



# **NEVADA LEGISLATURE JOINT INTERIM STANDING COMMITTEE ON NATURAL RESOURCES**

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

## **DRAFT MINUTES**

**January 29, 2024**

The first meeting of the Joint Interim Standing Committee on Natural Resources for the 2023–2024 Interim was held on Monday, January 29, 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 3138, 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](mailto:publications@lcb.state.nv.us) or 775/684-6835).

### **COMMITTEE MEMBERS PRESENT IN LAS VEGAS:**

Senator Julie Pazina, Chair  
Senator Pete Goicoechea  
Senator Melanie Scheible  
Assemblywoman Shannon Bilbray-Axelrod

### **COMMITTEE MEMBERS PRESENT IN CARSON CITY:**

Assemblywoman Natha C. Anderson, Vice Chair  
Assemblyman Rich DeLong  
Assemblyman Bert Gurr  
Assemblywoman Selena La Rue Hatch

**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

DRAFT

*Items taken out of sequence during the meeting have been placed in agenda order.*

## **AGENDA ITEM I—OPENING REMARKS**

### ***Chair Pazina:***

Good morning. I would like to call this meeting to order. Welcome to the first meeting of the Joint Interim Standing Committee on Natural Resources for the 2023–2024 Interim.

[Chair Pazina discussed meeting guidelines for Committee members and asked the secretary to call the roll.]

Our agenda today will include introductions; a brief presentation from staff; the appointment of members to the Subcommittee on Public Lands; and presentations from the National Conference of State Legislatures (NCSL), the Desert Research Institute (DRI), Nevada's Division of Forestry, and a presentation of water resource management.

[Chair Pazina noted all meeting materials will be provided to members electronically and that the public can sign up on the Nevada Legislature's website to receive electronic notifications of agendas, minutes, and the Committee's final report. She also shared procedures for giving presentations and providing public comment.]

Before we go to Item II on the agenda—Public Comment—I would like to hand it over to our Vice Chair, Assemblywoman Anderson, to make a very special tribute.

### ***Vice Chair Anderson:***

Today I would like to make a tribute to former Assembly member, Jason Geddes, Regent Emeritus. He served from 2002 to 2004 in our body, and he served on this Committee. I had known Jason since I was a senior in high school, and he was president of the Associated Students of the University of Nevada at the University of Nevada, Reno (UNR). Jason had a love of Nevada and a love of our natural resources that has not been matched by many. He would always make sure to do everything he could to preserve our beautiful State and to remember that the preservation of our State and of our natural resources had nothing to do with party and everything to do with celebrating and remembering the world, the land that we live on. I ask that we remember his spirit as we start our proceedings over this interim and take a moment of remembrance for Jason and the work that he did for us.

### ***Chair Pazina:***

May we all remember the wonderful work that the former Assemblyman did for our State and the incredibly generous contributions of his time and efforts toward the natural resources community.

## **AGENDA ITEM II—PUBLIC COMMENT**

### ***Chair Pazina:***

[Chair Pazina called for public comment; however, no testimony was presented.]

## **AGENDA ITEM III—COMMITTEE MEMBER AND STAFF INTRODUCTIONS**

### ***Chair Pazina:***

We are going to start with our members in Carson City and then come back here to Las Vegas members. When introducing yourself, please note the district that you represent, your history in the Legislature, and your interest in the Natural Resources Committee. I think we are going to go ahead and get started with Vice Chair Anderson.

### ***Vice Chair Anderson:***

It is my honor to represent Assembly District 30, which is basically the heart of the Truckee Meadows because it has Sparks and a little bit of Reno in there as well. I just finished my second term, and I am excited to be on Natural Resources. Both terms, I have had the opportunity to serve on it. One reason why I love being on this has everything to do with that beautiful lake that is very close to my house—Lake Tahoe—also, the natural beauty of our State and making sure to preserve it and celebrate it.

### ***Assemblywoman La Rue Hatch:***

I represent Assembly District 25 in Reno. I just finished my freshman term in the Assembly, and this is my first interim. My connection to natural resources—I grew up on a ranch, so I have a lot of agriculture and water background. I am also a great outdoor enthusiast, and as many people know, I teach geography, which is all about the human relationship with the earth. I am interested in all of the topics in our purview.

### ***Assemblyman DeLong:***

I represent District 26, which is basically southern Washoe County—includes Incline Village and the community of Verdi. As far as natural resources, I have a bachelor's and master's in geology and a second master's in natural resource management. I have worked in the mining industry my entire career, so I have a lot of hands-on experience dealing with natural resource issues, particularly in rural Nevada.

### ***Assemblyman Gurr:***

I represent District 33—about the eastern third of the State of Nevada. My interest in the Natural Resources Committee goes way back. I have been a hunter, a fisherman, an outdoor enthusiast, snowmobiler—pick something, I have been outdoors most of my life—a guide. I have a deep respect for our eastern third of the State and the western side. I do not come over here except for this; when you cover 50,000 square miles in the district, you do not get much time to travel the rest of the State—but I have a deep background in it. I was on the Wildlife Advisory Board for the better part of 15-16 years, so I have been outside a lot.

### ***Senator Goicoechea:***

Senator Pete Goicoechea—representing Senate District 19. I am 312 miles from home, but I can look out the window and see my district—the west side of the Las Vegas Valley. I have been involved in Public Lands. I was actually twice appointed to the interim Committee on Public Lands as a county commissioner representative. I do not remember what those years were, but it was way back in the '90s. I have spent 10 years in the Assembly and 12 in the Senate and enjoyed working with it always. I think one session I was not on Natural Resources. It has been a great experience. Third generation rancher. I am not going

to say I understand the issues, but I have been involved with a lot of them. It is always a pleasure serving the people of this State. I thank you for the ability to be here again.

***Chair Pazina:***

I had the pleasure of working with Senator Goicoechea this past session on the Natural Resources Committee.

***Assemblywoman Bilbray-Axelrod:***

I represent Assembly District 34, which is basically due west of here. I am a third-generation Nevadan. I have served four terms in the Assembly, five special sessions, and served three of those terms on Natural Resources—serving as Vice Chair one of those terms. I love Nevada for all the reasons that people have said, and one of my favorite things to do with my family is pulling our fifth wheel and visiting those Nevada State Parks. We kind of have everything, and we are here to protect it. I am happy to be on this Committee.

***Chair Pazina:***

I am fortunate to serve as the Chair of the interim Committee, and I served as the Chair of the Natural Resources Committee in the Senate this past session. I serve in Senate District 12 here in southern Nevada. It covers West Henderson, Green Valley Ranch, Silverado Ranch area. Huge fan of the outdoors—visiting all the trails in the parks with my husband and two dogs—and served previously on the Nevada Conservation League Board. Incredibly fortunate to be here today, not only with phenomenal members from around the entire State of Nevada but also some incredible staff members.

I have been told that a number of our staff members do not want to do their personal introductions, so I am going to introduce them for you. We are going to start with our Committee Policy Analyst, Jann Stinnesbeck with the Research Division. Mr. Stinnesbeck has been with the Research Division since 2014 where he served as the policy analyst for the Assembly Committee on Growth and Infrastructure during the 2023 Session and the Joint Interim Standing Committee on Natural Resources and its Subcommittee on Public Lands during the 2021–2022 Interim, and we are thrilled to have him back.

We also have Committee Counsel by my side—Erin Sturdivant and Jeffrey Chronister with the Legal Division. Ms. Sturdivant has worked for the LCB for nine years. She staffed the Legislative Committee on Public Lands during the three legislative interims and the Committees on Natural Resources during those same three legislative sessions. Mr. Chronister recently joined the LCB and is staffing his first interim. We are thrilled to have him, and I am thrilled to work with Ms. Sturdivant again, as she was our legal counsel on Natural Resources this past session in the Senate. I believe you also served in the Assembly in that same role.

In Carson City, we have Committee Policy Analyst, Becky Peratt, with the Research Division. Ms. Peratt has been with the LCB since 2022 and served as the policy analyst for the Assembly Committee on Natural Resources during the 2023 Session. We also have Committee Secretary, Lisa Creamer, also with the Research Division. Ms. Creamer has been with the LCB for 12 years where she staffed the Legislative Committee for the Review and Oversight of the Tahoe Regional Planning Agency for five interims and has assisted with the standing Committee on Natural Resources in both houses. We are so lucky to have them here with us today.

Joining us on Zoom, we have Fiscal Analyst, Adam Drost, with the Fiscal Division. Mr. Drost has been with the LCB since 2012 and currently serves as a Principal Program Analyst in that role. Mr. Drost and his team members review and monitor the budgets for various agencies related to natural resources.

I have to mention, of course, our fantastic Broadcast and Production Services staff who enable us, the presenters, and members of the public to participate in these meetings and ensure that recordings of our meetings are available to everyone. So, thank you so much to our Broadcast and Production staff who are always working so hard behind the scenes.

## **AGENDA ITEM IV—PRESENTATION OF COMMITTEE BRIEF**

### ***Chair Pazina:***

We are going to move on to Number IV. Our Committee Analyst, Jann Stinnesbeck, will present the Committee Brief. Please proceed whenever you are ready.

### ***Mr. Stinnesbeck:***

It is my pleasure to serve this interim as the main policy analyst assigned to this Committee. As nonpartisan central staff to the Nevada Legislature, I cannot advocate for nor against any measure that comes before this body. However, I am available to assist the Committee and its members on any issue or topic on a confidential basis. At the Chair's pleasure, I will provide an overview of the Committee Brief (Agenda Item IV), which is posted to the Committee website.

The Committee Brief contains a list of members and staff assigned to the Committee, as well as the Committee's jurisdiction, powers, and duties. It is important to note that the Committee may request up to 14 bill draft requests this interim for the 2025 Session, of which at least 4 must be based on a recommendation by its Subcommittee on Public Lands. The Joint Interim Standing Committee on Natural Resources is budgeted to have up to six—and the Subcommittee on Public Lands, up to three—meetings this interim. The Committee's currently scheduled meetings can be found on its website, and as such, the remaining meetings that are currently scheduled are February 29, April 5, May 10, and August 23 of this year. This completes my remarks, and I am standing available for any questions the Committee might have.

### ***Chair Pazina:***

Do we have any questions from the Committee? Do we have any questions in Carson City?  
[There were none.]

## **AGENDA ITEM V—APPOINTMENT OF MEMBERS TO THE SUBCOMMITTEE ON PUBLIC LANDS**

### ***Chair Pazina:***

We will move on to Number V—the appointment of members of the Subcommittee on Public Lands. As Chair of the Joint Interim Standing Committee on Natural Resources, it is my responsibility to appoint the members of the Subcommittee on Public Lands. Four members must be selected from this Joint Interim Standing Committee on Natural Resources consisting of two Assembly members and two Senators. Additionally, the Subcommittee has one member representing the governing body of a local political subdivision and

one member representing the tribal governments in Nevada. As such, I would like to announce my appointments of the following members to serve on the Subcommittee this interim.

We will have Chair, Senator Melanie Scheible; Vice Chair, Assemblywoman Natha Anderson. Our members will be Senator Pete Goicoechea and Assemblyman Rich DeLong. Serving as alternates will be Assemblywoman Alexis Hansen and myself. Clark County Commissioner Justin Jones will be our local government representative, and the tribal representative will be appointed at a later date, as we are awaiting the recommendation of the Inter-tribal Council of Nevada. Thank you all for your service on this very important Subcommittee.

## **AGENDA ITEM VI—PRESENTATION ON NATURAL RESOURCE ISSUES AROUND THE COUNTRY**

### ***Chair Pazina:***

Next on the agenda, we have a presentation from the National Conference of State Legislatures on natural resources issues around the country.

I believe they will be joining us via Zoom. We felt this was really important because coming into the interim and looking at the issues that are facing us around the country, we want to be cognizant of everything going on around us as we determine what will be coming before us next legislative session.

### ***Jennifer Schultz, Program Principal, Environment, Energy and Transportation Program, NCSL:***

Unfortunately, Kim Tyrrell, the head of our program, is not feeling well and asked me to step in. I have been at NCSL for over ten years where I split my time between environmental issues, mainly waste and recycling, land use, some environmental health and disaster resilience, and military and veterans affairs. I am based in our Denver office, but I am joining you today from Vermont where I moved a few months ago.

Just a bit about NCSL—if you are not familiar. We are a bipartisan organization serving state legislators and legislative staff for almost 50 years. We promote policy innovation, create opportunities for lawmakers to share knowledge, and ensure state legislatures have a strong, cohesive voice in the federal system.

Turning now to hot topics in environment and natural resources (Agenda Item VI)—I will start with our database. Last year, we combined two legislation databases—one on environment and natural resources and one on environmental health—to better help our members find everything they are looking for in one place. In 2023 our team captured almost 1,800 bills across 28 topic areas, and things are well underway this year with over 970 bills tracked just this month.

Our team covers a range of topics related to environmental policy at a high level. They fall into the following buckets: water; natural disasters; land use; environmental health; and waste and recycling. As you can see on this slide, some of those topics that fall under each of the buckets are listed.

Diving a bit deeper into each of these issue areas—You see that water policy, as you are all keenly aware, is both broad and complex. Legislation can generally be sorted into the categories of governance and management, infrastructure, and quality issues. As drought

conditions have worsened, particularly in the West, we have seen states digging deep into their own statutes to see what is on the books as they try to keep water supplies from drying up. This means looking at jurisdictional issues, water reuse and conservation, water rights, and appropriations. Flooding, on the other hand, requires preparation and assessment of infrastructure capacity. States must also assess the balance required to maintain local ecosystems, support agricultural demand, and recreation. Water infrastructure issues—often assessing the viability of dams and reservoirs, balancing the need to upgrade infrastructure and expand to accommodate growth, and evaluating the most efficient path forward for small and rural systems with consolidation often a consideration.

Policy on water quality largely focuses on drinking water standards and enforcement, often empowering regulatory authorities and local utilities to set standards and ensure availability of funding for surveillance and remediation. Recent sessions have included state action on lead pipe replacement, the role of authorities in private well management, and how best to achieve equitable outcomes.

Faster resilience—given the increase in the size and frequency of disasters policy at the state and federal level has shifted from preparedness and response to mitigation—trying to reduce the risks and impacts of disasters before they happen. In response to the diversification of federal funding, at least 28 states and D.C. have created some sort of resilience body. This could be a designated office, resilience officer, or task force. States have noted that this approach helps streamline collaboration among agencies and jurisdictions and complements the Federal Emergency Management Agency's (FEMA) ethos of locally executed, state managed, federally supported.

States are also reevaluating the tools that they have, including building codes and land use policies. A trend we are keeping an eye on is the use of buyouts as a way to move people away from areas that are prone to repeated and/or worsening disaster threats. States are also getting creative with how they pay for disasters by creating revolving loan funds, infrastructure banks, and catastrophe bonds, which offer an option to bolster insurance needs in the wake of extreme events. Parametric insurance offers a way to disperse funds quickly, since payouts are triggered by condition predictions. I will also call your attention to a FEMA announcement regarding several changes in their individual assistance programs, which will make it easier for disaster victims to get resources quickly and bridge the gap in covering losses in excess of what is covered by individual homeowners insurance.

Moving on to land use—Here are some land use-related issues that have gained traction at the state level. One is wildlife corridors. Twelve states have enacted legislation or issued executive orders in recent years to identify and protect wildlife corridors and contributing to over 1,000 wildlife crossings in the United States today.

Recreation—Eighteen states have created state offices of outdoor recreation. These offices provide a single point of contact for business and government and can support economic development initiatives, workforce programs, youth engagement, and more. States are also making investments in outdoor recreation through bonds, general appropriations, lottery proceeds, vehicle registration fees, oil and gas royalties, taxes on temporary lodgings, and real estate transfers.

Many states are interested in research and development to support a domestic supply of critical minerals. At least a dozen states introduced legislation last year.



And finally, foreign ownership of land—Foreign owners hold more than 40 million acres of U.S. farmland, a trend that has many legislators raising concerns about the impact on the food supply and national security. Thirty-five states considered legislation to restrict foreign ownership in 2023, with 15 enactments, and this year we are tracking bills in 16 states already.

The NCSL's environmental health coverage tracks many areas, but there has been outsized focus recently in air quality, per- and polyfluoroalkyl substances (PFAS), pesticides, and lead. On air quality, wildfire smoke has dominated discussions in state legislatures the past few years, and this is of particular interest to states who may be out of attainment with the National Ambient Air Quality Standards. The Environmental Protection Agency (EPA) continues to look at these exceptional events and develop tools to help states. On PFAS—PFAS describes a class of thousands of synthetic chemicals that have valuable industrial uses and have been used widely since the '40s. Anything that is water, grease, stain, heat, or fire resistant may very well contain PFAS. Their durability makes them useful but difficult to manage or remove from the environment. States are taking action in various ways, like source reduction, establishing drinking water maximum contaminant levels, and exploring remediation. The EPA proposed drinking water maximum contaminant levels are lower than any state currently imposes. The EPA has yet to release a final rulemaking. There is also widespread interest in intervention and clean-up technologies. This is very much an emerging space.

On pesticides, recent state action most often addresses a few key areas: the use or restriction of neonicotinoid products based on human and pollinator impacts; provisions for pesticide applications, such as accounting for wind and timing near schools; and preemption. Some states have supported local pesticide regulations, while others have reinforced state-level authority.

On lead, states considered more than 100 bills last year with 25 enactments. Delaware will create a process for health officials to identify and remediate homes that contain exposed lead paint, including screening every property where a child received a test result showing an elevated blood lead level. Michigan passed a package of bills that require schools and childcare centers to install filtered faucets and conduct routine sampling. And our last example—Rhode Island—also passed multiple bills related to lead service line replacement, protections for renters, and damages for families affected by childhood lead poisoning.

On to waste and recycling—This is something we are also tracking. The NCSL public-private partnership on recycling just wrapped up this fall, which I staffed, and we released a Recycling Policy Toolkit that is linked here. The toolkit includes a Recycling 101 as well as in-depth reports on extended producer responsibility and recycling market development. We also cover source reduction measures around single-use plastics and polystyrene as well as bottle bills, food waste, recycled content mandates, chemical recycling, et cetera.

A few other areas that are gaining traction in the natural resources space, there in mention, include regenerative solutions, electric vehicle life cycles, and carbon capture. Regenerative solutions often refer to agricultural practices to improve yield and resilience to changing conditions. Many states encourage partnerships between producers and university extension programs to explore options to bolster soil health through practices like cover crops, no-till methods, and more diversified crop rotation.

Electric vehicles—as the popularity of them continues to grow, there are increasing demands for rare earth elements, such as lithium. As with any natural resource extraction, states are looking to balance economic opportunities and environmental impacts. A handful of states are also looking at solutions for battery reuse and recycling.

Carbon capture—or CCS—is one option states are exploring to offset emissions. In 2023, 30 states introduced 4,142 bills regarding CCS. Arkansas and Oklahoma both enacted legislation defining bioenergy paired with carbon capture and storage as a carbon negative energy source. Indiana enacted Senate Bill 541 to establish a carbon sequestration pilot project with two carbon dioxide pipelines at a proposed ammonia production facility. States also consider legislation concerning soil-based carbon sequestration. For example, Maine enacted a bill requiring a study and report on incentive programs for soil carbon sequestration. The study is to be conducted on forest lands, agricultural lands, conservation lands, and wetlands, as well as in suburban and urban areas.

Here are links to some new resources that we have put out in the past month or two—the Disaster Resilience Report and a Disaster Resilience Toolkit that aggregates resilience resources from NCSL across numerous program areas. We have a web page on soil health. We updated one on lead service lines; wetlands; PFAS—constantly tracking—and we have some resources on chief resilience officers along with the Recycling Policy Toolkit and many other resources that we would be happy to share with this Committee as you encounter any questions.

That is all that I have today. I know that was a lot—and me filling in for Kim. I am happy to take any questions or refer to my colleagues if necessary.

***Chair Pazina:***

That was really interesting, and you are right; it was a lot of information packed into a small time period, which we really appreciate. Do we have any questions from the Committee?

***Assemblywoman Bilbray-Axelrod:***

It was very informative. I want to ask something about the PFAS. We had some legislation last session that was vetoed. I was wondering what other states have brought that. Has it been bipartisan? Anything that you could drill down on—on what has been successful.

***Ms. Schultz:***

Yes. I personally do not cover PFAS, but my fantastic colleague, Emily Sampson does, and she has complete legislation charts of every bill that was introduced—there are many—and an updated web page. I would be happy to connect with you offline and share those resources.

***Senator Goicoechea:***

I would be interested in the 35 states that are looking at foreign land ownership. Do you have a breakdown that you could get to us on the Committee—what states they are and just kind of a nutshell of what they are really looking at? I know in some areas it is critical, and I think it clearly ties back into the critical minerals, which we have in this State—the huge lithium deposit in northern Nevada—and just how that is, technically. Behind the scenes, they are saying that is probably foreign money that is actually developing

the projects. How do they deal with that? Just a little more along those lines would be helpful.

**Ms. Schultz:**

That is a topic that I cover, and I would be happy to share a complete legislation chart with this Committee. Like I said, 35 states introduced legislation last year—more than 100 bills; 15 were enacted across the country in various regions. Just in January we are tracking bills in 16 states, which I also have to share.

**Chair Pazina:**

We do have a question from Carson City as well.

**Assemblywoman La Rue Hatch:**

I appreciated that there was a whole slide on water because I think that is one of the most critical issues that we are facing in our State. I would be interested to learn what other states, especially in the West, are doing about water rights and drought and balancing over-appropriation and over-pumping and all these challenges that we are seeing with climate change and water rights today.

**Ms. Schultz:**

I jotted down that, and I will get together with my colleagues and add this to the package we will be sharing with the Committee.

**Chair Pazina:**

Do we have any other questions in Carson City? [There were none.] Ms. Schultz, we really appreciated your presentation. We look forward to receiving some of those answers.

## **AGENDA ITEM VII—PRESENTATION ON RESEARCH ADDRESSING CLIMATE CHANGE ISSUES**

**Chair Pazina:**

We are going to move onto Item VII on our agenda—the presentation on research addressing climate change issues. With that, we are going to welcome up our friends from the DRI.

We have Dr. Acharya and Ms. Tracy Bower. Please proceed when you are ready.

**Dr. Kumud Acharya, President, DRI:**

We are going to tag team on this presentation (Agenda Item VII). We are one of eight Nevada System of Higher Education (NSHE) institutions. We are the only research institute exclusively involved in research, and we do not grant degrees, but we are part of the system here. We have grown a little bit in the last few years. We have been around for 60-plus years. We have more than 600 scientists, students, and staff at DRI; 140 Ph.D.s researching on more than 40 disciplines. Last year we brought \$47 million in external grants and contracts, not counting the State support.

What do we do? DRI—We investigate a human's impact on the environment and the environment's impact on the human. We research on air, water, earth, and fire, and how they impact humans.

I want to share with you a few research highlights that might be of interest to you that DRI scientists are currently involved in. The first one is the private drinking water wells—one of our teams at DRI, Northern Campus Reno, led by Dr. Monica Arienzo. This sample—170 groundwater wells in northern Nevada. They found out that almost one-third of those wells have elevated concentration of arsenic higher than EPA standards, and our scientists are trying to educate those homeowners and how they might want to treat those—the drinking water system from the water that they get from the wells. This is a very critical study. They also found some other contaminants, but arsenic was the main one.

Many of you are familiar—DRI houses one of the six national regional climate centers, primarily funded by the National Oceanic and Atmospheric Association. DRI is responsible for collecting climate data for 11 western United States. This data is available for policymakers and all water managers and all kinds of people and also the public.

A couple of projects out of Western Regional Climate Center—DRI scientists are deeply involved in studying atmospheric rivers. Obviously, atmospheric rivers have become a fairly common phenomenon recently. Those events bring a huge amount of precipitation. Our scientists are also involved in producing that map—Drought Monitor. That is the drought conditions for the whole country. This map is produced every week, and this basically tells which part of the country is under drought right now.

To give you an example—remember recently, Hurricane Hilary flooded Kyle Canyon here in Southern Nevada, and DRI scientists were involved working with Clark County people and looking at the impact of the flood on the debris flow and damages. You remember that there were so many people who were stranded there, and we were involved in trying to help the county manage those situations.

I want to share with you another new project here. This is called ARkStorm. Ten years ago, the United States Geological Survey (USGS) produced a scenario that basically mimics what happens if there is a historical level of floods, which is like the flood that happens every 200 to 300 years. The last flood of similar magnitude happened in 1861, and that damaged a lot of watersheds and flooded a huge amount of areas in California and Nevada. Our scientists are working on here to see what happens if we get one of those historical events. They are basically working with the emergency responders and all of those to come up with some sort of preparedness, right? I mean, what happens if you get a massive series of atmospheric rivers, and how that would impact, and how should we be preparing for that kind of event in Nevada? This is an ongoing project and happy to share with you more as we make more progress.

***Tracy Bower, Director of External Affairs and Communications, DRI:***

Building on what President Acharya said, I want to talk a little bit about some the impacts of extreme heat. Nevada holds the distinction of having two of the fastest warming cities in the country. Both Reno and Las Vegas are listed as among the fastest warming cities, and we know that summers are getting hotter, days are getting more difficult, especially for vulnerable populations.

One of the things that our scientists have realized is that there is not a single agency that owns the response to heat. It often, at times, rests with a number of different agencies to

respond to people who are impacted by extreme heat, so DRI scientists have put together the Southern Nevada Heat Resilience Lab. It is designed to bring together the different groups that are responsible for responding to vulnerable populations and the impacts that heat is creating to find solutions that will work for the Southern Nevada community. We are excited to bring those groups together. It is a new project, but we are hopeful that it will really help to build up a better Southern Nevada response to dealing with extreme heat.

***Dr. Acharya:***

Another project is geoengineering. This is new research. DRI received funding from the federal government to see if we can manipulate climate at a local scale. For example, can we change the color of buildings so that there is more reflectivity and less heat absorbance, or is there a way to thin cirrus clouds so that we are basically not capturing that excess heat? This is a geoengineering to deal with the impact of climate change.

DRI also has a program within Western Regional Climate Center where we are working on developing wildfire predictive models. Once the fire starts, where will that fire move depending on the weather and climate conditions?

One of the other projects I think that Senator Pete Goicoechea would appreciate—he has been involved with working in DRI—is the Nevada Water Resources Initiative. This is a project that began about a year ago where we are mapping, basically assessing, water resources of the entire State—the groundwater basins, the amount of water that we are losing to the atmosphere, the amount of surface water. This is a four-year project. This will basically tell us whether or not we are using our water resources sustainably.

I think Senator Pazina has heard this many times from us—OpenET, another program DRI has developed, working with the USGS, Environmental Defense Fund, and others—basically allowing water managers or the farmers to understand how much water they are losing from their ag fields every day just using an app and satellite data.

Cloud seeding—Again, we would like to thank Senator Goicoechea for his support and leading the effort in getting us additional funding for cloud seeding. This is our historical long-running program—basically, the generators that are placed in like two dozen locations to increase precipitation in the State and neighboring states.

DRI also has quite a lot of archaeologists working with anthropologists to try to understand how the culture and natural resources impacted the decision making. The anthropologists study present-day humans, but the archaeologists study the materials left by the past humans and how their behavior changed depending on environmental conditions.

DRI is very proud to say that 50 percent of our energy comes from solar on both campuses. We are also deeply involved in researching how to increase efficiency of solar systems.

Microplastics is a new project. We heard about PFAS earlier—microplastics and other emerging contaminants. We are finding microplastics in all kinds of places. They come from our clothes and all kinds of things that we use in daily practices, and DRI is a leader in the research of microplastics and prevention of its source.

Another project—DRI scientists are also working in air quality of national parks all over the country. Our scientists have developed what they call a haze index. If there is a national park and the air quality is poor, they try to understand the source of the air quality and work with the National Park Service and other agencies to manage those source control.

**Ms. Bower:**

One of the other ways that DRI is contributing, not just to the State but to the country as a whole, is through our Integrated Terrain Analysis Program. This is a program that really looks at the environment's impacts on the military's ability to respond in different conditions—everything from how a tank or a weapon or even an IED might respond differently depending on what part of the world the military is working in. This is a long-running program that is funded through the Department of Defense, but again, it really looks at the impact that the environment has on the military's ability to respond.

We also have a long-running program that deals with a number of environmental issues at the Nevada National Security Site (NNSS)—what used to be the Nevada Test Site. We have more than 40 years of history out at the NNSS doing engineering and hydrologic science support, national security program support, environmental monitoring. We also have a really widespread community environmental monitoring program. We have weather stations that are set up throughout southern Nevada, southern Utah, and parts of California. We work with a community volunteer. Usually it is a science teacher—a retired teacher in that community—to measure the environmental impacts of anything coming off of the Nevada National Security Site. Should there be any sort of a release or even a wildfire, the people in those communities will know if it is having any impact on their local community. We also do a lot of cultural resource management for the Nevada National Security Site. And then, in a newer program, we are working on some defense nuclear nonproliferation out at the NNSS as well.

I want to talk a little bit too about science, technology, engineering, and mathematics (STEM) education and the impact that DRI scientists have on STEM education throughout the State. Although we are not a degree-granting institution within the NSHE system, our scientists have worked really hard to translate the science that they do into programs that we can incorporate into Nevada schools. Our STEM education team provides a lending library of resources for Nevada teachers; those are made available free of charge. For example, if you are a third-grade teacher and you want to teach about the water cycle, you can check out a STEM education kit that does that. If you are a teacher that needs some assistance teaching robotics, we have lending libraries.

We also have teacher training classes that we offer to Nevada educators, again, at no charge, to help them to feel more confident teaching STEM, including robotics, throughout the State. This is a program that has been funded primarily through philanthropic support. We have had some support through some federal earmarks, as well, to help build out this program. We think it is a really important way that our scientists can contribute to STEM education throughout the State. I want to just remind everyone, too, those are tools that are available to any teacher. It does not matter if you are in an urban school, a rural school, public, private, charter school. We make those available to any educator throughout the State.

In addition to that program—Again, we are not a degree-granting institution, but we like to talk a lot about the grad students and the undergrad interns who work alongside our scientists. If you are a student at the University of Nevada, Las Vegas (UNLV) or UNR, DRI can help to fund some of the students' education, and they work alongside our scientists in the laboratory as well as in the field. We have an undergraduate internship immersion program that is really targeted towards getting students who do not see themselves as STEM majors to maybe consider a career in science. We have students from Nevada State University, College of Southern Nevada, and Truckee Meadows Community College, who come on board at DRI for a 16-week paid internship program, again, with the goal of

getting them to maybe expand what career fields they would consider going into. We are really excited to have a strong impact on STEM education, even though we are not the one granting that student's degree.

We also do a lot of community outreach to share the science that is happening at both our Reno and Las Vegas campuses through our science lecture series that we do in both parts of the State. We also open our campuses up for open house events as well. We are really excited to share the work that our scientists are conducting with the community.

One ranking that I would like to share is through the National Science Foundation (NSF). When you look at the amount of funding that the NSF awards to research institutions, DRI ranks in the top 9 percent for Geosciences overall. We rank in the top 6 percent when you look specifically at Atmospheric Science, and then the top 3 percent for Geologic and Earth Sciences. So, we are really among the nation's leaders when it comes to environmental research. Those are about 600 scientists who are based here in Nevada who do work here in Nevada and all over the world.

We also like to tout that we get about 15 or so percent of our funding from the State. That generally funds our labs, our operations and maintenance of our equipment, and the admin side of DRI. Everything else—Our scientists earn their own salaries based on the grants and contracts that they earn. So, we feel like we are also a positive environmental impact to the State. For every dollar that we get in State funding, our scientists bring in almost \$5 in outside grant and contract revenue, and when you look at the direct, indirect, and induced combined return on investment, it is over \$8 for every dollar that we get from the State.

We heard some great news this morning along those lines as well. The NSF launched a new program called the NSF Engines, which is looking at, "How do you create positive economic impact through scientific research?" DRI and UNLV, along with a couple of other partners were named today as one of those NSF Engine awardees. It is about up to \$160 million to our partners and DRI over the next ten years. That is the cap on that award. That does not mean we will get that much, but we are really excited. It is one of ten NSF Engine Awards that were announced today by the White House. So, again, we like to tout that we do great work and that we have a really positive impact on the State's economy as well.

That concludes our presentation. We are happy to answer any questions that you might have.

***Chair Pazina:***

I am always fascinated by the work that DRI does. I enjoyed hearing your presentation during the last legislative session. I enjoyed hearing everything today as well, and I know that due to time constraints, there was a lot of information packed into a little bit of time. We do have a few Committee questions, and we will start in Carson City.

***Vice Chair Anderson:***

I have multiple questions, but at this time, I will just ask two. I do not have the number, but you talked at one point about the heat mechanisms and the fact that we have the two cities that are growing hottest, for lack of a better term, and you spoke of community outreach. What are the goals under the Southern Nevada Heat Resilience Lab slide? You spoke of developing meaningful community engagement. What is the thought of that, and what is the outreach in there, because as I look around, this is a very pale group of people

here. I was just wondering what is that meaningful community engagement and outreach that is planned at this time?

***Ms. Bower:***

That is definitely one of the things that the group working for the Southern Nevada Heat Resilience Lab is very mindful of, and the people that they brought to the table for those initial conversations, some of which have really focused on, "What are the challenges associated with responding to heat?" For example, it might be somebody who works in a really hot environment, whether that is indoors or outdoors—somebody who works outdoors all day long or somebody who works in a really hot indoor kitchen, but then goes home and perhaps cannot afford to run their air conditioning at night. They are bringing together people who are in those vulnerable populations to really identify what the challenges are with living with extreme heat. From there we will work with the partners who are responsible for responding to extreme heat to see if they can identify some of the solutions. It is really starting at the community level with the people who are the most impacted, and that is an important part of this project and really kind of where they are right now in those very early stages trying to focus on, "What are the things that are driving people to be impacted by extreme heat?"

***Vice Chair Anderson:***

I really appreciate you bringing up the very specific employees and the world that they are in, because I know that we have had numerous discussions over the last two sessions as well as some bills that had to do with working in that heat. If you are a construction worker, let us say, and it is 106 degrees out, and you are supposed to continue to work—Are you reaching out with some of the unions and/or associations, which might represent these individuals, or is it more being done through an individual basis? I recognize that this is a very early stage, but it is just something to put out there.

***Ms. Bower:***

I do not know if that outreach has originated through the unions, but again, I know that they have been targeting people who live in communities that tend to have higher incidents of issues with the extreme heat—underserved populations and neighborhoods that have been impacted. I would be happy to follow up and get more information on exactly how they have been able to identify those individuals to participate in this.

***Chair Pazina:***

We are going to go next to Assemblywoman La Rue Hatch, and then we are going to come back to Vegas with Assemblywoman Bilbray-Axelrod. If anyone else has questions, we will follow up after that.

***Assemblywoman La Rue Hatch:***

I have kind of a request; I am not sure that you can answer it right now. And then I have my question. I appreciate talking about heat resiliency and climate resiliency. I know that we just had the National Climate Assessment, and it came out and said that Nevada has done some of the least work in the Southwest on climate resiliency, and our cities have done some of the least work compared to other cities on climate resiliency. I would really like to have some policy recommendations as you are doing this investigation on how we can promote more action on climate resiliency—not just heat resiliency, but in general,



climate resiliency. So that is my request, and then I have a question. Would you like to pause and respond, or do you want me to go to my next question?

***Dr. Acharya:***

I think that is a great question. We obviously do not make policies, but we are happy to provide our data to policymakers, then they can make policies on it. DRI is a nonpolicy-making body, and we are a bipartisan research institution, but I agree with you that there is a lot that we need to work on. I just wanted to put that out there so that you understood that.

***Assemblywoman La Rue Hatch:***

I am not saying you need to bring us a bill, for sure. I just am looking forward to the results of your study so that we can work on policy. My actual question is about microplastics, if you could speak a little bit more to what you have seen on what has led to microplastics. I know that we have alarming levels in Lake Tahoe up near us—anything you can share on the causes and what is happening up in those areas.

***Dr. Acharya:***

Happy to speak to that. Microplastics—our scientists have found that one of the biggest sources of microplastics are the dryer vents in people's homes. A lot of those microplastics can originate from the clothes that we wear, particularly fleece, and also the cosmetics, all the detergents, all those things that we regularly use. There are all kinds of plastics out there. The smaller fragments of macroplastics and some other ones that you cannot even see it with your naked eyes. They have found that we basically emit those plastics from places that we have never thought of before—one of the biggest findings that came out of this research—and then now we are trying to see if we can develop some sort of a filter that can be maybe mounted on those dryer vents that can basically prevent those plastics from getting into the outside or water bodies.

Microplastics are all over the place. The sources can be from unpredictable places and areas. It is a much bigger challenge than we had initially thought. It is a growing research at DRI right now. We have a number of people collecting data. They are finding microplastics in Lake Tahoe, Lake Mead. They are finding it in the Alps—the snows and everywhere. There is no regulation right now to control that, but it is similar to PFAS, right? I mean, it is something that is persistent in our system. We just have to understand and identify those sources and see if we can treat them at the source. Hopefully, that answers a little bit of your question.

***Assemblywoman La Rue Hatch:***

Yes. Thank you.

***Assemblywoman Bilbray-Axelrod:***

It is just incredible the work that DRI does, and I am just always blown away, even that last bit with the dryer—having that come through the vent. That is just fascinating. I am kind of putting on my different hat as chairing the Education Committee. I love the green boxes. I love the STEM education. Two questions—What age does that start? What age does it end? Do you have pre-K boxes? Does it go up through high school? And then, you mentioned that they are available throughout the State. Would a teacher reach out to you, and ask for you

to send that? Is that how we would go? You said there is no charge, but would they have to pay for it to be sent back?

***Dr. Acharya:***

It is available for K through 12—from elementary school to high school. The teachers can go to our website. There is a listing of all our green boxes. There are, I believe, 150 of them in circulation and 40 different topics they can request. I just had an experience because my wife is a schoolteacher, and she wanted to use one of those boxes. And I said, “Why not go to the website and get it?” She went to the website, and she ordered a box that was shipped to her school. She teaches at Legacy Traditional at Cadence. It was there in a few weeks and she gets to keep it for four to six weeks. When the box is shipped to her, DRI sends the shipping back—a label—and it is free for the teachers to send those boxes back to DRI. Everything is absolutely free. All they have to do is to go online and request those boxes.

***Chair Pazina:***

It really is a wonderful resource for the students in our State. We have some more questions up north.

***Assemblyman DeLong:***

I had a question about the fire research. Are you looking at the effectiveness of rangeland and forest management on wildfire propagation?

***Ms. Bower:***

Assemblyman, that is something that is an important part of research into wildfire. I know that is an area that our scientists have been eager to find additional funding for. I cannot tell you the scope of all of the research that they have done in that particular area, but I know that in the last couple of years we have been looking at funding opportunities to be able to better understand it—knowing that is a big part of the wildfire risk and wildfire management. I would be happy to follow up with a researcher who is leading in that area just to see if there is anything specific within the State that we can provide.

***Assemblyman DeLong:***

I would appreciate that.

***Chair Pazina:***

Assemblyman Gurr.

***Assemblyman Gurr:***

Cloud seeding—it looks like it was really successful last winter. But over time, how has it been? I was under the impression that it had been suspended for a while. Is it in place and working, and where? And how much success have you had?

***Ms. Bower:***

DRI has had a successful cloud seeding program for decades. It was a program that the State funded for a very long time until roughly the Great Recession. Funding was cut during

budget cuts to the State. It was reinstated, I think, for one year in 2019. And then funding was last reinstated in the 2023 Legislative Session. Thanks to Senator Goicoechea's leadership for sponsoring that bill, we received \$600,000 a year for each year of the biennium.

We have about two dozen or so cloud seeding generators that are located throughout the State that we can operate when weather conditions are right. We cannot make rain out of nothing on a perfectly clear day, but when those winter storm conditions are right, then our scientists can fire up those cloud seeding generators and generate about 10 to 15 percent more precipitation depending upon the winter storm. They have been operating those over the winter. We have a report that we will provide to the Legislature at the end of the fiscal year on how often those are operated. They can estimate what they have been able to generate in terms of additional precipitation.

In the years when the State funding was not available, we continued to operate the program, but on a much smaller budget. We went around to smaller water agencies throughout the State. We had some philanthropic funding that was made available as well, so we still operated it. But in those conditions, we are not as effective because we oftentimes would not get funding until conditions were so dire that somebody would provide some funding. Having the State funding is really important for us to be able to operate that program more effectively and generate more precipitation for the State. Again, we are very grateful for Senator Goicoechea's sponsorship of the bill and the funding that provided. We are hopeful that it will be able to continue in the next legislative session as well because we do think it is an important tool to have in the State's water portfolio.

***Chair Pazina:***

Senator Goicoechea is obviously very familiar with the wonderful work done by DRI, so he does not have any questions at this time. I would love to ask where the Open evapotranspiration program is right now. I am curious because I have heard a lot about it, and I think it is really important to the future of the State.

***Ms. Bower:***

OpenET was developed in partnership with the Environmental Defense Fund, Google, and NASA. There are two bills, one sponsored by Senator Cortez Masto and one sponsored by Congresswoman Lee, that would create some additional funding within USGS for OpenET. Those bills have not passed yet, but we are continuing to look at ways that we can make that tool available to agricultural users to be able to better understand what is happening with their crops. They still have some funding that they have from a previous appropriation at the federal level, but that permanent funding source through USGS has not happened yet.

***Chair Pazina:***

I am hoping you can share one of the really fascinating projects that I kind of geeked out over during session. I believe it was in Greenland with a cylindrical tube of ice. If you can share that with the Committee—because I find it so fascinating. It really fits in with the archaeology portion of the presentation.

***Dr. Acharya:***

Yes. Our Ice Core program is going really well. Two years ago, our team went there to Greenland to collect—bring ice cores. Last summer—the '23 summer—after the legislative session ended, our team took the lab to Greenland. They took all the equipment to Greenland, and they were there for a couple of months testing. That program is going really strong, and basically, they are looking at 10,000 years of climate history—how the atmospheric depositions that have been deposited on those ice cores are telling us during what period we were emitting, and what caused that. For example, when we started using gasolines, the lead spiked in our year—and all of those. They even discovered that the large volcanoes in the past have actually led to massive famine because of cooling effect, and that led to the fall of the Roman Empire and all of that. That team is doing really well and collecting a lot of data. Please be on the lookout—happy to share with you more research that comes out. It is going very strong. They actually took the whole lab to Greenland in the '23 summer.

***Chair Pazina:***

I am sure I will be reaching back out for updates on that program. Do we have any other questions from the Committee, here in Vegas or in Carson City? [There were none.]

[Chair Pazina asked the secretary to mark Senator Scheible present.]

That will lead us to our next presentation on wildfire issues—Agenda Item VIII.

**AGENDA ITEM VIII—PRESENTATION ON WILDFIRE ISSUES**

***Chair Pazina:***

We have a presentation from Nevada's Division of Forestry to discuss wildfire issues in the State.

State Forester Firewarden, Ms. KC, thank you for joining us today from Carson City. We would love for you to begin when you are ready.

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

I have my Deputy Administrators, Ryan Shane and Eric Antle, and we are going to provide you a presentation on a couple of the programs the Division is fortunate to be able to operate (Agenda Item VIII). Just as an overview and reminder that the Division's mission is to protect and enhance Nevada's ecosystems and communities through natural resource stewardship and wildfire management. We do this through implementation of multiple programs, as are listed here. I am not going to list them all, some of which are statutorily required—the protection of endangered and protected flora, making sure that we have a wildfire management program, insect and disease prevention, urban and community forestry, others which are not required by our statutes but are allowed, and our federally operated programs.

We did have quite a large number of accomplishments this year, and some of which I will speak to directly in slides going forward. But a big takeaway of what happened this year—We did a lot of education and outreach, a lot more than we had in historic years. We did treat a lot of acres. I normally would have started with the discussion on our

Shared Stewardship program, but you are going to hear from that committee later, so I skipped over all the acres we treated. We did sell a lot of plant materials, and we were able to hit the Urban and Community Forestry Program pretty hard this year with a lot of outreach and education.

A recap of the fire season—You might say, “What fire season this year?” Do not get used to it. 2023 was, I want to say, a little bit predicted that we were going to have a slow season. We could not have predicted that it was going to be the lowest in recorded history in Nevada, but it was, at 1,300 acres burned across the State. I would love to take all the credit for why those acres did not burn, but I want to say it was mostly weather driven.

We had snow at all elevations—compacted the annual grass growth at the lower elevations, and the snow stuck around at the higher elevations—thus reducing the risk. We also had a lot more moisture in the summer storms, which actually created less impact when we had lightning; we did not have a lot of dry lightning starts. We did have a less than average number of starts—about 400 fire starts. We usually average about 5 (500) to 600. What this meant is we had a lot more staff here, both at the local jurisdiction level, the federal and state level, so we actually were able to aggressively attack those fires immediately and put them out. That is not the case when we have multiple states burning across the U.S. That was also one of the reasons, and then of course, all the extra acres we have treated, causing some of those fires to start and remain small, giving our firefighters a better chance to fight them before they got out of control. Like I said, I would have started with our Shared Stewardship accomplishments, but I am not going to go there.

The Wildland Fire Protection Program is a program that we operate. It is a voluntary program that counties can opt into. One of our highlights this year is we are at near full participation statewide. We did get Mount Charleston in. They have not been in since the program began, so this is a big win for us. Mount Charleston is coming in; we are working on the contract. Thirty-one of the thirty-three entities are in. One did opt out this year—the City of North Las Vegas, I believe—and that is because they just do not really have a lot of fire risk, so it made sense that they would not want it. The primary purpose of the program is for payment of fire bills beyond the initial attack period, but bigger than that, it is risk reduction. We are trying to look at these areas, and how are we going to aggressively attack the risk in those areas, both in the built environment and the environment.

Fire Adapted Nevada is a program that we house in the Division of Forestry, but it is an interagency program with federal-state partnerships, local government entities—all of our partners—the University with Living With Fire. We housed the coordinator. The big story here was we went from 33 Firewise communities in the State of Nevada in 2022 to 52 as of today and growing. That was a big jump—the year previously. We had two in the State of Nevada, historically, so we have grown this tremendously. Why does it matter if we grow this? It matters because this means we are educating communities on their risk. They are taking ownership of the built environment and the planted environment, and they are also understanding who they need to call and how do they work together with our federal, state, local government contract partnerships to actually reduce the risk on a larger scale. That is a big win this year.

I was sure you guys would want to hear an update on the evolution of our Conservation Camp Program. As you know, with the passage of AB 236 in 2019, there was a big reduction in the inmate population that was going into the conservation camps, and we were then putting on fire and fuels crews. We went from about 1,500 in the program, rotating through, to 300 as of today. We have averaged about 300 over the last couple of years, so this meant we needed to greatly reduce the number of crew supervisors. We had

closed some of the camps down and start pivoting to funded, staffed—I do not know how you would call them—fire and fuels crews. We started to do that in the last couple of sessions.

I am really excited to tell you all today—In the last session, we were given the opportunity to take 35 of our crew supervisor positions, who no longer had crews to supervise, and make those into 42 Firefighter I and II positions. We were hiring those here in Carson City—actually, Washoe Valley at Bowers. We were hiring—Carlin, Ely, and Winnemucca to start testing where we might be able to fill these crews. I am happy to report in every one of those areas, we have been able to hire staff. Twenty-five of the forty-two fulltime positions are full as of today. We continue to interview. We appreciate the Governor's reduction of qualifications. It does not mean we want unqualified firefighters out there; it means we train them anyway. We will take anyone who wants to work hard and work in fire and fuels, and we will train them. We are very excited. The only crew that is almost near full—we need one more person to put on it—is the one here at Bowers. The reason for that is we started with seasonal crew. We started, four years ago, filling seasonals here—20 seasonals—so those seasonals got that time and experience on and then moved into fulltime positions. We are looking at how we might entertain that elsewhere, but we are very excited that we have had such a high turnout in applicants and actually are getting some very qualified applicants applying.

As of today, the current camps that stand closed are Ely, Humbolt, Wells, and Tonopah. We remain in the other camps, running inmates, and technically, we are still running ten as of last week. I do not know what the numbers are today. Inmates out of Ely—max as well. As we start to build the transition to the full-time crews, we will likely lose those inmates in Ely, but we will gain the workforce of these fire and fuels crews. This Bowers fire and fuels crew—just to give you an example—we had a feeling that this would be a lot more productive crew. We have seen it in the private sector. We were able to send them other places this year because we had less fire danger.

They need to reach a certain level of qualification in the nationally certified wildfire world, so we were able to send them out of State, which we are not able to do with our inmate fire crews. Other than California, they went to Montana, Utah, Idaho. They went all over this year, and they were able to get many qualifications that luckily a slow fire season offered us. That was exciting and exciting for those crews. They got to see fire in many different landscapes. That only helps them to be better firefighters here within the State. We continue to evolve in the camp program, and we are continuing to run crews in the camps where we still remain with crews in that camp.

One of the big highlights of this year—As we went last year, we got NRS 528 adopted—the Urban and Community Forestry Program. We have run this program for quite some time within the Division of Forestry. We knew that we needed to address heat island issues. We knew that we could not just focus on our forests and rangelands outside. We needed to look internal to cities and make sure that we were focusing there. Historically, this has been a federally funded program that has been zeroed out in almost every President's budget at the federal level since I started working here 21 years ago. With the infrastructure money—or infrastructure bill—came a large amount of funding into the Urban and Community Forestry Program. They did recognize the need to make sure that we were looking at these underserved populations and making sure that we are getting trees back into cities because of all the many benefits of trees in cities. We have an urban forester in Southern Nevada out of our Las Vegas office. She worked diligently with our partners, and they brought just under \$19 million to the State of Nevada in multiple project areas in order to do just that. So, there will be a lot of tree planting in all the highest-risk areas.

We have some programs for workforce development, making sure that contractors know how to be trained in tree pruning/tree planting and that that is actually translated into all the languages necessary for the workforce that is out there. There are a lot of heat island mitigation programs and then food security programs—orchards and food gardens to make sure that people who cannot afford to buy their food in grocery stores have that available. We are very excited about this program. One of the big highlights that you would not see from just a snippet of our accomplishments—We were able to reach 500,000 additional residents this year through having additional funding and looking and widening the program to different areas, which is actually about 700,000 over our ten-year average. We are really trying to get out there and reach people and make sure that we are doing these projects in urban forests, where they really matter. And with that, I would be happy to take any questions.

***Chair Pazina:***

I believe our first question is coming from Carson City.

***Assemblywoman La Rue Hatch:***

Thank you so much for that presentation and for the work that you are clearly doing. I can see a lot of benefits, especially in the urban forestry. I can tell you are busy, busy—every single day—working on all of these issues. My question is about the fire season. Last season was wonderful. I could go outside during the summer and not have to mask up. My question is—Is that going to make next fire season worse because there is more unburned fuels? Or what kind of impact will that have on next year?

***Ms. KC:***

It is a little early in the prediction models. We are looking. The National Interagency Fire Center is taking all of the data that is out there, looking at the information, and trying to tell us what it is going to look like. If we are looking at historical averages, yes, our fire season will be likely larger next year. It depends on whether we do end up getting a snowpack at the lower elevations that will pack down some of those annual, invasive species. Historically, we follow the flows in the rivers across the State. We take that data, and we look at our fire history and what it looks like. It is like the three years following our wettest years where we have the most devastating fire seasons, and we are headed right into it. I am hoping for DRI to seed some more clouds and make sure that we get a lot of moisture, but we are really nervous about this upcoming fire season. We will give a better presentation when we get some better models as it comes into the fire season.

***Chair Pazina:***

That speaks to the importance of some of the legislation we had, like Senator Goicoechea's cloud seeding legislation that he had with DRI and the great work that is being done around the State. We really appreciate all the work being done by your office. I believe our Vice Chair had a question as well.

***Vice Chair Anderson:***

First, I want to thank you for the information around the Fire Adapted Nevada (FAN) Summit because I know there is one coming up. I want to say it is in late February over at the UNR campus. Are there any sort of those summits also happening in our more rural districts, or are you partnering with any of the community colleges or the tribal communities

and trying to do those summits as well? It sounds like it is working. Great job with the fire adaption services.

**Ms. KC:**

The FAN Summit brings together everyone across the State in the fire-wise communities. It was very similar to the Fire Safe Council summits that were held historically. That is what this is. It is bringing together the leaders in those communities who are seeing the vision with the people—the contractors, the forest service, the Bureau of Land Management (BLM), and the partners who are there to help—and how can we help and, “What are your issues?” That is the point of the Summit. They did put it up here this year. I think historically it has been held in Reno.

I do think that they are looking at moving across the State, but this particular Summit is for all members, so anyone is able to join. There is a lot of great information and value for those community leaders. That is one of the big things we had, and I would like to say we still have here, because she moved into a different position. I greatly attest this to having an excellent FAN Coordinator, Kelli Nevills, who just really went all over the State and talked to these community “spark plugs,” we call them, trying to make sure that they had what they need to be able to understand their risk, and “How are they going to act?” They do have plans. They have community defense plans. They are looking at community wildfire protection plans. They are looking at them, but they do not always know how to implement what is on those pages. This was a big plug for her. She unfortunately—or fortunately—moved into our stewardship program, so we are filling this program now, but she is still with us. She is still helping the program. She will help through the Summit and beyond, I am sure.

**Vice Chair Anderson:**

You also mentioned about the food security programs. Could you go into that a little bit more? Is that statewide, or is that in very specific areas?

**Ms. KC:**

They are in designated areas. They were actually applications that went into the national infrastructure law “pool” that we are awarded nationally. I do believe there were some awarded both in Reno and in Clark County—the two fastest-growing heat centers in the nation. They were awarded that way. We do have a competitive process that was also given to us, so we actually are pushing those out right now to get additional applications. It is anyone who applies, and then we go through a certification process to make sure that they qualify. Obviously, we have to pick winners and losers because we do not have enough money to give to everyone, but these programs look to be sustainable in the long term, at least during the portion of the infrastructure bill, and hopefully beyond.

**Vice Chair Anderson:**

Is that then distributed through the food banks or Three Square in Clark County, or is it done specifically from smaller communities or even from a household? I am just kind of confused about the logistics, which I realize is not in our purview.

**Ms. KC:**

It varies. Each grant application tells us what they are going to do and how they are going to put those. We could actually get you the two applications if you would like to dig further



in—that did apply and were awarded for these types of programs. Basically, they are pushing a program. We liked the program. It actually was awarded at a national level. The reviewers looked at it and thought it was excellent. Nevada was very successful, and I attest that to having great leadership in Cayenne, down in the southern part of the State, running this program. She really worked hard to get all of our cooperators in a room when we knew it was going to move out to the cooperators going nationally. Nevada has not always been successful in national competitive grant programs, so this was a big win for us. We were one of the highest awarded states. We are very proud of that partnership and those programs moving forward.

***Senator Goicoechea:***

Just a couple of things. Touring the State, especially where we have done some significant fuel reductions in highway right-of-ways and under transmission corridors and even power lines—In a lot of those, we are allowing them to come back in with the native species. As I run across the State, I see miles and miles of 100-yard strips that are nothing but cheatgrass. Are we not better served—I realize nobody wants to talk about nonnative with more fire-retardant species in those. All we are doing is creating a huge wick. I think when you drive for 50 miles, and there is 100 yards of cheatgrass on the side of the road, a chain drag, a hot bearing, and we have got instant fire, and it is going to get a running start at that native vegetation once you get out of the cleared areas. Is there any focus on why we are not going to a nonnative, more fire-retardant species?

***Ms. KC:***

Yes, that is a focus of the Division of Forestry. We do not just push on natives. It is harder to get natives established back into these, especially as we have seen return intervals of one to five years of fire. We are losing ground, primarily to *Bromus* grasses—cheatgrass in the northern part of the State. Yeah, we promote the use of seeding and herbicide application. I know there are tradeoffs as we are going through this, but all of our programs are actually looking at it. Unfortunately, all of these fuel breaks are not ours. I do not know if every program is doing the same thing, but those that we look at, we try to ensure—especially when working with cooperators as well—that we, one, are reducing the fuel load.

We are actually making sure that something better comes back in, so we look at herbicide application, quick, and then we look at seeding with potent, most often, nonnatives to give us a footing back in and then a transition back into natives if we are able to do that over time. All these projects are long-term in nature, and they actually take a long time to implement to get back to a native vegetative type. We do push that. I know the Nevada State native seed group actually also pushed that in the native seeds strategy across the U.S. and the Nevada Seed Strategy that we adopted as a State and local entities. We definitely do not just push natives as it had been historically sometimes said, but we have always had better success with interim nonnatives to make sure that we actually gain ground.

***Senator Goicoechea:***

Along those lines, I just want to go back and echo your concerns about what this next fire season is like. As I toured the State driving down here yesterday, we have not had any kind of a snow load. We have got tumbleweeds and cheatgrass standing at two to three feet. None of us can predict the weather, what kind of spring/summer we are going to have, but we are poised to have a huge fire year. That 1,300 could go well to—We are going to put some more zeros to that number. We know that coming forward.

***Assemblyman Gurr:***

NV Energy had some kind of program for fuels reductions along power lines. Is that through you or with you or in concert with you? I am hearing that they may be pulling out of that. Rumors.

***Ms. KC:***

It was originally started with State funding through SB 508 (2019) and a matching grant with NV Energy, so we did work together in the initial output of the program. It grew much beyond the money that we had. We no longer have the same matching funds. We went through our portion of that a long time ago, many years ago. NV Energy—They are responsible for the right-of-ways underneath their power lines, and they have a vested interest in trying to reduce risk from, one, power shutoffs due to fires coming through, but also fire starts from their infrastructure in those right-of-ways. They had started a program looking at SDG&E, PG&E to the west of us, and making sure that they are reducing that risk in those areas. Through SB 508, we matched it because we have vested interests in a larger area outside of just their right-of-ways. We wanted to look at some of these transmission lines—span great areas that go through very high-risk fire risk zones. We wanted to make sure that these right-of-way entries actually were fuel breaks, so we widened a lot of those. We had foresters on staff making sure that we are prescribing them to be long term. So yes, we did have a partnership in that. Originally, some of those grants to the local fire districts came through us. It grew much bigger than that through NV Energy, and we have heard that they have cut back through some of the fire districts, but I do not have any more information than that.

***Chair Pazina:***

Do we have any more questions from the Committee? [There were none.] We really appreciate having you join us from Carson City, and I am sure as more questions come up later, we can always reach out as a Committee.

I did want to, before we move on to the next presentation, have Senator Scheible provide a brief introduction with her district number and her interest in Natural Resources.

***Senator Scheible:***

I apologize for being tardy. I was at my day job and had to make a court appearance before I could get down here. I look forward to reviewing the presentations that I missed after this meeting. I have been in the Senate since 2018. I have served on the Natural Resources Committee for the last three regular sessions and in the last two interims, or their equivalents. I am looking forward to joining Natural Resources again in this interim. I absolutely love the State of Nevada and everything she has to offer. I am just happy to be part of this team and to work with all of you going forward.

***Chair Pazina:***

We are looking forward to having you chair the Subcommittee on Public Lands as well.

***Senator Scheible:***

I was not sure if that had happened yet. I also look forward to that.

**Chair Pazina:**

Congratulations.

## **AGENDA ITEM IX—PRESENTATION ON WATER RESOURCE MANAGEMENT**

**Chair Pazina:**

We are going to move on to Item IX on today's agenda—the presentation on water resource management. It is our final presentation today, and we will hear a presentation from the SAS Institute. We have Ms. Julie Espy, the Senior Industry Consultant, joining us. We look forward to your presentation. Please proceed when you are ready.

**Julie Espy, National Director, Water Quality and Environmental Data Solutions, SAS Institute:**

I have a long background in working in government. I worked primarily for the Florida Department of Environmental Protection for over 20 years where I worked in pretty much all of the water programs that they managed in the state as well as worked in local government and in the private sector for a short time. I grew up in Oklahoma, but I now reside in Tallahassee, Florida. It is beautiful here in Nevada. I really hope to get to see more of it while I am here.

SAS is a data analytics company, basically. I want to try and give you a picture of kind of who we are and what we do as we speak this morning (Agenda Item IX). Our company actually started at North Carolina State University in 1976, so almost 50 years ago, and in that time, we have really grown into a company where we serve over 1,600 different departments and agencies in government across the world. As you can see, we are actually in 134 countries across the world.

What we really do is—We are a software and data analytics company. We want to empower state agencies to do more with their data. Most state agencies are working kind of on the left side in those blue sectors. They are out gathering data for various purposes, whether it be trying to track changes in environmental conditions or determining how much water they have available for various uses, reporting on drinking water because it is very important for environmental health purposes. All of that data gathering has to be reported, whether it be to a state agency, to the legislature, or to the EPA—up to the federal agency as well. All of that takes a lot of work and a lot of resources and efforts. We really try to work with state agencies to help them do that maybe more effectively, more efficiently, get more out of their data. I know that all state agencies that have become very accustomed and very good at reporting on current conditions, but we really want to help them get more insights, predict what may be happening in the future, why something is happening, where it could happen next, and help the programs really be more enhanced.

I just want to give one example where we are doing that. We have the Healthy Nevada Project. I am not sure if you are familiar with that, but they are using our SAS data analytics platform where they are taking genetic data and health records, literally billions of data points, and really leveraging that information and getting those insights that I was mentioning to help promote better personal and better health for the citizens in that region of the State.

One of the things that we often hear—These are kind of common themes. As I said, I am a national director, so I talked to state agencies across the U.S.—all different types. These

agencies are all reporting on a variety of environmental topics, and people really want to know, “Is their water safe to drink?” Are the rivers safe to fish and swim in? Can I go out and recreate? This often means that that data comes from multiple agencies, so it is maybe not just the water division or the environmental agency that is collecting that information. They may need to get information from a department of health or a fish and wildlife-type service and be able to report on that information better. That is one of the things that SAS is really good at. We help them with that collaboration, bringing in data into a data platform that gives them reliable information. You are also building that public trust when those results are reported out.

Some examples are a biennial integrated report. That is a requirement that environmental agencies have under the Clean Water Act (S. 2770, 92<sup>nd</sup> Congress) where they must report every two years on the conditions of the waters in the state. That is something where, if you can infuse some automation or bring together those pieces of information from those different agencies, you can do that, and the public and everyone can really trust the results that are reported out in that biennial report.

We have worked with government agencies across the U.S., and many of them are using our platform. We are providing them the software. We also can provide services to help them do some of these analyses. But really, we are trying to empower the agencies to do some of this themselves, and some of the things they have looked at is identifying sources of pollutants. I think we heard some conversations in some of the previous presentations this morning about how valuable that is and being able to follow those trends, whether it be in water quality or water quantity, and being able to predict what is going to happen into the future.

Looking at data gaps and monitoring—I actually administered an environmental program for many years, and I know we were always needing more data, but needing to prioritize where we did that monitoring, where we got the data to make it the most valuable. That is an analysis that programs have been using our software to do—also looking at environmental stressors. When I talk about environmental stressors, I am actually speaking about wastewater discharges or storm water that is reaching the lakes and rivers in the state and being able to look at the effects of those stressors on the water quality, and then being able to develop those restoration strategies that would be most effective—also running analytics on those restoration strategies to determine which ones would be most effective, say, for that particular water body or in that region of the state.

I will talk about a few projects we actually have in our SAS platform, so you can kind of see what it looks like—what our reports and analytics can look like. This was a project that we collaborated with the University of Florida as well as the Florida Department of Environmental Protection. It was under the Central Florida Water Initiative, which was a collaborative water planning effort that they we are taking on, meaning the local governments, the water management districts. We are all looking to figure out, “What is water going to look like in this corridor between Orlando and Tampa over the next 20 to 30 years?” It is a vital part of the state that is growing rapidly, and they knew that they needed to get a handle on what water availability was going to look like into the future. We were able to help them bring in different types of information and run analytics on the number of permits that were being issued, who was issuing them, how much water was being allocated in those permits, as well as were they actually using that allocation? If someone was allocated 100 gallons per day usage in their permit, were they using 50 or were they maybe using 200?—so that they had a better picture of what the use actually looked like in that region of the state.

The next example is an example of integrated data, and I talked about collaboration. This is an example where we took in data that is reported up to the EPA. It is reported through various programs. This one report shows you information about water quality monitoring data. In that top right graph, you can actually select a particular pollutant or a time period and look at what that looks like over time. You can also do it by particular watershed if you did not want to see what it looks like statewide. If you are interested in a particular area in the state, the map to the left—you could click on a single watershed, and it actually would update all of these graphics on that report, so you could also see which National Pollution Discharge Elimination System or wastewater facilities are in that watershed, what their data looks like, are they in compliance with their permits or not? The donut kind of graphic in the bottom right is actually grant funding. All states receive funding from the EPA for various purposes, and this can actually allow you to see how much funding is being used for what different types of projects, whether you want to see statewide or in a particular watershed—kind of a one-stop shop.

This next example is where we were able to work with them to automate some of their reporting. The agency has an annual reporting requirement on tracking the progress of water quality improvement in this region of the state. What you are seeing is a map of multiple subwatersheds, and this is a report that automates it. They were spending months of time gathering data, running it through Excel spreadsheets, and then trying to report out on it. This is a picture on the right of all the subwatersheds. The two graphics on the left and the two graphics on the right actually show the status—like tracking the progress. The ones in blue say they are meeting their allocation; they are doing what they are supposed to be doing. The pollutants have been reduced in those subwatersheds; however, the ones in orange and yellow are lagging behind. That lets them know that they need to be doing more investments in—whether it be storm water or wastewater or even agricultural best management practices—trying to better control the pollutants that are entering the watershed there. The bar graphs and the table actually give you the detailed data of whether or not they are meeting their goals and what the actual data look like—the actual numbers.

The last example that I will speak about is our flood prediction and preparedness solution. We were able to take historical rainfall data if it is available, if it has been collected, and then predict using our flood inundation model—we build a model using that historical data—and then be able to predict within a six-hour window where and how much water is going to accumulate, say in an urban area. Whether you are looking at a one-inch rainfall or a three-inch rainfall, you will be able to better understand where you may need to, say, deploy generators for lift stations or close roads or even perhaps evacuate people if an area is going to maybe have a flash flood or an area that would gather a lot of water over time. As I said, we can do that with data that is already being collected, or there are sensors that are very inexpensive, and we can help a community understand where best to deploy those sensors and get the most information and then provide them with the model.

That is all I have today. I appreciate your time, and I will take any questions if anyone has any.

***Chair Pazina:***

We are going to start here in Las Vegas with Senator Goicoechea, and then we are going to move to Carson City with Vice Chair Anderson, and then we can go from there.

***Senator Goicoechea:***

I am not very techie—at the risk of everybody laughing in the room. But anyway, it sounds like you are more of a software company, and you are making your software available. I think here in this State, especially when we deal with water quantity, it is only as good as the data you can put into it. I think most of us in this State will agree: there are some areas we have got more than enough data, but most of the State does not have enough. We do not know whether we are declining. How do you fix that? You are just going to sell a software package. It is only as good as what you put in it. That does not give us any answers.

***Ms. Espy:***

Right. One of the things that I spoke about was a gap analysis. That is something that our analytics platform can do for a state. You said you have areas that do not have enough data. We could help you understand where those areas are and also help you establish a prioritization or a monitoring plan. Say you only have a small amount of resources that you can actually deploy in that region to collect data. We could help you plan that out so that you could collect the information and data. That is what that is—one of the tools that we could provide.

***Senator Goicoechea:***

Then what you are saying is you could at least take it apart and say, “Hey, this is what you need to know first before we can move forward.” It might be helpful.

***Ms. Espy:***

Yes, Sir. Exactly.

***Chair Pazina:***

Vice Chair.

***Vice Chair Anderson:***

Very interesting information. I am so happy that the Senator brought up that very question of we are only as good as the information that is provided. I am not sure if you are able to answer this question or not. It has to do with slide 7, in particular, when you were speaking about the evaluation of water use when it comes to the number of wells. With that information, when you were going through that, explaining it, was this public wells? Was it private wells? Was it the partnership sometimes where it is private and public? We know that wells for water have been an issue of concern for many years. So, just wondering what that process was.

***Ms. Espy:***

Yes, it was a combination where it was mostly public wells that are permitted for either drinking water or public well systems as well as agricultural uses, but where they could, they did include private wells. I know oftentimes it is hard to know exactly where those are, but where some of the water management districts did have information, they did include that as well.

***Vice Chair Anderson:***

With that, was there also any discussion—and I realize this is in a different state—of the wells that are no longer producing? Because we have many of those issues as well. Was that part of the report? I do not know if that is getting too specific or not.

***Ms. Espy:***

Yes, it was considered, and certainly those capped wells. That was part of the analysis. There is always hearsay that there is perhaps over pumping in some regions of the state—if anyone has heard about sinkholes collapsing in Florida, things like that. That was part of the analysis, honestly, looking at where some of those wells are not producing anymore, perhaps why they are not producing and why the analysis was important because they knew that that region of the state is really growing.

***Chair Pazina:***

Do we have any other questions from the Committee? Any questions in Carson City? [There were none.] Ms. Espy, thank you so much for your presentation.

Before we move into more public comments, I want to thank the Committee who has already had so many wonderful questions today—who has been working so hard in the interim to prepare for this. If you have any subjects that you would like to see covered during the course of the interim, I would love for you to send those by email to me by the end of the week. I would really appreciate it if you would send those to me—if you would like to copy Mr. Stinnesbeck as well. I look forward to working with all of you and also covering any subjects that you might have in mind. As you can imagine, we will be talking about water conservation a lot. We have a lot of other subjects that the policy advisors and I have been batting around, but we want to make sure that we include the Committee, so please send those my way.

We are going to move on to public comment—Item X on the agenda.

**AGENDA ITEM X—PUBLIC COMMENT**

***Chair Pazina:***

We have arrived at that last item. It is our second period for public comment.

[Chair Pazina discussed the process for giving public comment.]

I see we have public comment here in Las Vegas. Mr. Donnelly, it is always good to see you. I believe we have some in Carson City as well, but we will start down here in Las Vegas.

***Patrick Donnelly, Great Basin Director, Center for Biological Diversity:***

Glad to be with you for yet another interim session. Just wanted to raise an issue for this Committee that I would hope this Committee can consider taking action on during the interim. This is an issue that is going to affect the water supply in Nevada, and that is the emergence of the lithium industry here. My organization and I think the general consensus is we need to electrify our power grid, and that involves electric vehicles and battery storage. So, we are going to need lithium, and we do support domestic mining of lithium in order to ensure that the highest environmental standards are held in our lithium supply chain. However, Nevada is the epicenter of this, and there are over 70 projects proposed

in Nevada right now. It is a project pipeline that is like ten times the size of the gold mining project pipeline. The scale of the potential for all these projects to get built out is just enormous. It is really staggering, and fully half of these projects are brine proposals, which would use groundwater for extracting lithium. There are certain places where this could be more impactful to the environment and to communities, and there are certain places where it could be less impactful to the environment and to communities. The State of Nevada has an opportunity to help shape that future by creating policies, or at the very least studying, where this lithium should be produced and where it might be less desirable for it to be produced. Without a proactive approach from the State, you will be at the behest of BLM and the federal government as far as deciding which lithium mines get built. I think this Committee, perhaps with one of your BDRs, could consider advancing a study on where the appropriate places to build lithium mines might be in this State, so we can have some level of control over the emergence of the lithium industry. Thank you.

***Chair Pazina:***

We will move to Carson City.

***Kailey Musso, Legislative Liaison, Department of Wildlife:***

I just wanted to take the opportunity to thank the Division of Forestry for their presentation and their work on the landscape. I also could not pass up the chance to put a plug in for wildfire restoration and rehabilitation. It is an important mitigation tool, but I will not take up any of your time. I know you are hearing more about that as the interim goes on. We look forward to working with you.

***Chair Pazina:***

[Chair Pazina called for additional public comment; however, no further testimony was presented.]

***Chair Pazina:***

That will conclude Item X—public comment—for this meeting, and that concludes our meeting for today.

Members, I am really looking forward to working with you over these next several months as we tackle discussions on important natural resources issues. Please do send me—and we thank you for those that came forward with issues during public comment. We look forward to receiving the issues from you—Mr. Stinnesbeck and myself—from Committee members on items that we can tackle during the interim.

Before we adjourn, I want to provide advance notice to the Committee that our last meeting in August, which will also be our work session—I am planning to chair that meeting from Carson City. It is my hope that all members will be able to attend from Carson City for this meeting. In the meantime, though, our next meeting will be held on Thursday, February 29.

[Subsequent to the meeting, Patrick Donnelly, previously identified, submitted a letter to the Committee (Agenda Item X A).]

[Subsequent to the meeting, the following information was submitted by NCSL staff:



- Emily Sampson, Policy Analyst, Environment, NCSL, submitted information concerning PFAS (Agenda Item X B-1) and a list of water policy resources (Agenda Item X B-2); and
- Ms. Schultz, previously identified, submitted a chart with 2024 state legislation concerning foreign ownership of land (Agenda Item X C-1) and a chart with 2023 state legislation pertaining to foreign ownership of land (Agenda Item X C-2).]

## **AGENDA ITEM XI—ADJOURNMENT**

There being no further business to come before the Committee, the meeting was adjourned at 11:03 a.m.

Respectfully submitted,

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Lisa Creamer  
Senior Research Policy Assistant

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Jann Stinnesbeck  
Principal Policy Analyst

APPROVED BY:

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Senator Julie Pazina, Chair

Date: \_\_\_\_\_

## MEETING MATERIALS

| AGENDA ITEM       | PRESENTER/ENTITY  | DESCRIPTION                       |
|-------------------|---|-----------------------------------|
| Agenda Item IV    | Jann Stinnesbeck, Principal Policy Analyst, Research Division, Legislative Counsel Bureau                         | Committee Brief                   |
| Agenda Item VI    | Kim Tyrrell, Associate Director, Environment, National Conference of State Legislatures (NCSL)                    | Microsoft PowerPoint Presentation |
| Agenda Item VII   | Tracy Bower, Director of External Affairs and Communications, Desert Research Institute                           | Microsoft PowerPoint Presentation |
| Agenda Item VIII  | Kacey KC, State Forester Firewarden, Division of Forestry, State Department of Conservation and Natural Resources | Microsoft PowerPoint Presentation |
| Agenda Item IX    | Julie Espy, National Director, Water Quality and Environmental Data Solutions, SAS Institute                      | Microsoft PowerPoint Presentation |
| Agenda Item X A   | Patrick Donnelly, Great Basin Director, Center for Biological Diversity:  | Letter                            |
| Agenda Item X B-1 | Emily Sampson, Policy Analyst, Environment, NCSL  | Information on PFAS               |
| Agenda Item X B-2 | Emily Sampson, Policy Analyst, Environment, NCSL  | List of Water Resources           |
| Agenda Item X C-1 | Jennifer Schultz, Program Principal, Environment, Energy and Transportation Program, NCSL                         | Chart of 2024 Legislation         |

| AGENDA ITEM       | PRESENTER/ENTITY  | DESCRIPTION               |
|-------------------|---|---------------------------|
| Agenda Item X C-2 | Jennifer Schultz, Program Principal, Environment, Energy and Transportation Program, NCSL | Chart of 2023 Legislation |

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