NEVADA LEGISLATURE
JOINT INTERIM STANDING COMMITTEE ON NATURAL RESOURCES

(Section 6 of Assembly Bill 443, Chapter 392, *Statutes of Nevada 2021* at page 2505)

DRAFT MINUTES

February 28, 2022

The second meeting of the Joint Interim Standing Committee on Natural Resources for the 2021–2022 Interim was held on Monday, February 28, 2022, at 9:30 a.m. Pursuant to NRS 218A.820, there was no physical location for this meeting.

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

COMMITTEE MEMBERS PRESENT:

Assemblyman Howard Watts III, Chair
Senator Fabian Doñate, Vice Chair
Senator Pete Goicoechea
Senator Melanie Scheible
Assemblywoman Maggie Carlton
Assemblyman John C. Ellison
Assemblywoman Alexis Hansen
Assemblywoman Sarah Peters

LEGISLATIVE COUNSEL BUREAU STAFF PRESENT:

Jann Stinnesbeck, Senior Policy Analyst, Research Division
Rebecca Williams, Research Policy Assistant, Research Division
Allan Amburn, Senior Deputy Legislative Counsel, Legal Division
Kimbra Ellsworth, Senior Program Analyst, Fiscal Analysis Division
Justin Luna, Program Analyst, Fiscal Analysis Division

Items taken out of sequence during the meeting have been placed in agenda order.
[Indicates summarized comments.]

AGENDA ITEM I—OPENING REMARKS

[Chair Watts called the meeting to order. He welcomed members, presenters, and the public to the second meeting of the Joint Interim Standing Committee on Natural Resources for the 2021–2022 Interim.]

Chair Watts:

Before moving forward, I would like to take a moment to note that I am joining this meeting from the ancestral homeland of the Nuwu, or Southern Paiute people. Our members represent and our state occupies the unceded homelands of the Nuwu, Newe or Western Shoshone, the Numu or Northern Paiute, and Wa She Shu or Washoe peoples, currently represented by 27 sovereign tribal nations located wholly or partially within Nevada's boundaries. I honor their stewardship of this area's lands and waters from time immemorial to the present day and continue to express a commitment to include their voices in this Committee and work with them to protect and restore these places for future generations.

I would like to provide an additional reminder to everyone that our Committee will hold a work session towards the end of this interim to consider certain recommendations. All interested parties are encouraged to provide recommendations in writing by completing and submitting our Solicitation of Recommendations form which is posted to the Committee's webpage. Committee staff must receive recommendations no later than Friday, June 24, 2022.

We are now going to start with our first public comment section for today.

AGENDA ITEM II—PUBLIC COMMENT

[Broadcast and Production (BPS) staff indicated there were no callers waiting to provide public comment.]

Chair Watts:

Thank you very much for that.

We will move into the rest of our agenda for today. Members, we have a few items. We will provide an update on the appointments to the Subcommittee on Public Lands, and we are going to have some presentations from state agencies.

AGENDA ITEM III—APPROVAL OF THE MINUTES FOR THE MEETING ON JANUARY 21, 2022

Chair Watts:

First, we need to approve the minutes from our January 21, 2022, meeting. You all should have the minutes and have had time to review them. Are there any questions, concerns, or revisions from members of the Committee?

Hearing none, first of all, I would like to thank our staff and note that in previous interims we had pretty condensed minutes, and these are comprehensive verbatim minutes from our entire meeting, similar to our in-session committee meetings. There are many pages of

them, and I thought they were very well done. I want to express my thanks to all the staff who helped compile those, and encourage folks who have remarks written out to please send those in to assist our staff in the compilation of the minutes moving forward.

With that, I will entertain a motion to approve the minutes.

ASSEMBLYWOMAN CARLTON MOVED TO APPROVE THE MINUTES FOR THE MEETING HELD ON JANUARY 21, 2022.

SENATOR GOICOECHEA SECONDED THE MOTION.

THE MOTION PASSED UNANIMOUSLY.

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AGENDA ITEM IV—APPOINTMENT OF MEMBERS TO THE SUBCOMMITTEE ON PUBLIC LANDS

Chair Watts:

Our next item is an update on the appointment of members to the Subcommittee on Public Lands.

We are still working with the Inter-Tribal Council of Nevada to solidify our tribal appointment to that Subcommittee. However, I am providing an update on the announcements that were made at our last Interim meeting. We are going to make some changes: Assemblywoman Carlton will now serve as the chair of the Subcommittee and Assemblywoman Hansen will be serving in my place on the Subcommittee. Once we have an update on the tribal member and we get that appointment made, we will provide that, hopefully at our next meeting in March.

AGENDA ITEM V—PRESENTATION ON THE ECONOMIC IMPACT OF CLIMATE CHANGE IN NEVADA

We will move on to the next item on our agenda and the beginning of our presentations today. We will have a panel to provide an overview on the economic impacts of climate change in our state.

Our first presenter is Dr. Kristen Averyt, Senior Climate Advisor with the Office of the Governor, who will provide an overview. Dr. Averyt will be followed by our State Treasurer, Zach Conine, who will discuss the incorporation of climate and environmental risk into our bond ratings. Lastly, we will hear from representatives of the American Property Casualty Insurance Association, who will discuss the effects of climate risks on insurance.

Welcome, Dr. Averyt; you can introduce yourself for the record and proceed whenever you are ready.

Kristen Averyt, Ph.D., Senior Climate Advisor, Office of the Governor:

Good morning. Thank you, Chairman Watts, members of the Committee. Thank you for the invitation today to talk a little bit about the economic impacts of climate change (Agenda Item V A).

Just like the rest of the United States and the rest of the world, Nevada is experiencing climate change. On average, temperatures in our state have increased by a little over 2° Fahrenheit. While this may not seem like a large change, these few degrees are driving an increase in more extreme weather. As temperatures increase, heat waves are growing longer and more frequent. Right now, we are in a 20-year long drought that is the worst we have seen in this part of the country in the last 1,200 years. Wildfires are increasing in size, and increasing nighttime temperatures mean that fires are actually being fought around the clock; they do not lie down at night like they used to. On the flip side, storms are also increasing in strength, and the frequency and intensity of flood events are projected to increase. Extreme weather and climate events pose increasing risks to our communities and to our natural resources.

According to the latest U.S. National Climate Assessment, climate change is projected to impose substantial damages on the U.S. economy. Here in Nevada, the Governor's Office of Economic Development, in their publication *A New Economic Agenda for Nevada* (2018), identified climate change as one of the most significant threats that is facing our state's economy. For example major weather and climate disasters that hit the United States in the year 2021, each of which cost our economy over $1 billion. From hurricanes in the Gulf, to severe storms in the Midwest, to the wildfires and droughts that are plaguing our neck of the woods; these events all have the fingerprints of climate change all over them.

Temperatures are continuing to increase. It should not be a surprise to see that the number of billion-dollar climate disasters has also been increasing through time. This graph shows the number of billion-dollar disasters between 1980—on the left side of your screen—and 2021 to the right. Each color of the stacked bars represents a specific type of climatic event. For example, the green bars represent the number of severe storm events, and the red line that overlays this entire bar chart—is the annual total cost to the U.S. economy of these individual disasters. Since 1980, major weather and climate disasters have cost our economy $2.2 trillion. Last year, these events cost our economy $145 billion.

Let me share with you a couple of additional statistics: Over the last 40 years, the economic costs of rain and snow events in the West were approximately $51 billion. In 2021 alone, Nevada's economy lost over $100 million as a consequence of both drought and wildfire. According to the last U.S. National Climate Assessment, climate change has cost our economy $1.1 trillion, and a report released last week by Deloitte indicates the U.S. economy could lose $14.5 trillion over the next 50 years if we fail to rapidly decarbonize. While these numbers are from different sources, using different assumptions, normalized to different dollar years, I think this paints the picture: Failure to act on climate will continue to cost our economy. Whether it is reaching that zero greenhouse gas emissions as soon as possible or reducing the vulnerability to climate events through resilience and adaptation planning. Investments in climate action today will pay off in the future.

One way that we can more specifically examine the cost of inaction on climate is using something called the social cost of carbon. The social cost of carbon is essentially an estimate in dollars of the value of future damage that would be caused by one metric ton of carbon dioxide emissions. Or, on the flip side, it is the benefit that could be realized by reducing carbon emissions by that same amount. In the State Climate Strategy that was released by the State of Nevada Climate Initiative in December of 2020, the team conducted an analysis using the social cost of carbon to estimate the avoided costs of meeting our greenhouse gas emission reduction targets here in Nevada. Even using a conservative approach to this calculation, if we meet our net zero-carbon reduction targets by 2050, we would prevent $4 billion in economic damages just to our state.

Indeed, we have a lot to lose if we do not meet our emission reduction targets, but if we do take action, we have much to gain. The Deloitte report that I alluded to earlier indicates the U.S. economy could gain $3 trillion and add 1 million jobs if we are able to rapidly decarbonize. Here in Nevada, we are particularly poised to leverage the opportunities in the clean energy and climate-friendly economy that will support job creation and economic diversification. We are the number one state for solar potential. Prior to the pandemic, we realized a 46 percent increase in clean energy job growth just between the years 2016 and 2019, and we are rebounding quickly. We have cradle-to-grave opportunities in battery technology, and we are at the forefront of water conservation practices and technologies—not just in the United States, but globally, particularly in southern Nevada. To quote the State of Nevada Climate Strategy: "Nevada can and should ensure that climate action is a part of the state's economic recovery, resilience, and job growth efforts and that climate becomes hardwired into the state's economic development plans."

Much of what I have covered here is covered in more detail in the State of Nevada Climate Strategy, and I point you to three sections of the Strategy. The first is titled "Climate Change in Nevada". This was drafted by the top climate scientists from the University of Nevada, Reno (UNR), the University of Nevada, Las Vegas (UNLV), and the Desert Research Institute (DRI). In this part of the report, it provides perspective on the risks that climate change posed to different parts of our state. I would point out that the UNR Cooperative Extension developed shorter, abbreviated documents based on this section of the Strategy in both English and Spanish that are available on the State of Nevada Climate Initiative website. The second part of the Strategy I direct you to is the section on "The Economics of Climate Action"; this describes more details about the social cost of carbon. Finally, the last section is "Economic Recovery and Vitalization", which has specific recommendations related to how we can bolster Nevada's role in the new climate economy.

Thank you for your time. I would be happy to take any questions.

Chair Watts:

Wonderful, thank you for that excellent overview, Dr. Averyt.

Members, we are going to do questions after each presentation, and then I am going to ask each presenter for the topic that I introduced to stay until the end in case something else gets generated after people have seen all of the presentations.

We will open it up to questions from members for Dr. Averyt.

Senator Goicoechea.

Senator Goicoechea:

Thank you, Mr. Chair.

I attended a seminar with Professor Reuben Torch at UNR years ago, and his statement that always stuck with me was there was cactus at the Canadian border before and there will be again. I know we are looking at a very small window—we talked 1,200 years—but in the whole realm, are we going to be able to turn this back?

Dr. Averyt:

Thank you for the question.

Today, a new report came out from the Intergovernmental Panel on Climate Change, which is the authority on climate science globally. They actually outlined some of what may not be reversible, essentially in the next couple 1,000 years, in terms of what is happening. The question, the idea, of what is happening today and how unprecedented is it or is it not in the scheme of things—because the climate has always changed, and I hear that loud and clear—was actually what I did for my Ph.D. research. I was really interested in climate change and over the last 120 million years, this is really, truly unprecedented in terms of what we are seeing and how rapidly it is happening relative to what we know in the last many millions of years.

Senator Goicoechea:

Thank you. Thank you, Mr. Chair.

Chair Watts:

Thank you.

Assemblywoman Hansen.

Assemblywoman Hansen:

Good morning and thank you for being here to present.

I have a few questions. The presentation went into extensive concerns about the weather crisis that we have suffered in the United States as a whole and how climate affects that, also the economic injury that we take from that. I brought this up at our last Interim hearing—I sometimes get chided that I want to talk about the bigger picture. Certainly, in Nevada, we care about our water and clean air and all of that. I think your presentation really makes the point that if we are serious about taking care of some of the concerns we might have about climate and projection, then Nevada—and I am referencing the Nevada Division of Environmental Protection (NDEP) report that came out—I think that we account for about 0.71—less than 1 percent, of greenhouse gas emissions. But then China is responsible for, they are number one in the world, and they are at 27. If we really are worried about what climate change is occurring and what those forces are at work that are causing—and maybe in question of whether climate changes are affected by the greenhouse emissions and that effect on the crises that we have had with weather events—I am wondering why we do not spend more time dealing with the problem that China is, when it comes to greenhouse emissions and some of these other issues that we are discussing.

Dr. Averyt:

Thank you for the thoughtful comment and question.

You are absolutely right: We are a relatively small fraction of the total emissions portfolio across the entire planet, but I will say it is going to take everybody to get to zero. We cannot be the only ones that are allowed to emit, but neither can China, I would agree with you there. I would point out, however, that per capita emissions—per person—is vastly higher here in the U.S. than it is in China. It is going to take everybody doing everything they can do get to zero. Nevada is committed to an organization called the U.S. Climate Alliance. It is a bipartisan coalition of states that are committed to achieving the greenhouse gas emissions reduction targets that are part of the Paris Agreement, which is an international agreement.

We are doing everything that we can, but I absolutely hear your point, we just need to be part of the solution as well.

Chair Watts:

Go ahead and follow up, Assemblywoman.

Assemblywoman Hansen:

Thank you for that.

I agree that we need to do all that we can, but also at what cost does that come to industry in Nevada? I think we are on board to make changes where we can. I am completely reasonable; I believe in some sorts of regulation. The air is cleaner now than when I was a child here in the Reno-Sparks area because our cars have better emission control, because we watch what the particulates are, and we do not use our fireplaces when we are having certain sorts of inversions. I am completely reasonable about understanding that there are things that we need to guard against. I am here to question how far that pendulum swings.

We want good partners, because while the U.S. is doing its part and Nevada is doing its part, it does not matter how much we do if China continues to get away with their pollution. They signed on to the Kyoto Protocol in 1998, and they were held to a standard then that their level they had in the 1990s—which was in the range of 700 million metric tons of carbon—needed to drop by 5 percent, which would have put them at about 692 when they got on to the Kyoto Protocol. In 1998, that was the projection. Currently, they are at 2,870 million metric tons of carbon emissions. They keep growing, their economy keeps growing, they sell their products here and yet Nevada and the U.S. are held to a higher standard, and they can sit and ask to accelerate that standard that we are not sure we can economically support by 2030. This is the problem I am having; I understand the intent is good, but I am concerned that we do dire consequences of economic damage we are already paying for—I paid $4.79 a gallon for gas. Where does it end? We make all these dramatic changes and affect industry and our fuel supply in order to achieve our standard by 2030, but China just keeps putting out more and more greenhouse emissions.

Dr. Averyt:

These are all excellent points. You are absolutely right with respect to Chinese emissions. It is a global problem, and everybody has different assets that they can deploy to tackle it.

I would point out again, there are dollars associated with not moving forward on climate in terms of taking action now and investments up front and what the long-term payoff might be. But you are absolutely right these are difficult decisions, and part of what we point out, in the State Climate Strategy in our section on complex challenges, is that it takes everybody getting around the table to talk about these issues. What are those economic tradeoffs? What are the short-term consequences? What are the long-term consequences? But, also, what are those opportunities? The supply chain issue around battery technology, that is something we really have a tremendous opportunity to have as a job creator here in the state, and we need to get some of the folks that really, truly are the expert economists—and who hopefully will be speaking later today—to talk some of that through and help us to navigate these issues that you are bringing up.

Chair Watts:

Thank you for that.

Assemblywoman Hansen:

Thank you.

Chair Watts:

I see Vice Chair Doñate has his hand raised.

I appreciate that. I want to remind members of two things: one of the things is that we are looking at, particularly within this Committee, some of the adaptation pieces on how we adjust to some of the impacts that we are seeing, less so on how we get emissions down. I think that Dr. Averyt's note about the social cost of carbon is a helpful guidepost to try and figure out the costs of some of these things that we are doing either to reduce emissions or, in the case of our Committee's jurisdiction, to deal with the impacts we are going to see from some of these climate changes, and weigh the costs of those versus the costs of inaction in figuring that out.

To the point of collective action problems: they are difficult, but it does take folks to lead by example and work together in some of these tricky issues, especially as we are seeing some of the global issues going on right now. It takes collaborative efforts in order to move everybody in the right direction.

Vice Chair Doñate, go ahead.

Vice Chair Doñate:

Thank you so much, Chair Watts, and good morning.

Dr. Averyt, it is always refreshing to hear your expertise in this subject; I have learned a lot just from your presentation. When we talk about climate change, we always think of it—especially with the economic impacts—from the lens of the harm that could be done to businesses, of course, having to make these hard, but necessary, changes. Can you talk about the worker lens and how climate change—when we talk about the social impact of it—can disproportionately affect workers that have to work outside? I would be grateful if you could.

Dr. Averyt:

Thank you, Vice Chair Doñate.

Extreme heat and exposure of folks here in Nevada is an issue. Both Reno and Las Vegas are among the fastest warming cities in the entire U.S. in terms of the combination of climate change and the urban heat island, and very much so there are consequences. Nationally, there are more mortalities associated with extreme heat than any other natural disaster in any given year. This is something we are paying attention to, and I would point out that Governor Sisolak announced last week during his State of the State address that we will be developing a statewide heat plan for precisely that reason.

In terms of the economic impacts, if you look at the National Climate Assessment from 2018—that is the last U.S.-based National Climate Assessment that was completed—they actually outline and break down the economic costs of inaction on climate. It includes the breakdown in terms of lost labor hours because of the impacts of climate change and, very specifically, mortality and morbidity that are associated with extreme heat in the future as

heat waves get longer and hotter. Those kinds of details actually are included in a lot of those economic impact dollars… [inaudible] our historically underserved populations.

I hope that answers your question.

Vice Chair Doñate:

It does, thank you.

Chair Watts:

Thank you. Members, additional questions at this time?

Assemblyman Ellison, go ahead.

Assemblyman Ellison:

Thank you, Mr. Chair.

I can bring this up under another subject that is going to be on here, but we have spent a lot of time in fire areas. These fires get out of control, they burn for a long time, and we are not fighting fires like we used to. I think that is part of the problem that we are seeing on some of these big fires.

The other thing, I watched a world report the other day on climate change, and the world scientists denied that climate change is what the experts in the United States are saying. Can you maybe respond to that? That was a great interview that these world scientists said that most of it is exaggerated for money; maybe not, I do not know.

Dr. Averyt:

Thank you for the comment.

I am not familiar with the specifics of what you may have seen, but what I will say is that the consensus from the Intergovernmental Panel on Climate Change—these are hundreds, if not thousands, of the top climate scientists from around the world—is the climate is changing, we are causing it, it is happening, it is impacting us now, and we can do something about it. In terms of papers and peer-reviewed publications, over 99 percent of everything that is out there in the literature, there is agreement and consensus that the climate is changing.

One thing I always like to point out is: gravity is technically just a theory, but it does not mean I am going to test it by jumping off a building. So, consensus, 99 percent or better, that is pretty much as certain as you can get with respect to science.

Assemblyman Ellison:

Thank you.

Chair Watts:

Thank you. I have a couple of quick questions. I do see you have your hand raised, Assemblywoman Hansen, and I know we want to keep this moving.

I think there are a lot of studies that are done and models—and they produce various results and ranges—and I think particularly sometimes in the media, they highlight perhaps the worst-case scenario or the most extreme findings. Can you discuss, particularly at the state level, when looking at the social cost of carbon or some of these other things in terms of impacts, your approach in looking at these things—do you look at the middle? Do you look at the more conservative scenarios? Speak to that so that our members can get a sense of when we see some of these things; they can be shocking numbers. Are we looking at the most shocking, are we looking at the least shocking, or somewhere in the middle?

Dr. Averyt:

Thank you, Chairman Watts.

There are different approaches to planning in terms of looking at risk. For example, water utilities—plan for the worst, hope for the best is the approach because if you are planning just for the median, then there are going to be real problems if that worst case scenario really bears out. For the most part, you have a lot of people, particularly with water planning, that are looking at that "worst-case" scenario—even though I do not like using that phrase—and trying to game around that particular situation.

Planning for climate is a little different to traditional planning where you have something in the past to react to, to say we survived that drought that was 15, 20 years ago and we got through it doing X, but future droughts might be a little different. We need to plan for that worst-case scenario moving forward because it might require we do things slightly differently. We just heard from Assemblyman Ellison talking about wildfire and how it is different, fighting it is different, mitigating it is different. So, our approaches need to be a little bit different in how we deal with them too. There is both that emergency response component, but there is also that long lead: What kind of planning can we do to actually mitigate the hazard should it happen?

In terms of that portfolio of issues to be concerned about, of course there is always the water issue, that is going to be an issue as the driest state in the country in terms of the precipitation we get. We heard about wildfire already, several folks brought that up. We do also, on the other side, have to worry about storms. The water cycle is intensifying—our dries are getting drier, our wets are getting wetter—and so these storms are bigger and badder, but so are the droughts and so will be the flood events. We can expect more of these swings between extreme drought to a flood season as we are moving forward, and we are already seeing some of that playing out in the state.

I hope that gets to your question, Chairman.

Chair Watts:

Thank you, it does; I appreciate that.

We will also note for the members that in relation to some of the things brought up by the vice chair, we will have an additional meeting in the future looking particularly at the intersection of some of these impacts and the impacts on health. We are actually working on a joint meeting with the Joint Interim Standing Committee on Health and Human Services to dive into those issues that overlap. We would love to get an update on that heat initiative at that meeting, which I think we are planning for June.

Assemblywoman Hansen, I will let you have a quick follow-up, and then I think we will move on to our next presenter.

Assemblywoman Hansen:

Thank you, Chair; I appreciate another opportunity.

I know that we need to move on with today, but this is a big, important discussion and a lot of very serious things are mentioned. We know the science is not settled, even though our governor has said it is. The science is not settled, or at least the solutions are not settled. I think there are going to be lots of questions and that is how you get to the best solutions, when we can have open and honest dialogue.

A question for the Doctor: Do we consider natural gas to be a carbon fuel?

Dr. Averyt:

Thank you for the question.

Yes, it is. First of all, it is methane, which is a very potent greenhouse gas, and when you burn natural gas, you actually release carbon dioxide. Natural gas is a fossil fuel.

Assemblywoman Hansen:

To generate electricity, we are getting away from coal plants, we rely on natural gas for generation of electricity in lieu of that. If that is giving a carbon emission, what are we looking for electricity generation to be then? Have we gotten better by getting away from coal and going to natural gas? Certainly, in a perfect world we would love solar, but we are maybe not completely there for every need we have. I am curious how natural gas looks in response to us getting away from coal: Did we lower our greenhouse gasses by doing so? And what is the next step if we are trying to get away from fossil fuels?

Dr. Averyt:

Thank you for the question.

I love that question because I have been asking the same sort of thing: What is the plan for natural gas? Natural gas was always presented as a transition, as you pointed out, from coal. So, now, what does the transition to renewable look like so that we can take advantage of our solar potential in this state and create more jobs? What is the plan? I agree with you.

In terms of the impact on our broader greenhouse gas emissions footprint, if you look across the United States, there was a period of time—a long period of time—where in that transition from coal to natural gas we realized a decline in emissions related to the energy or the power sector because of that replacement. However, because of the increasing demand for power and the prevalence of natural gas, the total emissions are now actually increasing for natural gas just because there is so much of it out there in terms of power generation. I too would like to know what the transition looks like because we are, as a state, committed to—in statute—net zero greenhouse gas emissions by 2050. So, there has to be a plan.

Chair Watts:

Thank you for that.

I think that is something that we are all thinking about, particularly over on the Joint Interim Standing Committee on Growth and Infrastructure, is what this transition looks like. We are close to phasing out coal power here in the state. As we know, particularly down here in southern Nevada, our public transit has transitioned from diesel towards natural gas, again, in order to reduce emissions. We have seen some heavier duty vehicles, including in our waste management fleet, also do that. And now, they are looking at zero emission technologies like electric power or fuel cells in order to move those emissions down even further. I think methane or natural gas has definitely been discussed as a bridge fuel and then the question is: What is on the other side of the bridge and how long is the bridge? Of course, I think some of the state, national, and international science has pointed to the timeline we are working on. I look forward to some of the other conversations that will be had around that and appreciate the clarification on that.

Thank you again, Dr. Averyt, for your presentation. I know that you have another commitment, but I would ask you to stick around for a little bit in case anything comes up after our other presenters.

I would like to move on to our next presenter, our state treasurer.

Treasurer Conine, welcome, the floor is yours. You can introduce yourself for the record and begin your presentation whenever you are ready.

Zach Conine, State Treasurer:

Good morning, Chair, and Committee members. It is my pleasure to be here this morning to discuss the impacts of environmental risks on the state's bond rating. (Agenda Item V B)

Before jumping in, I want to provide a brief refresher on state debt. Why do state governments incur debt? Debt is often issued to finance large infrastructure projects—long term benefits—things that we like, like schools, hospitals, highways, bridges, water sewer systems, and universities. These capital projects require relatively large expenditures in a concentrated amount of time to ensure planning, design, and construction is not interrupted.

What is a bond? I answer this question a lot. I want to make sure I get to answer it today. A bond is a debt instrument issued for sale by the government to help pay for its obligations and serves as a promise to repay the buyer on a specific date, along with regular interest payments along the way.

I will go through a little bit of "who's who", a couple of stakeholders we will be talking about as we work through this process.

- The issuer: the government—us—that offers bonds up for sale.
- The bondholder: the initial purchaser of a bond from the issuer or a subsequent registered owner of the bond.
- The rating agencies: independent agencies that assign ratings to the riskiness—the issuer's commitment and ability to meet its obligations. The three largest are Moody's Investor Services, S&P Global Financial, and Fitch Ratings. As a reminder, the state currently has its highest credit rating in the history of the state, which we

are very excited about, one that we were able to maintain and preserve during the pandemic.

- The disclosure counsel: retained by the issuer to assist with the compliance of federal securities law and to review and prepare disclosure documents related to public bond issuances, such as the official statement, the continuing disclosure agreement, and notices of sale.
- The municipal advisors, or Mas: retained by us, the issuer, to provide analytical support and options for the structuring of bond terms, coordinate with other parties to the issuance, and to ensure offering documents meet regulatory requirements.
- The underwriters: act as the intermediary between the issuer and ultimate bondholders by buying bonds from the issuer and coordinating the resale of bonds for a profit.
- The paying agents: typically banks that act on behalf of the issuer to distribute principal and interest payments to the registered bondholders of the bond.

The authority in the State of Nevada to issue bonds is the responsibility of our office. As noted, pursuant to Section 10 of NRS 226.110, the state treasurer is directly responsible for the issuance of any debt obligation authorized on behalf of or in the name of the state, except for issuances by the Colorado River Commission, the University of Nevada System, and the Department of Business and Industry (B&I), which issues various types of debt under a range of levels of autonomy. One of the ones that B&I issues, of course, is the $300 million that we are committing to affordable housing over the next year through our Private Activity Bond Program conduit bond placement, which is fantastic. Furthermore, Section 11 of NRS 226.110 allows the state treasurer to organize and facilitate statewide pooled financing programs, including lease purchases, that benefit the state and any political subdivisions.

Let us spend a moment talking about our bond rating, which, again, is the highest it has ever been in state history. Credit rating agencies provide an independent assessment of the relative creditworthiness of municipal securities. The rating system consists of letter grades that convey each company's assessment of the ability and willingness of the borrower to repay its debt in full and on time. Investors rely upon these letter grades as a means of assessing the likelihood of repayment. Think about credit ratings like the credit score that each of us have, our individual credit worthiness, but for the state. Credit ratings issued by rating agencies are a major factor in obtaining the lowest cost of borrowed funds in the municipal bond market. Credit rating agencies base ratings on the assessment of creditworthiness of an issuer with respect to a specific obligation. Debt management is an important factor in evaluating issuers and assigning credit ratings, which ultimately determines the borrowing cost of funds. In other words, when our credit rating is better, we spend less money paying interest on our debt, which means we can borrow more funds, which means we can spend less taxpayer money to build the things that we need.

The chart shows the credit rating of the state's debt at the end of the last fiscal year. All debts were rated investment grade, which means the rating agency has deemed the state, as the issuer, to have a low risk of default. I am always happy to talk about credit rating—I could spend all day—but let us move on to talk about what we are here for—environmental risks.

There are several factors that rating agencies consider in assigning credit ratings, such as financial, economic, administrative management, and environmental. Generally, rating agencies consider environmental risks to fall under one of the following categories: physical risks include the physical threat of climate change on the environment, such as those from hurricanes and flooding. Coastal and gulf states such as Louisiana and Florida are impacted

most by these types of risks. Carbon risks refer to those risks that are brought upon by economic dependence on oil, gas, and coal industries. Natural capital refers to the products and assets supplied by nature. As an example, the rating agency Moody's Investor Services notes the State of Hawaii is positively impacted by this category, given the state's tourism sector's focus on natural environment. Finally, waste and pollution risks are just that and include waste management considerations and the impact of environmental pollutants. Some rating agencies also include a category for water use, while others include water considerations under the natural capital factor.

Nevada's credit score currently shows neutral-low impact for climate change and environmental risks, which means that the rating agencies have determined there is little, if any, impact on Nevada's credit rating from the risk categories I have outlined above. I would note this could change in the future given the rise of wildfires and drought across the western United States, and that has been a conversation when we talk to rating agencies—they do ask about wildfires, our ability to fight them, and what the plan is for the future. The government's response to the increasing threat of climate change could mitigate not only the physical and social damage, but also damage to the state's credit rating.

I am happy to take any questions today. Much of the information shared is provided to my office by the rating agencies; should any of the Committee members like additional information we would be happy to provide it. We are also joined today by Jeff Landerfelt, Deputy Treasurer of Debt Management, Office of the State Treasurer, who will be hanging out in case these presentations go past 11 a.m., as we have a few other things we need to handle.

Chair Watts:

Wonderful, thank you for that, Treasurer Conine. I always appreciate the bond refresher and am glad that your office has provided some bond "101" education to me and other members so that we are not lost during the refresher course.

I will open it up to questions. First, I would like to kick it off with something: Could you speak a little bit more about the trends that you are seeing? You mentioned Moody's Investor Services, and I believe that it is relatively recently they have rolled out environmental, social, and governance (ESG) factors into their bond ratings. Could you provide just a little bit of additional update in terms of how the incorporation of environmental risk seems to be evolving? Could you also speak a little bit to how both the risk itself and the action of the issuer to mitigate that can get factored into potential ratings decisions?

Mr. Conine:

Absolutely and thank you for the question, Chair.

We are starting to see rating agencies across the board speak to the importance of ESG controls. That always been the case to some extent because they have always looked at the administrative capacities of the government—whether or not we were willing to pay the debts when they were owed, whether or not we do things like putting money into the rainy-day fund—so that governance piece has always been a big piece of the work we do. The expansion recently has been to look at both social policies and environmental policies of the state to determine whether or not we are going to be better prepared for that in the future. Additionally, there is a market demand for bonds that are focused on environmental or social outcomes. You see some states starting to issue social bonds to pay for things like

affordable housing—the State of Nevada is looking at doing that during our next round of issuance—or bonds that are sometimes called *green bonds*, which is the idea that a bond is being issued in order to help fight climate change and the negative impacts of it on society. Some of those are real, some of those are more greenwashed—a bond that does not actually do anything, but it sounds better. Of course, in the State of Nevada, we would only be interested in the former, something that actually has some impact.

To get to the second part of your question, rating agencies do not just look at what the current status is with climate, but what the state is doing to help protect against future negative impacts from climate. Just like with the rainy-day fund, they are not looking, necessarily, at the amount of money in the rainy-day fund, they are looking that the state has a plan that it sticks to, to move funds into the rainy-day fund when those funds are available. They want consistency more than they are specifically looking for a type of outcome.

We will continue to work with the rating agencies to make sure that Nevada's credit rating can stay high, which is deeply important—it saves the state millions of dollars in debt payments and saves taxpayers money—and we know that it appears that the industry, all the major rating agencies, are starting to demand more and more of that action going forward.

Chair Watts:

Thank you for that.

To put a final point on it before I open it up to others: I think in some of the materials that have been provided—but this is already being looked at for the state by Moody's Investor Services and other raters, as well as, at least Clark County—I believe it is likely this is going to eventually move to smaller jurisdictions and will essentially be incorporated into all the bond ratings at some point in the future. Going back to the social cost of carbon from Dr. Averyt's presentation, one of the things to keep in mind is what actions we are taking to identify and address some of the environmental risks to the state. While so far the relevant ratings have shown low to no impact, we need to keep in mind that our ability to look at and address some of these issues is important to preserve that bond rating and, again, save the taxpayers quite a bit of money as we look at financing some of these projects.

To make that a question, is my understanding of that correct?

Mr. Conine:

Chair, that is correct.

I think it is important to separate the fact that, right now, the bond ratings do not reflect a danger of climate change versus what the conversations are, which is: the future will involve more exploration of how that can be damaging to the state, long term. They are looking at it now; they are not worried about it in our ability to repay debt next year. That does not mean that if we do not do something about it, it is not going to be a problem.

Chair Watts:

Wonderful, thank you, Treasurer.

I would like to open it up to members for additional questions.

Seeing none, it looks like you are going to get off the hook for now, Treasurer. Thank you for the presentation. I think this is particularly relevant to our Committee, as we look at some of the adaptation side around how we are incorporating this into our planning conversations and policies to look at potential risks and then figure out what actions we are going to take. At some point, I think we are going to be having communication with the Office of the State Treasurer to make sure that those processes are robust so the state, in particular, can demonstrate we are looking ahead and taking action to address these measures in order to keep our bond ratings the highest they have ever been.

Thank you for that, Treasurer. We will move on to our next presentation.

I see we have Ms. Belz joining us. Ms. Belz, if you would like to go ahead and get us kicked off, I will turn the floor over to you.

Jeanette K. Belz, Lobbyist, Belz & Case Government Affairs:

Good morning, Mr. Chair, and members of the Committee; thank you so much.

I would like to take a moment to introduce Karen Collins, Assistant Vice President of Personal Lines at the American Property and Casualty Insurance Association, who will offer a general overview of recent climate trends impacting the insurance industry. The presentation will briefly highlight how insurers view mitigation as a critical priority to make communities more resilient to future catastrophic events and help promote stable and competitive insurance markets.

Thank you, I will turn it over to Karen.

Karen Collins, Assistant Vice President, Personal Lines, American Property Casualty Insurance Association:

Great, thank you. I am going to go ahead and launch a screen share (Agenda Item V C).

Our organization is the primary trade association for home, auto, and business insurers, with a legacy that dates back 150 years. Our member companies represent all sizes and structures, and offer insurance products across the U.S. and around the globe that help protect families, communities, and businesses.

I certainly appreciate the opportunity to speak before this Committee. These are the key areas that I will be focusing on, which Jeanette just highlighted.

Climate change is a significant concern to the insurance industry as climate change is expected to increase the frequency and also the severity of natural disasters. We have begun to see the devastating effects of this through a record-breaking number of weather and climate disasters. In fact, in the last two years, the Unites States experienced the highest 2-year insured loss total ever for the 50 U.S. states at $176 billion, and we are expecting these trends to continue. To help paint a little more of this picture, according to the National Oceanic and Atmospheric Administration (NOAA), the yearly average for billion-dollar disasters is only 7.4 events when considering 40 years of data and adjusting for inflation. However, the United States has now experienced seven consecutive years with ten or more of these billion-dollar weather and climate-related disasters. Of concern, in 2020, the United States actually experienced 22 individual events—shattering a previous record—while 2021 also resulted in 20. Of these events, we have seen a significant volume

of activity and losses as a result of hurricanes and other named storms along our southeastern coast. In 2021, in particular, Hurricane Ida became the costliest global…

[Inaudible]

Drought and wildfire have become a growing concern for western states, including Nevada, as we continue to experience larger and more severe wildfire events. In 2020, the United States experienced the highest acreage ever burned in a season at 10.3 million acres. In 2021, halfway through the summer, nearly 100 percent of the western United States was in drought, a concerning measure as the United States has never experienced that much dry land west of the Continental Divide in 122 years of observation. The Los Angeles Times also reported California experienced its hottest summer on record and its driest water year in a century, which by July resulted in more land having burned in the state than at the same point in 2020. These unprecedented longer, hotter, and drier conditions, combined with significant fuel loads, resulted in the Dixie Fire becoming the largest single wildfire in California history. Conditions also enabled—for the first time ever—a wildfire to burn clear across the Sierra Nevada mountains from one side to the other, first through the Dixie Fire, only to be repeated a month later after the Caldor Fire, which briefly threatened South Lake Tahoe and other communities in Nevada. Similarly, in Colorado, as they had not seen substantial rainfall since mid-summer, in December, in a 100 mile-an-hour wind event, bone dry grasslands erupted into flames and quickly engulfed nearby suburban communities on the outskirts of Denver. The Marshall Fire destroyed nearly 1,100 homes in a matter of hours, quickly becoming the costliest and most destructive wildfire in their state history and the costliest wildfire outside of California. In total last year, more than 7.1 million acres burned in the United States.

Aside from these growing numbers of natural disasters, the United States is also facing the sharpest increase in inflation in over 40 years. Unfortunately, the costs to reconstruct a home or business have risen at an even higher pace than broader inflation as supply-and-demand imbalances have led to significant material and labor shortages, pushing up costs. In particular, demand for new housing and an uptick in home remodeling projects throughout the pandemic—along with, of course, reconstruction following these recent disasters—have all converged. Inventories have dropped for everything from raw materials like lumber and steel to home appliances, leading to major shortages and longer lead times to secure construction materials. Ongoing pandemic-related shipping and supply chain disruptions continue to prolong these challenges, which we anticipate may force insurers to pass these higher costs on to consumers through higher premiums. Thus, there is a substantial amount of pressure impacting property insurance carriers. In areas where insurers are not able to collect sufficient premiums for the increasing exposure, there are some carriers who may need to reduce their exposure through other measures, such as writing fewer policies in high-risk areas. This is actually a trend we have begun to see in several disaster-prone states as some carriers have announced exits in some markets.

Given the rising costs, the insurance industry strongly promotes mitigation to reduce potential loss. The National Institute of Building Sciences has shown for every $1 spent on natural hazard mitigation, new code construction can save $11 in disaster and recovery costs. Thus, insurers strongly believe communities must begin to adapt now, given the growing threat posed by climate change and drought, in addition to land use policies which continue to add more homes and businesses in high-risk areas, further increasing the risk for wildfire in western states.

Policymakers interested in making a difference should be considering actions such as adopting stricter building codes, responsible land use policies, and strategies that encourage

communities to invest in mitigation measures that help protect lives and reduce the potential for property damage. As fuel loads are reduced in and around the wildland-urban interface and more properties are hardened to be resilient to wildfires, this should result in a meaningful decrease in losses, which should translate to more affordable available coverage for consumers.

While insurers have long studied disasters such as hurricanes and earthquakes, research on how to meaningfully reduce risk from wildfire is still ongoing. One thing that has emerged from all the research so far—which is unique from all other types of disasters—is that mitigation for wildfire must be done at the individual property level, as well as the community level. The national Firewise USA program has done an excellent job in building community awareness of risk and providing steps to reduce wildfire risk. There are actually a number of recognized Firewise communities in Nevada currently. Similarly, following a decade of scientific research, the Insurance Institute for Business & Home Safety has published a series of road maps that include best practices for wildfire mitigation and plans to roll out a property-level designation called Wildfire Prepared Home. This will initially be available in California, then expanded to the additional western states. Here, you can see a number of the most important tips these organizations promote to reduce risk, which include creating defensible space around your home, and also making your home ember resistant.

Insurers are also encouraging consumers to review their policy coverage to be financially prepared, should a loss occur. Given the extreme level inflation, to protect against potential underinsurance, insurers are encouraging consumers to review their policy limits and also consider optional coverage features. These typically include extended replacement cost coverage, which increases coverage available to rebuild your home when labor and material costs skyrocket after a natural disaster. There is building code and ordinance coverage, which increases coverage to help comply with the new building code ordinances that might have been implemented, and also automatic inflation factors, which typically will adjust your coverage amount automatically with each renewal to help keep up with the rising costs. Though, as mentioned, during these really extreme periods of inflation, it is still important to review individual coverage limits. In wildfire prone areas particularly, it is also heavily recommended to create a home inventory that you save electronically. In the event of a devastating fire, having such a list prepared in advance that enables you to quickly and easily identify belongings is incredibly helpful during a claim.

To recap, there is a substantial amount of pressure that is affecting the property insurance industry currently. Increasing threats from climate change and drought are leading to more frequent and severe natural disasters. In addition, current extreme inflation is adding further pressure, pushing up costs, which is likely to lead to higher insurance premiums. However, consumers in Nevada can take preventative steps to mitigate against future losses and to ensure they are financially prepared, should that disaster unfortunately occur. As more communities are hardened to be more resilient to disasters, this should result in a meaningful decrease in losses, which results in more affordable and available coverage for families and businesses.

Thank you. I welcome any questions that you might have.

Chair Watts:

Thank you very much for the presentation, Ms. Collins, I appreciate it.

I would like to open it up to members to see if anyone has any questions for our presenter. Assemblywoman Peters, go ahead.

Assemblywoman Peters:

Thank you, Chair.

I have maybe less of a question and more of a statement about the dire nature of this conversation. Not everybody has the capacity or expertise to take on those kinds of resiliency efforts on their own. I want us as leaders in our communities to think about the responsibility of the local governments and of ourselves in the state to really build those community-based resiliencies, so that not every homeowner is individually burdened with an effort that is really outside of their expertise, capacity, or even just generally the infrastructure of their communities.

Chair Watts:

Thank you.

Assemblywoman Carlton, go ahead.

Assemblywoman Carlton:

Thank you, Mr. Chairman.

My question goes to looking prospectively. We are going to have the same areas within the same disaster zones over and over again, we have noticed that. One of the things in looking at the flooding in the past is: There have been times where folks have rebuilt, and that same area has flooded again. We had issues here in Las Vegas until the retention basins were done; there were houses that were in flood plains. So, looking prospectively out there, where is the industry going as far as having people rebuild? Are you going to be working with some of the local governments to have conversations about areas where—instead of a floodplain and having extra flood insurance—are we going to be looking at fire areas and designating those areas as having to carry extra insurance? How are you looking at the changes in being able to put those policies together in the future?

Ms. Collins:

Certainly, the insurance industry is exploring and utilizing more tools and technology to have a better understanding of what the future risks are going to be, and there are some areas that are very prone to severe repetitive losses. We have seen that for many years in the flood insurance space. The National Flood Insurance Program is actually a federal government program—not a private market program—that provides flood insurance coverage, but they are increasingly looking into whether severe repetitive loss properties should actually be relocated instead of allowing funds to reconstruct. That is certainly a concern for both the insurance industry, as well as the federal government that provides the flood insurance protections.

Within the wildfire space, there is a lot of increasing research and a lot of engagement with the insurance industry and state and local governments to understand where the land use policies really come into play. We are seeing a lot of studies emerging that are highlighting that expansion of properties into these high-risk areas, or continued rebuilding, could actually be exacerbating some of the impacts of climate change because they are right there in harm's way, they are in the bull’s-eye zone. There are clearly ways that you can,

from a wildfire perspective, do home and community hardening, so that when these fires do come through, they actually may be able to be resilient and withstand those wildfires. That is true for storms as well in hurricane and wind-prone areas.

For flood insurance, obviously there are a number of mitigation techniques that can be done to harden a home against flooding; there is wetproofing, dry proofing, and elevating a home or a structure that can reduce what those impacts would be. There are a variety of approaches to mitigation, but there are going to be some properties that clearly may have too high an exposure and pose a threat that both the insurance industry and the federal and state governments are increasingly looking at—where does it make sense to maybe make an adjustment from a land use policy perspective, and trying to consider what resources could be provided for that in addressing those challenges.

Assemblywoman Carlton:

Thank you very much. Mr. Chairman; if I may, one quick follow-up.

The hardening issues that you talked about and all the different strategies that homeowners can take to be able to protect their residences: Is it the industry's proposal in the future to start building that into rates and allowing that to be part of the rate structure for individual homeowners?

Ms. Collins:

The science for wildfire is still evolving. In the long term, yes, but we are not necessarily there yet. I alluded to this, where there has been a lot of research over the years—decades—into a number of other disaster perils: hurricanes, for example, even earthquakes, which we are obviously exposed to here in the western states. The research for wildfire is so unique in that you have to do the hardening at not just the home, but also at the community level, because if you take all of these efforts to harden your home, but your next-door neighbor has not taken any mitigation and that home becomes exposed and catches fire, it could easily then overrun essentially all of the mitigation work that was done at your own individual property. With the research that is ongoing, we are trying to understand that dynamic of where that balance is; it is not just do one thing and that will reduce it, it is really a set of actions that need to be taken to truly reduce that risk.

Yes, insurers want to base their premiums according to the risk. Certainly, actions that do reduce risk are typically reflected in rating, but the actuarial, which is a very technical term for the scientific numbers, the economics, of what that translation is where they are still trying to finalize that research. You are starting to see some carriers that are beginning to voluntarily roll up maybe some reductions of premium credits in some states. But it is slow, simply because the research is not fully there yet. As more of that research is completed, you will definitely probably see more of that. Certainly, as more of that mitigation is done, the overall losses will be meaningfully reduced and premiums across the state will certainly experience the benefit from that reduction of losses.

Assemblywoman Carlton:

Thank you very much. Thank you, Mr. Chairman.

Chair Watts:

Thank you, Assemblywoman, for those questions. Members, additional questions?

Seeing none at the moment; first of all, I would just like to provide a brief comment, Ms. Collins, and thank you for the presentation. I am really glad that you took the time to share your perspective with us. I think it is helpful for the members of the Committee and the public to know this is not just an issue that is being looked at from the public or governmental side, but is something that the private sector is looking at very closely as well, and understanding that, particularly in this industry that is regulated and has oversight to ensure those rates are well-founded, this is something that is becoming an increasing factor. I think you highlighted very well the need for both individual level and some collective action in state and local governments to address some of these issues. I wanted to say, I appreciate you providing that perspective on behalf of the industry.

I was wondering if you could speak—and, again, we are also going to have some additional presentation about wildfires, but I know it is something that is particularly of interest to this Committee—could you speak a little bit more about some of the issues that have been seen? I do not know if they have happened as much here in Nevada, per se. I know in some of the California communities that are in extremely wildfire prone areas there—and I think you alluded to this briefly in the presentation—there have been points where the economics have become so bad that some of these coverages are either unavailable or the rates are simply unaffordable on a practical level. Could you speak to that a little bit?

I think it is helpful for us to understand, without taking action, some of the dramatic kind of impacts that could be seen.

Ms. Collins:

Yes, absolutely.

The challenges that we have seen in California are very specific to some of the regulatory restrictions that insurers in California face. For those not familiar, the insurance regulation is a state-based regulation, and it varies by state. In California—I believe Nevada is the same—it is a prior approval state, meaning that insurers cannot simply change rates and start passing that on to consumers, they are subject to prior approval from the state insurance regulator. When we see in states similar to the very extensive losses that occur in a very acute timeframe—like we saw in the 2017 and 2018 seasons where we had substantial wildfire losses in California—there is an outlay of claims that are paid, of course, and when you compare that to the premiums that have been collected in that state, in particular over the last 20 years, those two years essentially wiped out the profits of what was 20 years.

In the same kind of span of time in the aftermath of those losses having occurred, the state actually passed a number of laws that would essentially expand the benefits that would be available to consumers. So, think of it as the goal posts were moved; if the same losses were to have occurred a couple of years later, as they did in 2017 and 2018, they actually would have been even higher losses. We are experiencing a higher amount of insurance that would be paid in a single loss, and then you include that with the impacts of inflation, and you include that with the land use expansion that is continuing to add more and more housing into these high-risk areas. The amount of exposure has grown substantially, and when you think about it from that regulatory perspective, getting that prior approval—if you need to adjust your premiums to then reflect that higher cost—in California this is a very slow process. A lot of the impact to the marketplace has really been more of the aftermath of the bottleneck of trying to be responsive to the higher exposure, in addition to the amount of losses that took place.

We had a little bit of a lull in the market in 2019, as far as the number of losses, but then we had another substantial year in 2020. The unique thing with 2020, was more lightning-induced strikes versus utility-induced losses. With 2017, one of the interesting things is that some of those communities, when they went to reconstruct—again, the land use policies, how that is enforced, building codes—those homes were allowed to rebuild to a lesser standard. They were not even required to be rebuilt to a wildfire wildland urban interface (WUI) code-specific standard. Now, the state has improved on that and so we are seeing more of that reconstruction being held to a higher standard. They actually, just in the last a couple of weeks, announced a statewide "this is what we are going to work towards". That foundation, that groundwork, is being laid to be more responsive to adaptation and resilience, but in this window of time where the market has contracted, there are these other forces at play because insurers have not been able to address all of the increase in exposure. With climate change and everything else, we know this impact is still going to be there in future years, so there is that part of it.

There is one other unique—and really difficult—thing with California that the insurance industry is still working through with the state regulator, and that is the use of wildfire catastrophe models. Most states look at what your historic experience has been for trying to determine what your rate should be, what that average has been. The challenge that we are facing in wildfire-prone areas—and it is true to a degree with a lot of other areas in the country with natural disasters, but particularly so for wildfires—is that we cannot truly just look at historic experience because we have, in the western states, seen so much housing expansion into new areas that have historically been wildfire-prone areas, the WUI. That footprint and exposure is very different. The climate change impacts of where increasing temperatures and lack of precipitation from drought are going to continue these impacts of how aggressive these fires spread—as was briefly discussed, the fire behavior is changing, they are growing at a much faster per acre perimeter spread. This exposure, when you look at it from a historical perspective, is not truly reflective of the future. The ability to use catastrophe models that include these forward-looking projections and impacts, that is a tool that is available, but it is not available in that state.

Insurers require a certain amount of flexibility to use the tools and technology that are available to them to make sure that they are able to responsibly take on the exposure that is something they can pay out in claims and do so in a balanced way. These challenges in that state are not identical to Nevada or other western states, though it does not mean that cannot happen if the same type of losses happen or the same type of limited response. What I can say is that there are some carriers that are finally seeing some of these approvals for rate filing starting to occur and getting caught up to what that rate adequacy truly should be. We are starting to see a little bit of that tipping point with more carriers beginning to write in these high-risk areas. It is a cycle that we have seen in some of our hurricane states years ago. In Florida, Hurricane Andrew in the early nineties and then in 2004, 2005, we saw a similar type of cycle when hurricanes in the southeastern Gulf states—including Hurricane Katrina in Louisiana—occurred. We have gone through some of these market cycles, but then the market stabilizes over time. We are in that cycle currently in California, getting through it—it is not going to stay this way indefinitely—but, again, it boils down to how much can we reduce the losses, and have stability so that you do not go through these aggressive pain points like we have seen in recent years.

Chair Watts:

Wonderful, I appreciate all that background. I think those are all different points for us to take into consideration when looking at these issues.

Members, last call for questions for Ms. Collins or any other members of the panel on this issue.

Seeing none, thank you for the presentation. I think this was extremely helpful in helping us characterize the complex economics of this issue, everything from the physical damage costs; the costs of health impacts; potential costs to our state in terms of our ability to finance infrastructure projects; and the cost of insurance. Of course, the state has insurance and local governments do, as well as individuals. These are all very important things for us to keep in mind to have a global perspective about this issue as we look at what we try and do to take action to address drought, wildfire, flooding, and other issues that are influenced by our climate.

Thank you all for your presentations, we very much appreciate it.

We will now move on to the next item on our agenda. We will have a presentation from the State Department of Agriculture to discuss issues and implementation of past legislation, similar to some of our other agency presentations.

I will turn the floor over to Director Ott. You can introduce yourself for the record and begin your presentation whenever you are ready.

AGENDA ITEM VI—PRESENTATION ON AGRICULTURE ISSUES AND PAST LEGISLATION

Jennifer Ott, Director, State Department of Agriculture (NDA):

Thank you. Good morning, Chairman Watts and members of the Committee. It is my pleasure to appear in front of you today to not only present an overview of NDA but to also discuss some of the agriculture issues that our Department is working around, as well as provide an update on legislation from this past Legislative Session. We have a lot of updates, I am happy to say. (Agenda Item VI).

I will start off by giving an overview of the agriculture industry in the State of Nevada. Nevada's agricultural economic output is growing; in 2019, it was $4.95 billion, that is both the traditional agriculture sector—ranching and farming—as well as the food and beverage manufacturing sectors. It has grown to $5.2 billion in 2020, and continues to grow projected into 2021. Much of that in 2019, was due to some of the trade conflict occurring at the time. Certainly, we were expecting more of a rebound in 2020, but the global pandemic did have an effect on that as well, and we are continuing to see a rebound in this sector as you will see in some of the specific numbers later on in the presentation. The food and agriculture and ranching and farming sectors employ just under 19,000 Nevadans for a total of $818 million dollars in wages in the state.

We do have a State Board of Agriculture at the Department that oversees certain statutes under the Board's authority. This is a legislative update; we did have Senate Bill 54 that changed the makeup of the State Board of Agriculture that will come into effect on July 1, 2022, so we will start to see those changes here in a couple of months. At this time, we are still operating under the older version of the State Board of the Agriculture.

Our mission at the NDA is to preserve, protect, and promote Nevada agriculture and here is a list of our leadership at the Department. We are wrapping up our strategic plan, we look forward to wrapping that up after this next legislative session next year and looking to the future for more planning, based on the input that we receive at the next legislative session.

The NDA has many stops in the food supply chain. If it is a food supply chain, there is usually some aspect of our agency in it, starting with planting—whether food crops or animal feed—also working with natural resources and federal agencies on grazing lands, working lands; into livestock and production, transportation of those items; processing; weights and measures and measurements for packaging for those items; distribution; and then, of course, trade assistance and economic and workforce development of final products.

I will go through by division, pausing to discuss some of the agricultural issues by division.

Our Division of Plant Health and Compliance protects Nevada agriculture, the public, workers, and the environment through education, inspection, and certification.

Our crop production program: We have several programs within that to ensure that our crops are safe, healthy, and of high quality for export out of the state—domestically or internationally. Our phytosanitary certificates provide mandatory inspection and certification for plants and plant products for export. Similar to the numbers I shared for overall industry of agriculture—those numbers are continuing to go up: in Fiscal Year (FY) 2020, we had 683 certificates issued. In FY 2021, 781. That is a year-to-date number for FY 2022; we are going to probably more than exceed FY 2021 by a good amount. So, we are seeing those increases.

Hemp is not seeing the increases, and that will go into some agriculture issues I will talk about in a minute, but we are seeing a decrease in the hemp sector significantly. Some of that is due to the falling price of cannabidiol (CBD) and the demand for CBD in a nationwide market; there is competition from international markets as well. Also, this has to do with a lot of our hemp growers being new growers or growers that were diversifying, and so drought took a pretty heavy hit on our hemp producers over the last few years.

We also work on plant health. We collaborate with federal, state, and local governments and weed mitigation entities to be proactive in preventing, controlling, and managing invasive weed species on public lands and private properties. Our nursery programs, entomology programs, plant pathology, and seed certification work to prevent entry and spread of harmful exotic pests and plant diseases through identification, field surveys, and enforcement of state quarantines and the regulations.

Our Environmental Protection Unit provides pesticide enforcement and laboratory analysis to protect the environment and human health from the effects of pesticide misuse. That includes the licensure and monitoring of pest control companies and individuals for compliance with state and federal laws. Also working on the mitigation side, working on pesticide product recycling programs, and monitoring waterways to make sure pesticides are not getting in our waterways are all part of our Environmental Protection unit when it comes to the agriculture sector. A portion of that is our drought initiative. We have one drought position at NDA who really is involved with working with all of the other drought groups in the state: the Office of the Governor, the Division of Environmental Protection (NDEP), and the State Department of Conservation and Natural Resources (DCNR) to work on the more practical sides of drought, particularly for our farmers and ranchers. We talk about drought planning, drought monitoring, and then, certainly once a drought has occurred—which it has for several years now—making sure our farmers and ranchers are aware of the federal resources for mitigation and assistance in the drought areas, in the drought realm.

At this point, under Division of Plant Health and Compliance, I will pause and say the main issue we are working on in the Division is drought. Like I said, drought is much harder—it is hard on everybody—but it is much harder on those newer agriculture entities, especially our small- and medium-sized farmers and ranchers. Also working on solutions for invasive species on our public lands. You hear about wildfire, that is a big factor when it comes to invasive species; healthy range for grazing has a big impact. Working through our Shared Stewardship team, which is the group of state and federal agencies working together on these public land and private land projects; looking at funding and funding mechanisms; how we can collaborate on funding; and using the existing mechanisms to patchwork together whole projects. In forward looking: How can we adjust federal language and tackle rules at a national level so that we can work on public land issues that makes sense for Nevada? It is no secret that much of the federal and public lands language was not created with states like Nevada in mind, and so we are hoping to change that through some of our work, not only on the state level but the federal level.

I will move along the supply chain to the Division of Animal Industry. That Division is responsible for animal disease detection and prevention, food safety through our dairy program, livestock identification, theft prevention, commercial feed, agricultural product dealer licensing, and natural resources protection.

The Division of Animal Industry is a really busy Division. We have the livestock inspection program, those are the brand inspections that we hear about, protecting livestock producers and tracking the movement of livestock across Nevada and between states for health and consumer protection purposes. We have the Predatory Animal and Rodent Control Program; our agriculture enforcement police officers that work with not only enforcing agricultural laws but all laws across the state and acting as subject matter experts with sheriff's departments and local law enforcement agencies. Our Dairy Program, which tracks the sanctity of milk from production all the way through shelving and pricing in the State of Nevada. And our Animal Disease Laboratory that works on issues such as West Nile virus and rabies.

The main issue in this Division, that we are continuing to work on, is drought for our livestock producers. Our livestock inspection program, which many of you heard so much about: We are continuing and working hard to implement our new, revised program. I also want to mention processing as part of the supply chain. Processing is an area that we can really support this portion of the industry, the ranching industry. We have great production in this industry in Nevada. We have a wonderful market for those products, especially through our urban centers and our tourists and visitors to the State of Nevada, but we have very little processing in this state. Everything that we do has to leave the state in order to come back in to feed our population and our visitors, and so the NDA and the Office of the Governor is working to address that, and to support this industry through supporting processing efforts.

Our Division of Measurement Standards ensures quality of motor fuel and lubricants and consistency in commercial transactions by regulating devices used to determine weight and volume. Our three programs in the Division of Measurement Standards: weights and measures program, which inspects and certifies weighing and measuring devices; metrology program, that works on the sanctity of those measurements; and petroleum technology, that looks at the quality of petroleum across the state as it comes through the pipeline and lands in Nevada.

Two major issues that we are working on in this Division: One is the electrification of Nevada, how that affects our regulatory standards on measurement of electrification and

electric vehicles, and how we can provide consumer protection support in that industry. The other issue we are working on has been a year-long issue, and that is the quality of diesel fuel in Nevada through our poor pipeline, especially our northern Nevada pipeline. We are seeing heavy clogging of filters; there is some sort of ingredient or substance that is being carried through our pipeline that is really affecting our northern Nevada, central Nevada, and eastern Nevada fuel dispensing locations and costing a lot of money. We are working with the industry to solve that problem and maintain that high quality of the pipeline in Nevada and the petroleum.

We have our Division of Food and Nutrition, which administers federal funds to provide access to healthy food for Nevada's children, seniors, and food insecure populations. We have several programs in the Division of Food and Nutrition that we administer, and I am going to hit the big ones. The Child Nutrition Commodity Support, is the national school lunch program and school breakfast program. As you are aware, that has undergone quite a few pandemic changes and pandemic waivers; we are working with the U.S. Department of Agriculture (USDA) to continue, and certainly the governor has made the commitment, to make sure that all students in Nevada will continue to receive lunch, whether a pandemic program or not. We are continuing to work on that for the next school year.

We also administer senior nutrition programs and community support programs. Our largest programs here are: The Emergency Food Assistance Program, or TEFAP, many of you know that as the food bank. We are focusing on the Child and Adult Care Food Program, which supports our daycare centers. Certainly, as the need for quality childcare increases in the state, so that we can get parents back to work, assisting our fellow Department of Health and Human Services (DHHS) to provide support on the food realm so that these daycare centers can operate in the best way they can, with the healthiest food they can, is a focus of ours.

Some of the issues that we are encountering through this Division, of course, is that supply chain continues to be an issue for food. It seems like there are fits and starts; we will have no trucks coming in and then ten trucks coming in. There are still substitutions on products because of issues with sourcing or issues at processing where, again, there are labor shortages really impacting this. We are still seeing a lot of supply chain impacts. We were seeing supply chain impacts with our schools; some of our school contracts, because of supply chain issues, were increased by 30 percent, their costs were 30 percent over. We were paying those, and USDA has since provided us with funding to make the difference on that. Our focus was to not have any gaps in food, so we were willing to pay it, and luckily USDA has come through and made sure that we are not seeing shortages. We are not seeing the diversity of foods that we would like, but we are not seeing shortages, which is a good thing.

The other area is: We are continuing to see the increased number of food insecure individuals and families holding steady. We saw a huge increase during, certainly, the initial stages of the pandemic. It has gone down a little bit, but we are still seeing an elevated number of food insecure individuals and families in this state.

Moving on to our final division, the Division of Administrative Services. Of course, this is the support team to our Department, really, the core of our Department. We have a few programs within this Division; I would like to highlight two of them. One is our global trade program. Our global trade program assists farmers, ranchers, agribusinesses, and food manufacturers to enter and grow into domestic and international markets by providing educational seminars, federal partnerships, trade missions, leads, and market assessments. Also, part of our communications team is looking at various ways to support small

businesses. Two of the issues and three success stories I would like to highlight: One is we were able to start our Women's Farm2Food Accelerator Program that enrolled 15 Nevada women in the program to assist them in getting their food businesses up and going. We were also able to—just this last Friday—launch our Nevada Craft Beverage Passport Program, which is a passport; get your passport at your local brewery, distillery, or winery today. It is a way you can stamp and support small businesses throughout Nevada in this craft beverage space. As well, in 2022, we already have one trade mission under our belts, and we will have seven more throughout the year to support our agriculture industry and food and beverage manufacturing industry. In February, our trade manager went to Dubai; they will also be going to Singapore, Paris, and Vietnam to support not only food and beverages but also animal feed as well.

Legislative updates: Some of you may remember that we had quite a few bills in front of the Legislature this last Session. I am happy to say that we have had some accomplishments there. I am not going to read through these, I will provide the updates and if there are any questions, please let me know.

For Assembly Bill 31 (2021), we do have our economic impact survey completed and a workshop for the implementation of that bill is scheduled for mid-March.

On AB 34 (2021), our survey was completed. Our first workshop was held and, due to the comments that we had in the workshop and the feedback from the industry and the public, we are going to schedule a second workshop to receive further public input.

Same thing with AB 74 (2021); a survey was done, a workshop was held, and because of feedback and input, we are going to hold a second workshop to make sure that we are all on the same page and make sure we are hearing everybody's feedback to that language.

Assembly Bill 411 (2021): The economic impact survey was released, that was closed about a week ago, and the workshop was to be scheduled. That was a little bit further behind, schedule-wise, than we would like, but because of some court rulings that were happening in the 15 percent ethanol, or E15, sector, we were waiting for language on those rulings before moving back to LCB for final *Nevada Administrative Code* (NAC) language.

Senate Bill 63 (2021), I believe, will be up in front of you in the next Legislative Commission for those members on the Commission; the final adoption hearing has been held.

Senate Bill 65 (2021): That is the implementation of our new names, and has been implemented. We are done with that.

Senate Bill 370 (2021): This was the Home Feeds Nevada Agricultural Food Purchase Program that was added under SB 370. Those of you on the Interim Finance Committee (IFC) in December approved a position through the American Rescue Plan Act of 2021 (ARPA), Pub. L. 117-2, 135 Stat. 4 (2021), funds to begin this program. We were able to hire that person within about two weeks of receiving approval, and they have since been hard at work establishing that program. We will request additional funding for that program and intend to apply for the USDA Local Food Promotion Program to add additional dollars. This is the program that buys Nevada-grown goods and delivers them to food banks for distribution to food insecure populations. We are really excited that is moving forward at a good pace.

Senate Bill 404 (2021) LCB has reviewed our draft and the economic survey has been released.

Senate Bill 412 (2021), that purchase, with its one shot appropriation, is complete and we have that equipment in house.

Senate Bill 454 is implemented—notice to the ranching industry and the animal industry will be sent out shortly. We had a hiccup in the mail room last week, but that will be implemented and go into effect as of April 1, so that is moving along as well.

I wanted to preview a little bit of some brainstorming on what the NDA is working with the Office of the Governor on as far as ideas; again, brainstorms for ARPA funds. I had mentioned the need for processing in the State of Nevada, so we are requesting and looking to implement a state meat inspection program, which would include positions to not only support the industry on developing Hazard Analysis Critical Control Point, or HACCP, plans and food safety plans, but also assisting industry in requesting funds USDA has made available. Some of you might have seen that USDA made an announcement last week of a $215 million investment in the meat industry, and we are hoping to capitalize on that in Nevada and bring as many of those funds into our state as possible.

Rebranding the Commodity Supplemental Food Program: We are hoping to rename this the Senior Wellness and Nutrition Program for better adoption around the state, so it is more recognizable and every entity that runs this program can all have the same branding and awareness. We are looking to modernize our website. We have so many different areas of business and so many interactions with the public and nobody can find anything, it seems. So, we are looking to do a better job with our communications through the website.

Then, of course, tackling food insecurity in our state with the ARPA funds. Certainly, there is an ability to really look at how we can build better infrastructure for future growth of food insecurity and better use federal funds in the future. I really align this with. If you have a good base to your pyramid, then you can grow a strong pyramid. This is really investing in food infrastructure so that way, if we are having supply issues and there is an entity that gets ten trucks at a time, they are not worried about where they are going to put it all. Certainly, looking at transportation, we have new ways of delivering food now and really supporting all of these food insecurity agencies that are doing the good work on the ground.

As we get further down into the infrastructure bill, a lot of that funding is going to address natural resources. We have already started to have some meetings about the potential of that funding with our colleagues at the U.S. Forest Service (USFS). The Bureau of Land Management (BLM) is a little bit slower on the transparency on those funds, but we are looking forward to working with both groups to make a big improvement on our public lands this year and in coming years.

Thank you so much for your time and attention. I appreciate it.

Chair Watts:

Thank you so much for that presentation, Director. We certainly appreciate the updates, and you have quite a bit going on.

We will open it up to members for questions. We will start with Assemblywoman Hansen.

Assemblywoman Hansen:

Thank you, Chair, and thank you, Ms. Ott, for being here.

Just two questions. Do you happen to have an idea that you could share with us on the status of the spread of whitetop? Whitetop is an invasive species, but I have not seen it on your website; I do not see it listed as that, unless it is called something else. Just some edification on that subject for me and others. Is whitetop an invasive species? We tend to have a lot of trouble with it here, in the Truckee Meadows area along the river, and, as I recall, I think the University of Nevada was doing some work on trying to remedy that issue.

Then I have one other question.

Director Ott:

Thank you so much.

I should have started off with apologizing that I am here by myself. The more technical questions I may not be able to get to; the specifics on whitetop is one of them. I am happy to get back to you, and send an email to everyone on the Committee.

Yes, it is an issue. Our team does have a program for invasive species—early detection, rapid response species—and looking at targeting those species that, [Inaudible] for lack of a better word, in one area and how to treat in that area and keep it contained. Certainly, I will look to see if that is one of them.

Assemblywoman Hansen:

Thank you, I do not mean to put you on the spot. I know you already covered so much information, you did a great job, so thank you for that.

You referenced when you were talking about livestock that we do not do any processing…

[Inaudible]

Director Ott:

Assemblywoman Hansen, I just want to clarify—as part of your question—we do have some processing in Nevada, so I want to give credit where credit is due. It is limited, but we do have some processing in the state. It is all tied in—again, going to my point that we have great production in Nevada, and we have great market in Nevada, we are just missing that middle piece. The state inspection program that we are requesting and brainstorming about would be a supportive part of that industry. It would allow NDA to create an inspection program to inspect these processing facilities on a state level rather than having USDA inspectors in the facilities. So, they would be able to get state inspection, which then allows them to sell beef, or what have you, within the State of Nevada, just not across state lines—for that you would need the USDA inspection still. We are looking at creating that program.

Part of that program is also an education piece and a supportive piece for those industries that are looking to start a facility and helping them do that, helping them work through the financing part of it. Of course, we all know there was a lot of national attention on processing, and so USDA has come with funding, and we want to make sure Nevada gets as much of that as possible—that supportive piece as well. Also, just continuing to work in this sector, so we can grow this sector and support it as much as we can.

Assemblywoman Hansen:

Thank you; that helps give me a better understanding. Thanks for being here.

Chair Watts:

Next, we have Assemblyman Ellison.

Assemblyman Ellison:

Thank you, Mr. Chair.

Good presentation you put on, I enjoyed it.

One of the questions I do have is: Have we had any permits lately, that you are aware of, for new processing plants here in Nevada?

Director Ott:

Permitting, as in, for new facilities?

Assemblyman Ellison:

Right. Agriculture processing plants for beef or poultry.

Director Ott:

Yes, but not through a state process; that is county- or city-level designation. Certainly, in the news, we have heard about some facilities that have come in and have not been successful on the county- or city-level, and that is another brainstorm of this program—being able to have that education piece to educate local jurisdictions on what processing is in modern times, what it is not, and working with those entities so that we can have a little bit more success in that area.

I hope that answers your question, Assemblyman.

Assemblyman Ellison:

Yes, it does. The reason I ask this question is that I had a call in the last couple of weeks with somebody asking questions. I gave them your number and said they could ask if there is a state license, I was not aware of. I knew they did have some in Elko years ago, but I did not know if they talked to you or not.

Chair Watts:

Thank you. I appreciate the diplomatic response.

To make sure that all members are aware, I did see this in the news as well. There was a proposed processing facility—I believe it was within the jurisdiction of Carson City—that was rejected. I just wanted to make sure all the members of the public are aware so you can look at additional information. I think it is important to understand that, in terms of fostering that local supply chain, we both need a local inspection program so that we do not need fully Food and Drug Administration (FDA) licensed facilities, but then we also need the processing here so we do not have to move our agricultural products out of state to be

processed. There is a local government component to having that happen, and I want to make sure everyone is aware that.

Assemblywoman Carlton, go ahead.

Assemblywoman Carlton:

Thank you very much, Mr. Chairman, and thank you, Director Ott, for all the work that you have done. You know one of the things close to my heart is the food insecurity conversations we have had over the last couple of years. I want to thank you very much for looking at some of the barriers that the two large food banks in the state—and, just by association, a number of the smaller food pantries—the challenges we have had and being able to look at the transportation and the storage; I really appreciate that.

The one thing we are having a hard time relating to folks is, it is great to have the truck to move it, but I need the truck driver; it is wonderful to have the forklift, but I need the forklift driver too. The folks who put their hearts into this work over the last two years, they were considered essential workers and showed up every day in the food banks and food pantries not knowing what they were facing, but knowing that people needed to be fed. I appreciate all the work they have all done to keep Nevadans fed, and hopefully we can work towards a time where we can have conversations about that, personnel that makes everything work. I appreciate what you are doing, moving forward.

I have learned a lot in the last year about not storing a bunch of fruits and vegetables in a regular room—with the gasses they put off, you need special air handlers. It is not like putting it in your fridge at home. I appreciate all the work you have done, and we know there is still a need out there. I just want to thank you very much for taking all those comments and suggestions and working on them so that we can move forward. Thanks.

Director Ott:

Chairman Watts, may I respond?

Chair Watts:

Yes, of course, go ahead.

Director Ott:

Assemblywoman Carlton, I really appreciate your comments.

We say over and over again at the Department, we know who is doing the work on the ground, we know who is doing the real work. We try as hard as we can to move money as quickly as we can and to support all of those entities, and so I echo. We really appreciate everything that everyone does in the food insecurity sector. Thank you for those comments.

Chair Watts:

Senator Goicoechea, please go ahead.

Senator Goicoechea:

Thank you, Mr. Chair. Director Ott, I just have a couple of questions.

First, I am going to touch on the hemp; that is discouraging to see those numbers have declined so badly, especially the outdoor grow. I want to remind the Committee, we are still waiting for the regulations from DHHS that would allow for the incorporation of CBD oil into food products in this state, where we can use Nevada-produced hemp. It is not your problem, but are we working on that yet? We had the legislation last Session, brought it forward. We are still waiting for the regulations, but I am concerned you can buy those products from everywhere else in the world in stores, on Nevada shelves, but we cannot use Nevada-produced hemp. That is a problem.

The other thing I want to touch on a little bit more, Ms. Ott, is presently, under Nevada law, you can have state meat inspectors, but that is only for intrastate meat; we have to use USDA to do interstate. Is that correct?

Director Ott:

Yes, to go between states—interstate—you have to have a USDA inspection. For intrastate you would have to have state inspectors. We currently do not have state inspectors that are trained or signed off by USDA, which is required to have a state inspection program, to do that work. We have, at times, worked with USDA on some custom-exemptions, but that is not going to get us very far in solving our problems. That is why we are looking at that intrastate state inspection program. There continues to be a bill floating around Congress—H.R. 3835 of the 117th Congress (the Processing Revival and Intrastate Meat Exemption Act, or PRIME Act) or versions of that—that if passed, a state inspection entity could act basically similarly as a USDA entity, so that if you were certified by the State of Nevada, you could sell your meat products to other states. That is not the case at this time but that is pending, and we are watching that closely; it would be another positive to having this kind of program within the state.

I hope that answers your question.

Senator Goicoechea:

Yes, thank you, Ms. Ott, I really appreciate that.

And just for the Committee to be aware, the bottom line is: The best scenario for us is the change in federal law that would allow Nevada's state inspectors to function as USDA inspectors and not handcuff ourselves. We are going to bring processing into the state, which is going to require feed yards. You have got to have finished lots, you incorporate it all, and then you would limit yourself to only be able to sell in-state. I think as a Committee, it is something we need to look for, Chairman Watts, maybe a resolution or something out of this Committee to support that would be great. Thank you. Thank you, Ms. Ott.

Chair Watts:

Thank you, Senator Goicoechea. We will add that to the running list of ideas to potentially consider, and would welcome both any additional information from the Department on some of the federal policy changes they are pursuing, as well as from the Senator, any other members, the industry, and members of the public on federal policy changes that could help support our agricultural industry. We can consider those, potentially, at the end of our Interim, whether it is resolutions, letters of support, statements of support, things like that.

I do have one update. I was doing a little bit of searching during some of the previous questions and comments, and whitetop actually is listed as a noxious weed. It is listed as

hoary cress, which is another name that it goes by, but I looked at the species name and it is in there. I just want to provide some additional clarity on that.

Members, additional questions for the Director?

Seeing none, I will give you a minute to think because I have a couple of things.

A lot of things have been covered already that I wanted to address. One of the things that I wanted to ask about hemp—because of the complicated and changing state and federal landscape—I just wanted to circle back around on that and see if there is any additional information you could provide on some of the factors related to that. Is it just what the Senator mentioned? What are some of the issues that industry, in particular, is seeing? I know you mentioned the economics in general, but if you could talk about that. Also, you mentioned the impact of drought, and I am wondering, does the hemp industry have access to all the same types of assistance that other plant production has access to?

Director Ott:

Thank you for your question, Chairman.

I will try my best to expound a little on what I have already covered. As far as the regulatory landscape, which was really what we have been struggling with, frankly, since hemp was made legal in the state and then again through H.R. 2 of the 115th Congress, also known as the Farm Bill, that has pretty much come to a conclusion. The NDA does now have an approved state plan through USDA, so that we are able to operate. It was cutting it close there, but we got it done. Our regulatory landscape is now complete and not nearly as much of a struggle. It has been a struggle for industry; with an industry that was moving as fast as it was and the regulations not able to keep up—not only on the federal side, but on the state side as well—it was difficult for our industry. First, we were supposed to be testing the flower; then we were testing equal parts flower stock; but then the question was raised, what about the plant if you are doing fiber? There were a lot of those questions we had to work through and, frankly, there were not a lot of answers. There has not been a lot of research, and so as time has gone on, we have been able to work out a lot of those details.

From a regulatory standpoint, we are more solid than we have ever been. From an industry success standpoint, just like anything else, when the Farm Bill was signed and hemp became legal, certainly, there was a big boom on what was going to be—or thought to be—the demand. The regulatory side—not just the State of Nevada, but across the nation—really hampered that initially. There were instances of crops being confiscated, set on fire; it was a very high-risk proposition and has since gone down to the Senator's point: CBD is being sourced from all over the world into the U.S., and there has not been a great way to track that. That has become an additional problem and an additional point of competition for industry in our state.

The competition part of it, the boom and decline and then, certainly, drought. Like I had mentioned, some of the hemp farmers were new farmers, so there is going to be a level of failure there. Some were transitioning crops and did not find it to be nearly as water-saving as was initially "advertised". Certainly, being in a drought has not helped; newer or beginning farmers, smaller or medium sized farmers do not have the same allocation of water rights as some of the long-term farmers or larger farmers—when the water ran out, it ran out, and there was nothing that they could do. And the price of hemp is nothing near the cannabis cousin of marijuana. You almost have to do it as an outdoor grow; as an indoor grow, it is very difficult to make up that price margin.

There are a lot of different factors there, but I always attribute it, basically, to the CBD, the demand going down, the competition from international markets, certainly, and then drought definitely has a factor to play.

Chair Watts:

Thank you very much for that.

That leads to another question that I have on drought. Could you elaborate a little bit more both on what you are seeing, and what your perspective is from the agency, as well as what you are hearing from producers about, essentially, the support or assistance that is needed in addressing the impacts of drought? Whether it is programs, policies, or resources; what are some of the things that you see as needed to help our agriculture manage drought?

Director Ott:

Certainly. I am going to be careful because I do not want to step on DCNR's toes here, but I can tell you that people are going out of business, and they are going out of business because they do not have water. I would like that to cease. I would like to see some sort of assistance for those businesses, to get them over the hump to the next year so that they are not losing everything because they could not afford to plant.

Nevada knows drought. We have been in drought for many years; our ranchers and farmers—a lot of the drought programs and drought assistance have to do with loss. We know drought, and if we know your water is getting cut off on July 4, you are not going to plant—there is no loss there and some of the federal programs do not apply. We would like to see some sort of assistance or work done in the area so that we are not losing these family farms and ranches due to a lack of water.

Chair Watts:

Thank you very much, I appreciate that.

I was on another educational webinar recently that discussed some of the changing dynamics we are seeing in some of the—particularly drought—some of those assistance programs are envisioned as an emergency response. But what we have seen is essentially a permanent state of drought, or something close to it, and so some of those frameworks are not aging well and need to be rethought. I do appreciate that and yes, I understand that there is a water rights perspective. We are going to talk about water issues in more depth in our next meeting.

One other thing I did want to talk about—and I know this has a crossover with another state agency—is, you had mentioned a little bit before about trying to manage invasive species and the impact on wildfire. I know that has some overlap. I know the Department also manages the horses on the Virginia Range. I know that has some other crossover with other wildlife issues that perhaps Nevada's Department of Wildlife (NDOW) is involved in. I know there has been some recent discussion about crossings and other things, so I was wondering if you could speak a little bit to those issues, and to the conversation and collaboration with other relevant agencies to try and address them.

Director Ott:

I am going take the horse issue first. Yes, we are still having an immense amount of horse issues on the Virginia Range. We do have two cooperative agreements with horse advocacy

groups, one for darting of birth control and one for, basically, answering the phone calls that we cannot answer, such as: There is a horse in the roadway; there are horses on my land; or somebody hit a horse with their car. Those kinds of responses. They are still, according to… [Inaudible] Yes, they are probably older than I would like them to be, but we still have more horses than that range is projected to be able to carry, which is affecting that range.

As far as the horse crossings, that has become a topic of conversation because of language within H.R. 3684 of the 117th Congress, the recent Infrastructure Bill. There is money within it for wildlife crossings; our horses on the Virginia Range are not rated as wildlife, and so I am guessing that those do not apply. I have not had anybody come to me asking to do wildlife crossings in that area. There is wildlife on that range which would then be supported, but then we are also encouraging the movement of horses as well. Frankly, it is a lose-lose issue on that until we can do more work on birth control and that kind of thing. Fencing, a lot of fencing. Currently, we have a funding request in to the federal government for fencing, especially in the UWI areas.

Chair Watts:

Great, thank you, I appreciate that.

That is a very interesting point that you raised. It looks like we have a follow-up from Senator Goicoechea. Go ahead sir.

Senator Goicoechea:

Thank you, Mr. Chair. I will not touch the horse issue; I will leave that alone.

I am really concerned about the drought issues, and clearly, in the Highway 50 corridor here in eastern Nevada, it is bleak. Tomorrow we are at March 1, there is nothing that a foot of rain would not cure, but I do not know if it is going to come. Just for the Committee, this drought is for real, here in eastern Nevada, especially. When it appears on the drought map as that dark red, it is there. We have got dust coming right out of the brush and have had for the last 60 days; anytime there is a breeze, there is dust. You cannot have the ground soil conditions that dry and expect any kind of a season.

Thank you.

Director Ott:

Chairman Watts, may I also add?

Chair Watts:

Yes, go ahead.

Director Ott:

I just wanted to highlight one of the items I should have brought up earlier when I referenced that Nevada is used to drought. A member of industry told me one of the big problems with that is when we had such a severe drought as we did this last year—where areas like Washington, Oregon, and areas of Idaho that had not experienced drought in a really long time were experiencing drought—the competition for resources to continue agriculture was intense. Normally, we would have ways to use range in other states to

transfer water, to buy feed at the end of the season, but all of those—because of the intense drought—were being snapped up, and so it is not just us, it is regional as well.

I wanted to highlight that. Thank you.

Chair Watts:

Thank you, I appreciate both of those comments.

One other thing. This is a bit of a comment so if you want to respond, feel free to do so. I know we had discussed at some point the National Poultry Improvement Plan, which I learned about when working on the cage-free egg legislation. This was something that was brought up by somebody in the agricultural industry here, and I understand it is essentially a voluntary program to help ensure the quality and safety of poultry and poultry products. I think Nevada is one of the few states that is not really participating in it, and it is essentially a resource issue. So just reiterating, as you are looking at the state inspection programs and some of these other things, the importance that all of us as members think about resourcing some of these things and, I believe at different points in time there have been federal resources available to states participating in that program. This gets back to a recurring theme we have had in this and other committees about trying to find ways that we can make these initial state investments provide the opportunity for us to pull down additional federal resources in support for the industry. I wanted to make members aware of that additional issue.

If you want to respond you can. I want to put that on the record for other members' awareness.

Director Ott:

No response on that. Could you repeat the invasive species question that I missed in my comment?

Chair Watts:

Essentially, could you touch on that a little bit more? I know there were a couple of members' questions…

[Inaudible]

Director Ott:

To address the questions on invasive species, there are really two areas where NDA works on public lands, or land issues in general. The first is the identification and then treatment of those invasive species. Nevada's Department of Wildlife, frankly, does much more on this work than we do from a range and habitat perspective, but we work together on those identifications and treatments.

The second area is on native seed. We work with nonprofit groups, local governments, as well as the federal government, to collect native seed. We are working on a program to enlist Nevada farmers to grow out native seeds so we have a native seed bank, so that in the event of a wildfire we are able to reseed the land with seed that has been collected and grown here in the State of Nevada rather than in eastern Washington or Montana, where a lot of that work goes to. In the last year and a half or two years, NDA, as well as other state entities, the U.S. Fish and Wildlife Service, BLM, USFS, USDA, and the Natural Resources

Conservation Service are all a part of a Shared Stewardship group. We meet quarterly and have members of our agencies that meet monthly to work on these natural resource issues, targeting issues and areas where we can come together and work together to address those problems or a prioritized list of what we have identified. We have had a lot of success over the last year, and I think more collaboration has happened than ever before. It is really exciting to be part of that group. I expect great things for the future. I am excited for this infrastructure bill and what that might be able to do to fund that collaborative effort in tackling those invasive species, which we all know not only affect our industries but affect wildlife and affect the wildfire impact potential.

Chair Watts:

Thank you for that, I appreciate it.

Members, last call; any other questions for the Director?

Seeing none, thank you again, so much, for your presentation. We appreciate the updates and information, and thank you for your time.

We will move on to the next item on our agenda, which is a presentation from our Division of State Parks and our Office of Outdoor Recreation within DCNR on issues related to outdoor recreation in Nevada. I believe we have Administrator Mergell and Mr. Robertson with us. Please go ahead whenever you are ready. You can introduce yourself for the record and begin.

AGENDA ITEM VII—PRESENTATION ON STATE PARKS AND OUTDOOR RECREATION IN NEVADA

Colin Robertson, Administrator, Division of Outdoor Recreation, DCNR:

Good afternoon, Chair Watts, and members of the Joint Interim Standing Committee on Natural Resources (Agenda Item VII). The mission of the Division is to promote Nevada's outstanding outdoor recreation opportunities and the conservation of its natural environment, grow Nevada's economy through outdoor recreation, and educate the public about responsible recreation and healthy and active lives enriched by the outdoors. I am here today to present some information about the threats to and impacts of climate change on outdoor recreation in Nevada, and the implications for both the state's natural resources and its economic diversity.

That story begins with a headline: Nevada is an outdoor state. Nevada is second only to Alaska in terms of public lands, essential assets supporting the state's thriving outdoor economy. As a state, we enjoy four national park units, including the fifth most visited national park unit in the country, Lake Mead National Recreation Area (LMNRA), which was also the first national recreation area ever designated, established in 1936. In 2021, nearly 8 million people visited the LMNRA.

Among the jewels of our public lands, Nevadans and visitors to our state enjoy the natural, cultural, and economic benefits of outdoor recreation in 72 designated wilderness areas across our state. As I like to tout to anyone who will listen, Nevada has more mountains than any state in the country, with more than 314 named ranges; more than 4,000 miles of trails; and 4,185 campsites, among many other outdoor assets. We enjoy the key quality of life indicators of our 27 beloved state parks, which you will hear more about from my colleague, Bob Mergell, in just a few minutes. Importantly, among respondents to Nevada's

2021 Statewide Comprehensive Outdoor Recreation Plan public survey, 91 percent of respondents report participating in outdoor recreation activities at least once a week in the last year.

I lay all this groundwork to emphasize what is at stake from a natural and cultural resources and economic perspective in the face of climate change. In spite and, perhaps, because of the unprecedented impacts of the Coronavirus Disease of 2019 (COVID-19) pandemic, outdoor recreation contributed $4 billion to the state's economy in 2020, representing 2.3 percent of the state's overall gross domestic product, or GDP. That is extremely important in terms of efforts to sustainably diversify the state's economy. Outdoor recreation in Nevada also supported 49,501 jobs in 2020. The many well-documented, beneficial, and repeatable impacts of outdoor recreation for the economy and for Nevadans' physical and mental health are only possible because of the presence of healthy public lands, clean air and water, seasonal snowpack, and stable seasonal temperatures.

As has been heavily documented, our state and region are experiencing some of the driest conditions in a millennium and certainly since records started being kept in the late 19th Century. Drier conditions and warming temperatures are leading to lower snowpacks that directly affect both water- and snow-based outdoor recreational activities, shortening seasons and contributing to new environmental hazards, such as algal blooms.

The threat of climate change has enormous economic implications for the outdoor recreation economy in Nevada alone. Those nearly 8 million visitors to LMNRA I mentioned a moment ago, they contribute $336 million annually and support 3,990 jobs in gateway communities like Boulder City.

Outdoor recreation drives more than 15 million visitors to Lake Tahoe annually, and warming temperatures have a direct and concerning effect on that visitation. According to data from the Tahoe Regional Planning Agency, traffic doubles to the Lake Tahoe basin on a 100-degree day, as compared to a 65-degree day, in Sacramento. Perhaps more stark is that every 10 degree increase in temperatures equals 800 more car trips into the Lake Tahoe Basin. Warmer temperatures also mean shallower snowpacks, shorter seasons for snow sports, including Nevada's and California's robust ski and snowboard industry.

Wildfire impacts are no longer seasonal; we now face year-round threats. The air quality index in northern Nevada in the summer of 2021, ranged from unhealthy to hazardous for weeks due to large scale wildfires across the west. Such climate change-driven impacts are multivalent; not only are wildfires larger, more complex, and more expensive to fight, they are also far more poisonous. Forest fires of yesteryear burned trees; in today's complex UWI, where cities are planning and designing communities to the threshold of wildfire, smoke is far more toxic, creating significant direct consequences to the outdoor recreation economy in Nevada, but also enormous, and as yet unmeasured, impacts on the health of Nevadans. This is problematic for a state that is already considered among the worst in the country for chronic respiratory diseases.

It is for these many, but briefly mentioned, reasons that I have set out the following relevant priorities of the Division of Outdoor Recreation. With support from federal ARPA funds and private sector donations, we will be conducting a full-scale economic impact study of outdoor recreation in Nevada over the next year or so. As I hope this presentation has made clear, the impact of outdoor recreation on Nevada's overall economy is significant. Climate change creates far more complexity in this matrix. That is why in the Divisions of State Parks and Outdoor Recreation, with broad input from Nevadans, we have woven sustainable, responsible outdoor recreation into the updated 2022–2026 Statewide

Comprehensive Outdoor Recreation Plan (SCORP), which will shortly be shared with the National Park Service for the purposes of guiding future investment of Land and Water Conservation Fund dollars into outdoor recreation in Nevada.

Similarly, in a first of its kind in the country, an outdoor recreation shared stewardship agreement is about to be signed by all the federal and state land management agencies operating in Nevada, plus Nevada's Departments of Transportation and Tourism and Cultural Affairs. This innovative and future-minded agreement will help ensure that climate is an essential consideration of outdoor recreation and its economic benefit to Nevada. As the Nevada State Infrastructure Bank and the investment of other one-time federal resources—such as H.R. 3684 of the 117th Congress—and funds from the ARPA are debated and deliberated, particularly in the context of Nevada's precarious position with regard to climate change, it will be increasingly important to see outdoor recreation infrastructure in the form of public lands, parks, trails, and open space as a key to the long-term sustainability of the significant contribution of outdoor recreation to Nevada's overall economy.

Thank you for the time and the opportunity to present here today to the Committee and to you, Chair Watts.

Chair Watts:

Thank you very much. We will, if it is all right with everyone, let Administrator Mergell speak, and then we will open it up for questions to either presenter.

Whenever you are ready, Mr. Mergell, please go ahead and introduce yourself and you can proceed.

Bob Mergell, Administrator, Division of State Parks, DCNR:

Thank you, Chair Watts. The mission of the Nevada Division of State Parks is to develop and manage Nevada's system of parks and recreation areas; contribute to a vibrant economy; and protect areas of scenic, historic, and scientific importance. Basically, we get to take care of all the cool stuff and make sure that it sticks around for generations to come.

A general overview of what we are and what we do. I believe everybody on the Committee has seen this particular slide before, but we have 27 parks, in 4 regions. We recently started managing the Tahoe Basin as its own region; it was unofficially a region, but we now actually have a regional manager there, so it is finally functioning in that capacity. We do interpretive events and, our primary goal right there is to provide affordable family recreation—that sums it up.

I am going to dig in a little bit more granularly on the direct impacts of climate change to our state parks and where you can see that. In some places it is hard to see, and as I will explain, it has varying impacts; it can actually increase visitation and it can decrease visitation, so it is a little all over the place. As you can see, though, the overall trend in outdoor recreation is increasing, and that is a nationwide trend, not just here in Nevada. Parks and outdoor recreation in general are becoming more popular with more people going outside. You will see the drop off there in 2020, and in 2021, that is more COVID-19 related than it is specifically climate related, but there are some impacts that overlap there. When we dig into specific parts a little bit later on, I will make that a little bit more clear, but that drop off in 2020, had more to do with parks actually being closed because of COVID-19 and limitations that we put on capacities.

Lahontan State Recreation Area is a park where you can clearly see the impacts of climate on a park. Lahontan State Recreation Area is a water-based recreation park, and you can see that our visitation out there definitely follows water levels. 2015 was a terrible water year; when there is no water out there, people are not going to go out there and recreate. This visitation trend is very atypical, of course, when we compare it to all of our other parks, but the impacts of drought are very clear when you look at a place like Lahontan State Recreation Area. The reservoir holds water, so up until the irrigation season starts, you can depend on a certain amount of water, and we will get some visitation early on. But if there is not enough water to last throughout the course of the summer, as that water is being used for irrigation purposes, then recreation really drops off.

The next park we will look at is Sand Harbor State Park, another water-based recreation area; in this one you can see impacts from a variety of things. Sand Harbor State Park has been one of those parks where the shoulder seasons drive visitation. So, during the summer months at Sand Harbor State Park, full is full—you can only fit so many people into Sand Harbor State Park. When the gate is closed, the gate is closed, and we stay pretty much full from May through September. But once you get into the shoulder seasons, if there is a heavy snow year then visitation drops off because people cannot get into the park, or the activities there are more limited because of the snowfall. If there are really beautiful fall and spring days then people will go there, and that expands our busy season up there. The shoulder seasons drive visitation at Sand Harbor State Park to a larger degree.

There is a pretty significant or very direct impact to visitation with things such as catastrophic wildfire. This shows visitation just for the months of August and, as you can see, in 2021, when we had to close Sand Harbor State Park because of the smoke, there was a very significant drop in visitation. Our visitation would have been trending up, again 2020, took a hit because of COVID-19—but even with that, comparing visitation when we had the Tahoe Basin full of smoke and happened to actually close the park, the direct impact of catastrophic wildfires, on park visitation.

Parks that are a little bit less affected by climate change, parks like Cathedral Gorge State Park. There is no water-based recreation there, people go there to do more typical camping, outdoor recreation types of activities. There impacts of severe flooding issues as Cathedral Gorge State Park has been impacted by catastrophic floods. The problem is, our staff are really good at what they do, we were able to get in and rescue people that were trapped in the campground, get them out, go back in and clean up all of the damage that was done while we had half the campground closed, and have that back open within a week. It did not impact our visitation as much as I was hoping it would, but I will show you that is one of our challenges towards the end of this presentation. The staff we have are great, but there is not enough of them, and the equipment they have is getting older and so are the facilities. Anyway, this shows that visitation in some of our parks does not have a real, direct correlation, to climate; it just shows that upward trend of visitation in outdoor recreation over the years.

Valley of Fire State Park is similar, people just love to go there. The visitation drop-off is 100 percent because of the COVID-19 pandemic, that was in 2020. We were forced to close Valley of Fire State Park for three months during its busiest part of the season and, obviously, that devastated our visitation for that park. The typical day user visitation and the campers have all come back at Valley of Fire State Park, but what has not come back yet is the international travel. We would have exceeded and probably hit the million-visitor target if it was not for the impacts of COVID-19 because our day use numbers are pretty much the same, but we are not getting the international tour busses that we

used to get. That is hundreds of thousands of people that we are not getting any more, with the current state of international travel.

With the impacts climate change is having, the Division is facing a challenge of expanding the shoulder seasons. We used to be able to staff around about a three- to three and a half- or four-month busy season, and now our busy season is almost non-existent in certain parks; parks like Valley of Fire State Park stay busy all year round. Parks at Lake Tahoe are finding themselves in that same boat; they need staffing levels year-round because it is no longer just a seasonal opportunity for people up there, they find ways to get outside and recreate year-round. That is a challenge when you rely on seasonal employees. We have 132 permanent employees and 145 seasonal positions, so, clearly, the majority of the work that is being done on the ground is being done by seasonal workers. When the seasons are over, we are not getting the help to fill those positions, it is getting harder and harder for us to fill those positions. Even when we do have them, when we are paying our seasonal employees $12 to $13 an hour and they can go and work at McDonald's for $16 an hour, we are having a hard time competing in that market. Then, of course, we have the increased impacts from more severe storms and wildfire, and our facilities are aging, our equipment is aging. We do not have enough staff to go in and make those very needed repairs.

I jumped into this topic already—the increased maintenance needs in order to keep those facilities open to the public. It is not just keeping them open to the public, we do a pretty good job of that. Outdoor recreation is our business, we depend on having the resources there for people to want to come utilize, but there is also a definite aesthetic component to that, and the facilities are just old and worn out. That definitely is a detraction for people when they show up to recreate. Again, with resource protection, there is a big increase in visitors going out to our parks and a lot of these people are first time outdoor recreators. They do not know how to recreate responsibly. We do not have a lot of park interpreters to get that message out to people, so we want to make a concerted effort to get that message out to people—start going to schools and teaching kids how to go out and recreate—so when they are out there, maybe they can help their parents to know how to do that responsibly.

It is the same with invasive species, as it was brought up earlier on. A lot of the invasive species are more drought-tolerant than some vegetation that we would like to have around, and we do not have people that are specific to doing that invasive species control, other than at a couple of locations. We really need to make a more conscious effort to focus on invasive species control.

Some of the opportunities available to us, as I believe some of you are aware—and was brought up earlier under the bond program—Conserve Nevada is a huge opportunity for state parks. We have $30 million in authority; we have utilized $5 million of that, so we still have $25 million remaining. The problem is $25 million does not got that far when you start looking at it. If a visitor center needs to be replaced—there goes $20 million right there. It seems like a lot of money, and we are grateful to have it, but it does not go as far as we might hope.

The Capital Improvement Program (CIP) also assists with infrastructure repair. We do have several CIP projects going on right now that the State Public Works Division is spearheading for us. We were able to get those projects funded because we were able to use some Land and Water Conservation Fund money to make that money go further. Any bond money we do get—we tried a couple with Land and Water Conservation Fund money in order to get the most out of that money—we have tried to double our money, basically, on every project.

Lastly, you will see on the list there is some private sector funding. We have been super fortunate to have partners like the Tahoe Fund. We were recently approached by a group that wants to potentially help us either upgrade our current visitor center at Valley of Fire State Park, or potentially build a new one. It looks like the price tag for a new one might be a little too steep for them to cover, but we figured it was worth asking while we were talking to them.

The bond funding is definitely an opportunity, but again, it only goes so far. It is intended for construction projects, but we have tens of millions of dollars' worth of deferred maintenance projects out there. We are going to need a significant amount of money to come in to help us get those facilities, not just back to functioning but to where they are aesthetically attractive for visitors as they show up. In areas like the visitor center at Valley of Fire State Park, it is not that it is in bad shape, but it is very old, and it was built for a park that used to get about 400,000 visitors a year and now gets close to 1 million. Virtually every visitor that goes to Valley of Fire State Park goes through the visitor center at some point while they are there; the visitor center is not built for that type of visitation.

I already touched on the staffing levels. Honestly, if we got a new position to mirror every position that we have in the state right now, we would still be shorthanded. To say we operate on a "skeleton crew" would not even do it justice.

Then as I said, our visitation continues to grow. Our busy season continues to expand, but our operating budget stays the same. We are trying to clean bathrooms and drive around the park to make sure we are taking care of people and watching people's public safety, but fuel prices have gone through the roof. In order for us to do that, that means there are a million other things that we cannot do because we are putting fuel in the vehicles and our fuel budget is the same as it was 6, 7, 8 years ago.

It is not all doom and gloom; we are doing a good job. I think that, generally speaking, our visitors are very happy, but we would like to do a lot more for them than what we are able to do right now.

I am happy to answer any questions that you might have, thank you for the time.

Chair Watts:

Thank you very much to both of you for the presentations. I very much appreciate it and appreciate all the hard work that you are doing.

Do you want to take a moment to address some of the staffing concerns? We are hearing about these issues on so many different committees and bodies that we sit on, and I do appreciate them being raised as issues here. I think they are issues in almost every level, particularly at state government; we have heard about it quite a bit when it comes to public safety. We are hearing about it in education, we are hearing about it in healthcare, and I appreciate that it is also an issue with our state parks, particularly some of the difficulties in recruitment and retention in some of our rural communities and thinking through ways to address that.

I will open it up to questions from our members.

Assemblywoman Hansen, go ahead. Then we will have Assemblyman Ellison.

Assemblywoman Hansen:

Thank you.

I have a question for Mr. Robertson. You made a statement, and I wrote it down—"Nevada's precarious position in climate change". We are 0.71 percent of the entire greenhouse gas emissions for the whole country, and so I am trying to understand what is this precarious position that we are in for outdoor recreation or Nevada as a whole?

I listened to the presentation, I saw the things related to droughts and, certainly, how that affects water levels and fires closing some of our parks down. But can you elaborate a little bit more on why it is so precarious?

Mr. Robertson:

Thank you for the question, Assemblywoman Hansen.

I would say the purpose is looking at, for example: The elevation of the surface level of Lake Mead has dropped by north of 150 feet in the last ten years or so, and those kinds of drops in the water level from a recreational standpoint really threaten the growth and importance of the recreation economy in Nevada, given that large number of visitors who are going to Lake Mead on an annual basis. I think the precariousness comes in that those places are contributing enormously to the diversification of Nevada's overall economy through outdoor recreation, and that becomes threatened when water levels, like at Lake Mead, are dropping so precipitously.

Assemblywoman Hansen:

Thank you, and Chair, if I could just follow up a little bit.

We discussed some of that in our last meeting, that these levels—Lake Mead, in particular, and the Colorado River and some of the other things that are going on in southern Nevada. One of your slides, though, I guess I am getting mixed messages, because certainly we want tourism, and we want that outdoor recreation, and it requires people to drive cars, they drive boats. And then you had a slide about Lake Tahoe, and for every ten degrees the temperature goes up, 100-degree days get 800 more car trips to Lake Tahoe versus a 65-degree day in Sacramento. Almost as if to say, hotter temperatures have people get in their cars more to go use our lakes. Of course, that is a carbon footprint, so I guess I am not understanding when the concern is offset by another concern. They drive their cars to get to the lake, and we want tourism. I guess this is more of a statement. I am all for this conversation, I just want to put on the record that I think tying climate change discussions into every single agenda item here in such precarious and very strong language as if to scare us all, it is disingenuous. We have it, we can talk about correlation and causation, but we have not—even the greatest scientists disagree on causation. I appreciate we need to have the discussion, but I do think it is disingenuous to try to make claims—not just in this presentation—that, somehow, the science says we are in a precarious climate culture right now in the State of Nevada with 0.71 percent of carbon emissions, or greenhouse gasses, and yet almost 30 percent is happening in China, and maybe that is responsible for hurricanes and droughts. We have not figured that out, but if it is—and that is what some scientists say—we are not going after the head of the problem.

Anyway, thank you for letting me have this moment. I appreciate the time and energy you put into your presentation. I just have to get on the record, that I think we need to be careful that we not make pronouncements that have not been proven.

Thank you very much.

Chair Watts:

Thank you for that, Assemblyman Hansen, and I want to make the record extremely clear on this because this is the second meeting that this has come up.

I want to say this once again, and hopefully for the last time. This Committee is looking at the impacts that we are seeing of a changing climate, and the data we are seeing shows we are seeing changes. I mentioned this again earlier: Yes, the modeling varies, and we cannot attribute a specific wildfire, a specific flood, a specific impact directly to the changing climate. However, I do want to be extremely clear that the level of scientific agreement that certain chemicals cause warming in our climate, that humans are emitting and are a factor in increasing those emissions—it is pretty universal. When we talk about the impacts, and again, what we are seeing is that disruption. Whether it is directly human-caused—a heatwave, a drought, a wildfire—or not, I think the scientific consensus is pretty clear we are having some form of impact, and I think it is important that we recognize that humans have had a dramatic impact across the face of the earth. We see these impacts coming, and this Committee's jurisdiction is not dealing with emissions. What we are dealing with is the fact that we are seeing an increase in the incidence and severity of drought, of wildfire, of extreme heat and that those are, and we are hearing this not only from the public perspective, but you heard earlier, even from the private sector, they are seeing these trends. We need to look at them very carefully and figure out what we can do to think about them, to plan for them, and to have responses in place that make sure that our outdoor recreation industry, our agricultural industry, and our communities that are dependent on these natural resources are in a position to continue to survive and thrive moving forward.

That is really what we are trying to look at in this Committee. This particular presentation is looking at, as you said, a complex issue; these issues are complex in many ways. We are, in fact, seeing that hotter temperatures could drive people away from, say, a Valley of Fire State Park that is reaching temperatures of 115 degrees or more. But, they may be driving people up towards Lake Tahoe into the mountains where people can get away from the higher temperatures. There are economic costs and benefits, but our state is really on the front lines of this, whether it is the impact of reduced snowpack on our winter sports or whether it is heat, either driving people to or away from different locations. That is what we want to look at and think about how we incorporate planning, response, and utilizing our resources to address some of those issues. That, I think, is the precarious situation that we find ourselves in as a state that already is hot and dry, and sensitive to any changes that we see one way or another.

Members, are there additional questions for our presenters at this point?

Yes, thank you for waiting, Assemblyman Ellison. Go ahead

Assemblyman Ellison:

Thank you. I liked some of the pictures and stuff, they are absolutely gorgeous.

I have a couple of questions and either or both can answer this. You talked about lack of funding and hardships in finding employees. We are all dying there, we cannot get people to work. But one of the things I was going to ask, and there has been nothing in any of these presentations for a long time, and I am hoping we can get this, is about fines, like littering, boating, cleaning up water muscles. There is a lot of trash thrown out there, and I pick up a lot of garbage all the time, so I know that, but there is nothing in here about the fines. I know a lot of people that get out on the lake, they get fines for speeding and not doing the right things about having the right certificates and this kind of stuff. There has got to be a lot of money collected on these fines and maybe you guys can help me on that.

Mr. Mergell:

Thank you for the question, Assemblyman Ellison.

When we write a citation, the money that is collected from that does not go to the state, it goes to the county where the citation is written. I believe most of that money ends up going to education, but none of that revenue actually, in any way, makes its way back to us. Frankly, as somebody that has written citations to people for 20-something years, I prefer it that way because when they say that I am only writing them the ticket because the park needs money, I like to be able to tell them, in complete honesty, the state does not see a penny of that money. It is beneficial to us in that regard, to not have the money come back to us in any way. But the flip side of it is, we get none of that money, so it really is not beneficial to us in any way.

Hopefully that answers the question.

Assemblyman Ellison:

Follow-up, Mr. Chair.

Chair Watts:

Go ahead.

Assemblyman Ellison:

I thought that, just like the highway patrol, they get a percentage of tickets and a portion goes back to the county where they are at. I thought the same thing happens with when you do a citation, yes, a portion of that goes back to the county that it originates in, but I thought a portion that goes back to the state. Is that not true?

Mr. Mergell:

That is not true with citations that we write.

Assemblyman Ellison:

That is good to know, thank you.

Chair Watts:

Thank you. Members, additional questions?

Seeing none, I do not think I have any other questions.

I appreciate your time for sharing these things with us today, including some of the recent items that were approved from IFC to help support the resilience of our outdoor recreation industry. I think you also mentioned the importance of outdoor recreation on our health, and I think that is something we would probably like to loop back around with you on and discuss when we have our joint meeting to evaluate this kind of intersection of health and environmental issues. Thank you so much for your time.

We will move on to our final presentation of the day. We have a presentation from the Nevada Division of Forestry (NDF) on issues particularly related to wildfires. I see we have our State Forester Firewarden with us. Ms. KC, you can go ahead and introduce yourself for the record and proceed whenever you are ready.

AGENDA ITEM VIII—PRESENTATION ON WILDFIRES IN NEVADA

Kacey KC, State Forester Firewarden, NDF:

Good afternoon, Chair, members of the Committee. I appreciate being here today to talk about the effects have been seeing in wildfire over the last couple 20 years. (Agenda Item VIII)

As has been talked about already today, as we start to see increased temperatures across the United States, we see this altering ecosystem structure and function, most notably by altered disturbance regimes. Talking about increased wildfire quantities; frequencies; intensities; increased mortality from insects and disease; increased duration and frequency of drought, coupled with these years where we get excessive amounts of water; and then decreased snowpack, where we are seeing more rain than snow over the winter months. All of these affect ecosystems and what is in them, and we will get into that in a minute.

The West has borne the brunt of the wildfire crisis across the United States, though I do not want to take away from the South and the northeastern states as they have had an increase in fire also. When we talk about the Camp Fire, the Caldor Fire, the Dixie Fire, they call them mega fires, they call them giga fires. In-state examples: the South Sugarloaf and the Martin Fire, huge fires for us. We are seeing these mega fires, or these giga fires, at an increased frequency and they are resistant to suppression. It is very hard for us to use normal suppression tactics, though we are still using them and employing different tools to try to fight these fires.

It is extremely unsafe for firefighters, and we have talked before, where the increase in the frequency and the quantity of these fires has an impact on firefighter mental health as well; where they used to see a bigger fire or mega fire once in a career, they are now seeing it twice or three times in a year. This is probably part of our reasoning for not having as many firefighters or the capability of hiring them or keeping them; there is a money issue, which we will talk about later, but also the mental health impacts. Many are going into different fields because it is very challenging.

One of the things that was discussed earlier is development in the wildland urban interface. The 5-year average of structure loss in wildfires across the West in 2014, was about 2,800 structures. In 2020, that rose to 12,255 structures lost—that is a fourfold increase over six years.

There are two trends that are a little bit concerning to us from a fire perspective. In the last 20 years, up to 2002, Nevada has burned just shy of 9 million acres, which averages about 440,000 acres per year. In the previous 20-year average, we burned over 5 million acres

and we were averaging about 264,000 acres. The graph includes the Humboldt River overlay; this is actually indicative of most of our waterways across Nevada. When we have these peak wet years, we tend to see our peak wildfire years follow, due to invasive annual fuels that grow in the inner spaces, which cause rapid-moving fires in these ecosystems. In those previous 20 years, 1999 is still the highest recorded year of acres burned in the State of Nevada, just shy of 1.8 million acres. We have repeated over a million acres seven times in the last 20 years. This is a lot more frequent high-intensity fires than we have seen historically.

Our fire season, I do not even think we call it this anymore, we call it a fire year has increased. The United States is showing an increase in days we are likely to burn on average from 1979 to 2017. We have seen an increase across most of Nevada of up to 20 days for each decade over the last four decades. Where we used to hire a seasonal workforce that came on for five months maximum, we are now meeting them year-round. This year alone, we are already at 11 fires and 142 acres. We have seen them all the way from the northern part of the state down to the southern part of the state. Even with the recent snow, we are still seeing fire starts.

One of the other impacts we are seeing is a change in species cover and diversity over time. This is not shocking to anyone. Logan City, a mining camp northwest of Hiko, the first picture, on the left, was taken in 1871. The second picture was taken just last year of the same area. What you see is where it used to be a blackbrush-dominated site with Wyoming big sagebrush and scattered juniper and pinion, so we were probably at phase one pinion juniper at that time. We are now at phase three pinion juniper with very little understory remaining under most of that. This causes higher intensity fires in these ecosystems, and when they do get started, we are seeing increase in insect and disease kill because these trees are stressed due to lack of water. They are all fighting for the same resources, so you see these impacts grow greater and greater in these ecosystems.

I am not going to go over all the numbers, but you have them should you wish to know all of the bugs that are affecting our trees in the state. The federal and state agencies fly many of our forested areas every year; COVID-19 put a damper on it, so we did not have numbers from 2020, but what we are seeing, generally, is we have an increase in insect and disease kill across the state. Mortality from these is nature's way of thinning forests. However, we are not yet seeing levels of epidemic proportion in any of our ecosystems; we are still waiting to see if these increased trends will get to epidemic proportions in the future.

Our wildfire statistics across the state. We focus primarily on the human-caused starts as we are starting to see a whole lot more human-caused starts; you see the numbers since 2012. What we are seeing on a 5-year average is that human-caused starts are about 57 percent of the overall starts, that is across all jurisdictions and all reportable fires, not just state-reported fires, and 48 percent of the acreage.

Obviously, natural-caused fires in the State of Nevada are usually caused by lightning, or [inaudible] other such activities, but human-caused ignitions come in many forms. Some of the highest frequency ones: target shooting; fireworks; illegal campfires or campfires that have not been properly put out; cigarettes out the window; debris burning; arson; and equipment sparks. Every year we—the collective state, federal, and local governments—look at what is causing these fires, and we send out an interagency fire prevention team across the state to try to target the message. For example, target shooting is a big cause of fires, particularly in southern Nevada. Early in the last couple of years, we sent the team down there to try to get these prevention messages on radio, in print, on television—wherever we

could get it—trying to educate the public, who may not be aware of these ecosystems that we have and how you might be able to target shoot in an area in a drought year where we do not have those grasses in the inner space, but you cannot do the same activity in a wet year when we did have a lot of rain or moisture in the spring, causing those annual grasses to grow.

What are we doing to adapt to the changing wildfire situation across the West? There is a lot we are doing. I am sure you have heard all of us speak to increasing the pace and scale, active management across the highest priority areas; Jennifer Ott spoke earlier to our Shared Stewardship Agreement. This really is looking across state, federal, and local government, and private partnerships. How do we take our limited resources and funding and place them in the highest priority areas where we are going to have success in changing that ecosystem and reducing the risk of fire in those ecosystems? In the two years since we have had the Shared Stewardship Agreement in place, we have had an annual average increase of 47 percent each year. We are making an effort to try to get more done out there, and really focus our efforts in the highest priority areas where we are going to see fire come through.

One of the things we have to recognize is, as land managers, historically, we were looking at how to take these ecosystems back to what they were 100 years ago. Now we are looking at, what is this going to look like 100 years from now? We cannot do the same treatment we might have done 20 years ago, so we have to look forward. We have got invasives that come in directly following a fire, we have got other issues, so we have to start looking at in this hotter, warmer climate, how can we have an impact in these ecosystems?

For an exciting piece of news, in 2021, we treated more acres than we burned in the State of Nevada. We got lucky, it was a drought year, and we did not have a huge fire season in the State of Nevada like, unfortunately, California did. We have been greatly increasing that treatment together—state, federal, local government, private industry—and we have really been increasing our efforts.

One of the other areas we are focused on is Fire Adapted Nevada; creating fire adapted communities, making sure the infrastructure we build is able to withstand fire. We are never going to get rid of it, but the rising cost of wildfires, as you heard earlier, can be directly correlated to the increase in housing we have in these high and extreme areas for wildfire. One of the things we need to look at is building codes, making sure that we are adopting and putting in place the WUI building code standards for wildfire, and is done at the county level. The state has adopted the WUI code, minus the building section. I think one of the things that is critically important is educating homeowners on what they should not be doing and can be doing to safely protect their homes, but then also looking at developments before they go in. It is much easier for us to treat the forest or the range land prior to homes with somebody's favorite tree being in place than afterward, obviously.

One of the things we are always looking at as an industry is, how do we expand all the tools in the toolbox? We are looking at different and more effective ways to fight wildland fire, and we are looking at different and effective ways to treat these landscapes. We need all those tools in the toolbox. We look at things like prescribed fire; in some of these ecosystems that were dependent upon fire to recreate and to sustain an understory that could carry fire through it, it is critical that we mimic fire’s natural role and put fire back on these landscapes. There is a lot we can do, and all of those tools need to be in the toolbox.

The Nevada Division of Forestry, working with all of our partners—federal, state, local government—has come up with a forest action plan that we have on our website. It is available to everyone, and we have a climate section on how we can impact climate change in these environments. One of the juxtapositions of forestry work is that you are trying to thin a forest and you are also trying to keep carbon. We are trying to make sure that forests can be both sinks and sucks—if that is the right word—because you have got these large mega fires that are taking out large amounts of trees, usually replaced by something that is flashier and burns more often. These are just some of the things that we are doing to try to mitigate climate change in our environments.

We need to maximize sustainable carbon volumes in ecosystems. This really means active management of our ecosystems. Making sure that we are thinning forests to where they can withstand fire coming through, that we are rehabilitating and restoring as often and as quickly as we can to try to get ahead of an annual invasive species.

We are trying to make sure that we are keeping erosion control at bay. What tends to follow large fires in this state are large rain events that, then bring double damage to homeowners who have already been impacted by either having to evacuate or through loss of their homes.

We are trying to reduce greenhouse gas emissions from catastrophic wildfires and land management activities. Of everything we are looking at; obviously catastrophic fire has a huge impact on these emissions. Nevada was a great example last year—we had many days and weeks, more than we had ever seen, of air quality that was exceeding standards and it was unsafe to go outside. That actually caused our fire season to be a little bit less, but it did not help for wanting to go outside or help outdoor recreation.

When we do these large-scale forest treatments or range treatments, we are really looking to try to reduce the loss and the catastrophic nature of wildfires in those ecosystems. This is a change we have had to do overtime, too, from a science perspective. We look at how wide our fuel break have to be. We also ask how large is the area which we need to treat in order to slow most fires that are going to come through this ecosystem.

One of the other things we are doing in the state is facilitating programs for the utilization of biomass. I do not think it will surprise anyone to know that we do not have very many of those across the State of Nevada, and that is one of our biggest challenges as land managers. What do we do with all of this green waste that is coming off of these projects? An example is the one-megawatt biomass facility here in Carson City; though it is small, all these small pieces put together actually make a big difference in being able to take, for example, the trees out of the Tahoe Basin and utilize them to sequester carbon. But you need mills, you need fire char facilities. We can use them for making building materials, there is a lot that we can do. We do not have a lot of timber in the State of Nevada that is sold and makes money as timber, so we are still looking at: What do you do in pinyon juniper forests to utilize that biomass in a way that also produces green energy?

One of the things we always have to do in all of our lines of work is support research and make sure we are providing education to the public, to other land managers, to everyone on, what are the best treatments that we can do, and how do we match our treatments to the current trends in the environment?

One of the things we looked at in the Interim Study Concerning Wildfires in the 2019 Interim, one of the things we are always looking at, is to make sure that policy is current and the things we can do are not hindered by our own policies and procedures. The

Interim Study Concerning Wildfires came out with quite a few things, some of which you heard today, so I am going to hit on those.

Assembly Bill 85 was an expansion of noxious weeds policy—which, historically, is actually under the NDA's jurisdiction—for when things like cheatgrass that had already become well-established in certain areas were not able to be managed by a state quarantine officer. This allows that designation, and it also allows us to designate noxious weeds in specific locations rather than across the entire state.

Assembly Bill 86 authorized local governments to recover wildfire suppression costs. The state had that authority already in statute, but local government did not. So, if a fire is negligently caused, there can be some ability to try to recoup costs from the person who caused it.

Assembly Bill 84 was to increase the ability for the state forester to enter into public-private partnerships, specifically to reduce catastrophic wildfires in Nevada.

Assembly Bill 100 made a multitude of changes; some of them were just codifying existing things like the Nevada Fire Board of Directors, which is a partnership between state, federal, and local government, and private industry, where we are constantly looking at what we all have for response and how we can better help each other, both from a response perspective and an implementation perspective. It also codifies our Wildland Fire Protection Program, which is where we assist local government with the cost of their wildfire once it goes beyond initial attack or the first 24 hours. In return, we try to buy down our risk by doing more work in their jurisdictions that will directly affect how fire goes in, and hopefully reduce the cost of wildfires in those areas over time. Additionally, the bill codifies Shared Stewardship practices, making sure that we are all working together; our land ownership is such a checkerboard of state, federal, local government, and private that the way the state is built up requires us to work very closely together.

The other thing it did was authorize the creation of an insurance incentive program relating to wildfire, and we have had multiple meetings to talk with the insurance industry on what that might look like. As you heard from an earlier presenter, it is a difficult challenge to get their hands around. Insurance is just starting to figure out what these losses are and how you might quantify that into an incentive program because most incentive programs are individual based, but in this case, you need a community to act, and you also need the people outside of the community to act. We are still working on what that might look like for the State of Nevada.

Thank you for your time today. I would be happy to take any questions.

Chair Watts:

Thank you very much, Ms. KC, for that update and overview.

We will open it up to members for questions.

Assemblywoman Hansen.

Assemblywoman Hansen:

Thank you, Chair, and thank you, Ms. KC, for being here; it was very informative.

Just two questions. Could you elaborate a little bit more about mitigation, "facilitate programs for the utilization of biomass"? Can you give me some examples? You might have but my audio went out for a few minutes.

And then I have another question.

Forester Firewarden KC:

Thank you for the question, Assemblywoman Hansen.

The utilization of biomass is critically important in how we are able to actually take more out of our forests—and not necessarily range, but it could be—because we do not have any facilities, unlike the State of California, which has multiple mills. Historically, for the Tahoe Basin and along the Sierra front, we hauled that timber, which was merchantable, over to the State of California. Unfortunately, or fortunately, they are full because they have enough trees with the recent burn scars and the number of treatments they need to do; they cannot take anything from the State of Nevada. We are starting to look at sustainable industry that could either mill wood; turn it into power; generate power or heat like the facility here in Carson City did for the prison for a while; pellet production for things like stoves, biochar, there are all kinds of stuff we can do with the less merchantable timber, like pinyon and juniper. Though they seem small—a one megawatt facility is not going to solve every problem in the Tahoe Basin—they are necessary. Really, multiples of these things are sustainably necessary across our landscapes so we can continue to haul as much as we need to out. We do not have any other industry to rely on anymore.

Assemblywoman Hansen:

Thank you. I am a huge supporter of that, and hope we can make some in-roads in being able to do that here in our own state.

The second question. This last year, the smoke was so bad; it was one of the worst years that I recall, having grown up around here, for such an extended period of time in northern Nevada. I think you said it. Even though we had a ton of smoke, Nevada dodged a bullet in that we did not have a lot of large wildfires. The majority of the circumstances that we suffered under were due to neighboring states, is that what I heard you say? You said it differently, but did I get the thrust of it?

Forester Firewarden KC:

Yes, most of the smoke we were seeing in the State of the Nevada was from the State of California and the large fires that were happening in their state. So, it was fortunate, or unfortunate, for us because some of that smoke impact cooled us down a little bit too and helped us to not have such a fire season.

We look at fire predictions every year. The National Interagency Fire Center pulls predictions of what fires are going to look like based on fuels, climate, air conditions, air quality, heat, all of those things. We looked at it last year and we anticipated a smaller fire season based on the lack of grass growth in the inner spaces; we had a lot of snowpack that actually held that grass down at lower elevations. I am a little concerned about this year as we start to head into it—though it is very, very dry, we do not see a lot of new grass growth unless we get a wet spring, but we also did not get that lower-level snowpack to hold it down. We are a little bit more concerned this year than we were going into last year. But every year we have the potential for large fire.

Assemblywoman Hansen:

Thank you, I followed along when the fires were so intense in the Tahoe Basin, and we were all on pins and needles. I think there were some videos you had online showing the ways that, on the Nevada side, you had worked in the forest. It showed a contrast between how some of the fire spread could be stalled with some of the methods that you are practicing here in the State of Nevada. I thought it was a really good education campaign, and appreciate the hard work that you do in the forest space.

Thank you so much.

Chair Watts:

Thank you. Additional questions?

Senator Goicoechea, go ahead.

Senator Goicoechea:

Thank you, Mr. Chair, it is more of a comment.

Thank you, Kacey KC, for your presentation. Clearly, if it does not change, we will not have much of a fire season this year; there is nothing out there to burn other than some dry strands of sage brush. It is going to be bad.

I am still concerned about initial attack. Even in these small fires in Nevada, we have got to get on them quickly. I know the Ely Conservation Camp is still closed; I understand they are going to put two crews instead of ten there. That is concerning for us in eastern Nevada.

Forester Firewarden KC:

Thank you, Senator Goicoechea.

Yes, we are always concerned about initial attack and how we are going to get there quickly. We have beefed-up local government assets. We have talked before this Committee, or with various members, of our partnership with NV Energy. We have created 170 firefighting positions at local government entities. We have greatly increased.

Unfortunately, at the same time, NDF saw a decrease in our camp crews across the state due to inmate numbers, COVID-19, all of that. I was happy to see that today we have 20 going back in Ely, this was a big win for the state Department of Corrections (NDOC) and NDF. We will have a fire crew running out of Ely again. We have other fire crews across the state that will be providing that, but we are also looking at other assets. Currently, a Super Scooper contract is flying a call; we need a Super Scooper contract at the state level, and we are also looking at flying a Single Engine Airtanker (SEAT) contract at the state level. We have created a crew of seasonals, we are trying to see if we can hire, currently, with some seasonal positions that we had vacant. We are going to take two conservation crew supervisors who ran inmate crews historically, and they are going to run a seasonal crew of firefighters.

We are trying to beef-up our initial attack forces to match the fire season we are going to have in different ways than we had before. Today we are doing interviews for our seasonal firefighters, so I am hopeful we will get enough to fill our crews. That is our fear always. Everybody is hiring at the same time, there are a lot fewer folks applying for this type of

work. We are hopeful that we can fill all of our seasonal positions across the state, I remain hopeful that will happen.

Senator Goicoechea:

Thank you, Mr. Chair. Thank you, Ms. KC.

Chair Watts:

Thank you. Additional questions, members?

I have a couple. One, I know this conversation has been had in the past and there has been a particular interest to some of the members on this Committee. Could you give us an update where things stand in terms of the potential and status of targeted grazing for fuels reduction on range lands? I understand it may not be as much of an issue right now, given some of the conditions out on the range and there is a federal component.

Forester Firewarden KC:

Thank you for the question, Chair Watts.

Targeted grazing is definitely one of the tools in the toolbox. If done right, grazing can be of great benefit to use with fires, and how they move through ecosystems. The federal agencies have more control over that—they are the ones issuing the permits to the permittees—but they have done a pilot program within the state looking at how targeted grazing can be used effectively, not just for wildfire management, but also invasive species management, like the management of cheatgrass directly following fires. A lot of the permit process actually disallowed for that historically, where they would take cattle off the range for five years—it was two years, but it would end up being five years or more because of the conditions being out there. That is very detrimental to the first- or second-year growth on some of that cheatgrass in those areas. I think they are fairly far in getting their permitting processes a little bit better aligned to the current conditions that we are seeing, and those pilot projects have been very successful within the state, looking at how they can better adjust their permitting to allow for that.

Chair Watts:

Thank you for that. I really appreciate that update.

It is good to hear those pilot projects were successful, and this is just yet another issue of making sure we stay up to date on what is happening with our partners in the federal government, and making sure that we are supporting changes, as needed, to some of the federal processes to better align with the needs of our state. Thank you for that.

Could you go back a little bit to the human ignition causes and speak a little bit to any trends? I appreciate you track those very closely. I know you mentioned target shooting; you said it was higher up on the sources. Could you provide a little bit more on any trends you are seeing or what are the main human ignition sources? You talked about your educational response, but if there is anything that has been seen in terms of policy responses that could address some of those human sources of ignition, that would be great.

Forester Firewarden KC:

Thank you for the question, Chair Watts.

For human-caused ignitions, the trend we are seeing is definitely an increase, both in starts and in acres burned by human-caused ignitions. Traditionally speaking, lightning, though it was always a smaller number of starts, actually burned the larger number of acres proportionately across the state. We are starting to see that trend shift. We have got a lot more people out there recreating, so there is this balance, and we just have a lot more people that are not aware of the ecosystem.

The educational campaign is a big piece of it, but the policy response is as well. One of the things we have done over the last, two to three years with our federal and local government partners is to actually go into fire restrictions together. Historically, BLM, USFS, and the State of Nevada state parks and state lands would go in separately and often disjointedly. I would be banning target shooting and welding and the feds would not, and so it was very confusing to the general public and to people who were coming into the state. But they now know to check where they are going and what restrictions might be in place. That was one of the changes we made. We all go out together, we try to align our restrictions together, so that has been very helpful to the population. Also, we post them all in one singular site so that everyone can find them. If you are coming into the state and you are wondering, there is a map below, you can see exactly where your campground is, which land it is on, and it will take you to the burn restrictions for that particular area. So, that is one of the things.

From a trend perspective from starts, it is all over the board, and we see it varies every year. Target shooting has been an issue for us in years where we have large cheatgrass growth in the inner spaces, where people are not using designated target shooting areas. They have probably shot out there for years and years in those same areas and not caused a fire. That is why we are watching trends every year.

One of the big ones we have seen was ignition by mechanized equipment. We are always very cautious when we are at construction sites that spark a fire, or even the work we are doing to reduce fire risk. In the hot summer months, you will see us have water tenders, or water capability, or foam capability, even on site. In case any of our equipment sparks a fire, we are able to immediately attack that. There is a lot that we are doing from a policy perspective, really trying to look at what is causing these. Twenty years ago, we never thought to send a water tender out with our masticator; now, we do it every time we get over 80 degrees or we are in current drought conditions. Even up in our higher elevations where we still retain a snowpack, it is very dry. We are really looking at all of these things. One of the other ones is chains dragging behind, like trailer chains that drag behind and cause sparks to go off. One of the big things we have been working on is right of ways for our electric facilities—looking at how we can treat underneath them—and along roadways. When you drive up the Interstate 80 corridor, you will see a lot of fuel brakes have been cut in along the sides of the roads, trying to make sure that if we have those scenarios where chains are dragging, it is going onto bare dirt.

What we also learned a long time ago is that we are not really successful in one treatment for a lot of these things. You can mow down the grass, but it comes right back. We have been using large-scale herbicide applications, following up those applications with some native or non-native species that will out-compete some of those invasive species. We have been working a lot to look at the science of what is most effective in these treatments, and how we can do that at a large scale to slow fire and fire starts.

Chair Watts:

Thank you, I appreciate that.

Could you speak a little bit to fireworks? I know that is also an interesting topic because there is very much an urban component to that, which probably does not fall under your jurisdiction, but also, of course, there are the WUI communities. Last summer, I did a little bit of traveling by car and saw some communities where, based on the drought conditions, they had very prominently restricted firework usage, even within their communities.

Forester Firewarden KC:

Yes. Thanks, for the question.

Fireworks are an issue for us. Illegal use of fireworks was the cause of one of the largest fires in Nevada for us. We are always looking at where fireworks are sold. They are not sold in the state, usually, other than in some of the tribal communities, and they are to be used out there on tribal land in areas devoid of vegetation. But we see them all [inaudible]. We work with law enforcement. We work with other folks who actually have jurisdiction over those sales. The state fire marshal's office has seized large quantities of fireworks coming into the state illegally. We are constantly looking at, how do we reduce that risk? For us, this is really more of an educational campaign to try to educate people on what is out there, and when and how these things can be safely used.

Chair Watts:

Thank you. My last question goes back to some of the work that has been happening in fire adapted communities, and it is something that has been talked about throughout the meeting. Can you give us a quick update on how that is being factored into some of the local government and land use decisions? We have talked about some of the educational resources, trying to develop different supports and resources for individuals and communities to make these improvements. Where are our land use policies in helping ensure that new development in fire-prone communities is matching some of the best practices?

Forester Firewarden KC:

Thank you for the question, Chair Watts.

Most of the land use policies for how we create fire adapted communities—the building code and the defensible space code—are housed in the WUI code. That is adopted at the local government level and at the state level as well through the state fire marshal's office. Most of that code is adopted at the state level—I think the current code approved at the state level is the 2018 one, minus the building code section, which I think is chapter five. So, counties at least have to follow those restrictions, but they can be more restrictive. Many of the local government entities have adopted the current WUI code with the building chapter in place. That means that if there is new construction going into those areas, they are actually meeting a fireproof standard. They are looking at roofing; they are looking at eaves; they are looking at siding and decking; they are making sure that when you put your home in, you have defensible space right up front. That is really where those policies are housed. The local governments have limitations on people and time because they are also responsible for house fires, car accidents, and all kinds of other assets. We are trying to help where we can, such as with defensible space inspections; looking at these areas of high risk; modeling those areas; and then trying to make sure the codes they have in place are being followed.

Chair Watts:

Thank you so much for that and thank you for entertaining that barrage of questions. I appreciate it.

Members, any final questions for Forester Firewarden KC?

Yes, go ahead, Assemblyman Ellison.

Assemblyman Ellison:

Thank you, Mr. Chairman.

I have a couple. One was with the statistics of Nevada wildfires from 2012 to 2021; is it not true that 90 percent of those fires were caused by lightning?

Forester Firewarden KC:

Thank you for the question, Assemblyman Ellison.

No. Historically, that was true, it was more lightning caused. Actually, I think the causes have always been more by humans, but we are definitely seeing an increase in the acreage of these fires. What you are seeing in the last five years, it is about 56 percent of the starts are caused by humans and then about 48 percent of the acres. The trend is that we are seeing the human-caused starts and acres increase in the State of Nevada.

Assemblyman Ellison:

A follow-up, if I may.

They did a study on target shooting in grassy areas in rural Nevada and that was very low. Fireworks, is usually caused by people being stupid, shooting fire rockets off, not by the cities. But the biggest thing we have seen, the biggest fires that have been lately for the last three to five years, have been arson-started. Is that not true?

Forester Firewarden KC:

Thank you, again, for the question.

We have seen an increase in arson fires. I do not think I could state with any confidence that has been the primary cause, however, of the fires across the state.

Assemblyman Ellison:

Thank you.

Chair Watts:

Thank you very much.

Seeing no other questions, thank you again, Forester Firewarden KC, for this detailed presentation and update; again, we appreciate it. It is very helpful to see how things are going as we look at how to try and address the issue of wildfire moving forward.

AGENDA ITEM IX—PUBLIC COMMENT

Chair Watts:

Members, that brings us to the last item on our agenda today, which is our second period of public comment.

I will mention that we will be having a work session in the future to consider recommendations, and any interested parties are encouraged to provide recommendations to us by completing and submitting a Solicitation of Recommendations form, which is posted to this Committee's web page.

Staff in BPS, can we please check the line and add the first caller wishing to speak to the queue?

Nikolai Christenson, Sierra Club, Toiyabe Chapter:

My name is Nikolai Christenson, speaking on behalf of the Sierra Club.

As Dr. Averyt pointed out in her presentation at the beginning of this session, Las Vegas and Reno are both among the top three fastest warming cities in the United States. One of the reasons for their rate of warming is they have also been some of the fastest growing cities, and their increased geographical footprints have significantly contributed to their warming via the heat island effect. These two metropolitan areas are also projected to continue growing, and so without intervention, we should expect these areas to continue their present warming trend, continuing to warm at a faster rate than our country as a whole. At the same time, we are experiencing concerns about the availability of sufficient water in both metro areas, and a crisis in available housing in both cities as well.

There is a strategy available to us that allows for population and economic growth in these communities, while minimizing both water consumption per capita and minimizing the heat island effect. This is by creating a development environment that encourages vertical and infill development in these communities preferentially over metropolitan sprawl.

In terms of water use, this is beneficial because per capita water usage is significantly lower for higher density living than for sprawl development. And, with a lower aggregate developed footprint, the urban heat island effect will be minimized. Further, we heard testimony today that the expanded metropolitan footprint brings with it more exposure to losses due to wildfires. Also, public transit becomes more efficient and cost effective, which improves commute times and reduces overall traffic in terms of person-miles traveled, and this significantly reduces the overall emissions of air pollutants.

While most of the responsibility for land development in Nevada is administered at the county or city level, the state can and should enact policies that support responsible and sustainable development at all levels, and I would encourage them to do so. Effective planning for sustainable development in Nevada requires changes in our approaches at all levels of government, and overall quality of life will be higher going forward if we prefer infill and vertical development over reckless sprawl. Thank you (Agenda Item IX).

Chair Watts:

Thank you very much, sir. If you have any written remarks, you can send those in to have those added to the record or to assist our staff in compiling the minutes.

BPS, can we move on to the next caller?

BPS:

Chair, the line is open and working but there are no more callers at this time.

Chair Watts:

Thank you very much.

That concludes our meeting for today. Our next meeting will be on Monday, March 21. Thank you all for your time, this meeting is adjourned.

AGENDA ITEM X—ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 1:45 p.m.

Respectfully submitted,

_____

Rebecca Williams
Research Policy Assistant

_____

Jann Stinnesbeck
Senior Policy Analyst

APPROVED BY:

_____

Assemblyman Howard Watts III, Chair

Date: _____

MEETING MATERIALS

AGENDA ITEM	PRESENTER/ENTITY	DESCRIPTION
Agenda Item V A	Dr. Kristen Averyt, Senior Climate Advisor, Office of the Governor	PowerPoint Presentation
Agenda Item V B	Zach Conine, State Treasurer, Office of the State Treasurer	PowerPoint Presentation
Agenda Item V C	Karen Collins, Assistant Vice President, Personal Lines, American Property Casualty Insurance Association	PowerPoint Presentation
Agenda Item VI	Jennifer Ott, Director, State Department of Agriculture	PowerPoint Presentation
Agenda Item VII	Colin Robertson, Administrator, Division of Outdoor Recreation, State Department of Conservation and Natural Resources (DCNR)	PowerPoint Presentation
Agenda Item VIII	Kacey KC, State Forester Firewarden, Division of Forestry, DCNR	PowerPoint Presentation
Agenda Item IX	Nikolai Christenson, Sierra Club, Toiyabe Chapter	Public Comment

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