

**MINUTES OF THE MEETING  
OF THE  
ASSEMBLY COMMITTEE ON NATURAL RESOURCES**

**Eighty-First Session  
February 10, 2021**

The Committee on Natural Resources was called to order by Chair Howard Watts at 4:02 p.m. on Wednesday, February 10, 2021, Online. Copies of the minutes, including the Agenda ([Exhibit A](#)), the Attendance Roster ([Exhibit B](#)), and other substantive exhibits, are available and on file in the Research Library of the Legislative Counsel Bureau and on the Nevada Legislature's website at [www.leg.state.nv.us/App/NELIS/REL/81st2021](http://www.leg.state.nv.us/App/NELIS/REL/81st2021).

**COMMITTEE MEMBERS PRESENT:**

Assemblyman Howard Watts, Chair  
Assemblywoman Lesley E. Cohen, Vice Chair  
Assemblywoman Natha C. Anderson  
Assemblywoman Annie Black  
Assemblywoman Tracy Brown-May  
Assemblywoman Maggie Carlton  
Assemblyman John Ellison  
Assemblywoman Cecelia González  
Assemblywoman Alexis Hansen  
Assemblywoman Susie Martinez  
Assemblywoman Robin L. Titus  
Assemblyman Jim Wheeler

**COMMITTEE MEMBERS ABSENT:**

None

**GUEST LEGISLATORS PRESENT:**

None

**STAFF MEMBERS PRESENT:**

Jann Stinnesbeck, Committee Policy Analyst  
Allan Amburn, Committee Counsel  
Devon Kajatt, Committee Manager  
Nancy Davis, Committee Secretary  
Trinity Thom, Committee Assistant



**OTHERS PRESENT:**

Kacey KC, State Forester Firewarden, Division of Forestry, State Department of Conservation and Natural Resources

**Chair Watts:**

[Roll was taken. Committee Rules and protocol were reviewed.] We have a presentation today on wildfire in Nevada.

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

Thank you for allowing me to be here to speak about wildfire in Nevada. I will begin my PowerPoint presentation [[Exhibit C](#)].

Page 2 shows what the 2020 fire season looked like for the Division of Forestry (NDF), State Department of Conservation and Natural Resources. We had a total of 802 fire starts across the state, burning approximately 292,000 acres. This was a different year for us in that fire starts were significantly up. Our average is about 600 fire starts per year. In addition, the numbers were significantly up in human-caused starts and human-caused acres burned. I believe that is related to how many people were outdoors because of COVID-19. Last year, 68 percent of our starts were human-caused, and 76 percent of burned acres were human-caused. Our five-year average is about 52 percent of the starts and 28 percent of the acres being human-caused. Usually our lightning-caused fires are much larger.

One of the things I would like to talk about with the COVID-19 impact, is that we as a collective body of state, federal, and local governments realized pretty early on that there were going to be impacts with fire suppression response due to COVID-19. Primarily, our concern was getting enough ground crews, either from being impacted by COVID-19 or not being able to travel across state lines. The Division of Forestry; Bureau of Land Management (BLM), U.S. Department of the Interior; Forest Service (USFS), U.S. Department of Agriculture; Fish and Wildlife Service, U.S. Department of the Interior; Bureau of Indian Affairs, U.S. Department of the Interior; and local government got together very early on in the season. We increased staffing where we could across the state. We put in some strict guidelines on how we were going to manage the COVID-19 issue with firefighters and keep them safe throughout the state. We collectively came up with a state, federal, and local government plan for how we were going to manage that. We increased our air assets across the state—helicopters, scoopers, and other responders—so that we could ensure that if we did not have the ground crews, we would have air access until we could get ground crews in.

The map you see [page 2, [Exhibit C](#)] is of the fire starts last year. Red and green are human-caused fires, and yellow indicates the natural-caused fires.

I traditionally show this graph on page 3 every few years. The reason is not because we care more about the Humboldt River watershed than other watersheds across the state, but this graph depicts two things for the state. This is an indicator of all watersheds across the state. This is important because we have overlaid the actual acres burned each year over the waterflows in the Humboldt watershed. One of the important things to note here is, if you look at 1980 to 1999, just over 4 million acres burned across Nevada. We were averaging about 208,000 acres a year. You can see the highest year on record was 1999 at just below 1.8 million acres. That was an anomaly.

In the last 21 years, from 2000 to 2020, just shy of 10 million acres have burned across the state, averaging approximately 500,000 acres per year. We are seeing more peak fire seasons. The reason we overlay the watershed is to show that traditionally, the years we have peaks follow years in which we have wet springs and get a lot of rain. The three years following a high year of water are the years in which we tend to have our largest fires.

On page 4, we are seeing larger fire occurrences and much more devastating loss across the United States, the West in particular. Nevada is obviously engulfed in that. Part of the reason is an increase in fuels in our forests and rangelands. We have a lot of invasive flashy fuels that are coming in due to the fire return intervals. We are seeing increasing temperatures and much drier conditions much more often. We have increasing development: we are one of the fastest-growing states in the nation. We are building a lot of homes in the wildland-urban interface which become fuels when wildland fire gets into those home areas.

Wildland fire suppression needs a comprehensive, interagency approach. We learned a long time ago in suppression that we could not do it alone. We needed everyone engaged together—federal agencies, state agencies, and local government. None of us individually had the assets necessary to respond to the fires we were seeing in these landscapes. We work very well together. I think that is why we had such a successful response to wildland fires last year. Our average initial attack success rate is about 95 percent across the state; last year it was 97 percent. We were more successful in initial attack, and I think much of that can be attributed to our early air access that we had available. We also had a lot more crews available within the state because at the times we were burning, adjacent states were not.

One of the things we also realized is that we cannot just focus on the fire suppression aspect of our agencies by putting all of our eggs in the suppression basket. We also had to focus more on creating and sustaining landscapes resilient not only to wildland fires, but to the insect and disease outbreaks that are common in our forests and rangeland. Also, we needed to create and sustain communities that can withstand fires. Fire-needed ecosystems are natural but can be very devastating under the wrong circumstances.

On page 5, the Division of Forestry's mission is, "Provide professional natural resource and wildland fire management services to Nevada citizens and visitors to enhance, conserve and protect forest, rangeland and watershed values, endangered plants and other native flora."

On page 6, our job is not only to manage suppression. We have our own engines, three helicopters, and a large number of inmate hand crews across the state. Our primary mission is to try to create those resilient landscapes. All our firefighters—though they are firefighters by trade—are also natural resource managers by training. We have them do that work when they are not suppressing fires.

One of the accomplishments of NDF in 2020 was we treated about 4,700 acres. One of the things I would say here is we were on target—for the last four years we have all been redirecting ourselves back to the mission, and then COVID-19 came. We were on target to overshoot our average of 5,000 acres, and we fell short. Part of that was due to the fact that we did not have a lot of our inmate workforce available, and we were just generally too understaffed to get to multiple projects in the landscape. We are hoping that once the COVID-19 situation diminishes or becomes less of a problem, we will have our workforce back out doing more projects. Our goal was to get an increase in acres.

We also had a decrease in the plant materials that were sold. We sold 54,000 plants and 15,000 pounds of seed. The seed was directly correlated to the fire season from the year before: 2019 was a small fire season with 82,000 acres. The plant sales were down about one-third of our average, which was due to having the nursery closed to the public for quite some time and having limited public access into the nursery.

I would like to highlight the amount of water delivered. We doubled water delivery to wildfires this year. The state's three helicopters dropped about 365,000 gallons of water on fires. It was a great asset in initial attack, primarily in forested areas where we have single-tree lightning fires. We contracted with two scoopers; one was housed in Minden for most of the summer. The second one arrived about midsummer. The scoopers were able to drop approximately 400,000 gallons of water on fires throughout the state. The scoopers dropped on 200 fires, and they were initially responding. If a water source was available, they were able to get thousands of gallons of water on fires much quicker than the other assets we have. One example was the Topsy Lane fire—within the first 15 minutes, the scoopers had dumped 4,000 gallons of water and put the fire out. This would have taken a lot longer if we had only had initial attack ground forces. It is a great asset to have on contract. One of the good things about having the scooper under state contract is that when they are under federal contract, they become national assets, so when Washington, Oregon, and California began to burn, all our air assets started to move out of state. These scoopers were moved out of state because we did not have risk here, but we were able to pull them back when we needed them.

On page 7 [[Exhibit C](#)], I would like to go over a couple of the programs within NDF. The Wildland Fire Protection Program is a program that we offer to local government. It is a cooperative program between NDF and local government fire protection districts to improve efficiencies and capabilities for suppression, but really before, during, and after wildland fires. The map depicts in green all of the entities currently within the program. Our nonparticipants are primarily in Clark County. We split Clark County into multiple jurisdictions. We do have a couple in Clark County, but we have five that are out: Boulder

City, Clark County, Moapa, Mount Charleston, and North Las Vegas. Mineral County is not in, and there is a portion of Lyon County that is not covered by a fire protection entity. Since the transfer of the Walker River State Recreation Area to the state, it is NDF's jurisdiction.

One of the challenges of this program is getting full statewide participation. This year we transferred to NDF the mutual aid position that the NDF had back from the Division of Emergency Management within the Department of Public Safety for wildland fires. The purpose of the transfer, as we discussed with the Committee to Conduct an Interim Study Concerning Wildfires, was to ensure that we were getting all the closest available resources to a wildfire quickly; this includes local government assets. They are a huge asset in the wildfire response, and having them within our interagency dispatch centers increases our response capability significantly.

This program had mainly been allowing the local government a more solid way of budgeting for wildfires because we have helped support those large wildfire costs if the fire lasts over 24 hours. One of the things that we have not focused much on in the past, but have in the last few years, is how to reduce risk for the participating entities. We did about 8,000 acres of fuel-reduction projects in these participating jurisdictions over the last four years. We have provided engines and water tenders as we can find them. Our goal is to build capacity in local government response and to reduce risk in high-risk areas.

Another challenge as a division is that we are reliant on those county receipts for our fire staff within the division.

On page 8, another of the successes we had last year was we got a new formula. The Wildland Fire Protection Program began in fiscal year 2014. We had never had a formula. It was always based on the concept that dealt with risk and cost. We created a formula. The formula is based on the risk in the county, including vegetation, the possibility of ignition, and fire history, as well as values at risk and the nonreimbursed cost to the state on behalf of the jurisdiction.

We have had other successes: We were able to increase suppression capacity. We increased program participation this year by two entities, Henderson and Las Vegas. We increased the fuel-reduction project that we are working on with the local government. They would tell us areas of high concern for them, and if we had staff that were not in suppression mode, we sent them out to implement the projects. We increased fire prevention events last year and we tried to increase coordination and communication, even though that has been a little more challenging to do in-person this year. I think we have done a good job using Zoom, among other things. We have some fire-billing efficiencies coming with a program in which all of the costs will be entered into a system coming right out of our dispatch center automatically. It will speak to our dispatch. Local government will go into the system and check that yes, in fact, this engine was manned and here is the staffing. It will automatically create a bill that comes into our office. Our goal is to expedite the fire-billing process so we are not sitting on fire bills for two to five years. We increased efficiency significantly through our paper processes, but this will hopefully increase it further.

On page 9 [[Exhibit C](#)], I would like to talk about the Nevada Shared Stewardship Agreement. Governor Sisolak signed the Nevada Shared Stewardship Agreement in November 2019. This is a partnership between all of the state agencies—Department of Wildlife, State Department of Agriculture, State Department of Conservation and Natural Resources—and USFS, BLM, and the Fish and Wildlife Service on how we are going to tackle this wildfire issue across the state with limited reserves and abilities that each of our agencies face. It is much like looking at the fuel reduction and resilient landscape the same way we have collectively worked on wildfire suppression. The purpose of the Shared Stewardship Agreement was to collaboratively determine state-level management needs and priorities to ensure that we are all collectively doing the right work in the right places at the right scale to effect change in how fire moves through ecosystems. Also, it ensures that we are all using the best available tools to do the most active management we can ahead of wildfires.

The map on page 9 shows the areas we collectively determined as the top 13 areas that need our attention and addressing at this point. We still do work in the rest of the state, but from a Shared Stewardship Agreement perspective, these are the areas that we are most concerned about how fire does and would react in those ecosystems.

We are currently taking bids to develop a strategic plan and a five-year program-of-work action that will drive how all our agencies collectively work these landscapes at a larger scale together. Two projects have been selected as the landscape-scale projects to be completed by the Shared Stewardship Agreement by 2021. One of the projects is the Elko-Spring Creek-Lamoille unit, and the other is in the Spring Mountains area in the south. We are working now on implementing those projects. An executive committee has been created for this, and there is also a technical assistance committee so that we are all guiding our work together and really looking at how these landscapes need our help collectively.

On page 10, the fire-adapted Nevada program lives with NDF; however, it really is an interagency program guided by the state, federal, and local government agencies. This is that other arm we need to focus on, which is providing education to homeowners on what they can do to harden their homes, making sure they have the right roofing materials. Even though we do not have a jurisdictional responsibility for that, we do want to provide the education for what property owners can do to become more resilient once a fire comes through.

We are also focused on ensuring that they evacuate early and safely, working with local government and industry on how to get homeowners out safely and quickly, and how to survive if they cannot get out quickly or safely. That is the focus of the program—looking at multiple different areas, such as defensible space in backyards, to looking at the entire surrounding neighborhoods. An additional focus is looking at ingress and egress: is there more than one way in and one way out, and is there a way for us to make two ways in and two ways out? There is also the built environment, as I mentioned.

On page 11, the Committee to Conduct an Interim Study Concerning Wildfires did a poll on how the local government, state, and federal agency representatives are going to look at both suppression and mitigation of wildfires in the state and collectively address those issues. I have listed some of those Committee-sponsored bills and how they are moving forward.

One bill, Assembly Bill 85, is related to noxious weeds. Cheatgrass in Nevada is a noxious weed but is not listed as such. How do we manage and live with cheatgrass and try to reduce it in our environment so it is not causing the fire return intervals to decrease? A normal fire cycle in ecosystems would be 20 years; now we are seeing it reduced to 5 years or even annually because of flashy fuels.

We are looking at working together, which is what many of our bills are doing—making sure we solidify the relationship between the USFS, BLM, Fish and Wildlife Service, and the state agencies. That is so that beyond my tenure and the tenure of whoever is in charge of those other agencies, we are working together both from a suppression standpoint—which we have done for decades—and from an implementation and a resilient-landscape perspective. That is our goal.

**Chair Watts:**

Thank you for that presentation. We have a few questions.

**Assemblyman Ellison:**

The map on page 2 [[Exhibit C](#)] shows red and green dots as human-caused fires. All the red and green dots on the top of the map follow Interstate 80 (I-80). That must be from cigarettes or other things thrown from vehicles. Most of the fires in the Elko area are lightning-caused.

**Kacey KC:**

I cannot speak to all those fires, but usually when they start along the highways, it can be cigarettes, chains being dragged on the ground causing sparks, et cetera. Many of the issues along the I-80 corridor are the receptive fuels. There is mostly cheatgrass along the right-of-ways. That is a big focus of ours, trying to get the right-of-ways cleared out. That would help prevent starts from a chain that sparks, a lit cigarette, or whatever the reason may be.

**Assemblyman Ellison:**

I know that the Department of Transportation (NDOT) has a good program to cut the grass in those areas. The dots on the map are following Lovelock, Winnemucca, Battle Mountain, and Elko; it is definitely following the I-80 corridor. I also have a question on the ecosystem and the protection of sage grouse. Are you working on policy for that?

**Kacey KC:**

The Division of Forestry is part of the Sagebrush Ecosystem Technical Team. Nevada was one of the pilot states for some adaptive shared stewardship such as grazing permits. The team took five ranches in Nevada and looked at how their grazing permits were given through the federal agencies and how much more we could do. Some of the restrictions that

are put in place are actually causing more fire returns into the ecosystem. The team looked at that, and I think they have found great success. I think we will see a big change in how those permits are awarded going forward. That was one area that was good for cooperation and collaboration in Nevada. Other states got one pilot project. Nevada got five because we were working together a little better and had some forward-thinking ranchers who were willing and able and had been doing these practices for decades, but not getting credit for taking care of the ecosystem.

**Assemblyman Ellison:**

Are you using goats for noxious weeds? I know BLM has looked into it, but I have not heard a lot from NDF. Elko used some goats to clean up the Humboldt River.

**Kacey KC:**

We have used goats along U.S. Highway 50 for a reduction project we were doing in cooperation with NV Energy. We took our masticator out there and brought the goats in afterward. We will be reseeding following the chomping of the vegetation. We traditionally bring in sheep along the old burn scars in Carson City. We are working to expand our bid for a state contract right now. We are trying to get more contractors with goats and other nontraditional-use ideas so we can employ more contractors to do a lot of this work.

**Assemblywoman Cohen:**

Will you give us a little more scientific background about why cheatgrass and noxious weeds are a problem?

**Kacey KC:**

Cheatgrass is an issue for us. Fire in ecosystems is natural. In the higher elevations we have fire return intervals, both natural and man-made. There was a lot of Native American fire use for prescribed fire over thousands of years. We do try to clean up the understory of forests and in our rangeland. Fire comes at normal intervals.

Cheatgrass is highly competitive to native seed. It outcompetes our native vegetation all the time. When we have a forest fire that comes through in the range, we still have some native vegetation that can compete with the cheatgrass; it will start to come back. Cheatgrass allows for more receptivity because it gets drier much more quickly than our native vegetation and it stays drier longer. It puts out a lot of seeds and is highly competitive. Then the fire return intervals decrease. You may have had fire return in these landscapes every 20 years; now it is starting to come back every 10 years. Then, when you get two fires that come through, the cheatgrass is starting to take hold. It also depends on how hot a fire burns through the ecosystem. If it burns all of the native seed base, there are real problems in the first year. Cheatgrass is very competitive and very flammable. That is why it allows for more fires to come into the ecosystems.

As we start to see those return intervals get smaller and smaller and the cheatgrass becomes the more dominant species, we are really inhibiting our ability to make a change from our rehab efforts as well. We have to go out there on a very large scale and use an herbicide



application, let it stay fallow for a while, and then try to get some native seeds to compete; all the while there is still cheatgrass seed. Cheatgrass has a long lifespan and it is very hard to get it to go away.

**Assemblywoman Cohen:**

Is the cheatgrass edible for wildlife or cattle?

**Kacey KC:**

I have heard it is edible but not preferred. I do not think it is something wildlife or cattle would seek out if there were other plants on-site; they would eat the other native or introduced vegetation. That is why oftentimes because cheatgrass is so competitive, we look at introducing seeds that will compete better with cheatgrass, but will also give us a placeholder for trying to get some native species to come back in.

**Assemblywoman Titus:**

Cheatgrass was actually planted as bronco grass, and the Department of Agriculture thought it was going to be part of a food source and good for grazing. As it turns out, it is a fuel source. We are trying to recognize that it can be counted as part of the grazing allotment and have it be grazed at the appropriate time, which is the key.

Is your nursery open and available to the public?

**Kacey KC:**

It is open with limited capacity.

**Assemblywoman Titus:**

Does the public have to make an appointment?

**Kacey KC:**

You need to make a reservation either by calling in or going to our website. We are doing that as a COVID-19 precaution to ensure we do not have too many people at one time. We do still allow walk-ins as long as we are under the recommended-risk capacity.

**Assemblywoman Titus:**

It is a great resource. I am curious about the seed program. It always seems like there is a shortage of the number of seeds. What is the availability of native seeds? I know there has been a big push on the Committee to Conduct an Interim Study Concerning Wildfires. How do we compete with the cheatgrass if there are no native seeds available?

**Kacey KC:**

Our seed bank is pretty small. There is another seed bank in Ely that was just built with federal partners; we worked collaboratively. One of the things that was encompassed under the Shared Stewardship Agreement was a native seed strategy. It was an interagency partnership between state, federal, and local cooperators about how we are going to increase native seed collection and sourcing from site. As you are all probably aware, it does matter

where the seed is grown and at what elevation, and ensuring we are putting the right seeds back in the right places. That was pretty big for us. We created a committee that came out with the native seed strategy, looking at how to increase the seed. Our nursery has a lot of land along with our greenhouses. We have room and have been creating seed-increase beds. We have a list of the highest priority seeds used for things like sage grouse or mule deer habitat. We are having a hard time buying some seeds, so we are growing them out. We are looking at trying to get more private-industry folks and ranchers involved in this by creating long-term contracts so they have some stability in this process. If we were to ask them to grow sagebrush—it sounds weird to want to grow sagebrush—but seed is not a given every year; it is all dependent on how much moisture we get. Those are the types of things that group is looking at and implementing across the agencies.

**Assemblywoman Titus:**

That particular nursery is in Washoe Valley. Do you have anything in southern Nevada? I think that area could benefit from a nursery program as well.

**Kacey KC:**

We have two state tree nurseries. The Washoe State Tree Nursery is where the seed bank is. Our second one is in Las Vegas. The Las Vegas State Tree Nursery is directly attached to Floyd Lamb Park. It used to be on the outskirts of town; now it is in the middle of suburbia. It is required that we sell the plants there in bulk for conservation purposes. The Las Vegas nursery is great for us and it is our primary growing source. As you know, our growing season up here is pretty short, even with our greenhouses. Las Vegas is growing most of the plants, then we move them to an outside space up here.

**Assemblywoman Titus:**

Assemblyman Ellison referred to the I-80 corridor and grazing. We have sheep that are put on the Carson City hillside. We know that lowers fire risk. There was a mention of NDOT and cutting the fuel beside the road. It has been my impression from the past that NDOT also has a program in which they spray an herbicide or spread a fire retardant along the roadside. Are you partnering with NDOT on that program?

**Kacey KC:**

We are partners with NDOT on right-of-way projects all across the state, both from a fuel-thinning perspective, a tree-thinning perspective, and the visual areas of open space for deer and other things that might cross the road. I am not aware of NDOT putting down retardant in those areas presuppression. Oftentimes, you will see the green spray; that is hydroseeding. We have worked with them using herbicides, and we have done prescribed burning in the right-of-ways for them, but I am not aware of spraying retardant ahead of a fire.

**Assemblywoman Titus:**

I was thinking the hydroseeding was a fire retardant. Thank you for the presentation. I am happy to hear about the early response and early intervention and the billing efficiencies. I appreciate what you do for Nevada.

**Assemblywoman Anderson:**

Are there some ideas of how we can improve our emergency response delivery services? I realize this is a regional thing; the emergency services necessary in Douglas County and Washoe County, and even here in Carson City, would be different. Are there some possible resources that you are looking at to help with getting those emergency response services quickly?

**Kacey KC:**

We are always looking at how to improve our efficiencies. One of the long discussions we had at the Committee to Conduct an Interim Study Concerning Wildfires was how, particularly local government whose jurisdiction this really is, do we get out there quicker. They dispatch through 911 dispatch centers for all emergencies and all risks, not just wildland fires. The state and federal agencies are really wildland-fire focused. We dispatch out of the interagency dispatch center that is run between all of our agencies. One of the things that came out of that Committee was being more efficient and looking at how to get local government into our dispatch centers. We have made that transition. We have five interagency dispatch centers across the state: Las Vegas, Winnemucca, Ely, Elko, and Minden. The primary moving parts and the largest amount of moving local-government parts are here along the Sierra Front. We started with that one, the most complicated, and it has taken us a while to transition. We did dispatch them last year, and we are trying to formalize a plan on how to get them into our system so they will be more immediately available.

**Assemblywoman Anderson:**

I do have more questions and I might reach out to you later for more information.

**Kacey KC:**

Fire response in Nevada with the jurisdictions and the checkerboard landscape is very complicated. I can draw a nice map and use a whiteboard if that might help. It is a very complicated response because of all our agencies. We do a good job every year, and I am hoping that we can correlate that response of really working together and giving up our jurisdictional focus and work together to reduce the risk on the front side as well.

**Chair Watts:**

We discussed collecting seed to restore habitat, grazing, and deploying additional assets for response. Could we talk a little bit about technology? In the last session, we had a presentation on using cameras to detect wildfires early. Has there been any technology deployed or developed that you see assisting in wildfire response and recovery?

**Kacey KC:**

We have been looking at how technology can assist. Obviously, the fire cameras are great for detection. One of the reasons those cameras are so important for detection is anyone can watch them. They are open to the public. Once a fire starts, smoke can be seen almost immediately. We are working on systems that may autodetect the smoke and immediately go into an interagency dispatch center. There are approximately 20 more cameras being

installed this year; there are about 50 across the state right now. We are trying to ensure we have coverage from multiple angles. In case one camera goes down, we would still have coverage.

There is a lot of technology we use, such as weather systems. With our partnership with NV Energy, we have been putting in a lot of weather systems that help us to determine how hot and dry a microecosystem is, and what it really looks like out there. That is really impactful from a fire perspective when we are looking at the relative humidity and the speed and direction of the wind. We also have mobile devices that are weather stations we take out with us.

We have looked at how drones could assist and we have used drones on fires, both from looking at and mapping the perimeter of a fire and in other aspects, such as seeding. There are drones that can shoot seed into the ground. We are looking at multiple ways that technology can help. There are a lot of great mapping tools out there. NV Energy is coming up with fuel moisture readers across the state that take live reads of fuel moisture content at different elevations and of different fuel types. This is extremely helpful for us while fighting fires, looking at how hot it is, and determining what we are going to staff up for. If we know we have very dry fuel moistures and we have a potential for any starts, we can staff up for that. We are constantly evolving with the current technology.

**Chair Watts:**

It is great to see the increased collaboration between government entities at all levels as well as with other partners, including NV Energy's increased involvement as they step up their wildfire response plan.

Back to the issue of human-caused starts, you discussed some of the educational programming that goes around to the communities to help prevent some of the emergencies with the urban interface. Can you talk about any activities you have in terms of educational outreach or any other initiatives that address the increase in human-caused starts we are seeing?

**Kacey KC:**

We have always had an educational component. Smokey Bear goes to schools and talks to kids about starts. It is pretty effective to talk to kids about it because they go home and talk to their parents. As we have started to see an increase in human-caused fires over the last few years, we are constantly looking at data and why those fires are starting. Many of our large fires have been started by target shooting. We called an interagency prevention team—one with federal, state, and local government partners—that came into the state to directly target the public with public service announcements, billboards, fact sheets, and going door-to-door to talk about the conditions out there. In areas where you used to be able to go and shoot because there was no vegetation in the understory, conditions are different than what they were 20 years ago. You cannot safely shoot in these areas anymore because we have had these flashy fuels come in. That is part of the educational tool. We look at that every year. Every year we are looking collaboratively on what is the biggest cause. If it is illegal

campfires, we will do a big push on how to try to stop those fires. I would like to say it is effective, but we keep seeing the numbers increase. We are effective in some areas; we are unaware of some others. We are still working through how to get that education to the people who really need it. We do work across states with the National Association of State Foresters and the Council of Western State Foresters. We are also talking about things that are joint issues across states, so that we are not just seeing it here as often as tourists coming in who are not aware of our vegetation issues or what might be in this landscape. We are working across state boundaries to try to get that education to be consistent and across all agencies.

**Chair Watts:**

Will you speak a little bit about what the firefighting workforce looks like, particularly the noninmate workforce and any issues you may see in recruitment and retention? How does that relate to our reliance on inmate firefighters to help us combat wildfires?

**Kacey KC:**

I can speak to NDF specifically. Our workforce in wildland firefighting has fluctuated over the years. Historically, we were an all-risk fire department. We were not just responding to wildland fires, but to all emergencies. That went away about eight years ago. We moved to a solely wildland fire response agency. When that shift happened, a lot of the staff was picked up by the county in which that responsibility lies. Many of the NDF staff moved over and became county fire protection staff. There has not been a decrease in staffing, but there has been a shift. It shifted out of NDF and into the counties.

We are seeing a retention issue generally across the agency because often we cannot compete with wages in private industry and/or the public sector. For firefighters who come to work for NDF, we do offer things that other agencies do not. We have three helicopters. We have programs that others do not that draw people in and keep them here.

Our largest workforce, if you take out inmate firefighters, is seasonal firefighters. Part of our push was to try to get a longer season for them. We were able to do that a little bit last year. Historically, our fire seasons were five months. We would bring on the seasonal employees, train them for a month, and then have three months of firefighting and one month of cool down. Now we are looking at about nine months because we try to keep them on for project work as well.

From a retention standpoint, we have a lot of firefighters who have been with us for quite some time. I like to think that is because we do not have the requirement of the all-risk component for them to become a paramedic in our agency. Some people really care about the ecosystems in Nevada and like the mix of caring about it from a suppression standpoint and being able to implement fuel reduction ahead of time. We have six staffed engines across the state that we use as support for local government and the federal agencies. The three helicopters in Minden help, along with about 50 seasonal firefighters and dispatchers who are hired during the peak of the fire season to help us out.

Regarding the inmate workforce, the whole reason the program was created between the Department of Corrections and NDF was to provide skills to inmates to reduce the return rate into the prison system. When we bring them into the system, I do not think we always intend for them to be firefighters, although they are a large firefighting workforce for us. Their primary mission, as is ours, is natural resource management. We give them the same training and they receive the same accreditation that our tree staff has. They take that with them when they leave prison. The real goal of the program is to try to give them skills. We do not see a lot of them going into firefighting as a career, but we do see a lot of them going into the tree care industry. We are working with the University of Nevada to give accreditation and certifications concurrent with national standards that would be more helpful to the inmates in that industry. We do provide them the training in saw classes, climbing classes, and how-to-tie-a-knot classes. That was the goal of the program.

**Chair Watts:**

That is a lot of helpful information. It is very interesting to think of ways we can continue to build the pipeline in order to reduce recidivism and provide opportunities for folks. It is good to hear that there are other opportunities for inmates to move into, and hopefully there are no barriers for those who want to pursue firefighting. I heard you specifically mention the state does not have a paramedic requirement. I did not know that. If there are any barriers, I hope we will be made aware of them so we can consider addressing those in the Legislature. Thank you for the presentation. Today I am wearing my Wildland Firefighter Foundation pin.

I will now move on to the next agenda item, which is public comment. Hearing none, that concludes our hearing. Our next meeting will be Monday, February 15, 2021. This meeting is adjourned [at 4:59 p.m.].

RESPECTFULLY SUBMITTED:

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Nancy Davis  
Committee Secretary

APPROVED BY:

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Assemblyman Howard Watts, Chair

DATE: \_\_\_\_\_

## **EXHIBITS**

[Exhibit A](#) is the Agenda.

[Exhibit B](#) is the Attendance Roster.

[Exhibit C](#) is a PowerPoint presentation titled "Wildfire in Nevada," dated February 10, 2021, presented by Kacey KC, State Forester Firewarden, Division of Forestry, State Department of Conservation and Natural Resources.