit of background—is $1,413 per acre-foot of that historic consumptive water use. It is not the same as the face value of the water right. You have to think about that too. So far, we have invested about $3.9 million in State funds in

this Program. There is an opportunity to get match from federal, local, or other NGO dollars. So far, we have seen a match of different sources of about $1 million dollars, which has contributed to the producer incentive to go ahead and make an enrollment, or possibly not. Sometimes it can get them right over the edge with those other sources of income.

Here are a couple of things I wanted to point out in our brief time together if you are contemplating something like this. You may have experience from other states that indicate differently, but in our experience, the geographic area of the water retirements must be very targeted to be effective. You might remember the map I showed you of the Upper Arkansas River CREP. It is a 13-county area that covers millions of acres, and even though it may look like there is a lot of enrollment there for the amount of geographic area that is considered, that is really a drop in the bucket as far as the impact it is having there. The more focused it can become, the more effective and cost effective the Project stands to be.

As I pointed out here, the opportunity to continue farming dryland after an irrigation water right retirement is a big factor for landowners. If you are in a state where it is so arid or that the soils are so difficult that they cannot be farmed without irrigation anyway, it is not really a factor. We certainly have a lot of that here in Kansas right along the Arkansas River. But CREP does limit the opportunity to dryland farm for 15 years after the water right is retired. That is a factor that people are really considering. The State of Colorado recently came out with a dryland farming practice under CRP, which seems like an oxymoron, but Kansas is trying to duplicate that as well. We are working with the national office and FSA to try and get that done. If we can, that is certainly going to enhance the interest, the participation, and enrollment.

Comparing the two programs, CREP is much more State agency cost effective.
Ninety percent of the costs are paid by the federal government, but it does come with other program bureaucracy and federal complications. The State driven program that we have is, relatively, very expensive. I think that is why sometimes the Legislature has not had the funding to finance it; in other years they have. Overall, the CREP Program, if you can accommodate your needs with that, is certainly a lot more cost effective from the State point of view.

I will pause and answer any particular questions that you might have.

Chair Pazina:

I appreciate the update. For the first question, I am going to hand it over to our Vice Chair.

Vice Chair Anderson:

My first question—I have two—comes from slide 10 when you went through all the different contracts that were approved and the onetime State sign up incentives and everything else that that happened with that. I am wondering about the timeline. Was it, "Hey, we are going to jump all in," or did you do it a little bit by little bit? Was there, kind of like, "What happened with us" with maybe a smaller group, and then you learned from that? Or was it, "We are just going to let this evolve organically." How, how did the process grow over that time frame?

Director Frost:

Are you referring to the State Program or the federal Program?

Vice Chair Anderson:

The State Program, in particular, because I am sure there were many times that there was a partnership with the federal program. But in this case, I am interested in the State program and how it grew.

Director Frost:

It has been a work in progress as far as the development of that State-driven program. It initially started out with two target areas identified by the Legislature in the authorizing statute, and those were two areas that were a compelling interest to the State of Kansas. One was this federal wildlife refuge called Quivira near Stafford, Kansas. The other one was with the Republican River Compact in the State of Nebraska. It started off that way. We really did not get very much participation in either of those areas for cultural, social values that people were hanging onto with regard to their water rights. People religiously hang on to these water rights for different reasons. It evolved and grew from there. There were other target areas that were established by groundwater management districts that had very good management plans that they were able to utilize this in conjunction—like one tool in the toolbox, as Laurel mentioned. From there, it was several years later that we adopted this latest version of the target area around the municipalities, and that has been working quite well.

Vice Chair Anderson:

So, this is not a, "Hey, we are just going to jump in and solve everything." That is good to hear. The second question is based upon information that came from slide 12 when you spoke of the grants that are ranked, and you went into it a little bit. I am thinking about this presentation as well as the prior presentations where we had the map of the historical levels and everything. Is this the historical consumption water use based on data from the prior year or from the prior ten years? I am a little confused about how that historic consumption water use time frame would be utilized, or how it would be used with the competitive grant process, and who is involved in making that decision. Was it only one office staff member, or were there also elected officials involved in the competitive process?

Director Frost:

On the first count, "historic consumptive water use" is sort of a term in hydrology and those kinds of things. I know that your Chief Engineer would be very familiar with it. As far as this particular program, there can be variations of how historic consumptive water use is analyzed or evaluated. In this case, the Legislature, based on the advice of our Chief Engineer, put formulas in the statute that gave guidance to people that were enrolling or applying that described exactly how the consumptive use was to be calculated. It gave them various options for doing that, including getting their own engineering analysis and things like that. In this case, the historic consumptive use went back to the last ten years of water use; that was water being used on record. That is kind of the benchmark there.

As far as the other question about who is deciding, it is our Office—the Division of Conservation—that provides the application process and the gathering of all the information and all the quote forms. Then we ask a groundwater management district in the area of the target, or the enrollment, to provide a recommendation from their board of directors. They go through their own kind of evaluation ranking and decision-making process and provide those recommendations to us. From there, it is back to the Kansas Department of Agriculture's Secretary and the Director of my Office who make the final determination. It has a review process that is not [only] in one person's hands. These are high dollar

contracts—funding agreements for the State—so it is important that it has very good vetting.

Vice Chair Anderson:

It sounds like it is a very strong process that has evolved over time. You alluded to this in the first answer and also during the second question. It brought up another question. Yes, I understand about the water consumption use. That is the most important thing, obviously, as to why we have the water. We also have to be aware of other areas of our society—and cultural. For example, you brought up the tribal communities, and how there is a possibility of a cultural connection. Is that ever considered with how it would impact other communities if these water rights were to be retired? Has that ever been part of the questions or consideration?

Director Frost:

I do not believe it is probably given as much consideration as it deserves. The kind of cultural reservation that I was speaking of had to do with landowners in these particular target areas that were afraid the State was coming in to do something to them like, "They are taking our water rights away." For a family that has had water rights for hundreds of years—or 100 years or more—it is like, "Grandpa said never sell the water rights." That kind of thing resonates through generations. It is something they do not let go of very easily. The circumstance of people that are reserved or suspicious of what this is really about, and the fact that it is actually voluntary, and incentive based—they kind of get over that. Once you can explain it, they understand it. If they see their neighbor do it, then of course, that makes a difference. That is what I was talking about. There were actually these groups that held fast together as a neighborhood and said, "No, absolutely do not. We have got to hang together on this and do not offer any water rights. If the State is going to try to take our water rights away, we will get together and fight them," so to speak. That was not the intent of that at all. If it is misinterpreted, that is something to work on. We have worked on that too. Again, some of those things are cultural standings that are part of the process. It is part of the water right atmosphere that we deal in with these hydrology situations sometimes.

Senator Goicoechea:

Listening to your conversation, your water tables are still declining then across the State. You were talking about the municipality that was running out of water because of pumping in their proximity. Are your water tables still declining across the State?

Director Frost:

Yes, they are. In many areas of the State, in both of these project areas, we have declining water tables. In part of the project area, for example, the CREP project area that we just added, the water tables are a little different. They are not as declining. They are a little bit more moderate, and that is where we are not really seeing the participation desire to have any retirements because as far as the irrigators or the landowners are concerned, they are okay. They are not seeing the water table fall out from under them, so they do not have a lot of financial motivation to enroll. They would rather continue irrigating at the economic rates. They can be productive. It is the water right enforcement or administration issue that is staring them in the face, and sooner or later, that might be a factor in giving them more incentive, or disincentive, to enroll. But at the current time, stable water tables do not mean as much as declining ones in these types of enrollments or projects.

Senator Goicoechea:

You were talking consumptive use. Are all your wells metered there? Do you have water meters on it?

Director Frost:

Yes. All of the wells except domestic wells in Kansas are required to have totalizing flow meters.

Senator Goicoechea:

Then I assume, looking at your numbers, your duty is about two acre-feet per acre?

Director Frost:

Yes. That is correct. Most of western Kansas is two acre-feet per acre. Central Kansas is about 1.5 acre-feet per acre.

Senator Goicoechea:

That is a ways from our 3.5 and 4 to 5 [acre-feet], so that is the problem we run into here. It is mostly 4 acre-feet. In the south, 5 acre-feet, so significantly more water, and drylanding is not really an option.

Chair Pazina:

Are there any further questions for Director Frost? [There were none.]

We are going to close Item VII B and move into Item VII C where we will welcome Colorado State Senator Cleve Simpson and learn more about his experience in Colorado.

C. COLORADO STATE SENATOR CLEAVE SIMPSON

Chair Pazina:

Moving from Kansas to Colorado, we are going to learn about the experience there retiring groundwater withdrawals.

Laurel Saito, Previously Identified:

I am going to introduce Senator Simpson. Senator Cleave Simpson is from Colorado, and we will share experiences with groundwater rights retirement in the San Luis Valley in Colorado. Senator Simpson is a State Senator for Colorado, but he is also the General Manager of the Rio Grande Water Conservation District, and he is a fourth generation San Luis Valley farmer and rancher with a deep understanding of the water issues facing Colorado's agriculture and rural communities.

Cleave Simpson, Colorado State Senator; General Manager, Rio Grande Water Conservation District; and Farmer/Rancher, San Luis Valley:

It is a pleasure to be with you all today. We finished our session Wednesday night, so wrapped up, jumped on a plane yesterday, and welcome the opportunity to be here with you all today, and welcome any opportunity to talk about water and particularly

groundwater. Again, as Laurel pointed out, I am a farmer and rancher. I utilize surface water out of the Rio Grande, and I pump groundwater as well.

For perspective, Colorado manages groundwater differently all around the State. I am going to talk specifically about how we manage groundwater in Division 3 of Colorado, which is the Rio Grande Basin (Agenda Item VII C) [Due to copyright issues, the handout is on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827 or https://www.leg.state.nv.us/Division/Research/About/Contact.]

We are the headwaters of the Rio Grande within Colorado. You can see on the map, it is kind of central Colorado, borders New Mexico. And even within the Basin itself, I will talk specifically about groundwater management in the north half of the Basin, which is a unique geologic, hydrologic basin in that it is characterized as a closed basin. The surface water and the groundwater there is generally—you cannot say exactly—nontributary to the Rio Grande River itself. At times, under the right conditions, there is some connectivity between the groundwater and the surface water in the Rio Grande. It does function as its own independent closed basin.

Within that Basin, the shaded area represents what we—the Rio Grande Water Conservation District—have been studying on a monthly basis since 1976. The District has had an employee, every month since January of 1976, go out and measure the depth of groundwater. We use some modern technology as well. The shaded area represents a shallower, unconfined, closed basin aquifer system that responds really well—is very manageable—to either less pumping and/or recharge. We do managed recharge here where we divert water out of the Rio Grande, and under a decree, we recharge it into the aquifer system. It is a matter of diverting it into recharge ponds, and within 24 hours, it will be in the aquifer. We have been studying this aquifer system, again, since January of 1976, and the shaded area up there represents the study area of that portion of the closed basin and the unconfined aquifer. You can get really into the weeds here and talk about underlying this shallow, unconfined aquifer is a deeper confined aquifer, which is actually what I rely on for my farm and my wells. This effort around reducing our dependence on groundwater started in this part of the San Luis Valley and this unconfined aquifer system.

Again, we have been studying and managing, calculating the change in this aquifer every month since 1976. We commissioned a local engineering firm to help us with the analysis and the calculation. We—the District—have never attempted to try to quantify the volume of water in this unconfined aquifer. We have simply said, "Alright, in 1976, let us establish this as a baseline as zero. And then monthly, we will measure the depth of water of 29 wells and calculate what the change in the storage of that aquifer system was like." You can see from 1976, the blue line is the monthly measurements. The dashed red line is the five-year running average of the change. You can see in the graph, from 1976 up until 2002, we were pretty steady. We had some gains and some losses. 2002 was the worst drought in our recorded history. For perspective, the Rio Grande, where we gauge the flow as it enters the Valley, is the second oldest continuously gauged river in Colorado. We have records of the flow there since 1890. On average, historically, the Rio Grande would deliver flow at the Del North Gauge, somewhere around 700 to 800,000 acre-feet a year—long-term average. In 2002, we actually had less than 200,000 acre-feet. It was like 135,000 acre-feet of flow at Del North. That is the scale of the impact of the drought of 2002.

This graph represents some natural inflow into the aquifer system, but largely, this is a managed recharge system where we have senior water rights that divert out of the Rio Grande, flow into the system, and recharge the aquifer. 2002 was really a bit of an eye

opener for us. You can see the precipitous decline in the aquifer. The community watched that over the next two years to go, "We have to choose a different path of how we manage this aquifer system." We actually went to the Colorado General Assembly in 2004 and asked for, and directed the State Engineer to, craft rules and regulations for creating and maintaining a sustainable aquifer system in Division 3, in particular. That was pretty uncharacteristic and unique to ask the State to administer water rights because we are at the risk of pumping the system to the bottom. Because it is a shallow, unconfined aquifer system, you could not deepen your well and go farther and find more water.

Really unique to Colorado and the western United States at the time—in 2004—was this directive to create and maintain sustainable aquifer systems in the San Luis Valley. As you can imagine, it took the State Engineer a long time to get to that point to develop rules and regs. In actuality, the rules and regs were only promulgated in 2015. They had a trial in 2018. The judge ruled in 2019. The rules became effective in 2021, so we have only had these rules since 2021.

But the community said, "We are not going to wait for the rules and regs." We undertook our own effort and got statutory authority to create a Subdistrict of the Rio Grande Water Conservation District, and it is largely that shaded area where we were studying the change in the unconfined aquifer. We went to court and said, "We are going to create a Subdistrict, and we are going to manage this system independent of wherever the State ends up in these rules and regs. We cannot wait that long. We need to start now." The Subdistrict came together, was formed, went to court, has a decree that became effective our first year of operation of this Subdistrict, and a groundwater management plan was in 2012. We filed in court, originally in 2009, and you can imagine trying to go through this effort—couple of trips to the Colorado Supreme Court. 2012 is when we were finally operational, so we have been managing this effort to create and maintain a sustainable aquifer since 2012.

A little over that ten-year period, that Subdistrict—which was the geographic footprint of about 246,000 acres—within that, the Subdistrict is really comprised of people that have irrigated land with groundwater. Keep in mind, some of that groundwater is surface water that we have recharged into the ground and can pump out. It gets complicated. The scale of what we are trying to manage was, when we started, about 176,000 groundwater irrigated acres that comprise this Subdistrict 1. They agreed to assess themselves fees to raise money, to advance their plan and their program to create and maintain a sustainable aquifer. For perspective, I can tell you after a little more than ten years, they have assessed themselves in excess of $70 million over that ten-year period. They have used it. I will describe the efforts that we have gone through to create and maintain a sustainable aquifer system. They started managing this kind of forcibly, when there was no water, and it was dominated by center pivot sprinkler systems. Producers could not irrigate 130 acres in their pivot anymore. They had to start doing half circles and quarter circles because you could not legally deepen your well. They are managing this very limited resource through reducing their size.

When the Subdistrict first started and was assessing and collecting fees in 2012, they started a fallow program and said, "We will collect money and we will pay producers—if you are willing to participate—fallow for a year at $200 an acre. We will pay you to fallow for a year. This is all in an effort, as Mr. Foster was also talking about—we were in the process of establishing our CREP Program, which again, it is a collaborative effort with the state, local, and FSA. It took a little bit of effort to get that stood up and going. It really was not in place until 2015. So, 2012 to 2015, the subdistricts were trying to figure out, "What can we do to improve the condition of the aquifer, and it was this temporary fallow program, but it was not without it is own controversy. Are you paying folks to fallow? They might not have water

anyway. It was pretty challenging to think about, "How are we going to construct this?" The plan we built stood up in court, and we are operating on a court decree now—before there were rules and regs.

Let me take a step backwards in the graph you are looking at. The decree that the court issued—that we asked for—said we would move that dashed red line from where it is now to within at least -400,000 acre-feet of that zero baseline. You can see how challenged we are from the time we started to where we are at today of trying to resolve this problem. The intention was, when we started this—our plan—and our engineers said, "Alright, if you have 170,000 irrigated acres in your Subdistrict, if you could retire 40,000 acres, given the hydrology and the climate for the previous 20 years, the problem gets solved." We were going to solve that through this CREP Program. We would get enough producers given commodity prices at the time—getting paid $200 an acre to enroll in a 15-year program to retire groundwater withdrawals. You would solve this problem. You would move the dash red line from where it was in 2012 to where we needed to be by the court order, at the very least, to -400,000 acre-feet.

A couple of problems—the next 20 years looked nothing like the prior 20 years. The 20 driest years—in 1,200 or 1,400 years—was a problem. Dealing in the CREP Program—look, farmers do not get into farming to not farm. Trying to incentivize them to participate in a CREP Program was difficult. Sometimes the bureaucracy in the federal government and the CREP made it hard. I can tell you, to date, we only have about 10,000 acres enrolled in CREP.

We have done other programs outside of CREP, and I will characterize it. We went from pumping over 300,000 acre-feet a year in this Subdistrict in 2011 to last year—206,000 acre-feet. We cut pumping by a third. Problem is, Mother Nature and what the prior 20 years looked like. This 20 years of the driest period in 1,500 years has put us in a predicament because you can see we have made massive efforts in reducing our groundwater withdrawals, but we are not making the progress that we have to make. It is really driven around Mother Nature; so we have done fallowing programs. The District has purchased farms and retired groundwater rights intentionally. I am going to say we do not retire them. We actually put them into a conservation program to enhance and improve the aquifer conditions. We do not retire rights. We hang on to them, but they are part of a conservation program.

We did our CREP Program; we got it established in 2015. The Subdistrict was incentivizing producers—"Please enroll in CREP." Every year for four or five years, the Board that manages the Subdistrict was increasing the incentives and trying to get people to produce. It got to the point where producers would say, "Well, I am not going to sign up this year because you are going to improve the incentives next year." We finally got to the point that we are going to stop incentivizing and go back to the basic program because we had other programs we were working on.

So, we bought property, we have our CREP, we went to multi-year fallow programs where we get producers to sign up, not just one year at a time, but four years at a time. But that was temporary. Three years ago, the Subdistrict—every year—set aside $5 million and did a reverse bid and said, "Producer, we do not want to buy your whole farm. If you are willing to sell us your groundwater right—your well—tell us what you want for your well." We did a reverse bid, and we had $5 million. Staff went through and prioritized. We had very reasonable offers and very unreasonable offers, and we funded what we could. We have done that every year for the last three years.

Uniquely—I think Mr. Foster touched on this as well—as part of the General Assembly three years ago, when ARPA dollars were flowing into the State and the Legislature set aside $800 million for legislators to make a request for appropriation—myself and other legislators teamed up. I asked for $100 million of ARPA funding to help the Rio Grande Basin, and there was another basin in northeast Colorado called the Republican River Basin; both are tasked with reducing their groundwater withdrawals. Ours in the Rio Grande Basin is statutorily required. The Republican River is compact driven on the Republican River and Nebraska to reduce groundwater withdrawals. We ended up with $60 million. We split it. Each of us had $30 million.

We are on the cusp, in the next month or two, we will finish distributing, or at least having commitments, for all of the $30 million in the Rio Grande Basin; and we structured that one. I told my Board, "Actually, getting the funding ended up being the easy part. That bill went through interim committees like this, committees of reference, appropriations, and on the floor in the Senate and the House, and it went through the whole process without a 'no' vote anywhere in the process. It was well received. We got the money and then [we were] trying to figure out, 'How are you going to spend $30 million?'" We ended up setting a price; the Board said, "We will pay you $3,000 an acre-foot for every acre-foot not of consumptive use, but of what you have pumped over a ten-year period—your five highest years averaged out." They did not beat the doors down to come do this. We had to run the program three times to get enough participation, but we now have commitments to spend all $30 million and buy those groundwater withdrawal water rights and have them participate in a conservation program.

Lastly, and very unique, was an effort started a few years ago with a conversation I was having with the land trust community. I said, "You have an amazing business model and great success in conservation easements in the San Luis Valley and all across Colorado where you are preserving land values that are really important to you—habitat, any number of really important issues." I said, "Help me figure out—would a healthy aquifer system really contribute to the values you are paying for that people are signing easements up into?" Over the course of a couple of years, we finally did get to the point where a particular land trust—Colorado Open Lands—took the lead in this conversation and crafted the first of its kind ever, we think, in the United States, certainly in Colorado—a conservation easement that included a reduction of groundwater withdrawals that was recognized as a conservation value. It was an amazing process to go through, and a wonderful tool that I know my producers are interested in.

It got confusing and convoluted when we had $30 million now in our pocket to go out, and we set the price for the value of water. That made this whole conservation effort a little more troubling and challenging because, prior to that, you could take, "Here is the market value of your farm. If you agree to suspend the groundwater withdrawals, here is the market value." The difference is the conservation value, and in Colorado, you get 90 percent of that conservation value as a State income-tax credit, and it is fully refundable. For me, as a farmer, I do not need that State income tax credit because I do not pay that much in State income tax. I always said, "John Elway, he needs a State income tax credit, so I can sell it to him." It is fully marketable, and it is pretty attractive. We set the stage to use these conservation easements as a really amazing tool, and then the federal dollars and the ARPA complicated it. The appraisers have stepped aside and said, "We do not know what the real value of your property is now," because temporarily for this period, we have established a market value of water of $3,000 an acre-foot. But I do think it is a tool, that $3,000 an acre-foot will be temporary. It will go away, and we will be back to what is the value of land and the water minus this infusion of $30 million of capital.

We have used those tools over the last several years, again, to reduce our dependence on groundwater withdrawals. I would say we have been hugely successful in reducing our dependence on groundwater. We have been struggling to achieve what we have to achieve by our decree. We have to reverse this trend and raise that dashed red line. The decree said we had 20 years to do it. We are ten years into it, so we are actually back in court now, changing the plan to figure out a different approach to this.

All in all, managing reduction in groundwater withdrawals is a difficult, nuanced conversation—thinking about impacts to communities, thinking about land use. We are taking land that has been in production for 100 years and trying to take it out of production and returning it to its native vegetative cover. We do not have great experience in doing that. I live in a community that is exclusively dependent on agriculture. To take land out of production is hard, but we are also at the risk if we do not figure this [out]. I have said agriculture in the San Luis Valley is going to change. If we are thoughtful and calculated about it, it will change incrementally. If we are not, you run the risk of the State Engineer coming in. If we do not live up to our decree, he is going to turn off groundwater withdrawals for 170,000 irrigated acres. That would destroy our economy and our community, so [we are] trying to be very thoughtful and engaged in incremental change.

This is a tough road to hoe. If Nevada is thinking about this, come spend a little time with me in the San Luis Valley and/or Kansas, because it has been an amazing conversation over the years engaged with the community. We keep infusing money, and we have put $70 million of our own dollars into it—$30 million of federal dollars through ARPA cost share with the CREP Program. Again, you can see where we are at because Mother Nature has been really hard on us. I appreciate the time and the opportunity to be here with you all today. I am happy to answer questions.

Chair Pazina:

Senator Goicoechea, I would be surprised if you did not have a question.

Senator Goicoechea:

Even though we are much younger than you are in Colorado, and in your area, it is identical [to] what we are looking at. Clearly the drought scenario—we go clear back to 1983 since we had a really good year, and we have had some little bumps along the way. How many divisions do you have in Colorado? How is your State broken [up]?

Senator Simpson:

We have seven different divisions, largely by the seven major water systems in the State. There are seven of them. The Rio Grande is 3.

Senator Goicoechea:

That might be interesting to look at for Nevada because we are not quite as bad as Colorado where you have the west slope and the east slope. Now, your duty there, is it three acre-feet? In Nevada, we have a four acre-foot duty. That is four acre-feet per acre on a groundwater right. I assume you have something. Are your wells metered, and [do] you know how much you pump?

Senator Simpson:

It varies across the State. I will speak to Division 3. We generally use a rule of thumb of two acre-foot per acre, and that is largely because we only have about a 90-day growing season. There is no dryland opportunity for us either, and you are subject to a killing frost every month of the year. We have had July killing frost before. And it is crop dependent; my alfalfa that I grow will be between two and three acre-feet. Some small grains—and that is part of the conversation—is trying to find different crops to grow that are less consumptive. I raised hemp for fiber a few years ago, and I raised it on half of the water as my alfalfa crop. We have been metered since 2007, Senator.

Senator Goicoechea:

It sounds a lot like Northern Nevada. We get a frost every year, and our duty is about four acre-feet because we are so dry. It takes at least 30 inches to raise an alfalfa crop. We have some tools very similar to what you are bringing into place. The State Engineer can declare a basin a critical management area (CMA), which would be very similar to what you have in the court decree. You have ten years, and then at that point, if you do not bring it into compliance and you face curtailment—very similar—you come up with a groundwater management plan, see if you can reduce it, and get back in line. You guys are ahead of us a little bit. We are a little younger in our ag. We are definitely looking at the same thing. In your District there—we have basins very similar—100,000 acres of ag that is looking at a curtailment of 40 or 50,000 acres in that Basin. Half of it will go away if we have to bring it back into balance. I definitely look forward to talking to you again. You seem to have the ability in Colorado to retire a water right. You can buy it and then it is retired, and it is not available anymore. Is that correct?

Senator Simpson:

It can be rather nuanced conversation within Division 3 in the Rio Grande Basin. It has been affirmed by the Colorado Supreme Court [that] there is no unappropriated water left in the Basin. We have to be very careful about either abandoning or retiring a water right because, potentially, you open that up and somebody could try to make the case that because you were using it and now you have abandoned it, it is available or retired—it is available for adjudication again. It gets very nuanced. Nobody could make that claim inside the unconfined aquifer in the closed basin because we are operating under a court decree that says you are going to recover this water level from where it is today to within 400,000 acre-feet. Nobody could make a claim in that Basin that there was any water available. We have been very sensitive about not characterizing water as retired or abandoned. It just changes to a part of an aquifer conservation program.

Senator Goicoechea:

These are questions we are struggling with right now as well.

Assemblyman DeLong:

I have a couple of questions. Placing these water rights into a conservation agreement means they are not pumping, so the State water law then does not penalize that water right for not putting water to beneficial use? In Nevada, you have to put it to beneficial use, or it is subject to being lost.

Senator Simpson:

We have similar laws, but we also have statute that says if you are participating in a conservation program, particularly one sponsored by a water conservation district like mine—there are only four water conservation districts in the State of Colorado. There are a number of conservancy districts, but there is specific statute about [it]. Most of the water rights that we are acquiring have no intention of ever going back into production. So there is no historical consumptive use analysis and use period that, at least at this stage of the game, would be terribly problematic. So again, we are taking those water rights. We are buying them, and then we are saying they are part of this effort to conserve and create a healthier aquifer system versus somebody individually. To your point though, if we are paying somebody through a temporary fallow program, because we have sponsored that, they are not penalized for nonuse in those periods.

Assemblyman DeLong:

Another question about Colorado Water law—does Colorado water law allow for water rights based on different aquifers within the Basin? Your water rights [are] tied to, in your case, the unconfined aquifer, but there could be another water right that is for the deeper aquifer tied specifically to those.

Senator Simpson:

Yes, it does. The wells I have are decreed for use to pull from a confined aquifer—from a different layer. In our Basin, it is really split between an unconfined and a confined. It gets nuanced and complicated. You can have dually completed wells that are pulling water from both of those. But largely, it does recognize a water right from either the unconfined aquifer or the deeper confined aquifer.

Chair Pazina:

[Chair Pazina asked if there were further questions. There were none.]

AGENDA ITEM VIII—PRESENTATION ON THE NEVADA WATER CONSERVATION AND INFRASTRUCTURE INITIATIVE AND THE GROUNDWATER RIGHTS RETIREMENT PROGRAM

Chair Pazina:

We are going to move to Item VIII—the presentation on the NWCII and the Water Rights Retirement Program. Returning to our local landscape. Our next presentation will be from DCNR Director James Settelmeyer on the NWCII as well as the Water Rights Retirement Program.

James A. Settelmeyer, Director, DCNR:

I greatly appreciate the opportunity to make this presentation here today (Agenda Item VIII). We would like to give a presentation on the NWCII and the Water Right Retirement Program. [The NWCII] was authorized, as you know, by the Interim Finance Committee (IFC) on October 20, 2022. The concept was designed to support the investments to reduce water demand by residential, commercial, and agricultural sectors while supporting the investments to repair and replace aging, leaking, infrastructure and simultaneously investing in our workforce. There are key programs that are listed right there. It is important to realize that we are the driest state in the nation. As we proceeded

on this, we really tried to look first at safety and conservation in these aspects, and I am not going to read through everything because I know our time is short and you probably want to have fun questions with me. I acknowledge that.

Onto the next slide about the administration of it. The first thing that we looked at within DCNR, as the administrator of this, was wanting to get a large stakeholder group together. We wanted to make sure we involved all aspects that wanted to be involved and, more importantly, get their support and try to look for the pitfalls and the unintended consequences that may occur. We looked at other states and what they did [to] try to learn from those potential successes and mistakes. We created the TAC—the Technical Advisory Committee—which, as you can see, their advice and support was instrumental. We had the Central Nevada Water Authority (CNWA), Southern Nevada Water Authority (SNWA), and Truckee Meadows Water Authority (TMWA). We wanted to make sure we had conservation issues represented as well from The Nature Conservancy. We wanted the counties to be involved—Department of Agriculture, Economic Development—we do not have a person on that now because that person left—and of course, DRI.

Within that, the Program budget was $100 million, overall, of ARPA funds. There was discussion of how much we put forward to the concept of a water right program for purchases. As we looked at it, [as] it started out, we were like, "Well, maybe five," and as we had more discussions with the TAC, we realized we wanted to put more to this effort because we saw the value of it. Unanimously, we all voted to go for $25 million of it. Now within that, that left $75 million in the other bucket. But in total, there is five that can be allotted for administrative cost. We thought we could do that for about 2 percent because we wanted to see more actual projects done than potentially creating more bureaucracy. I was very grateful to do that. The $75 million is for drinking water, wastewater, and stormwater projects. The other 25, per se, is the Groundwater Retirement Program and the administrative cost.

Enhancing the drinking water, wastewater, and stormwater systems—that follows a lot of what is called the State Revolving Fund (SRF) rules and protocols. They must qualify under the U.S. Environmental Protection Agency (EPA) Drinking Water SRF, the Clean Water SRF, and the Treasury rules. I find that interesting because those rules have changed and evolved through this process at least three or four times. And who knows, I would suspect they will probably change a little more as we go along. Some of the things that we did in order to use the funds correctly, based on Treasury rules—we are now being told, "Well, why do you do that?" And "There is no reason to do that." Well, the rules three months ago said we had to, so some of that has occurred. You can look at the eligible projects that are within here for the SRF, mainly those we are dealing with, again, drinking water and safe water standards.

If you go to the next graph, you can see that what we awarded—almost $73 million there was $606 million of request. Part of that comes from the simple fact that the SRF, if you look at its request, they had $1 billion in clean water projects and another $1 billion in drinking water projects. You cannot [only] add those two numbers together though because, pretty much across the board, all drinking water projects are clean water projects, but not all clean water projects are drinking water. Those numbers cannot be completely combined, but it demonstrates the need in our State. And part of that need, unfortunately, has been created by the federal government. They have a series of funds they put to state revolving programs to try to deal with drinking water. However, congressional action has dictated—that money has to come from somewhere. So, when certain people get an earmark, that money comes out of the overall money that goes to the SRFs. The State of Nevada in recent years has seen anywhere from a 30 to 40 percent decrease in funds from

the feds to try to deal with these programs, and those issues are not going away. These communities—we are very grateful to try to find a source of money to help them in that endeavor.

The next slide goes through the different programs. It was interesting that when the discussion began with the TAC, all of us had a fair amount of different interests and beliefs, and we were all trying to rally for the things we care deeply about. The first thing I said was, "I think we need to worry about health and safety," and we all looked around and said, "Alright, what do you want to do in that respect?" We had the Nevada Department [Division] of Environmental Protection (NDEP)—come and tell us some of the problems that exist within the water systems across the State of Nevada. Once there were discussions that nitrate levels are too high in certain areas, to the point where if someone was to potentially make formula with this, you might have blue babies. Issues where we have some systems where they are actually delivering water with five-gallon buckets because their main systems failed. And of course, we have some systems that are still utilizing lead pipes. Unfortunately, with the holes in the federal program, they do not necessarily apply from the federal lead water pipe system because that system is designed from the distribution point only to the home, not in between. So let us say maybe you had a siphon from Marlette all the way to Virginia City. They are only really concerned about it once it gets to Virginia City to the homes, not in between, so we have needs. Everyone within that TAC agreed health and safety was the primary goal and objective.

I will highlight some of the programs I thought were very interesting. The SNWA—their Water Smart Landscapes—it is fascinating to me that for every home that enters into this Program, it saves 55 gallons for every square foot of lawn that is taken out. That is amazing to me. With 976 participants, it actually equates to 458 residential homes being saved. At that rate, they have saved 130,000 gallons, and an acre-foot is 325 [325,851 gallons]. It is just fascinating to me—those numbers they have been able to demonstrate, being able to put this money to good use. We were very grateful to the Program, and to be able to add a little bit of extra incentive to try to get more individuals to participate in said Program.

Another one that I think is very important—TMWA, their Advanced Meter Installation—90,000 meters. It has been proven pretty easily that once you have a meter, you tend to use less. Agriculturals have a meter, number one. They also have this other meter that goes in a circle from NV Energy, usually, or some other provider that tends to make them use water a little bit more conservatively. I do think it is important when we are looking at municipal systems that they have these meters so they can appropriately bill, so people will see a consequence or a reward, potentially, of utilization of water. We are the driest state in the Union. One of my predecessors, Mike Snyder, had a very interesting saying that even though we are an incredibly spread out State, 85 percent owned by the government, once you add the 1 percent the State owns, you add the 1 percent that the counties own, and you add the 2 percent that the tribes own, which are highly unlikely to develop, you are almost a 90 percent. That means our entire population is packed in that other area, so we are the most rural and dense State, almost at the same time. That accounts [for] the $72.6 million for that particular Program.

We then come to the subject I think a lot of people have interest in—the Groundwater Rights Retirement Program. When we had this discussion, some people felt we might be jumping a little bit too quickly into the process. There were concerns we were not stepping into the deep end; we were stepping into the Class 4 rapids, in that respect. But after discussions with everyone, we all felt it was an important thing to do and the best utilization to have success [was] to show this Program. We have all, within the TAC and all parties, been with that one goal—getting it done, and making it successful. We have listened to

issues and concerns. When issues have risen, we have basically dropped everything else and had meetings to try to address these issues, to find out solutions, and it has always been to the goal of 'yes,' and making it work. Of course, part of that is beneficial in that, if it did not, we could always put the rest of it back to the SRF, and we would get it all spent in enough time to meet the criteria. Everybody knew that and knowing that helps create a little bit of pressure to ensure we find a way to make it successful.

If you look at it, we are purchasing the groundwater from willing sellers. There is no eminent domain, this is willing buyer/willing seller. Within the discussion, you get into the aspect of "How do you find the value?" It was important to us to make sure that our taxpayer dollars were not being abused. In that respect, I looked at it more as a diminished evaluation appraisal. You can look at what a ranch is currently selling for in an area with water rights. Luckily, in Nevada, there is usually a ranch next to it that sometimes has no water rights. That delta tells you, between the two of them, what the water right values are—also recent sales in that area. We had certain basins [where] we were very hopeful that they would take advantage of the system. However, they prided their value of water rights to the excess of what the actual ranch sold [for in] its entirety, and therefore, it was not necessarily a wise decision. So, the State and the TAC decided it may not be the best way to go forward.

We focused on over-pumped and over-appropriated basins. What we are looking at is only groundwater. We were not interested in the surface water. Our goal is to try to see if we can get these basins to come back into balance. The reality is the groundwater traditionally helps recharge those basins. That is why we did not want to focus on any of the groundwater [surface water]. There are 256 administered hydrological basins within the State of Nevada. I [am] very grateful for being able to follow the State Engineer with his presentation, and it always brings up fascinating questions because people say, "How many basins will this affect?" Or "Okay, are you talking about the number of basins? Are you talking about the land mass values of the basins? Are you talking about the water volume per acre-foot, or perennial yield, of those basins?" There are so many different questions to ask to drill down on those details. His maps were phenomenal in helping the TAC make these decisions and guide us in how to try to do it most appropriately.

We also looked for areas where there were conflicts that, potentially, these resources could help alleviate. A lot of these conflicts were created over time. It certainly was not the current State Engineer. It is a problem that has existed for a long time, and Mr. [Senator] Goicoechea can speak to it as well. You had situations where people were granted water rights—well before you had electricity come to the area—and you did not have much threat of over-pumping. It is the development of the technology coming out there—better pumps—that created a situation that—most of them failed in the past, so it was not a big deal. You would not give somebody a permit. They fail; they go out of business. Well, things changed, and they got more success. We did also try to focus on what I call "high bench" type of situations—lands that are usually less economically productive, agriculturally. They are not rich, fertile soils. They are not as beneficial. I consider it with conservation easements to encourage your neighbor to do it because then your water table will be more secure in the future, or your values will go up. It is always interesting, but it is also fascinating that we had some of the oldest ranches in the State—they were looking at, "Do I drill another well or take my old well and go down an additional 200 to 300 feet, or do I look at this Program?" Some of them made that decision based on that, and there are some that are getting a little bit older and may not have someone willing to take over the property, and it was their decision to utilize this as a potential exit, which I think is wise. We left that opportunity for them.

We also looked at addressing impacts, of course, on the natural resources. We were not in a realm of trying to dry up all of agriculture, again, trying to focus on less productive lands. We also wanted wet water. I know that sounds crazy, but wet water, not just paper certificated water that someone may not be utilizing. We were pretty stringent too. We implemented some rules. We have had many disagreements, but by the time we came out of these TACs, we were basically in agreement. Some people wanted to have the ability to leave 2 acre-feet for a 20-acre parcel, and I was not interested in that at all. I am not going to be responsible for the sectioning off of the entire State of Nevada, and frankly, none of us did. We left it [so] you could only reserve 2 acre-feet per 160-acre parcel. That way, if someone wanted a home on there or water for animals, something of that nature, they could do so. But with this, they are giving up the right to get [inaudible] certificates on those properties too, because I could not see a situation where we said, "We will buy your water rights, but you can come back tomorrow and create one-acre parcels, all that get two acre-feet." That seemed to defeat the purpose, so we did put those type of restrictions in—reducing the consumptive use in those basins, prioritizing the basins, taking active steps to mitigate the groundwater use, ensuring substantial mitigation plans to prevent noxious weeds. We want to make sure, and we are in a little bit of a rush. There is a lot of agriculture right now that wants to make sure this money is actually real because they are looking at converting to a cover crop rather than planting, let us say, a higher utilization crop, such as alfalfa. They are looking at what they can do for a cover crop for the rest of the year in order to convert their operations over. And of course, the groundwater rights must be in good standing because, as we know, sometimes there are some that are not.

If you look within this, we allotted $25 million. There is actually $65.5 million of individuals who came forward, wanting to try to take the opportunity to look at these options. We did it through nonprofits and government entities, again, looking at concepts such as conflict resolution in order to help us with that.

If you look at where they had CNWA—Diamond Valley—which has one of those ones, there is about 350 percent over-appropriated, basin number 153. I have the 256. You can see their acre footage. Humboldt River Basin, SNWA, Muddy Springs Area—interesting opportunity with them—they will be able to acquire some senior rights, which helps them maintain that seniority, which in my hopes, will help maintain seniority priority water law in the State of Nevada. I think that is a side benefit. Walker Basin Conservancy—they obviously have a long record of successful acquisitions of water rights over time, so it was great to have them participate in this. Again, it goes back to the 250—the numbers there represent the 256 administrative hydrological basins.

If you go to the next one, we have the totals of each one of those basins. What I think is important is, if you look at some of these, you are talking anywhere from 8 to 16 percent potential reduction of committed groundwater to those basins. This will, in my opinion, obviously have the effect of helping bring these basins back into compliance. The 25,000 acre-feet total. Basically, at the end that you are looking at, that is the equivalency of Donner and Boca Lakes combined in the State of Nevada. You looked at the Kansas presentation earlier. It is only half of what they have done, but we are going to do that in one year. That is a pretty good concept. Not rental—this is a different concept of retirement or slash relinquishment. I will get to that subject in a second.

We put forth policies and procedures to make sure that this works correctly and try to think of some of the unintended consequences and pitfalls that occurred in other states. From the retention of only two acre-feet, things of that nature, there will be a restriction that is put on their deed, so a non-revocable deed restriction. They would have the ability if they found other water—maybe somebody sells it and decides to move out, and somebody else has

other water that is beneficial. They would have the ability to think about transferring that, but they can never get a new allocation on these lands. That is obviously very important to me.

Filing for ground retirement has to be done with the State Engineer, and it is more of a relinquishment. That is something the Legislature might want to potentially help us with—terminology. We have nothing in law that goes to the concept of retirement, but we are utilizing relinquishment. *Relinquishment* is important versus the definition of *abandonment*. By doing relinquishment, it is still on the books. That means somebody else can go apply for it. If it was deemed abandoned, then someone else can say, "Well, it is not being used. Now, I have the right to go apply." The State Engineer was very helpful in guiding us in that process and making sure the terminology and where it will be done is more of a relinquishment, even though we use the term *retirement*. But who knows, maybe a legislative body might want to look at helping us with that wording. With that being said, they need to file for a change application where appropriate of that two acre-feet they are leaving. If they are looking to convert it to a home or to a different utilization other than agriculture, they might want to go to stock water. They need to do that as soon as possible. The deed restrictions are also in retirement—are filed with the State Engineer and the county. Additional protections could be established for defining water right retirements in NRS, such as the terminologies. I think that would be beneficial to have within NRS in case anybody ever tried to challenge it. We feel very confident in what we have.

I stand for questions. I also have with me, Brandon Bishop, who has been instrumental, to say the least, in the administration of this Program. I am very grateful for his work and all the hard work of everyone in DCNR, especially the State Engineer, and the information there will help us provide, and direct us to, where we could get the most benefit for the citizens of the State of Nevada.

Chair Pazina:

We are going to start with our Vice Chair.

Vice Chair Anderson:

I have two questions. They both have to do with the Groundwater Retirement Program. The first comes from slide 8 when everything was discussed about what all the priorities have been and everything that has happened with that. I am just wondering, has there been an internal or external evaluation of what went well, and what needs to go differently? If this Program were able to continue, would you do the Program the exact same way? I am wondering if there has been any sort of evaluation that has been discussed internally or externally so we can make it stronger.

Director Settelmeyer:

We have been evolving this process as we have gone along. We all say, "retirement," then we start talking to the State Engineer who actually has the knowledge base to work off of. He says, "You might want to think about calling that relinquishment and not an abandonment in getting into those specifics." We have been learning as we have been going along. I cannot state how many times the staff has been gracious enough, that when we have any issues or questions—we were on a Team's meeting with some of the people who put forth, just literally a week or so ago—to make sure to look at any issues and concerns they may have and try to find solutions. As far as what we learned, going forward, absolutely, we are learning every day. The other aspect of it is we will probably have our

first completed one probably in the next week or two. I cannot tell you which ones have been completed in success because they are not done. We are still working on the paperwork. Lawyers want to look at things really closely, so they have been analyzing things several times and making sure this will work correctly to meet our goals and objectives. They have been very beneficial with the ag for us and also for the lawyers who are representing the other side to make sure we are all doing the same thing. But we all have the same goal, so I feel very confident, and that is success. As far as a report, we will end up getting one and showing exactly what we think was successful. There are times that it is beneficial too. If we created too hard and fast rules, and then if we said, "Okay, we are only going to do retirement," that means that someone else could then get that water. We would have made a huge mistake. Being a little bit fluid, no pun intended, has been beneficial.

Vice Chair Anderson:

I appreciate the fluidity, without the pun, but also the fact there is a process currently in place, internally as well as externally, with the attorneys making sure everything is being done correctly, fairly, accurately. I was talking with somebody about this this last week. It is about the water rights, but it is also about, sometimes, the other communities that are sometimes impacted. Has that ever been considered, or is it always about how much water rights are we saving? What is the money process? What are the things that are considered when you are talking about this? There are cultural questions as well that sometimes will come up with not necessarily retirement, but other things that have to deal with water. Is that ever discussed as well? How it will impact, in particular, our sovereign nations?

Director Settelmeyer:

We did have involvement from NACO (Nevada Association of Counties) to try to look at the aspects of how it affects the communities. I have talked to my friends within the Washoe Tribe, other areas, and things of that nature. That being said, there is also a desire of people who are next to these types of things realizing that if we leave more water in there, potentially, that means the water will be able to last longer. I think there is a general feeling from a lot of people that it is beneficial to be able to get some of these rights, especially in these over-pumped [basins]. Again, we only focused on over-pumped, over-appropriated basins. When you are looking at places that are potentially 300 percent over-appropriated and exceeding their perennial yield—you look at Walker Basin Conservancy. I know they reached out and had discussions with the community as well—many community hearings. You are in situations there, in the drought years—they were dropping 20 feet per year. I know that Adam, or the previous State Engineer, had to entertain the concept of curtailment—to tell people they had to turn off their pumps. That is not a pleasant conversation to think about having.

Vice Chair Anderson:

Thank you for recognizing—and I think all of us do—that this is not a one and done [that] it is clean and easy to do. We are always going to make somebody upset. We have to be realistic with that. My last question has to do with slide 11 with the basins that are discussed and the approximate proposed retirements. Is the advertising consistent around that—of this Program? Even though it did come out, there was not a large amount of time frame between when it started and when everything had to be awarded. If we are to take a look at how many people applied for it—it was pretty strong advertising. But was that advertising or knowledge of how this was happening, and was that consistent across all of

the different water groups? I am sorry. I cannot remember the groundwater retirements of all of the different basins. Or was that up to each basin management to make that decision?

Director Settelmeyer:

What occurred is when this came out, we made sure to have press releases and discussions. We also asked the Farm Bureau—I saw a lot of their advertisements—the conservation districts, and the other water areas, reached out to everyone out there to try to interest them in participation and awareness of this Program—of the benefits that could occur from it. I feel we did a pretty good job of getting advertisement out there to individuals. A lot of it was word of mouth. There are a fair amount of individuals that looked at it reluctantly saying, "We are not sure if this is real. Is this going to happen?"

I believe success will breed more discussion and more involvement from individuals. I sent letters to the Congressional Delegation saying if they had another 100 [to] spare that does not go against the SRF, to potentially utilize, we would of course like to see that money directed to the State. Hopefully, the IFC once again would think about directing [funds] at us for this purpose.

We did a very good job of advertising and really benefited from the partnerships that we have established within DCNR, such as the Farm Bureau, conservation districts, the Cattlemen's Association—also put it out to their membership—[to] realize what was going on and they could apply or work through their own nonprofits or government entities to participate. I was remiss by not mentioning NACO. They did an excellent job reaching out to all the counties and making sure the counties knew about it and could have said discussion.

Vice Chair Anderson:

You brought up one last thing. Is there any possibility of matching funds at the federal level if we continue this Program for the future? If we needed to, are there federal programs that we could attempt to get more money to help us with this, that you know of?

Director Settelmeyer:

I was talking to Brandon Bishop earlier next to me. Some of the programs that were mentioned by other states we do not qualify for. We are always going to try to do our best. My old adage, when I was in this building at one time, was to try to use the federal money first, State money second, community money third, and my money dead last. That being said, we will continue to look for those types of opportunities. I am trying to encourage the Delegation to look, if they have anything going on and need to get rid of some money—we have great opportunities in the State of Nevada, especially at DCNR—to try to assist in these programs. Mr. Bishop, did you want to elaborate on that anymore?

Brandon Bishop, Program Manager, Conserve Nevada, DCNR:

There are a variety of federal programs that are provided that can be accessed for groundwater right retirement. There are different challenges. Many of these programs have been designed for very different environments than Nevada presents, so there are certain challenges, but I think there is always opportunity to work with our federal partners to discuss opportunities that can be specifically tailored for the State of Nevada.

Vice Chair Anderson:

Wonderful. [I am] looking forward to working with all of you on that.

Assemblywoman Bilbray-Axelrod:

Director Settelmeyer, you mentioned lead pipes, and of course as a mom, I piqued up immediately. I think you said something about monies available from where the water is pumped to the homes, but then there are other aspects that are not covered. I believe it was last week that the EPA announced almost $30 million to Nevada for a replacement of lead pipes through the Biden Administration, their Investing in America. Can that money be used for that? I know some of these pipes are extremely old, and it does seem like our communities are affected. You said Marlette Lake to Virginia City was one of your examples, but I can just imagine it is a lot more than that.

Director Settelmeyer:

In discussions with Jennifer Carr from NDEP, the federal funds are set forth almost to maybe benefit one or two key states with certain lead pipe issues. Because of that, there is no desire to change the rules because those two states get the lion's share of the money. The rules are designed to go only from the distribution point to the consumer. If you are transmitting that water through a long pipe to get to said location, they are not eligible. So that is the federal funds.

[Director Settelmeyer indicated the funds that allowed for the NWCII projects had more flexibility to address certain issues.]

Fortunately, for Clark County, they are fairly new; there are not a lot of old lead pipes. It really comes down to some of the older communities around the State of Nevada that we need to try to assist in that conversion. We have consistently been trying to roll out the federal money, but again, the barrier a lot of times has been that little rule that is only from the distribution to the actual consumer, not the transmission to the distribution point, but we will continue to work on it. We are trying to convince our Congressional Delegation to change the rules, so more money is available, but it seems that certain key states are advantageous to the system as it now exists, are not real interested in letting that rule be changed for some reason.

Assemblywoman Bilbray-Axelrod:

I want to clarify, because there was money specifically for Nevada—almost $30 million, I think. But what you are saying is there is a caveat that will not allow us to do those distribution pipes, and that is from the federal government. We cannot do anything about it, and, we are sure.

Director Settelmeyer:

Assemblywoman, I will get you more clarification [from] NDEP and get it back to you individually. But my understanding is 'yes,' there are certain rules and protocols that must be followed. They more directly align with the other money that has been allocated in the large pool of funds. So yes, they did make an individual allocation to the State of Nevada, but they still follow some of the protocols. Our bigger issues with lead pipes are actually from the source to the distribution center, not the rest, but I will get you further clarification from NDEP, and provide that to you as soon as possible.

Assemblywoman Bilbray-Axelrod:

If you could get that to Committee, I am sure the Chair will get that out.

Chair Pazina:

We will look forward to receiving that information, and we will share it with the entire Committee.

Assemblyman DeLong:

I wanted to follow up on your one example—the Marlette to Virginia City line. Are there other transmission situations in the State, besides that one, that have lead pipes?

Director Settelmeyer:

Some of my understanding is there might be other examples of that in more rural areas—Tonopah and so forth of that nature. I will get more examples of that from the NDEP Director—direct them to the Committee to be distributed to all.

Chair Pazina:

We are going to close Item VIII on the agenda and move to Item IX.

AGENDA ITEM IX—PRESENTATIONS ON EXPERIENCES WITH GROUNDWATER RIGHTS RETIREMENT IN NEVADA

Chair Pazina:

[Chair Pazina opened Item IX—presentations on experiences with groundwater rights retirement in Nevada.]

I am sure everyone has sensed a theme today in our discussion. We have two presentations under this item to learn more about implementing water right retirement under DCNR's Program. We really appreciate the overview we just received.

A. REPRESENTATIVES OF THE WALKER BASIN CONSERVANCY

Chair Pazina:

The first portion is going to be representatives of the Walker Basin Conservancy. We will hear from Mr. Peter Stanton, the Chief Executive Officer (CEO) of the Walker Basin Conservancy.

Peter Stanton, CEO, Walker Basin Conservancy:

It is my honor to appear here providing updates on our efforts in the NWCII (Agenda Item IX A). I lead the Conservancy in our efforts to cultivate resilient communities throughout the Walker Basin. Those communities include Smith, Mason Valley, Yerington, Schurz, Hawthorne, and communities throughout eastern California as well. Over the last ten years, we have worked with 155 farmers and ranchers to increase the flows of the Walker River and restore a fishery at Walker Lake. Today I want to stress there is great interest from local farmers and ranchers in the Water Rights Retirement Program in our region. I want to stress that we anticipate being able to leverage significant federal funding

from the State's initial investment, and that continued support for water rights retirement and the on-the-groundwork that is essential to make it happen, is essential to long-term sustainable water policy. I am going to go through a bit of the specific concerns that our region faces, learnings from the initial pilot program, and recommendations from initial implementation as well.

Historically, Mineral County's Walker Lake was a trophy trout fishery—home to the Lahontan Cutthroat trout, the largest native trout in North America. It is the traditional homeland of the Agai Dicutta—or Walker River Paiute—who, in their native language, refer to themselves as Trout Eaters and Walker Lake as Trout Water. Since European arrival, most of the water from the Walker River has been diverted for irrigation use upstream. This has led the River to run dry many years, as it flows through the Walker River Reservation, and the reduced flows of the River have led to complete ecological collapse of Walker Lake. Once a trophy trout fishery known as Trout Water, by 2009, Walker Lake no longer supported trout of any kind and has lost 90 percent of it is volume.

Similar to the Walker River, in our region, there are more rights to pump groundwater than there is annual recharge of the groundwater resource. That has led to significant declines in the groundwater levels over the last 50 years. During the 2014 and 2015 drought, specifically, we saw precipitous decline in groundwater tables, including leading to domestic wells going dry. In 2015, the Nevada State Engineer curtailed supplemental groundwater rights, effectively reducing the amount those water right owners could pump by 50 percent. That was eventually struck down in State Court. I want to stress recent research from the USGS also indicates that declining groundwater levels negatively impact the flows of the Walker River. To put it simply, as you draw down the groundwater table, you are drawing down the River along with it. In this case, drawing down the Lake and flows to the Lake along with it. In addition to threatening agricultural water supply, this creates significant conflict between groundwater users and the Basin's most senior surface water rights, including those of the Walker River Paiute Tribe at the end of the system.

Since 2000—the Conservancy was incorporated in 2014 to administer the Walker Basin Restoration Program (WBRP), a federally funded program. We have worked with 155 farmers and ranchers to purchase and lease water historically used for irrigation and send it to Walker Lake.

In partnership with the National Fish and Wildlife Foundation, we have acquired more than 55 percent of the surface water needed long-term to restore and maintain the Lake’s fishery. Over that time, we have created a new State Park on the East Walker River, actively revegetated more than 2,500 acres of former alfalfa fields and created public access to about 29 miles of the Walker River.

Of particular note for today's conversation—over the last ten years, the National Fish and Wildlife Foundation and the Conservancy have acquired and relinquished 11,710 acre-feet of groundwater per year through the WBRP. Prior to the NWCII, as far as I know, that is the single largest effort in retiring groundwater in the State of Nevada. As one of the initial recipients of the NWCII grants, we are very pleased to report initial progress and engagement in the NWCII.

We were initially awarded up to $4 million for groundwater right retirement in the Walker River Basin, and we had two months to begin putting that on the ground. In just two months, in response to two meetings and two pieces of mail, we saw sellers express interest in entering more than 20,000 acre-feet into the Program valued at more than $36 million.

Because we have had such strong interest from sellers, we are able to prioritize water right acquisitions that will significantly reduce actual pumped water. Further, I want to stress that we are in a position to leverage federal funding to make the State's investments go further here. We are currently pursuing multiple transactions, and actually, just last week entered into contract on the first acquisition through this Program. For the transactions we are pursuing, we expect the State's investment to be matched at least 1 to 1 by federal funds that are available for the purchase of surface water.

Of particular note for the interim Committee today, our federal delegation has been very pleased to see the State's investment in sustainable water management long-term. This has a couple of folds to it. The first is that there has been significant federal investment for water demand management in the Walker River Basin, and the State's management of unsustainable groundwater withdrawals has a direct negative impact on efforts to increase flows of the Walker River. This investment through groundwater retirement turns that on its head. The reception we have received from the federal delegation indicates that, should the State of Nevada develop a sustainable funding source for water rights retirement or environmental flow enhancement, we are likely to see an appetite at the federal level for continued investment in water rights retirement.

I also want to stress that with roughly two months to do initial outreach on this project, it is because we have been engaging with water rights holders for more than ten years in our region, that we are able to bring forward so many willing sellers. I would also like to stress, as we see engagement from across the State of Nevada through this Program, there are two areas where a lot of people have been interested. That is the Walker River Basin and Diamond Valley. One of the key commonalities between those two is that in both regions, there has been, respectively, curtailment of groundwater rights in the Walker River Basin and a groundwater management plan in Diamond Valley, so it is in areas where there is real regulatory threat of the sustainability of groundwater withdrawal that we have seen strong response to this market mechanism for water rights retirement.

As we look forward at what needs to be improved in this project, I want to bring forward two suggestions. First and foremost, the average length of our relationship with groundwater sellers in this Program is more than six years. We are in a position to retire groundwater effectively because of a long-term, ongoing investment in protecting water resources. The Water Conservation Initiative has been made possible through a reinvestment—federal stimulus money—and we do not know when the next tranche of federal money is going to come down the pipeline. We need to take advantage of current interest, build on current momentum, and be prepared to leverage federal opportunities when they do arise. Accordingly, I ask the interim Committee to consider funding ongoing water rights retirement and specifically ongoing operations in each of the regions where we have stood up this Program. That will provide continuity in building relationships, continuity in presenting quality information around water supply and demand, and continuity in the administrative apparatus needed to retire water rights.

I also want to stress that the current Program addresses water and water alone. At the Conservancy, we are currently working to establish a federal mechanism to fund land repurposing, revegetation, and other dryland farming practices behind water rights retirement. This element is currently missing from the Program within the State of Nevada. At the Conservancy, we go above and beyond to demonstrate our commitment to the land that is affected by water rights retirement, and we have found that sustainable, long-term solutions need sustainable, long-term funding mechanisms if we are going to provide meaningful solutions for landholders in the long run.

In summary, I want to commend the Legislature for the leadership in taking responsibility for long-term water supply in our State. As we go into the next legislative session, we have the chance to take this pilot project and it is learnings and create a stable funding mechanism to ensure we can leverage these opportunities in the future. Today, even with this pilot program in our region, we are going to see water resources continue to be diminished in our region. Through thoughtful action over the coming months, our leaders and policymakers can ensure that we do not squander this moment and do not squander this momentum. We can firmly put ourselves on a trajectory towards sustainable water management in the Walker and across the State, and that requires putting folks on the ground, building these relationships in critical areas throughout the State.

I will leave you today with the final image, and that is the image of Walker Lake. You see the water level in 1908 versus where it was in 2019. It is like the bathtub rings at Lake Mead. It is a very stark, visual reminder of the threat to our State's water resources. You cannot miss it when you are at Walker Lake, it is very tangible. It is very palpable. And while we cannot see groundwater decline immediately, the same thing is happening with groundwater resources throughout our State, currently. We have a public trust responsibility to protect our water resources and groundwater resources in the long run, and I hope that the interim Committee will play a leadership role in carrying this momentum forward and leaving the water resources for future generations that our State needs.

Chair Pazina:

That is definitely a striking image for us to end on. It reminds me of looking out at Lake Mead here in Southern Nevada. Do we have any questions?

Assemblywoman La Rue Hatch:

I wondered if you could expand a little bit on what you mean when you say address land with water. What does that look like on an actual case by case basis?

Mr. Stanton:

I will speak to the Walker River Basin, specifically. In our region, we get an average of about five inches of precipitation a year. That means that dryland farming is not really an option. When we take agricultural fields out of production, especially alfalfa fields, there are significant impacts to the soil long-term. There is significant impact. There is very intensive agricultural weed pressure in that soil as well. In the Walker River Basin, we have taken an approach that centers around the reestablishment of native plant communities, repurposing of land for other purposes. I alluded to the creation of a State Park on the East Walker River—excellent example of repurposing former alfalfa fields for recreational use. As we go forward into the future, ensuring there is funding available to do that revegetation and provide, frankly, for ongoing weed management on those properties for multiple years is a key element of a robust program.

Assemblywoman La Rue Hatch:

Just to clarify—are you suggesting that within the Program, you are actually purchasing the land as well, or are you saying there is an agreement that there will be money for the landowner to then do that work?

Mr. Stanton:

Through the NWCII, we are not purchasing any land with the Program. There is also, currently in our administration of the Program, not an ongoing commitment to the landowner in any financial way. The Conservancy works directly with landowners to develop long-term land use plans. We actually provide native plant material and actively do revegetation often in partnership with landowners, including landowners who retain land after selling water rights.

Chair Pazina:

Wonderful. Seeing no questions down here and no further questions up north, we thank you for your presentation today.

B. REPRESENTATIVE OF THE CENTRAL NEVADA REGIONAL WATER AUTHORITY AND THE HUMBOLDT RIVER BASIN WATER AUTHORITY

Chair Pazina:

We will move on to Part B, and that will be the representative of the Central Nevada Regional Water Authority (CNRWA) and the Humboldt River Basin Water Authority (HRBWA). Staying within Item IX, we will now hear from Mr. Jeff Fontaine, Executive Director of the CNRWA and HRBWA.

Jeff Fontaine, Executive Director, CNRWA; and Executive Director, HRBWA:

Thank you for the opportunity to present on CNRWA and HRBWA's experience with groundwater rights retirement (Agenda Item IX B). I really appreciate you having a number of presenters here today to talk about their experience with water rights retirement programs in different areas around the country. Director Settelmeyer has already provided the background on the Program. I want to express appreciation to the Legislature for appropriating the ARPA funding for the Program and also acknowledge DCNR's leadership in initiating the Program and working very closely with us during the past six months.

Our goal all along has been to utilize the grant funds to develop and implement a short-term Water Rights Retirement Program that can be a model for an enduring statewide program. You heard the Program has a very tight timeline, and while the State had developed guidelines as part of their roll out of the Program, we needed to have our own plan and details related to what we were going to be doing at CNRWA and HRBWA. Even though both of those organizations have different hydrographic areas that they work in, and priorities, it made a lot of sense for us to administer the Program jointly. We did a lot of upfront work and planning and assembled a great team of contractors to help us with all of this. Those contractors had a lot of experience working in the Central and Humboldt Regions. There was an agricultural economist, our legal counsel, someone who helped us with the communications and outreach, and certainly water rights and conservation specialists. As the timeline shows, we received official notice of the grant awards in November and had until February to develop and submit a list of willing sellers to the Department. And now, we have until September 30 of this year to acquire the groundwater rights or to enter into some sort of contractual agreement for the transfer of those rights. I would also note that the sellers will be able to continue to irrigate until September 30 if they wish to do so.

As far as the prioritization of groundwater rights within both the Central Region and Humboldt Region, first of all, Director Settelmeyer went over how the Department

prioritized their basins—clearly over-pumped, over-appropriated basins where they are the priority and those with known conflicts with existing rights and natural resources. Within the Central Region, there are eight over-pumped groundwater basins. For the purposes of this Program, CNRWA targeted four: Diamond Valley, which is the State's only designated CMA; Big Smokey Valley; Stone Cabin; and Railroad Valley, the southern part. The predominant manner of use in all those basins is irrigation, and in the Humboldt Region, there are also eight over-pump basins. The HRBWA Board targeted four basins where groundwater pumping has the highest potential for surface water capture from either the Humboldt River or one of it is tributaries. Those are Paradise Valley, Winnemucca Segment, Grass Valley, and the Lower Reese River in the Lower East River Valley. We wanted to focus on the larger agricultural water right holders. We did not think that we [would] make a lot of progress by trying to buy up 10, 20, 30 acre-feet at a time, but the large agricultural water right holders with combined duties of greater than 640 acre-feet, and then we also wanted to make sure that we are purchasing full permits and certificates for water rights that are in regular use.

There was a lot of interest in this Program. In fact, I would say that it exceeded our expectations in the Central Region. We had nine applicants who, in total, submitted 37 permitted rights or certificated rights, and they are all in Diamond Valley. Some of those applicants are selling off their entire water rights and will be ceasing operation of any irrigation in the future after those rights are retired. Others are hanging on to a portion of their total rights and will continue to irrigate perhaps other lands that they have. The applications, in total, were 12,535 acre-feet for a total cost of $10,654,913. In the Humboldt Region, there were seven applicants who submitted 41 permits and certificated rights, and those applicants are in Antelope Valley, Middle Reese River Valley, and Upper Reese River Valley. Those three Valleys are not the target basins that we had hoped to acquire water rights in because there is no surface water capture in these basins, but nonetheless, they are over-pumped and, quite frankly, when we get to the next couple of slides, you will see why they are important basins for us to address. In the Humboldt Basin, we had willing sellers totaling over 13,000 acre-feet of a total cost of over $12 million. I would also note that when we received the applications, we made it clear to prospective sellers [that] by submitting an application, it is not binding. We still have a lot of things to work out, but none of the applicants have voluntarily dropped out at this point.

This map you saw earlier. The State Engineer presented this as part of his overall presentation on the Groundwater Basin Maps. The seven red basins that you see here are those with the sharpest decline of groundwater levels in the State, and those groundwater levels are, according to that map, declining at greater than a foot and a half per year. You can see they include the three Basins that we are purchasing water rights from, and those are Diamond Valley, Antelope Valley, and the Middle Reese River Valley. I would also note that four of those red basins, the ones with the diagonal lines, are affected by mine dewatering. Whereas, in the three basins that we are interested in—Diamond Valley Antelope Valley, and Middle East River Valley—are not affected by mine dewatering.

The Program elements—these are specific to the CNRWA/HRBWA Program and incorporate all of the State requirements. The water rights valuation has been talked about quite a bit—foundational to the Program. There are several methodologies that can be utilized but given the short time frame that we had in a large geographic area, our economist established a methodology to determine the price based on typical cost and income from farming one acre of alfalfa. There were different values set based on whether the basin was just over-appropriated, or whether it was over-appropriated and over-pumped. In Diamond Valley, we had a little bit of a lower amount compared to the other over-pumped basins, based primarily on the CMA designation.

Communications and outreach came up earlier with Mr. Stanton's presentation. We made a concerted effort to get the word out there. We presented at various meetings—the Nevada Farm Bureau, Nevada Cattlemen's, and the Diamond Valley annual groundwater management meeting. We submitted news stories. We had lots of coverage around the State, including in the urban parts of the State for some reason. We paid for advertising in rural newspapers, industry publications, and we did some social media and lots of word of mouth. The other part of this is the ongoing discussions with prospective sellers, and now, the applicants that have been approved for funding. Selling your water right is a big deal. What I learned in this process is—and it is been brought up before—farmers want a farm, and they want to continue to farm. But a lot of them see the writing on the wall, and this is an opportunity for them to make an important decision that is potentially life changing for them and their families. They wanted to have constant communications in this process, and we were happy to do that. We did not have the ability to have the longer relationship like Mr. Stanton does with his folks in the Walker River Basin, but it is an important component of this Program.

The application process is pretty straightforward. We had eight weeks to do it. We made it as simple as possible. Individuals could apply online, or they could download a two-page application, put it in the envelope, and mail it to us.

The due diligence piece, which is really very important—this is the detailed evaluation of each of the permits and the certificates, so we can verify all their information with the DWR records. Any issue that needed to be resolved is going to be the responsibility of the applicant, and we pointed out what items may need to be resolved administratively. The prioritization of applications within our basins—again, we are trying to purchase as much wet water as possible, as measured by the percentage of pumped water relative to the appropriated right.

Legal/financial mechanisms—we needed, first and foremost, assurance with Nevada water law, being able to operate within the context of Nevada water law—lots of legal documents. Essential documents, such as the purchase and sale agreements and declaration of restrictive covenants, all needed to be developed. The financial aspects of this, including setting up escrow accounts, are all part of what needs to be done for this Program.

Lastly, the mitigation and future land use—mitigation, we knew this going into the Program, is an extremely important component, and we also heard this from the communities. Part of what we are including in the purchase price for the water rights is $50 an acre-foot, and that is specifically for mitigation. It is really going to be very important for the landowners to continue that. We have developed a plan for them to use so they can do the conversion from an irrigated crop to an unirrigated condition that does not result in proliferation of invasive or noxious weeds or soil loss through erosion or any other nuisance that could result from that.

Program budget—I am going to go over this very quickly. The money—when the grant awards were made to CNRWA and HRBWA, they were sort of flexible. They can move back and forth between the two organizations based on need. When it was all said and done with an amendment, the net result is that it appears we will be able to purchase about 11,469 acre-feet out of the total for sale of 12,535 acre-feet in Diamond Valley. In the Middle Reese River Valley—in the Humboldt Region—we will be able to purchase all of the 3,675 acre-feet that is for sale in the Middle Reese River Valley and then purchase about 2,400 acre-feet out of the total for sale in the Antelope Valley, which was almost 13,000 acre-feet. The other item I want to point out on this particular graph is that our

administrative costs, even with hiring professional consultants and contractors, will most likely be less than 2 percent of the total cost of the grant.

This was also brought up earlier about the impacts, and I will say that, at least in Diamond Valley, we are retiring the equivalent of one-third of the perennial yield. If all the sales go through in Antelope Valley and Middle Reese River Valley, potentially retiring the equivalent of more than 25 percent of the perennial yield in each of those Basins.

Our key takeaways—I am going to echo what Mr. Stanton had to say. The CMA designation clearly motivated sellers in Diamond Valley. We believe that this carrot and stick approach, if you will, is an important factor in why there was so much interest. In the case of the Middle Reese River and [Antelope] Valleys, sharply declining groundwater levels was really the motivating factor there. I think some of the applicants there that we talked to were looking at having to spend potentially hundreds of thousands of dollars to deepen their wells. At some point, they realized that the situation is not getting any better anytime soon. And then lastly, probably the biggest one for us is based on the number of applications submitted in a short amount of time—there seems to be significant interest in continuing this Program in the future.

I want to end on this slide, "Why Purchase and Retire Water Rights?" I think we know why we need to do that, but why do it with ARPA funds and potentially State funds or other taxpayer dollars? You have all heard about the federal land policies—the Homestead Act and the Desert Land Act of 1877, which spurred settlement of the West and encouraged people to irrigate and cultivate the public lands in the arid regions of the West. Water rights were pretty easy to get back then, and farmers relied on those water rights. As a result, there have been individual and generational farms that have made significant investments in their communities and are major economic generators in rural Nevada. The State did over-appropriate these groundwater basins, and this occurred over many decades. Director Settelmeyer talked about this, but I think the past thinking was that water users would not put their entire allocations to use, and times have changed. Also, we did not have the same understanding about hydrology and transpiration in the West as there is today. There are limited tools for trying to get these groundwater basins back into balance, and that really is curtailment. Nobody wants to see that happen. It would be devastating to families and communities and have some serious consequences. The other item that I should have added to this chart—or graph—as well is that purchasing water rights clearly has an environmental benefit by reducing pumping.

Thank you again for the opportunity, and I would be happy to answer any questions.

Chair Pazina:

I have one question. It was really impressive looking at the figures in the slide—the one in regard to essentially one-third of the perennial yield being retired in Diamond Valley. And then, looking at Antelope Valley and Middle Reese River—approximately one-quarter. I heard there was a significant amount of time where there was outreach happening. How long did it take to get to that point where we are able to generate that interest?

Director Fontaine:

We had anticipated the Program, but we did not know for sure if we would be getting a grant award, or if we did, how much that would be. But we started to get the word out there. But officially, we launched our application process and our outreach campaign around

mid to late November. This is the list of willing sellers, or the interest from around that time, to January 22 when we closed the application process.

Chair Pazina:

That is really interesting. I am obviously fascinated by this Program. I am always looking at ways we can conserve water in the driest state in the nation. This has been incredibly informative.

Vice Chair Anderson:

Thank you, Chair. As you were asking your question, I thought of what I had asked Director Settelmeyer earlier, and I should have asked the past presenter too. Do you go through and do a process of what went well, what did not do well, and what do we need to improve internally or externally when it comes to doing this in the hopes that we get to do it a second time? Have you done that already, or are you in the process of doing that evaluation? As Director Settelmeyer just pointed out, we are not done with the Program yet, so wondering about your evaluation techniques of the actual Program.

Director Fontaine:

I will say the same thing. We are still in the process of working through this. We have not acquired a drop of water yet. We are poised to do that, so I am reluctant to give you any specific recommendations, except for one, and that is this Program requires more time than 11 months.

Vice Chair Anderson:

Heard and understood.

Senator Goicoechea:

First and foremost, Jeff, I want to thank you and your Board at CNRWA and HRBWA. I realize they are made up of users and permit holders in those areas, but if it had not been for you and your people actually taking a hold of this, nobody else would have done this in ten months and got to this. Here we are. We are looking at two basins of the 256 that at least are headed in the right direction. I can only thank you and your Boards for the work you did, and a job well done.

Chair Pazina:

Thank you for the work you have done for the presentation today, which was incredibly thorough. We do not have any questions from Northern Nevada, and I believe that exhausts our questions from Southern Nevada. We are going to close Item IX.

AGENDA ITEM X—PRESENTATION ON GROUNDWATER CONSERVATION EASEMENTS

We are going to move on to Item X—a presentation on groundwater conservation easements. We will hear from Dr. Katherine Wright, Senior Researcher with the Property Environmental Research Center (PERC), discussing a different approach to groundwater rights retirement. We look forward to your presentation.

Katherine Wright, Ph.D., Senior Researcher, PERC:

Thank you for having me here today. I recently finished my Ph.D. at Arizona State University studying, in particular, various approaches to managing water scarcity in the West. That ranges from everything from quantifying how effective different programs are at saving water to building data sets to help us understand how water transfers impact agricultural communities. I am here as a guest of The Nature Conservancy as well, and to talk about voluntary approaches to achieving sustainable groundwater management through groundwater conservation easements (Agenda Item X).

[Dr. Wright held up a PERC publication titled, *Groundwater Conservation Easements*.] This is a report that my company did. The Property Environmental Research Center is a nonprofit, nonpartisan think tank in Bozeman, Montana that has also spent around 40 years looking at water markets and water transfers using voluntary approaches to manage environmental problems.

I want to talk to you about groundwater conservation easements, which are very similar to conservation easements in that they are an agreement between a landowner, a water rights holder, a farmer, a rancher, and a nonprofit or another individual that is interested in preserving environmental quality. Unlike a conservation easement though, these groundwater conservation easements are over a reduction in water use on a particular parcel. I want to talk to you about how they can help us ensure permanent savings in water use as well as their inherently flexible method to doing this. But there are still several policy hurdles that we have before they can be used in Nevada.

As Senator Simpson referred to earlier, the first groundwater conservation easement was done in the San Luis Valley, and this was between Peachwood Farms and Colorado Open Lands. Peachwood Farms decided they were going to gradually reduce their water use over time by going into an agreement. The agreement was over 1,700 acre-feet of water reduction that would contribute to aquifer recharge in the area. Notably, this actually brought the Valley into compliance and allowed his neighbors to continue to farm. He just made a decision to reduce his water use on that plot.

I want to encourage us, like everyone else has been today, to think about groundwater conservation easements as a tool in the toolbox. They are not the only method. We have plenty of different methods to talk about when it might be the proper time to think about a groundwater conservation easement. You can think of rotational fallowing or buyback programs. Groundwater conservation easements are going to be another tool in that kit.

First, I want to talk about the permanent savings of a conservation easement. This is a design of the easement itself in that it ensures permanent water savings on a parcel. Oftentimes with these methods over water reductions, we have to choose between certainty in reduction or certainty in method. That limits the flexibility that the farmer has. An example I always use is in rotational fallowing. Rotational fallowing really restricts what the farmer can and cannot do. He has to fallow, but it provides a certainty and maybe a temporary water savings. There is a certainty in the amount of water perhaps saved, but that limits the ability of the farmer to adapt and change, as say, the climate changes or as seasons change. What groundwater conservation easements allow us to do, is they allow us to balance that certainty and flexibility. They assure we have an amount of water reduced. The agreement is over that water reduction, but the farmer is able to decide how that reduction is achieved, which leads me to my next point about flexibility.

It is flexible compared to other alternatives that require water reductions. The idea is, could we reduce water use without prescribing necessarily how that happens? I like this method in particular because it allows farmers to make decisions on their own farm about what is best for them. That might look like implementing different irrigation infrastructure, irrigating at a different time, growing different crops, or retiring a certain well. But importantly, a farmer is able to make the decision about his own farm, and what is best for him, and what he needs to do in the future. These agreements—groundwater conservation easements—can also be made between a nonprofit or a land trust, and the agreement could be to restore an aquifer, or it could be for another conservation outcome like instream flow.

Importantly though, there are several policy hurdles, and I have a little animation to go with this one. Currently, in NRS, there is nothing that prevents reallocation once a basin has been stabilized. The State Engineer could reallocate water in the future if they so decide for groundwater in a basin. You could think, if we make an easement over an outcome, we are pulling out of straw—out of the aquifer root. We are retiring certain water rights, and as we do that, we can see the aquifer levels go up. But what this means is that in the future, if aquifer levels are restored, there is nothing in code stopping a new water right from being issued for that saved water. Importantly, that affects the incentives for landowners to want to participate in these groundwater conservation easements. However, a potential solution is considering, "How can we think about conservation as a beneficial use?" When we conserve water for the purpose of aquifer restoration, is there a way that we can view that conservation as a beneficial use, and thus, the water right is maintained and not able to be reallocated into the future.

Also, most conservation easements require a conservation easement enabling statute. Nevada has one, but in Colorado, where the original groundwater conservation easement was done, they identified water as one of the resources that could be put into a conservation easement. Similarly, in Nevada, you would want to consider the way our statute is written—does it allow for water to be put into a conservation easement, or is there more detail that needs to be put into that enabling statute to ensure that a groundwater conservation easement can occur?

To give you three final takeaways—a little reminder of what I have talked about—is that groundwater conservation easements are an additional tool in the toolbox. We would want to use them for when we want to reduce. We want to permanently reduce water in a basin. We would not want to use it for temporary reductions because this is a permanent tool. However, that permanency also comes with an inherent flexibility in that farmers can decide how they achieve those water reductions instead of prescribing that. Also, in order to have ground water conservation easements, to allow them to be successful here, we need to consider conservation perhaps as a beneficial use. In this report that our Company has written, we go through the other aspects that made groundwater conservation easement successful in Colorado and think about the enabling conditions that would be required in several other states. We came up with a tier system as well to discuss, how would Nevada, for example, fall into the feasibility for groundwater conservation easement? I would be happy to continue this conversation or pass out any out other copies of the report.

Chair Pazina:

Do we have any questions? [There were none.] It was a really interesting presentation. That will move us to Item XI on our agenda—the presentation on water for wildlife legislation.

AGENDA ITEM XI—PRESENTATION ON WATER FOR WILDLIFE LEGISLATION

Chair Pazina:

This is our final presentation of the day, and we will focus on water for wildlife. On this, we will hear from Kyle Roerink, Executive Director of the Great Basin Water Network.

Kyle Roerink, Executive Director, Great Basin Water Network:

To start with a little levity, I was recently giving a presentation, and someone asked me, "How do we make Nevada's water law more like California's?" I said, "That would absolutely be one of the worst things that we could do right now." Part of my presentation (Agenda Item XI) is trying to exemplify some of the things that we do have in place that can help encourage more conservation but also keep rural communities intact.

A few considerations before we get started—it has been estimated that we have lost about 50 percent of our wetlands in the State over the past century or so. As we have seen from the maps that the State Engineer produced, we have basins that are in trouble, and we also know that we may be using some outdated methods in terms of how we are estimating what is available. Availability is one of the cornerstones of our water law in this State.

As I mentioned, we have existing tools in our toolbox that can help advance conservation. I want to say, briefly, we have been talking a lot about money that has been a windfall for us in Nevada since ARPA was passed by Congress. Considering the Walker Basin, you had the federal government help fund those considerable efforts to restore such a special place down there. But we have to be thinking, "What do we do if we do not have a lot of money at our disposal?" "How do we incentivize other practices while also making sure that rural communities can stay intact?" There are no silver bullets. The water rights buyback program is having its successes. In recent sessions—the 2021 Session and the 2023 Session—we have been focusing on municipal conservation and have been doing a great job with things like turf removal, septic conversions, and some of those other things we passed last session. Unfortunately, at least in recent years, the attempts at rural conservation efforts were thinly veiled attempts to facilitate water exportation and other questionable practices. Those bills did not pass, but those are things that we need to learn from. The other thing I wanted to mention is we need voluntary measures that entities will actually use. I talk about statutes collecting dust here in the PowerPoint, and I will be pointing to those momentarily.

This is really the seminal question. As agricultural producers invest in conservation, what can be done voluntarily, and how do we provide different types of incentives when there may not be a lot of money at our disposal? It is important. Water is the lifeblood of agricultural communities, and I think in recent years, we have seen a lot of demonizing of agricultural communities in certain groups. That is not what we are really here to do. We need to have those folks at the table more than anything else. A really important part is the base water rights that agricultural producers have. [It] is what brings a lot of the value to a farm or a ranch in this State. As we think about saving and conserving, we also need to ensure we are not creating loopholes for speculators, or rather nefarious interests, trying to take advantage [by] doing something in the name of conservation but actually doing it for other purposes.

As I alluded to, the real dilemma here is what I am calling "pumping to protect water rights," and we are seeing agricultural producers make major investments in conservation efforts going from 160 quarter sections where they are using wheel lines and then making

investments into the center pivots where they are reducing, in theory, what they are consumptively using. It is commonly referred to as "cutting the corners" at agricultural productions. What are you doing with the savings of that water in a "use it or lose it" system like we have in Nevada and in the West? I think we are going to see more efficiencies come into play with AI technology. That is something farmers on my Board of Directors are talking about right now in addition to other types of center-pivot upgrades and other innovations. We are going to see more efficiencies create opportunities for conservation. So again, what are we doing with those savings? I mentioned Jevon's Paradox here; as you get more efficient, you tend to use even more. How are we going to overcome that in this State?

I want to segue here into one area of discussion that can help us at least have a framework for considering what maybe to do to have more savings. As many of us know, beneficial use is the basis limit and measure of our water law. Quantity, point of diversion, place of use, manner of use. They are very much the substance of beneficial use, and right now, as it exists, we have statute and Nevada Supreme Court precedent and rulings and permits from the State Engineer that say that water can be put to beneficial use for recreation, wildlife purposes, and I guess we could say, some conservation minded purposes as well.

Really briefly—NRS 533.030 specifically highlights that a beneficial use can be a recreational purpose. We have seen decisions where things like fishing and protecting fisheries is essentially considered as a part of a recreational purpose. We have State Engineer Ruling 4683 from 1998—very important for Pyramid Lake and their fisheries out there. This is a screenshot from that ruling, but you can search the State Engineer's archives and see dozens and dozens of other rulings that were made for wildlife purposes. Another section in statute, [NRS] 533.023—we have *wildlife purposes* defined. So again, we have precedents here for conservation minded efforts. And NRS 533.367 is as a statute intended to make sure that if water life [wildlife] is using a water source today, they are going to continue to have access to it. This recently came up in the Sullivan Decision from the Nevada Supreme Court, and that was affirmed as a part of precedent now. Lastly, NRS 533.0243—some of the founders of my organization worked on this back in 2007. Largely, this was intended to be used in the Walker Basin before a lot of money started flowing into there. Again, this allows for a temporary conversion of agricultural water for certain purposes, and there are limits in terms of how long you could have that temporary conversion. This is another place to look at and give us guidance on what we can maybe do.

The big *Nevada Supreme Court* precedent for us to consider here is 1988 *State of Nevada v. Morros*. Morros was the State Engineer at the time. Again, another area for us to look at and consider as we talk about water conservation, water for wildlife, et cetera.

To finish up—the recommendations. We need a silver buckshot approach because there really are no silver bullets out there for us. I think we could make a couple of small tweaks to NRS 533.0243. We also have to be considering—in regard to that—that we are not double counting conserved water. That has been mentioned multiple times today—making sure that other entities are not necessarily putting to beneficial use water that is being conserved. I think we need to have a bigger discussion about the elephant in the room, and that is, "How do we give agricultural interests the ability to conserve water that their technological efficiencies bring without having to lose the base right, the value of their base, the value of the right that is giving them the value of their whole operation?" It is certainly not going to be easy. A couple of other things—let us consider how existing statute and precedent can be that foundation. Let us consider that any conserved water—water for wildlife purposes—what do we do with moving their points of diversion? Other considerations like exportation—out-of-basin uses. That should certainly be a prohibition.

How do we limit buy and dry scenarios? Let us also consider how we can avoid conflict, because so much of what our regulators are dealing with today is conflict amongst existing rights holders. We should not be having conflict, but it is inevitable.

I have footage of a ranch in Northwestern Nevada that converted its agricultural rights to water for wildlife purposes. I [am] going to play this really quickly for you all, and then we can go. This is something that we know is being done. We know it has been permitted and proved.

[Mr. Roerink shared footage of the ranch.] This was at one time a ranching operation, and there was alfalfa being grown on this property. The applicant was able to change the manner of use for wildlife purposes. The applicant did make financial investments in order to have those rights be converted and improve the beneficial use for wildlife purposes.

Madam Chair, I appreciate this time and would be happy to answer any questions from the Committee.

Chair Pazina:

Do we have any questions?

Assemblywoman La Rue Hatch:

Thank you, especially for the drone footage. I think that was really enlightening. My question is, we saw drone footage of an entire ranch that was converted to wildlife, but you talked about cutting corners. Does it have to be the entire operation, or can it be those corners that are being cut in a pivot system that you are talking about converting to wildlife use?

Director Roerink:

What you described is exactly the type of thing we need to be considering. It does not have to be a whole ranch. It can be a part of a base right. Those are the types of things in a silver buckshot approach that we need to be looking at, and we need to make sure we have buy-in from all sectors. That 2007 statute I mentioned had buy-in from all sectors, and I think that is really the key here. We would love to see what you just described.

Chair Pazina:

Seeing no more questions, we will close Item XI on the agenda.

AGENDA ITEM XII—PUBLIC COMMENT

Chair Pazina:

That brings us to Item XII—public comment. This is our last item and our second period of public comment.

[Chair Pazina discussed guidelines for providing public comment.]

Olivia Tanager, Executive Director, Sierra Club Toiyabe Chapter:

I am glad to be with you all today in Carson City. The Toiyabe Chapter works on promoting rooftop solar; expanding public transportation; and protecting land, water, and wildlife

across the Great Basin. As Senator Pazina pointed out earlier, Nevada is the driest state in the nation, so conversations around water conservation are of paramount importance. I want to offer my comments in support of Mr. Roerink's presentation. The Toiyabe Chapter cares strongly about equitable solutions to our changing climate here in Nevada. We support keeping water and existing water basins and taking measures to fix our over-appropriated basins. I would encourage you all to think about common sense solutions to our water scarcity problems that help communities across the State. The Toiyabe Chapter strongly supports using existing water rights for wildlife incentives to provide water for wildlife that do not otherwise negatively impact our watersheds—will become increasingly important over the next few years. Thank you all for facilitating this conversation and for the work you do as caretakers of our beautiful State.

Micheline Fairbank, Private Citizen:

I am here not on behalf of anybody in particular, and I am not going to talk about anything associated with water. I am here to talk about a little bit of support but also raising some thoughts with respect to the Shared Stewardship Program. The Shared Stewardship is an absolutely incredible Program, and it presents great opportunities. But as government is starting to expand into areas in which the private sector has traditionally been providing services, you are starting to experience and see where the government sector is competing with small businesses and local businesses that have been providing certain services, particularly when we talk about fuel reduction or home hardening or advising homeowners in communities with respect to those different types of measures that they can take to protect their properties. What happens is you have small businesses that have to pay workers compensation fees, which are exceptionally high. They have to pay environmental insurance fees. They have to pay general liability insurance. All of these different costs—as well as not being able to leverage costs for lower equipment—are starting to put pressures on those small businesses as they are now in a position where they are competing with government entities. Public-private partnerships are great opportunities, but not to the expense of small businesses. I think that is something to be in consideration. There is great opportunity for the State to leverage its resources and leverage those small businesses and help expand opportunities and availability of services for our communities. Thank you.

Deni French, Private Citizen:

Thank you for having the time to have all these wonderful presenters. I cannot think of anybody that presented that I did not want to swallow up all the words, and I got all mixed up in trying to keep notes. But the main thing I would like to talk about is all of them. The Stewardship really requires a great deal of information, and as was stated, we are so behind on our hydraulic mapping and updates on that. I mean, years and years and years, and that is inexcusable, and shame on us. And now that we have the technology and the science to do so, I would like to encourage any money that we have as a State to go towards getting those upgraded, because anybody who wants to be a steward needs to have a good foundation, and that information will provide it. The next thing on here is the groundwater basin areas. From my personal position, and my personal opinion, Carson City has not had enough information to have made some of the decisions it has, but since they have made those decisions, they have to move forward. Anything the State can provide as far as background from this meeting and others—I look forward to Carson having access. The next thing is, as far as retiring—there are several different ways to have put that, and I am sure I put that note somewhere else. The deal on the water rights—that is a really neat thing to have some flexibility. And as you said, portions of a property could be part of an easement perhaps, or such, and that is really good. I appreciate that. I think we have been put in a spot. Now water is really gold. Even states are going to be asking for other states. I know

Carson City looks to other cities to help implement our water resources as far as filtration or mixing, so that we have proper limits of certain requirements and such. None of us are alone on this, so the cooperative activity is really important. The next thing, as far as wildlife—

Chair Pazina:

[Chair Pazina noted the two minutes were up and asked Mr. French to wrap up his comments.]

Mr. French:

The basic thing I want to throw in there is a wildlife—without it, we should not really even be able to exist. So please, the health and safety that Mr. Settelmeyer brought up earlier has got to be the first consideration. Thank you.

[Chair Scheible asked Broadcast and Production Services (BPS) to open the phone lines for public comment.]

Fred Voltz, Nevada Wildlife Alliance:

At this Committee's last meeting, the issue of studying the operating practices and composition of the Commission on Natural [Mineral] Resources and the Wildlife Commission received considerable and overdue attention. Perhaps the best way to frame the issue is to compare Commission membership to the legislative districts you represent. It would be patently inappropriate for one Senate or Assembly district to have 500,000 people, and an adjacent district to have only 50,000 people for one legislator to represent. This type of imbalance currently exists with both Commissions and needs a complete review. Much was heard during final comments about how wildlife killing licensees contribute time and money toward habitat. Genuine altruism does not seek out reward in exchange for money or services rendered. By and large, the licensees participating in such activities do so to ensure a steady supply of animals for sport killing, not to protect or perpetuate wildlife without personal benefit. No acknowledgement was given to nonlicensees who commit money and time to help wildlife without the expectation of personal reward. Such contributions are not measured by NDOW, or estimated by them, which considers nonlicensees to be nonexistent constituents on display at any Wildlife Commission meeting. Here is an alternative suggestion toward answering a key question. What is the value of wildlife to all Nevadans? Let us put a dollar value on each wildlife species member—alive or dead. As part of the study, it would be worthwhile to consult with the Guinn Center for Policy Priorities and ask them to do the needed accounting. If Wildlife Commission licensees kill wildlife, then should not they compensate the public Treasury for the value of public property being permanently destroyed and converted to private property? Hopefully, this Committee will recommend a study proceeds. Thank you. (Agenda Item XII A)

Chair Pazina:

Mr. Voltz—literally right on the two minutes. And Mr. French, back to your comments, I want to say that I also got so much wonderful knowledge from today's speakers and enjoyed all the presentations. I am happy you were able to sit in and enjoy them with us.

We will go ahead and close out public comment, Item XII, and move on to Item XIII. Before we adjourn, I would like to make one last announcement. We are still waiting for the tribal representative recommendation to the Subcommittee on Public Lands from the Inter-Tribal Council of Nevada. We hope to have that recommendation before our next Committee

meeting where it will then be on the agenda. We thank you all for attending with us today. We hope you enjoyed the conversation in regard to Shared Stewardship, water, and wildlife as much as we did.

Additional written public comment was submitted (Agenda Item XII B):

- Casey Kern, Nevada Resident.
- Robert Emerick, Nevada Resident.
- Rita L. Ransom, Member, Sierra Club Toiyabe Chapter, Legislative Committee; Citizens' Climate Lobby.

AGENDA ITEM XIII—ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 2:30 p.m.

Respectfully submitted,

_____

Lisa Creamer
Senior Research Policy Assistant

_____

Jann Stinnesbeck
Principal Policy Analyst

APPROVED BY:

_____

Senator Julie Pazina, Chair

Date: _____

MEETING MATERIALS

AGENDA ITEM	PRESENTER/ENTITY	DESCRIPTION
Agenda Item II	Mauricia M. M. Baca, State Director, The Nature Conservancy in Nevada Jaina Moan, External Affairs Director, The Nature Conservancy in Nevada	Written Public Comment-Letter
Agenda Item III A-1	Kacey KC, State Forester Firewarden, Division of Forestry, State Department of Conservation and Natural Resources (DCNR) Cheva Gabor, Nevada Liaison, Intermountain Region, United States Forest Service (USFS), U.S. Department of Agriculture (USDA)	Microsoft PowerPoint presentation
Agenda Item III A-2	Kacey KC, State Forester Firewarden, Division of Forestry, DCNR Cheva Gabor, Nevada Liaison, Intermountain Region, USFS, USDA	Handout
Agenda Item IV	Kacey KC, State Forester Firewarden, Division of Forestry, DCNR	Microsoft PowerPoint Presentation
Agenda Item V	Adam Sullivan, State Engineer, Division of Water Resources (DWR), DCNR	Microsoft PowerPoint Presentation
Agenda Item VI	Adam Sullivan, State Engineer, DWR, DCNR	Microsoft PowerPoint Presentation

AGENDA ITEM	PRESENTER/ENTITY	DESCRIPTION
Agenda Item VII A	Laurel Saito, Ph.D., P.E., Nevada Water Strategy Director, The Nature Conservancy in Nevada	Packet of Information
Agenda Item VII B	Steve Frost, Executive Director, Division of Conservation, Kansas Department of Agriculture	Microsoft PowerPoint Presentation
Agenda Item VII C	Cleave Simpson, Colorado State Senator	Microsoft PowerPoint Presentation This is on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827.
Agenda Item VIII	James A. Settelmeyer, Director, DCNR	Microsoft PowerPoint Presentation
Agenda Item IX A	Peter Stanton, Chief Executive Officer, Walker Basin Conservancy	Microsoft PowerPoint Presentation
Agenda Item IX B	Jeff Fontaine, Executive Director, Central Nevada Water Authority; and Executive Director, Humboldt River Basin Water Authority	Microsoft PowerPoint Presentation
Agenda Item X	Katherine Wright, Ph.D., Senior Researcher, Property Environmental Research Center	Microsoft PowerPoint Presentation
Agenda Item XI	Kyle Roerink, Executive Director, Great Basin Water Network	Microsoft PowerPoint Presentation
Agenda Item XII A	Fred Voltz, Nevada Wildlife Alliance	Written Public Comment

AGENDA ITEM	PRESENTER/ENTITY	DESCRIPTION
Agenda Item XII B		Compilation of written comments received from members of the public who did not speak during the meeting. These comments are posted individually on the Legislature's website for this meeting and can be found at the address below: https://www.leg.state.nv.us/App/InterimCommittee/REL/Interim2023/Meeting/34498

The Minutes are supplied as an informational service. All meeting materials are on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827 or https://www.leg.state.nv.us/Division/Research/Library/About/Contact/feedbackmail.cfm.