

**THE PRESIDENT'S BUDGET REQUEST FOR THE
USDA FOREST SERVICE FOR FISCAL YEAR 2021**

HEARING
BEFORE THE
COMMITTEE ON
ENERGY AND NATURAL RESOURCES
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THE PRESIDENT'S BUDGET REQUEST FOR THE USDA FOREST SERVICE FOR FISCAL YEAR 2021

TUESDAY, FEBRUARY 25, 2020

U.S. SENATE,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The Committee met, pursuant to notice, at 10:08 a.m. in Room SD-366, Dirksen Senate Office Building, Hon. Lisa Murkowski, Chairman of the Committee, presiding.

OPENING STATEMENT OF HON. LISA MURKOWSKI, U.S. SENATOR FROM ALASKA

The CHAIRMAN. Morning everyone. The Committee will come to order.

This morning we will consider the President's budget request for the U.S. Forest Service for FY 2021.

Chief Christiansen, it is good to be able to welcome you back to the Committee. Thank you for being here. We say around here that the President's budget request is just that, it is a request. It does start the annual budget process. It gives us here in Congress the opportunity to learn about the Administration's priorities and how it would carry them out, but ultimately it is up to us to determine what programs to fund and what levels.

Although this year's budget request is far from perfect, I agree that the priority must be on wildland fire management and improving the health of our forests. I am encouraged the Administration is proposing to invest significantly in hazardous fuel reduction and other active forest management activities. We know such investments pay dividends in reducing the risk of severe wildfire. Hopefully we will see this important work planned and carried out without any disruptions thanks to our work on the Consolidated Appropriations Act of 2018 which provided new budget authority to fight wildfires. The fire fix will be available for the first time in FY 2020, and this budget request would make use of it for FY 2021.

The 2019 fire season was relatively mild in the Lower 48 with few notable exceptions, but in Alaska last summer is going to be going down in the history books. We had over 600 fires that burned over 2.5 million acres and we had the nation's costliest fire of the year, the Swan Lake Fire on the Kenai Peninsula. Thousands of firefighters from across Alaska, 46 states, Canada and even Puerto Rico fought fires in Alaska last summer. Hazardous fuel reduction projects and fuel breaks provided effective help with firefighters as

they beat back fires and prevented them from spreading into the communities. But it was a tough, tough summer for us.

As more and more of our forests die off due to beetle infestations across Alaska and elsewhere, this work becomes more urgent. We know that we need more of it. And Chief, you certainly know that fires have no boundaries there. What we can do to work together is important. I do appreciate the Forest Service acknowledging its cooperative work with the State of Alaska on the beetle infestation in its budget justification but I am dismayed that this request proposes to cut the overall program, the Forest Health Management on Cooperative Lands, and other state and private forestry programs. Even with the fire fix in place, wildfire will continue to consume a large percentage of the budget, so I am pleased the Forest Service wants to invest in building capacity to more effectively use technology and wildland fire management. That will help ensure that we are smart as we fight the fires, always keeping firefighter safety at the forefront.

I think we owe appreciation to Senator Gardner and Senator Cantwell for their work on the wildfire technology provisions in the Dingell Act which was signed just about a year ago.

Another area where I think we all know we need to do more is with recreation. Recreation is the single greatest use of our national forests, but this request does not accurately reflect that, in my view. In Alaska, I routinely hear about the demand for new recreation uses and corresponding difficulties in getting permits for them. I was just in Southeast this past week and, again, heard that repeated. Last year we held a hearing on recreation and heard about the need for permitting reform. I am still hopeful that we can work together to make some meaningful progress here in Congress.

Similar to recreation, I remain concerned that agency initiatives to create a positive workforce are not adequately articulated in this request. Time and time again I have urged Forest Service leadership to cultivate a work environment that is free of harassment and retaliation. I am also concerned by the increasing rate of suicide among wildland firefighters. These issues are a priority here on this Committee. I think they are a priority of all of us. I look forward to hearing how the Forest Service intends to address them.

So in wrapping up, I think I would be remiss if I didn't mention the Forest Service work on the Roadless. The agency states specific rulemaking for the Tongass has always been about reasonable access for every local stakeholder in the 32 islanded communities in Southeast Alaska. Not just timber, barely timber if we are actually being honest here, but also transportation, tourism, mining and even renewable energy. So my thanks to you, Chief, as well as Secretary Perdue and all who are working on this Rule. I know it is not easy, and I think that sometimes your good work is frequently mischaracterized. I appreciate, again, all that you are doing with that.

Let me turn to my colleague, Senator Manchin, for his comments.

**STATEMENT OF HON. JOE MANCHIN III,
U.S. SENATOR FROM WEST VIRGINIA**

Senator MANCHIN. Thank you, Chairman Murkowski, and I want to thank you for convening the hearing today on the Forest Service budget request for Fiscal Year 2021. I would also like to welcome Chief Christiansen to our Committee and thank her staff for being here. I had a nice conversation with you yesterday, and I look forward to you coming back to Monongahela Forest, and we will make sure you see some really special areas.

Aside from being beautiful, the Monongahela, like most of West Virginia's forests, is truly a working forest. It provides fish and game for sportsmen, timber for our mills, recreational opportunities for the hikers, jobs in our communities and serves as a watershed for four states. Forest Service lands across the country are similarly managed for multiple uses including supporting local economies, providing timber and conserving special areas for future generations to enjoy. Of course, all this can only be accomplished if the Forest Service has the funding that it needs. Rural communities all across the country support and demand our national forests, and we owe it to our constituents to deliver a responsible budget.

Some of the budget this Administration has proposed would do just that, but much of it doesn't. For example, I am glad to see the steps that you are proposing to take with regards to firefighting. They would significantly reduce our federal spending and increase the safety of firefighters. On the other hand, I do not support the proposal to zero out funding for the Land and Water Conservation Fund (LWCF). I appreciate the special exhibit that you included in your budget showing that in Fiscal Year 2019 LWCF was used to acquire 19,515 acres specifically to enhance access for hunting, fishing and shooting in national forests. Just last year the Public Lands package was signed into law, securing permanent authorization for LWCF. I followed up by introducing a bipartisan bill which many of my colleagues have signed on to, with 52 co-sponsors to be exact, which will require permanent and full funding for LWCF at the \$900 million level and remains to this day one of my top priorities.

I was also proud to join many of my colleagues on the Committee to co-sponsor the Restore Our Parks Act. This bill would provide over \$6 billion to the National Park Service to address its deferred maintenance backlog. The Forest Service backlog, as you know, is over \$5 billion, similar in size to the National Park Service. I wanted to note that the President's budget request includes a nearly identical proposal except that it would direct ten percent of the funding to the Forest Service to address its deferred maintenance backlog. While I am glad to see that the Administration is thinking about the problem, I am very disappointed to see that, at the same time, the budget proposes a reduction in annual maintenance funding. That is something we can't have happen. Reductions in maintenance funding are what caused the maintenance backlog, and it will just grow worse. Adequate funding needs to be built into the budget, or we will continue to find ourselves in a no-win situation.

Lastly, I want to complement the Chief on her ambitious goal for timber harvesting. I know that the Forest Service will conduct these harvests in a sustainable way as required by our environ-

mental laws, and I am pleased that you are partnering with states to help get this work done. As a former governor, I can tell you that the partnerships you are forming with states make your agency stronger and able to do more than you can do by yourself.

With that, I look forward to hearing about Chief Christiansen's priorities and discussing the investments that we need to make in our national forests. And I want to thank you, Madam Chairman, and I look forward to hearing from Chief Christiansen.

The CHAIRMAN. Thank you, Senator Manchin.

Chief, it is good to have you back before the Committee. We welcome your presentation here this morning. If you would like to proceed, and then we will have an opportunity for some questions, but thank you.

STATEMENT OF VICTORIA CHRISTIANSEN, CHIEF, USDA FOREST SERVICE

Ms. CHRISTIANSEN. Thank you, Madam Chairman, Ranking Member Manchin and members of the Committee, for inviting me back to testify on the President's 2021 budget for the Forest Service. Today I will share details on the hard choices that were made in our budget request and focus on three key areas: our progress to employ tools, authorities and funding to confront threats to forests and support communities; the work in front of us and the challenges that we must overcome; and, our steadfast efforts and progress to champion a strong workforce and healthy workplace.

We thank the Congress for approving the 2020 budget. We're putting funds, new authorities and tools to good use. Trend lines point upward as we treat more forest acres, reduce hazardous fuels and support rural economies. We are on track to meet our timber target, and so far we are outpacing last year's work to reduce hazardous fuels. Our shared stewardship approach is gaining momentum in spirit and new agreements. We're working across boundaries to do work at the right scale in the right places.

We've signed 12 agreements with states and one with the Western Governors' Association. Twenty-six agreements are in progress. We've executed 245 good neighbor agreements in 38 states and doubled timber volume. We aim to build on our progress in 2021. The President's \$7.38 billion budget emphasizes our critical work. It focuses work to reduce wildland fire risk, improve forest conditions, increase access and contribute to local economies and it advances our shared stewardship approach but it does reflect tough choices and tradeoffs.

In addition, we are seeking solutions and innovations to overcome obstacles that slow our work. We're nearing completion of the reforms that will ease process burdens and reduce costs. This spring we will finish new rules that streamline decision processes, meet our environmental responsibility and get more work done. Efforts to modernize budget processes, increase efficiencies in fire-fighting, integrate science and improve internal systems put us in a position to better deliver our mission. We also appreciate your help in addressing challenges of the Cottonwood ruling. It has delayed work on the ground and unending analysis and redundant consultation.

We're also seeking ways to maintain a reliable infrastructure, an essential for groundwork and public access. With over 370 miles of road and 159,000, excuse me, that's 370,000 miles of road and 159,000 miles of trails, the Forest Service manages the largest transportation system of all the federal land management agencies. These roads, trails and bridges make up the largest part of our \$5.2 billion maintenance backlog. We need functioning roads and bridges to treat forests, fight fires and reduce fire risk. Rural Americans need functioning roads and bridges for their daily use, for outdoor activities and emergency response.

Lastly, our mission's success depends on a highly-skilled, motivated workforce. We will continue our work to end sexual harassment and retaliation. We are making progress and are more resolute than ever in our commitment to provide a safe, harassment-free, respectful workplace. We have taken actions. We are improving but we must go further to permanently change our culture to one that is based on dignity, equality and respect for all. Our strong workforce is key to our aim to create a gold standard for public service and mission delivery. It ensures we make good on the investments of this Congress and provide the services and sound stewardship this nation deserves.

Thank you. I'd be happy to answer questions.

[The prepared statement of Ms. Christiansen follows:]

**Statement of Victoria Christiansen, Chief of the USDA Forest Service
Before the Senate Energy and Natural Resources Committee
Concerning President's Fiscal Year 2021 Proposed Budget
For the USDA Forest Service
February 25, 2020, 10:00 a.m.**

Madam Chairman Murkowski, Ranking Member Manchin, and members of the Committee, thank you for inviting me here today to testify on the President's fiscal year 2021 Budget request for the U.S. Department of Agriculture (USDA), Forest Service.

The fiscal year 2021 President's Budget for the USDA Forest Service discretionary appropriations totals \$5.3 billion for base programs and \$2.04 billion of the wildfire suppression cap adjustment (in the Wildfire Suppression Operations Reserve Fund). In addition to discretionary appropriations, the request includes \$747 million in mandatory funding. The fiscal year 2021 request focuses on three primary areas: risk-based wildland fire management, improving forest and grassland conditions through shared stewardship, and contributing to rural economic prosperity.

The President's FY21 Budget Request for Specific Priorities to Support Focal Areas

Each of the new investments detailed below align with and enhance the focal areas of the budget.

- \$10 million to develop the Risk Management Assistance framework to enhance capacity to make risk-informed wildfire response decisions;
- \$15 million to implement the Wildfire Technology Modernization section of the John D. Dingell, Jr. Conservation, Management, and Recreation Act (Dingell Act) to increase accountability for firefighter safety and for program spending during wildland fire suppression operations;
- \$10 million in Scenario Investment Planning to build capacity to maximize cutting-edge scientific tools to target wildland fire risk.
- \$15 million to implement an inter-agency (OneUSDA) Land Mobile Radio (LMR) shared service. This merge of USDA LMR operations will lower costs, improve operational efficiencies, and close gaps in delivery and security to better respond to emergencies, criminal activity, wildfires, and other disasters.

Each of the investments detailed below represent significant commitments to priority focal areas.

- \$78.5 million is for the Forest Inventory and Analysis Program, which enables the natural resource community to understand the magnitude of changes in forest conditions and trends, and to make projections of future conditions.
- \$2 billion for the management of NFS lands, which includes:
 - \$385 million for Forest Products to support the sale of 4 billion board feet of timber.
 - \$510 million for Hazardous Fuels, which supports the agency's emphasis on improving the condition of the Nation's forests and grasslands while enhancing their resilience to the negative effects of wildland fire by treating 3.5 million acres to reduce hazardous fuels.
- \$453.2 million for Capital Improvement and Maintenance

- \$2.4 billion for Wildland Fire Management
 - Within this amount, \$1.4 billion is proposed for Fire Preparedness, which enables the Forest Service to maintain its existing firefighting capability and funds all base 8 salary costs for firefighters.

Legislative Proposals

The FY 2021 President's Budget proposes several key legislative changes to improve our effectiveness in delivering programs and services:

- *Forest Management*: This proposal would provide categorical exclusions for active forest management on national forest lands, including the ability to harvest dead, dying, or damaged trees as well as proactive fuels management, including the use of fuel breaks. These changes will help reduce fire risk, improve forest health, minimize post-fire impacts, prevent re-burn of fire impacted areas, and improve safety for wildland firefighters.
- *Public Land Infrastructure Fund*: This proposed fund is included in the Department of the Interior's FY 2021 Budget request to address deferred maintenance needs. This proposal would allow the Forest Service to be eligible to use up to 10 percent annually from the Administration's Public Lands Infrastructure Fund. On the National Forest System, infrastructure is the physical link between Americans and their public lands. It strengthens communities by giving them safe access to the many ecological, economic, and social amenities these lands provide.

Perhaps most critically, forest infrastructure provides fire protection for communities. We estimate the cost for preventive maintenance, rehabilitation, and capital improvements; replacing structurally deficient bridges; upgrading many of the 22,000 culverts; and trail maintenance and capital improvements would require a funding level of \$445 million per year for 10 years. The Public Lands Infrastructure Fund would be supported by the deposit of 50 percent of all federal energy development revenue that would otherwise be credited or deposited as miscellaneous receipts to the Treasury over the 2021-2025 period, subject to an annual limit of \$1.3 billion.

- *Cost recovery Minerals*: This proposal would authorize the Forest Service to retain and spend new fees to recover costs of processing applications and monitoring compliance for locatable mineral plans of operations and surface use plans of operations for oil and gas leases, and other written Forest Service authorizations relating to the disposal of locatable and leasable (but not saleable) minerals on all NFS lands. This authority would greatly enhance customer service and expedite these activities. The provision caps the amount that may be retained at \$60 million annually. This proposal also better aligns the Forest Service with the Department of the Interior's mineral program.
- *Lands and Realty Management-Threshold Waivers*: Two proposals would amend the Federal Land Policy and Management Act to both reduce the administrative burden of land exchanges (by approximately 70 percent) and increase the quantity of eligible land exchange proposals (by up to 30 percent).

- The first proposal increases the dollar threshold for waivers from the requirement for payment to equalize land exchange values when there are relatively minor value differences.
 - The second proposal amends the formal appraisal requirement to reflect present day land values. This amendment would also reduce the legislative burden on Congress to authorize individual land exchanges due to the current limitation.
- *Roads and Trails Fund*: This proposal would authorize the Forest Service to retain funds deposited in the Roads and Trails for Fund to repair or reconstruct roads, bridges, and trails on NFS lands. The proposal would allow the Forest Service to carry out and administer projects to improve forest health conditions—which may include road, bridge or trail construction and repair—on NFS lands in the wildland-community interface where there is an abnormally high risk of fire.
 - *Federal Lands Recreation Enhancement Act Reauthorization (FLREA)-Extension*: The proposal would extend the Federal Lands Recreation Enhancement Act through September 30, 2023. The revenues collected from these recreation fees are an important source of funding to enhance the visitor experience through maintenance, operations, and improvements to recreation facilities on public lands. This is an interagency proposal with the Department of the Interior.
 - *Forest Service Facility Realignment and Enhancement Authorization – Extension*: This proposal would extend the authority through September 30, 2021. This authority provides that an unlimited number of administrative sites, and up to 10 isolated, undeveloped parcels per year acquired or used for administrative purposes, may be conveyed through sale or exchange.
 - *Grazing Permits*: The proposal would amend the Federal Land Policy and Management Act (FLPMA) to include all National Forest System lands in the 2015 National Defense Authorization Act amendment to Section 402 of FLPMA. That amendment applies to grazing permits on national forests in the sixteen western contiguous states that have expired or are transferred or waived and requires the continuation of their terms and conditions until an environmental analysis is complete. The proposal would add grazing permits on the remaining National Forest System lands (grazing permits on the national forests in eastern States and National Grasslands).
 - *Wild and Scenic Rivers*: The Wild and Scenic Rivers Act requires that comprehensive river management plans be prepared within three years following a Wild and Scenic River designation. This proposal would amend the Wild and Scenic Rivers Act to provide that the Secretary of Agriculture shall not be in violation of Section 3(d)(1) of the Wild and Scenic Rivers Act solely because more than three years have passed since a river was designated “wild and scenic” and a comprehensive river management plan has not yet been completed.

If more than three years have passed since designation without the completion of a comprehensive river management plan, the proposal would require that a plan must be completed or appropriately updated no later than during the next forest plan revision process.

- *Forest Botanical Products - Extension:* This proposal would extend the authority for charging and retaining fees for the harvest of forest botanical products for one year, to September 30, 2021. This program provides for the sale and harvest of forest botanical products in a sustainable manner that contributes to meeting the Nation's demand for these goods and services.

An estimated 63 million acres of National Forest System (NFS) lands and 70,000 communities are at risk from uncharacteristically severe wildfires. Other threats include regional drought, invasive species, and major outbreaks of insects and disease. Natural resource challenges are best met with collective action. Stakeholders of the Forest Service broadly agree on the need for active measures to address the threats across many of the landscapes we manage, and Congress has done their part to help. I appreciate the support and innovative authorities that Congress has provided in the Consolidated Appropriations Act, 2018, the Agriculture Improvement Act of 2018 (the 2018 Farm Bill), and the Dingell Act to help us do more to improve landscape resiliency for present and future generations. This is an indication of Congress' expectations and trust in us, and I look forward to continuing to work with you to meet those expectations. There is much more work to be done, and we are committed to doing the right work in the right places at the right scale.

As the Forest Service moves forward with its shared stewardship strategy, we are working more closely than ever with states, tribes, and other partners on priority projects across landscapes and all ownerships. We are sharing decisions and risks and achieving outcomes that we mutually define. This strategy is dependent on our employees—our largest and most important investment. The successful delivery of services and work starts with a highly skilled, motivated workforce. They are essential to confronting the arduous challenges facing America's forests and grasslands; they are integral to the services and experiences we offer to citizens, local communities and our partners. We have taken significant steps to improve policies, raise accountability, upgrade reporting systems, and conduct training around the workplace environment to stop harassment, bullying, and retaliation and permanently change our culture. I am committed to continuing the hard work that creates the work place our employees deserve; to continue transparency before this Subcommittee, Congress, and the citizens we serve; and to build an organization where every individual, inside and out of the agency, is treated with respect and dignity.

In recent years, the agency's budget structure has not efficiently supported mission critical work; nor has it provided necessary transparency to Congress to enable decision-making. I thank Congress for providing for the establishment of a new Forest Service Operations account in the Further Consolidated Appropriations Act, 2020. As directed, we will be prepared to implement the new account on October 1, 2020. The President's fiscal year 2021 Budget request also proposes additional changes to the budget structure. Specifically, we request establishment of Salary and Expense accounts, as well as modest consolidation and movement of some line items. These changes will allow the agency to plan and fund fixed costs in an accountable and transparent manner without any negative effects on program implementation.

In closing, the President's fiscal year 2021 Budget request for the Forest Service prioritizes investments to reduce wildland fire risk, improve forest and grassland conditions through shared stewardship with our partners, and contribute to rural economic prosperity. It requires tough choices within our existing program of work, including the reassessment of Research and Development priorities. I look forward to working with this Subcommittee to fulfill the President's goals and our key responsibilities for the long-term benefit of the Nation's forests and grasslands, and for all Americans. I will be glad to answer your questions.

The CHAIRMAN. Thank you, Chief, we appreciate your quick review here, but we will have an opportunity to fill it in with more questions.

I want to start off with a couple of Alaska-specific issues. You have mentioned and my colleague, Senator Manchin, also acknowledged that the Administration is proposing its highest national timber target in decades here but that goal, as you probably know, just really doesn't extend to us in Alaska. We are at the lowest point that we have seen in our state's history since we have been logging there and among, certainly among the lowest in the nation here. Only 5.6 million board feet were sold in Alaska in 2019. This would be 0.14 percent of this year's goal.

Again, recognizing that this is coming from our nation's largest national forest. So, again, I just came from Southeast. I was down in Ketchikan, in Juneau, in Sitka, obviously discussions about Roadless but really a broader concern about whether or not we are going to be able to get any reliable volume out of the Tongass given what we are seeing.

What steps, can you share with me, is the Forest Service taking to reverse this trend on the timber in Alaska?

Ms. CHRISTIANSEN. Thank you, Senator. I hear you loud and clear. I, too, have concerns and I've dug pretty deep into the uniqueness in Alaska, myself and, you know, took the time to come up this summer—

The CHAIRMAN. Which we appreciated.

Ms. CHRISTIANSEN. —and have a look myself.

What I can assure you is that we do remain committed to a reliable and a continuous supply of timber for Southeast Alaska. It's a part of the economy and the way of life—we really do get that. And I'm pushing our folks to really work innovatively on how we can address some multiple challenges, quite frankly, in doing business in this island communities. There are—it often has some more logistical challenges. It is more expensive, and we need to really be smart and we need to be coordinated.

In addition, there's significant market variability. I think you know that right now the market is very soft. The 30 million board foot sale that was a good neighbor sale in the State of Alaska is on hold right now because of market conditions. It's compounded by some retaliatory tariffs in China. And, you know, there is a significant amount of controversy and lawsuits in Alaska. And it's not that we don't have those challenges other places, Senator.

So we really looked hard on how we, as the Forest Service, the stewards, as you say, of the largest national forest, we can be a convening capacity to bring multiple interests together to look at the watershed, fisheries, recreation values, in addition to the timber values, find the common ground and have enough available, cleared, environmentally cleared, product that we can be responsive to the different market changes. As you know we took a large landscape approach, the first with the Prince of Wales large landscape project. It brought a lot of collaborative capacity, a lot of common ground by many interests were brought together. Unfortunately, it's been enjoined and so that's the biggest reason why we couldn't offer the amount of timber we intended to do. We're looking at the situation there and we're trying to adjust accordingly,

and we're committed to continue to work on this to be flexible and meet the needs of Alaska.

The CHAIRMAN. Well, Chief, I have not interrupted. I have allowed you to try to give me as fulsome a response as you can. But you need to know that I view this as wholly, wholly unsatisfactory. Instead of moving forward, instead of actually seeing some results translate on the ground, we are going backward which I didn't think possible. I don't believe it is because you don't support the work or the opportunity that remains in the Tongass, but what is happening is exactly what those who would seek to shut the Tongass down—it is happening that the industry is unable to hold on.

You will be visited by a group of Alaskans this week who will not only share with you their concern about, again, this downward trend that has gone so low that we could not have even imagined that it would be this bad. But they have also been hit with a double whammy that you reference with regard to the Chinese tariffs. That came out of left field. But I think you have a situation here where through policies, through litigation, you have managed to eliminate an industry and an opportunity for people who live in the nation's largest national forest.

In deference to my colleagues here and their opportunity to ask questions, I will conclude my statement, but know that the response that you have provided—that you are committed—committed on paper is one thing and I have all the materials and the statistics, but it is not translating on the ground. It is not translating in these communities, and that is not an acceptable solution.

Let me turn to Senator Manchin.

Senator MANCHIN. Thank you, Madam Chairman.

Chief Christiansen, in December of last year, myself and the Chairman and members of this Committee, many members of this Committee, worked diligently to enact a two-year extension on the Secure Rural Schools program. Over 290,000 West Virginians really depend on that. They sent me letters. They were excited. But even though we provided the funding, the money has not been dispersed. What should I tell them? When will they get this money? And why is it taking so long to get it out the door?

Ms. CHRISTIANSEN. Senator Manchin, we appreciate your leadership on Secure Rural Schools. It really does make a difference across the country in many of these rural counties with public lands.

We are working, top priority——

Senator MANCHIN. It usually goes out in February. It usually goes out, the money goes out in February.

Ms. CHRISTIANSEN. Yeah, it will be out before the end of March. I can guarantee you that. And I have asked my folks to step it up, top priority, to get it out.

Senator MANCHIN. What slowed it up? Is there anything that we can do to prevent this? Because we have a two-year extension, we don't want this to repeat itself next year.

Ms. CHRISTIANSEN. You know, in the finance part of the Federal Government, I'm not the expert. I will get back to you——

Senator MANCHIN. We will be happy to work with your—you have to have somebody that works at OMB, I am sure, who is connected with OMB on this?

Ms. CHRISTIANSEN. Sure.

Senator MANCHIN. If you can give us the person, your contact, on behalf of all of us that rely on this——

Ms. CHRISTIANSEN. Yes.

Senator MANCHIN. ——we are happy to work with you.

Ms. CHRISTIANSEN. Well, we'd be happy to work with you if there's any——

Senator MANCHIN. So we should tell, basically, our constituents back home—for any of you all that have this type of funding—that it will be a month late, 30 days late, probably.

Ms. CHRISTIANSEN. Or less.

Senator MANCHIN. Or less, okay.

Second thing then, speaking about royalty. The budget proposal includes a \$5 million increase for your communication sites program. It says the funding would be used for providing broadband access to rural communities, specifically in areas where there is little or no capability. There is not a state that is probably affected more than my State of West Virginia that has rural areas that have no connectivity whatsoever.

I guess I would ask how, with the little bit of money you have there, how are you going to select the areas for which you are going to disperse this?

Ms. CHRISTIANSEN. Yeah, I really appreciate your question and your leadership on rural broadband. As you know, this is a high priority for Secretary Perdue and all of USDA. Just to clarify what this—on the numbers it looks like a bump up and it is because it's a request for the fees that are paid from these communication—to establish, to get permits on these communication sites for the agency to retain them so we can provide better service, better response times for those communication sites.

Senator MANCHIN. So you are not selecting new sites at all? You won't be selecting new sites?

Ms. CHRISTIANSEN. Yeah, we don't select sites. That's the private sector comes to us and asks to establish a site——

Senator MANCHIN. One thing I would make you aware of is their maps are usually wrong. We have proven through FCC that the FCC maps are wrong, what these providers are telling you they are covering and they are not covering. So, please, if you will, work with us on that. We will give you the accurate maps.

Ms. CHRISTIANSEN. Absolutely. We——

Senator MANCHIN. We are urging FCC. There is \$20 billion going out the door this year. They are probably expediting it because of elections, and there are going to be a lot of rural communities that are going to be left behind because the maps have not been updated. We are going to get screwed again.

Ms. CHRISTIANSEN. Yeah, again, it's a top priority for USDA, and we'd be glad to work with you on that.

Senator MANCHIN. My final question is going to be this. According to the budget proposal, the Forest Service is preparing to publish a revision of regulations for locatable minerals in October. The current regulations apply to hard rock mining operations which,

you know, have not been changed since 1872 and very little has been done. With that being said, there are no royalties paid to the American public whatsoever for the resources they own.

Are you suggesting and working toward making those changes that we should be making here in Congress, supporting the changes that need to be made, not only for the royalties, but also for how it is mined and for the environment and how it is protected, the same as we do in coal and other extractions? For some reason hard rock has been left off the table. It has been protected.

Ms. CHRISTIANSEN. Yeah, there's a rich history on the mining laws.

Senator MANCHIN. It is rich for the companies that do it. It is not rich for the American taxpayer.

Ms. CHRISTIANSEN. Sorry, wrong word I used, yes. There's significant history on the mining laws and I'd be, we'd be happy to work with you on that, Senator. I really appreciate your questions.

Senator MANCHIN. Well, I would like to know from your office and your department, basically, how many active permits we have, how many prospective permits that are in a queue, if you would.

Ms. CHRISTIANSEN. We have hundreds, but we'll, for sure, give you the numbers.

Senator MANCHIN. Yes—if they identify it, they submit it to you, and you give them the permit, and then we get nothing in return. I would like to know where we stand on that.

Ms. CHRISTIANSEN. Well, it's complicated that, you know, the subsurface estate, most of it is BLM and we manage the surface. It's split estates and—but it depends on where we're at—

Senator MANCHIN. Yes.

Ms. CHRISTIANSEN. —in the U.S.

Senator MANCHIN. You all are very much involved with that, I am sure.

Ms. CHRISTIANSEN. Yes.

Senator MANCHIN. Okay, thank you.

The CHAIRMAN. Thank you.

Senator McSally.

Senator MCSALLY. Thank you, Chairwoman Murkowski.

Chief Christiansen, good to see you again. Thanks for your continued work in this position as well as your service to the State of Arizona as our State Forester before you came to the Forest Service.

When we spoke at this hearing last year you committed to working with me to update Region 3 forestry guidelines to make sure that Phase 2 of Arizona's 4FRI initiative is a success. Shortly after the hearing I introduced my bill, the Accelerating Forest Restoration Act, which laid out very concisely the top asks from the 4FRI stakeholders to make the project more efficient and economical. The Ecological Restoration Institute at NAU, Northern Arizona University, has been a leader in developing effective forestry policy and convening stakeholders to ensure policies get implemented. They recently released a progress report on modernizing 4FRI implementation. It acts as both a report card on how well the Forest Service has done in implementing the reforms laid out in my bill and as a guide to what still needs to be done. It should be required reading for anyone involved in 4FRI, and I want to make sure you

have a copy and also, Chairwoman, I would ask unanimous consent this be added to the record.

The CHAIRMAN. It will be included, thank you.
[4FRI Progress Report follows.]

Modernizing 4FRI Implementation: Progress After Two Years
Workshop Final Report

February 11, 2020

Prepared for

USDA Forest Service
Four Forest Restoration Initiative (4FRI) Team

Prepared by

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Introduction

On October 29 and 30, 2019, the Ecological Restoration Institute (ERI), in collaboration with The Nature Conservancy (TNC), and the Forest Service (FS) 4FRI Team, held a workshop in Flagstaff, Arizona to:

- 1) Review the status of modernization actions identified during a [fall 2017 workshop](#) and that are underway as a part of 4FRI implementation;
- 2) Discuss lessons learned with an emphasis on operational experiences, challenges, troubleshooting, and future application;
- 3) Promote learning using a field trip and discussion sessions; and
- 4) Explore benefits and issues of partnerships in a two-way dialogue between the Forest Service and partners.

In addition to the goals stated above, we also sought to test different approaches for sharing information and fostering learning. This additional goal was included to help inform the national [Forest Products Modernization \(FPM\) initiative](#), which is focused on improving the efficiency of forest product delivery through a series of innovative changes in technology, policy, and implementation.

Budget constraints have forced many organizations, including the FS, to increase reliance on computer-based learning at the cost of peer-to-peer learning. Yet, according to the FPM team, “Wi-Fi connections are not consistently available and internet bandwidth is insufficient to meet needs at agency offices.” This problem impacts employee access to web-based learning options. In addition, online learning limits hands-on mentoring and peer-to-peer interaction. We sought to assess how implementers respond to peer-to-peer learning combined with hands-on field experience using new technology. To understand how FS staff receive information and how they felt about their workshop experience, we encouraged participants to complete a workshop evaluation.

Workshop materials can be found on the Southwest Ecological Restoration Institutes’ [website](#). The web page includes:

- [Workshop Materials](#): Workshop Agenda, Workshop Participants, and History and Action Items developed at the 2017 workshop.
- [Fact Sheets](#): Branding and Painting, In-Woods Drying, Load Accountability, Merchantability, LiDAR, Standard and Potential Lidar Products, Script for Creating a Tile Package From an Image Service, Virtual Boundaries, and DxP and DxP+ (Designation by Prescription and Designation by Prescription using tablets(+)).
- [Presentations](#): Branding and Painting, In-Woods Drying, Load Accountability, Merchantability, LiDAR, Virtual Boundaries, and DxP and DxP+.
- [Key Note Address](#): “Modernization: What it Takes,” by John Crockett, Deputy Director of Forest Management, USDA Forest Service, Washington, DC.

Workshop Structure

The two-day workshop was intentionally designed to meet information and education needs of multiple interest groups. Day one participants included FS staff representing implementers on the 4FRI forests to Regional and Washington Office personnel (see “Workshop Participants” on website). Key external partners representing industry, local government, congressional offices and other agencies were also invited. The day was split into two formats. The morning included plenary sessions and panel discussions designed to provide a broad look at modernization, FS decision-making, and partnership roles. A field trip in the afternoon gave participants an opportunity to explore technology tools in the field. Field trip attendees were divided into groups that rotated between three technology stations. The stations included, 1) Creating Virtual Boundaries, 2) Using Designation by Prescription (DxP) and DxP+, and 3) LiDAR and Unmanned Aerial Systems (UAS). At each station, groups of four individuals had a tablet managed by a tech savvy individual with prior experience. After listening to an overview and instructions from the station leads, groups were able to explore the technology in the field themselves.

Day two focused on the FS staff who are expected to adopt new innovative and modernization approaches. Participation was limited to FS staff to foster honest conversations about implementation experiences including mistakes, successes, and challenges. Individual topic sessions led by FS staff gave participants the opportunity to ask questions about the innovations and presenter experiences. The day two topics included, 1) DxP and DxP+, 2) Virtual Boundaries, 3) Remote Sensing, LiDAR, UAS, and 4) Merchantability Standards and Responding to Industry Requests for Change.

Workshop Results

This section analyzes key results from the workshop. Specific discussions include: 1) progress on innovation action items identified in 2017; 2) lessons learned from two years of implementation; and, 3) feedback from the workshop evaluation and how well the workshop met participant expectations and goals.

Progress on Innovation Actions Identified in 2017

In 2017, the Washington Office (WO) of the FS launched the Forest Products Modernization (FPM) initiative to improve the efficiency of FS management, the delivery of forest products, and to carry out timber sales to increase acres treated and volume produced. Also, during 2017 The Nature Conservancy (TNC), Arizona Chapter developed a Master Stewardship Agreement (MSA) with the FS with the goal of identifying, promoting, and testing innovative approaches to implementing forest restoration treatments on the 4FRI CFLRP project. On November 29 and 30, 2017, FS staff representing the 4FRI team, the 4FRI national forests, Region 3 (R3), and the WO assembled in Phoenix, Arizona, at the “Accelerating Restoration Implementation Workshop” to discuss innovative actions.

The workshop was collaboratively designed by ERI, TNC, and the FS. The Nature Conservancy MSA and the conclusions of a time and efficiency study conducted by a TNC fellow provided an

important framework for the conversation. Partners at the workshop included staff from TNC, Campbell Global, and NewLife Forest Products. The group identified 21 action items for advancing innovation and modernization with the understanding that capacity would limit testing and implementation.

A detailed description of the status of the 21 items can be found at: <https://sweri.eri.nau.edu/4fri-modernization-workshop/>. An annotated summary is provided in Appendix A of this report.

Progress has been made for most of the actions identified in 2017:

- Eight action items are underway in the field
 - DxP and DxP+ (DxP and DxP+ were already being used but acres using this approach have increased)
 - Branding waivers to a lower percentage of load
 - In-woods processing
 - Increased collaboration with industry
 - Increased FS learning from industry
 - Facilitation of consistent interpretation of financial instruments across the FS
 - Convening of contracts and agreements staff with field staff to identify the correct financial instrument to achieve management goals (underway at highest levels of FS)
 - Weight-scaling/load counts
- Three innovations are in the testing phase
 - Virtual Boundaries
 - Cruising timber using LiDAR
 - Testing Unmanned Aerial Systems for sale administration and monitoring
- Three are in development or authorization is being pursued
 - Raising the authorized limit for disposition of wood products by the Regional Forester
 - Barcoding to replace paper load tickets
 - Determining the appropriate definitions for products
- Two action items were authorized but are not known to be in use
 - Extended decking time
 - Streamlining sales less than \$2,000
- Three received partial authorizations or a variation were approved
 - Assessing the need to cruise timber when weight-scaling is used
 - Increasing weight limits on state, county, and federal highways
 - Assessing with industry partners the pros and cons of standard rate appraisals
- Two were considered and rejected
 - Closing FS roads to increase hauling efficiency
 - Assessing the need for a new financial instrument to accomplish landscape-scale objectives

Lessons Learned from Two Years of Implementation

Day two of the workshop included in-depth sessions and discussions of the technology featured during the previous day's field trip. We gathered lessons learned and recommendations from these sessions and their associated fact sheets for this section of the report. The fact sheets and presentations from the workshop can be found at: <https://sweri.eri.nau.edu/4fri-modernization-workshop/>.

The technology and innovation areas of focus were chosen based on their relevance, progress, and ripeness for the workshop audience. They included: DxP and DxP+, Virtual Boundaries, Remote Sensing, LiDAR, and UAS, and items relevant to merchantability standards and responding to industry requests for change, which included in-woods drying and decking, load accountability using electronic load ticketing and weight scaling, log branding and painting, and merchantability. A comprehensive summary of the lessons learned can be found in Appendix B of this report. Many of the lessons are detailed and technical. Before pursuing one of the innovations, implementers should review the fact sheet and the full summary in Appendix B. Contact information for innovators is also provided. For purposes of this report, we have highlighted key lessons and recommendations and the associated business practices that helped advance learning and adoption below.

DxP and DxP+

- Basal area (BA) targets were met under both DxP and DxP+, but spatial objectives were met more closely with DxP+. Without the DxP+ guidance, the operators left excess trees.
- Regular inspection occurred during implementation so adjustments were made on the fly. DxP can be successful when applied and inspected appropriately.
- Cost savings were achieved using DxP as opposed to Individual Tree Marking (ITM); 20–40 acres in the beginning, up to 50, versus 5–10 acres with ITM. However, concern exists about whether the efficiency gained at the front end of sale preparation by technology will be at the cost of operator efficiency or downstream sale administration work.
- Issues with the technology can cause delays.
- Heads-up digitizing with remote sensing (this enables delineating units in the office) has promise for the future. Canopy height models from LiDAR could especially be helpful for this.
- Operator guidance and coordination is key.

Virtual Boundaries

- At the beginning, a “fire team” approach was used to work out all the steps in the process of virtual boundaries (i.e., assembling leads from all the discipline areas in a face-to-face meeting to move the innovation forward). This was effective and efficient.
- Collaboration and communication between the sale preparation team, sale administrator, silviculturist, and other resource specialists during the risk assessment phase was important. Input from the purchasers is also necessary for successful implementation.

- Having partners with resources in technology/planning helped support testing.
- Having a partner who can interface with the logger to help implement the technology was important.
- The interest and willingness of everybody to try something different helped.
- Be prepared for trial and error. It is a valuable and inevitable part of the learning process.
- Education for both FS staff and contractors is necessary to incorporate geo-fences into management projects.
- Determine at the beginning of the project the actual areas of risk and how much risk the FS is willing to take.
- Determine what boundaries can and cannot be moved according to the NEPA decision.
- At the beginning, identify the leader who will make final decisions.

In-Woods Drying and Extended Decking

- Site-specific reviews take time. Formal requests should be provided in advance of planned implementation to avoid delays.
- Begin collaboration early to develop a monitoring and mitigation plan.
- Establish an agreed-upon timeframe to obtain response/signature from the responsible official.
- Communicate early and often.
- Ensure that the Supplemental Project Agreements (SPAs) include in-woods drying and extended decking with specific site-based considerations.

Load Accountability Using Electronic Load Ticketing/Weight Scaling

- This is an effort between the FS and National Technology Development Program (NTDP) to develop an electronic system to track all loads. It is a work in progress.

Log Branding and Painting

- Modifications for branding/painting were made by the RO in response to industry requests. However, industry was dissatisfied and requested justification for any branding given the low value of the wood. In response, the RO requested authority from the WO to give a 100% branding waiver.
- Make proactive waiver determinations when practical.

Feedback from the Workshop Evaluation

Modernization requires effective teaching and learning, a willingness to work with partners, and a healthy approach to experimentation, risk-taking, and learning from failures, as well as successes. The “Modernizing 4FRI Implementation Workshop” combined several learning approaches, including plenary sessions/panels, a field trip with technology stations, fact sheets, and peer-to-peer learning sessions with presentations and discussion. To understand the effectiveness of the workshop design, and to determine how to continue to promote learning and

information sharing in the future, we asked participants to complete a workshop evaluation. The comprehensive evaluation results are included in Appendix C.

We summarize key findings below with the goal that the results can inform the design of future workshops. Many questions asked for narrative responses. For more detail, read the comments in Appendix C.

Forty-eight surveys, representing approximately 50% of the participants, were returned.

- Participants learned about the workshop by either receiving the original invitation (48%), a forwarded email from a colleague (23%), and a forwarded email or communication from a supervisor (21%). We asked this question because we relied on forwarded emails by supervisors or others to ensure the appropriate staff attended the workshop.
- The Forest Products Modernization (FPM) initiative is using a variety of communication tools to reach FS implementers. To understand which of their outreach tools have been most effective, we asked whether participants had taken part in outreach activities and to identify all the activities that applied to them. Discussing FPM with a colleague (67%) was the most frequent learning mechanism, followed by FPM webinars (31%), participation on an FPM team (23%), visiting the website (21%) and reading the FPM newsletter (21%). Five respondents asked, “What is FPM?”; however, this response could have been from external partners.
- We asked respondents to indicate their level of agreement on a series of statements about the workshop. Participant satisfaction was very high with respondents either “strongly agreeing” or “agreeing” that: the goals of the workshop were clear (91%), the organization was effective (90%), workshop materials had useful information (89%), quality of the plenary/panels was high (87%), quality of the field trip was high (83%), quality of the learning sessions was high (90%), stated goals were met (92%), and personal expectations were met (98%).
- With respect to what method of learning people liked most, the second day learning sessions were most preferred (44%), followed by panels and field trips (25% each). Fifteen percent of respondents liked the entire workshop. People frequently mentioned the value of the question and answer opportunities and discussions, networking, and how it was great to have representatives from the FS Washington and Regional offices.
- When asked about what needed improvement, most surveys had no comments or complimented the event. Beyond that, it was a scatter shot of comments.
- Based on the survey DxP/DxP+ (71%), virtual boundaries (71%), and LiDAR/remote sensing (73%) are modernization approaches that participants anticipate adopting. Respondents were given the opportunity to say why they wouldn’t adopt modernization approaches, and their answers included lack of infrastructure, technology isn’t ripe (LiDAR), poor internet service, while one respondent said they were not 100% on board.
- Attendees were asked how they anticipate using the information they learned at the workshop. They were not given specific options so individual responses were grouped by themes. Also, some responses included multiple potential uses for the information.

Therefore, responses are grouped by theme and the number of responses are indicated as opposed to by percentage. Innovate (19), not applicable or unsure (11), training staff and industry partners (7), sharing with others (5), fostering more networking (4) and advocating to leadership (3).

- Respondents were asked if they have implemented efficiencies that weren't discussed at the workshop. Thirteen different items were listed.
- Participants were asked what other modernization or implementation information they need. Responses were grouped by theme and include: more training (7), improving biomass utilization (2), more validation that efficiency has been achieved (2), and several smaller specific improvements.
- A critical piece of information for informing future learning is to understand what staff feel is the most effective way to learn about modernization and innovation. Face-to-face workshops (83%) and training (69%) were the preferred learning approaches. Next most popular was word of mouth/peer-to-peer learning (35%) followed by online courses/other online resources (21%). Webinars (6%) and online training videos (15%) were less popular.
- Responses to the question of how participants would like to see innovation and learning proceed after the workshop were grouped by themes. Fifteen respondents stated the next step should be to implement, monitor and verify efficiency. Eleven suggested workshops and trainings. Three asked for maintaining and open dialogue with leadership, while two want to make sure there are regular updates.
- Quarterly face-to-face meetings are the preferred way to stay updated on 4FRI modernization (65%), while 38% would like on-line materials and 29% would like quarterly webinars. Other suggestions included emails, phone calls, and creating a working group.
- There were 16 comments provided to the open-ended question inviting feedback, in addition to 15 responses complimenting the workshop and saying thank you.

Conclusion

Innovation is underway as a part of 4FRI implementation. Based on the results of this workshop, applying and testing innovation on 4FRI has helped to deepen staff understanding of how to implement new technology, as well as illustrated the importance of supporting business practices that include regular communication, engaging a team that wants to innovate, and identifying the key decision points and decisionmakers to accelerate change. Key elements of success include consistent communication, clear leadership intent, accountability to making progress, and a commitment to moving beyond "business as usual."

Based on the results of our workshop evaluation, participants at the "Modernizing 4FRI Implementation Workshop" liked the opportunity to assemble in a face-to-face workshop format that emphasized peer-to-peer learning, allowed plenty of opportunities for dialogue and Q&A, and encouraged networking. Participants emphasized that including leaders from the WO and RO was a benefit, as it helped bring in perspectives from other levels of the FS that may not

reach field staff. Furthermore, it allowed leadership to reinforce the importance of the work, clarify policy and interact with the people on the ground.

In the future, we recommend that the FS continue to use in-person, peer-to-peer learning formats to advance modernization whenever possible. We also recommend that support for the experimentation and healthy risk-taking necessary to advance modernization be effectively communicated at all levels of the FS in order to support innovators working to fulfill the goals of FPM.

Acknowledgements

The ERI is grateful to Congress and the Forest Service (Agreement #19-DG-11031600-052) and Arizona Board of Regents for the funding to help support this workshop. We especially appreciate the contributions of the planning team and presenters who made the workshop a success.

APPENDIX A

Annotated Summary of Action Items

	Action Item	FPM	4FRI	Action	Implementation
1	Designation by Prescription (DxP) and DxP+ using tablet technology+	x	x	In use by field	Use of DxP and DxP+ has been expanding across the 4FRI.
2	Virtual Boundaries (VB)	x	x	In testing phase	VB is being tested by 4FRI for national application.
3	Assess the need to cruise timber when weight-scaling is used	x		Related action authorized	Sampling error for cruising for high value sales was increased to reduce preparation costs.
4.	Raise the limit of the RF to dispose of wood products to > 10,000 CCF per agreement. This will reduce the number of agreements that must be prepared.			Authorization being sought	RO has requested authority from WO
5.	Streamline standards for sales less than 2,000 CCF to achieve time and cost savings.			Action Authorized	New direction exists related to sales that are \$2,000 in value or less (not CCF). Standard rates can be applied to sales equal to or less than \$2,000 in total advertised sale and also provides direction that for all sales greater than \$2,000 in total advertised value will conduct a detailed appraisal.
6.	Identify industry standard and/or digital methods for tracking and accountability.				
	a. Branding		x	In use by field	RO is requesting a policy deviation from the WO to waive branding when appropriate.
	b. Barcoding in lieu of load tickets			In development	Work is underway nationally to identify

					to identify appropriate equipment
	c. Weight-scaling/load counts		x	In use by field	Permission has been given to contractors to use load counts where consistent truck-trailer configurations and weight are used.
7.	In-woods processing		x	In use by field	TNC is chipping logs in the woods. The CC Cragin project ROD permits in-woods processing.
8.	Extended decking to reduce weight of logs and to decouple harvest and hauling		x	Action authorized with caveats. Not in use	Preliminary approval was granted to TNC, however, timing precluded use.
9.	Raise road weight limits			Partial authorization in place	Industry and county government have successfully worked with the AZ Dept of Transportation to increase weight limits. FS is doing diligence on their roads.
10.	Close FS roads to allow hauling to be more efficient			Rejected	Road closures are only used for public safety. Closures to improve hauling efficiency have not been tested. Authority exists but isn't generally used due to multiple-use requirements by the FS.
11.	Increase collaboration with industry		x	In use by field	Annual industry round-table is used by the 4FRI to engage industry.
12.	FS should seek opportunities to learn from industry and expand capacity		x	In use by field	The new 4FRI RFP2 asks industry to provide substantive input to make implementation more industry efficient.
13.	Implement actions to facilitate consistent interpretation of financial instruments across the Forest Service			In use by field	RO has convened relevant staff to promote learning.

14.	Convene contracts and agreements staff with field staff to identify the correct financial instrument to achieve management goals			In use at high levels of the FS	A "Best Tool Decision Tree" has been developed to guide field decisions as well as Stewardship End Result contracting training.
15.	Assess the need for a new financial instrument to accomplish landscape-scale objectives	x		Considered and rejected	
16.	Determine appropriate definitions for products.			In development	RO is finalizing reclassification of products and merchantability.
17.	Assess with industry partners the pros and cons of standard rate appraisals.			Partial authorization.	Detailed appraisals required for all products with an advertised value greater than \$2,000. Either detailed or standard appraisal can be used for sales less than \$2,000.
18.	Cruise with LiDAR		x	In testing phase	Two tests underway
19.	Test UAS for sale administration and monitoring		x	In testing phase	FS does not have authority to use UAS. Partners are leading testing efforts

Acronyms:

WO-Washington Office of the Forest Service

RO- Region 3 Office of the Forest Service

RF- Regional Forester

CCF-100 cubic feet

RFP2- 4FRI Phase 2 Request for Proposal

UAS- Unmanned Aerial Systems

APPENDIX B

Lessons Learned from the Modernizing 4FRI Implementation Workshop

DxP and DxP+

Lessons Learned:

- DxP+ can't really be compared to individual tree marking (ITM), there's a big difference in these approaches, but it does make more sense to compare to DxP.
- DxP should only be used in certain stand conditions. A good place is an even-aged, single species stand. It gets more complicated after that.
- Basal Area (BA) targets were met under both DxP and DxP+, but spatial objectives were met more closely with DxP+. Without the DxP+ guidance, the operators left excess trees.
- The operator successfully followed the polygons. The FS was happy with how closely the prescription (Rx) was reflected on the ground, particularly with spatial pattern.
- Trees infected with Dwarf Mistletoe (DMT) were reduced with DxP+, even though operators can't see the rate of DMT from the cab, and there was no ITM to identify trees that should be removed.
- The proportion of "defect" trees was not reduced, therefore the proportion of post-treatment trees increased, but addressing "defect" trees was not part of the Rx, and is not as important when the management is not timber production.
- There was a lot of inspection as the project during implementation so adjustments were made on the fly. DxP can be successful when applied and inspected appropriately.
- Implementation should smooth out polygons and set a minimum size (0.1 acres)
- It is more efficient to reduce group types – they didn't use all of them and could meet objectives with fewer group specifications.
- Account for individual trees to be left. A point feature was added for trees between groups, also used paint. Most of the time these are yellow pine, so the operator knows to leave them. The point helps account for the BA left behind.
- Cost savings were achieved using DxP as opposed to ITM. (20-40 acres in the beginning, up to 50, versus 5-10 acres with LTM)
- Issues with the technology can cause delays.

Recommendations:

- Formalize inspection process for checking DxP.
- There's a role for GIS specialists to get involved. There's a learning curve, and GIS expertise is a helpful resource.
- Consider using heads-up digitizing (HUD) with remote sensing (this enables delineating units in the office). Canopy height model from LiDAR could especially be helpful for this.
- There are special considerations, such as DMT, that can't be addressed with HUD.
- GPS accuracy is important. Cellphone GPS results in too much error.

- Updating the USFS handbook with a digital Rx guide could help push this forward, but it could also be restricting.
- Standardize data models to support automated processes. Changing the approach to tablet marking from project to project means the model must change also. This means there isn't a good way to know if you're meeting objectives in the moment.
- Operator guidance and coordination has been key.

Virtual Boundaries

Lessons Learned:

- At the very beginning of planning for advancing Virtual Boundaries as a new tool, it was effective to use a "fire team" approach to work out all the steps in the process (i.e. assembling leads from all the discipline areas in a face-to-face meeting to move the innovation forward).
- The use of ESRI ARC GIS Online was effective.
- Collaboration and communication between the sale preparation team, sale administrator, silviculturist, and other resource specialists during the risk assessment phase is important. Input from the purchasers is also necessary.
- Having partners with resources in technology/planning helped support testing.
- Having a partner who can interface with the logger to help implement the technology was important.
- The interest and willingness of everybody to try something different helped.
- In-cab mapping software on GPS enabled tablets mounted in operating equipment
- Discernable boundaries are already permitted under FS regulations. The technology and hardware for implementing virtual boundaries already exists and are in use.
- Although Avenza software is popular with operators it isn't robust enough for virtual boundary applications.
- Discernable boundaries must be discernable from in the cab and from the ground.
- In-cab technology is needed for the operator to view geo-fence boundaries.
- The area of risk as defined by the contract should consider the accuracy of the GPS being used.
- Be prepared for some trial and error. It is part of the learning process.

Recommendations:

- Education for both FS staff and contractors will be necessary to incorporate geo-fences into management projects.
- Forest Service policy and contract language concerning geo-fence implementation are currently under development. Consult with the Regional Office specialists when considering geo-fences for a project.
- Consider evaluating HUD to increase efficiency.
- Determine at the beginning of the project the actual areas of risk and how much risk the FS is willing to take.
- Determine what boundaries can and cannot be moved according to the NEPA decision.
- At the beginning identify the leader who will make final-decisions.
- Provide tablets to operators so their accuracy is consistent with USFS standards.

In-woods drying and extended decking

Lessons learned:

- Site-specific reviews take time. Ensure that formal requests are provided in advance of planned implementation to avoid delays.

Recommendations:

- Begin collaboration early in to develop a monitoring and mitigation plan.
- Establish an agreed-upon timeframe to obtain response/signature from the responsible official.
- Communicate early and often.
- Ensure that the Supplemental Project Agreements (SPAs) include in-woods drying and extended decking with specific site-based considerations.

Load Accountability using electronic load ticketing/weight scaling
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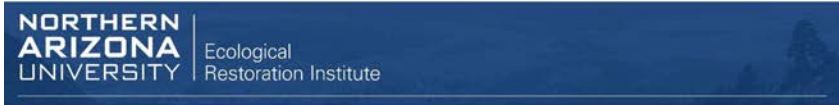
- This is an effort between the FS and National Technology Development Program (NTDP) to develop an electronic system to track all loads. It is a work in progress.

Log Branding and Painting

Lesson Learned:

- Modifications for branding/painting were made by the RO in response to industry requests. However, industry was dissatisfied and requested justification for any branding given the low value of the wood. In response the RO has requested authority from the WO for authority to give a 100% branding waiver.
- Make proactive waiver determinations when practical.

APPENDIX C



Modernizing 4FRI Implementation Workshop Evaluation

Total number of survey respondents: 48

1. What did you hope to gain from this workshop?

Networking	Understanding FPM and the big picture	4FRI implementation/tech tools
8 (16%)	11 (22%)	23 (48%)

Other illustrative examples:

- Understand how modernization will impact my job. (3)
- Get on the same page as RO and WO on policies and assess their support. (2)
- Insights on how the FS changes. (1)
- Understanding of modernization context for industry. (1)
- Assess employee level of acceptance. (1)
- Don't want to be left in the dark. (1)

2. How did you learn about the workshop? Please circle one.

Original Invitation	Email or communication from Supervisor	Email from Colleague	Other _____
23 (48%)	10 (21%)	11 (23%)	4 (8%)

3. Have you participated in any Forest Products Modernization (FPM) outreach activities? Please circle all that apply.

FPM Webinars	FPM Website	FPM at a Glance Monthly Newsletter	Discussed with a Colleague	Participating in an FPM team (e.g. solution or extended team)	What's FPM?
15 (31%)	10 (21%)	10 (21%)	32 (67%)	11 (23%)	5 (10%)

4. Please indicate your level of agreement with the following by marking the appropriate boxes below:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The goals of the workshop were clear.	28 (58%)	16 (33%)	3 (6%)	0	0
The organization of the workshop agenda was effective.	28 (58%)	20 (42%)	0	0	0

The workshop materials provided useful information.	27 (56%)	16 (33%)	2 (4%)	0	0
The quality of the workshop plenary sessions and panels on the first day was high.	25 (52%)	17 (35%)	4 (8%)	1 (2%)	0
The quality of the field trip was high.	29 (60%)	11 (23%)	3 (6%)	0	0
The quality of the learning sessions on the second day was high.	30 (63%)	13 (27%)	4 (8%)	1 (2%)	0
The stated goals of the workshop were met.	26 (54%)	18 (38%)	2 (4%)	0	0
My expectations of the workshop were met.	29 (60%)	18 (38%)	1 (2%)	0	0
The workshop facilities were appropriate.	29 (60%)	16 (33%)	3 (6%)	1 (2%)	0
The workshop was effectively facilitated.	35 (73%)	13 (27%)	0	0	0

5. Which part of the workshop was most useful to you (e.g., plenary talks, panel sessions, field trip, day 2 learning sessions) and why?

Illustrative survey comments:

- Panel (12 or (25%))
 - I heard a lot and great feedback, good discussion, heard what people are concerned about and can provide better service- discussions are vital for learning ways to improve. (3)
 - Q&A. (2)
- Field trip (12 or (25%))
 - Seeing it on the ground. Having specialist available to discuss their experience and potential of products or methods. Discussions. (7)
 - I'm a hands-on learner. (1)
- Learning sessions (21 or (44%))
 - Amount of material presented/detail/learning what's been accomplished/most relevant to my work. (6)
 - Q &A and ability to participate. (4)
- All (7 or (15%))
 - I loved the open discussions and Q&A. (1)
- Other
 - Networking. (5)
 - Offers a chance to interact with other who know more and hold other perspectives and I can ask specific questions relevant to my work.
 - It was nice to have WO and RO leadership voicing support for these efforts and providing context. (5)
 - Great to have practitioners presenting and WO/RO there to listen and provide needed context.

6. Which part of the workshop needed the most improvement and why?

Illustrative survey comments:

- (18) surveys did not comment and (5) complimented the event
- First day panel sessions (6)
- Comments on specific presentations or their relevance (6)
- Suggested change in program sequence (4)
- Lunch amount or length (3)

- The field trip - bit chaotic or desire for more time (2)
- Facilities – seating (2)
- Present other topics such as industry perspective (1)
- More discussion (break out groups were suggested) (1)
- Facilitation- Keep Q &A relevant to panel (1)

**7. Which of the modernization items, if any, do you anticipate adopting or attempting to adopt?
Please circle all that apply.**

DxP/ DxP+	Virtual Boundaries	LiDAR/ Remote Sensing/ UAS	Industry-Related Changes	None (please see Question 8)
34 (71%)	34 (71%)	35 (73%)	22 (46%)	3 (6%)

8. If you do not anticipate adopting or attempting any of the modernization items, please explain why.

People were directed to answer this question if they answered “none” to question #7. However, more than three people responded.

Illustrative survey comments (individual comments unless otherwise indicated):

- Modernization is not relevant to their job. (5)
- Will adopt only those components relevant to job. (2)
- Infrastructure doesn’t exist to implement modernization.
 - No certified scales. (2)
 - Poor internet, WIFI and computer access.
- Technology isn’t ready such as LiDAR.
- Not 100% on board. Very technical work for the outputs currently demanded. Don’t believe in prepping acreage that doesn’t match demand.

9. In what other ways do you anticipate using the information you learned in this workshop?

Survey results grouped into common themes with illustrative comments:

- To innovate. (19)
 - Using LiDAR canopy scans to aid in tablet marking productivity.
 - Changing contract type with new product rates.
 - Excited to do more data collection with LiDAR.
- Not applicable or unsure. (11)
- Sharing with others. (5)
 - There was a lot of information about changes that are occurring in forest restoration and mostly everything that was talked about can be used. Passing this information along to the crew on the changes or upcoming changes.
- Training staff and industry partners. (7)
 - Better sense of how the field can use LiDAR for designing training, products, and making the case to leadership.

- Able to hear where people are comfortable and not and can follow up accordingly. Got good information on the kind of communication and leadership employees need. I'll be able to track better with employees on technical aspects of material.
- Foster more networking. (4)
 - I plan to network others who have at least tried some of the methods discussed.
 - Using the contacts I made to discuss future projects, new ideas and challenges.
- Advocating to leadership. (3)
 - Working to get more LiDAR in R3 and work with new partners that I met at this event.

10. Have you implemented any other innovations or efficiencies that were not discussed in this workshop? If yes, please explain.

Illustrative survey comments (individual comments):

- Designating group selection cuts.
- We are using acre-collector to collect walk-through data for silvicultural Rx.
- Starting to work with TNC to consider modernizing/digitizing the timber sale prep/admin/monitoring process.
- The Kaibab is working with TNC on an economic and operational feasibility tool that was not yet ripe for presentation.
- Using tablets/collector for silvicultural walk-throughs.
- Fuelwood- other restoration with partners, youth, and tribes.
- Using tablets for sale administration. Tracking landings/skid trails etc.
- Using tablets and ArcGIS online for prescription development and layout of sale administration.
- Deck sales.
- Estimating timber volume defect. Conversion from CCF to BDFt has so much fudge it negates our defect deductions. Use a standard 8% reduction.
- Cut stem data collection during operations.
- Burn first, then cut. Cut and hand pile and burn piles for non-commercial sites.
- We were already doing DxP, including scoping with specialists, to help build to field approval guide to use with the markers (demo marks for DxP) and with the loggers.

11. What other modernization or implementation information needs do you have?

Illustrative survey comments (individual comments unless otherwise indicated):

- More training
 - LiDAR. How are other units and regions using it? How can it be used for timber/fire? (3)
We need a cruise design training that implements all the items in modernization.
 - How will training be managed for rural districts?
 - Need better delivery platforms.
 - Remote sensing and how can it be or is being used to evaluate treatment effectiveness.
What measures are being used to assess canopy openness, a likely sticking point for stakeholders/environmental groups.
- Improving designation and handling biomass and non-saw wood. Would like to see on-site conversion of slash and small trees into chips or biomass materials.
- Need to understand if we are really gaining efficiency and if we are transferring risk and to whom.

- Will have to see how the DxP sales are cut.
- Improving the log accountability. Electronic systems.
- How can drones be used for difficult locations like steep slopes?
- Electronic bid package submission/sharing.
- Timber Information Management – TIM.
- How involved can we be with the developers of used systems and applications i.e. can we get improvement from ArcCollector according to our specific needs?
- More information/ideas on how sale administration can adapt to these new efficiencies so they can be efficient/modernizing as well.
 - Need to increase the pace and scale of completing sales. Timber volume sold means nothing if the sales are never cut.

12. What is the most effective way for you to learn about modernization and innovations? Please circle no more than three.

Webinars	Online training videos	Online courses/ other online resources	Face-to-face workshops	Face-to-face training	Written material	Word of mouth/ peer-to-peer
6 (6%)	7 (15%)	11 (23%)	40 (83%)	33 (69%)	11 (23%)	17 (35%)

Other: In-woods applications and learning by doing.

13. How would you like to see innovation and learning proceed after this workshop?

Survey results grouped into common themes with illustrative comments:

- Implement, monitor and verify efficiency. (15)
 - Keep going-trying new things and monitoring their costs and benefits. Zoom out in the monitoring process i.e. how does tablet marking affect sales administration? Are we saving on one end and incurring more cost on the other?
 - Set up experiment – set bench mark standards and do work with and without innovation and compare results.
 - Better reporting/summarizing results, expansion/pilots beyond westside 4FRI, operationalize these approaches that are more research-based/driven.
- Workshops and trainings. (11)
 - More hands-on training. We plan to have a representative from a nearby forest show us how they implement tablet marking, uses, troubleshooting.
 - More of the same! Annual check-in to allow employees to share learning and network.
 - Plan on one new tool every-other month within driving distance, to learn, discuss, and brown bag lunch.
- No response. (9)
- Leadership commitment and open dialogue. (3)
 - District and forest staff and line officers need to drive the change on their district/forests.

- I would like for upper management to consider new ideas from districts differently depending on risk/importance.
- Provide updates (2)
 - We need to do updates to show we are making progress or the learning needs to be institutionalized.
 - Communicate what works and what doesn't.

14. How would you like to stay updated on 4FRI modernization efforts?

Quarterly Webinars	Quarterly Face-to-Face Meetings	Online Materials	Other _____
14 (29%)	31 (65%)	18 (38%)	Peer to Peer (4) (8%) Email (3) (6%) Phone calls (1) (2%) Form working groups (1) (2%)

15. Please provide any additional feedback or comments.

Illustrative survey comments (individual comments unless otherwise indicated):

- Good, great, or well-done workshop, thank you. (15)
- Great news on changes in appraising. Wow. No more “no bids” I hope.
- It is very essential and a great thing that the minimum rates decreased especially in the PIPO. However, if there is only one main company (4FRI), and only a few small companies it does not matter how fast we put up sales, they will either go to 4FRI (who has 15+ sales and just sitting), go no bid, etc. We need more competition if we want to succeed and have vigorous forests for the future generations, the likelihood of that happening seems to be bleak. I am NOT trying to sound negative just worried about the feasibility of our own success. But I am here to ensure our forests can be around for future generations, a commendable way to spend one's life and will continue to do my best.
- Hearing ideas and networking with folks really helps smaller programs stay relevant. In addition, thank you for not charging a fee to attend.
- I would have liked breakout sessions like the field trip to have a conversation with the specialist involved.
- Hope to have a follow-up early summer 2020.
- Consider sending out a request for feedback in a month and see how folks think or feel after some time has passed.
- The workshop was well planned and carried out. For the most part, we had the right mix of people in the room at various level of the organization. It would have been nice to have more people show up from the A-S and the Tonto NFs. We might need to have a special session to involve these folks more. I'm sure they are doing wonderful things too.
- Discussions highlighted how FPM efforts may impact other resources. Perhaps that could be summarized and shared out.
- I really liked that the location was off forest. Helped me focus and “get away from email”
- Employees absolutely benefited. Very professional, well organized and well facilitated with plenty of time for networking.

- Enjoyed the feedbacks on all new and updated forest restoration efforts.
- Development of electronic bid processes & email expanded use of direct award for contracts – increased information criteria when determining market research, competition, true bidders.
- So happy to be able to attend at least one day. As a seasonal employee (timber marker) events like these are great learning opportunities to see how my job relates to the bigger picture. Also, as a young and newer forest service employee adopting these techniques can be easier for me since I have less time using the older methods. Change is harder to adopt when folks are more set in their ways and less willing to experience change.
- Will like to see the fire program involved and topics presented. More upper level silviculture representation, innovations and support. Bring in other “ologists” (biologists, archeologists) to help communicate. Don’t limit the amount of people to the workshop.
- Good to have regional folks and industry alike.

Senator MCSALLY. Right, thank you.

I will be following up with some questions for the record on detailed updates on the status of implementing the stakeholder requests, including branding requirements for low-value timber, streamlining truck weigh-ins, increasing weight limits and extended deck drying times, all of which you are familiar with.

But I want to turn to focus on one of the most critical components of making 4FRI work, both in terms of the economics and improvement of the forest health and that is biomass removal. When it comes to large forest thinning projects like 4FRI, do you agree that the biomass removal, the disposing of large piles of small branches of leftover slash, is one of the biggest challenges?

Ms. CHRISTIANSEN. Yes, I do, Senator.

Senator MCSALLY. I appreciate that the Phase 2 RFP has a biomass removal mandate in it, but these types of requirements on other projects have scared away industry due to the huge costs involved. Could you just share what do you think the options are for removing wood biomass besides openly burning many metric tons of slash piles in Arizona's forests? Does the Forest Service intend to overcome previous challenges to biomass removals in a different way in this next phase of 4FRI? I just wanted to get your thoughts on that.

Ms. CHRISTIANSEN. Yeah, that's a great opener for, you know, the bottom line is the aggressive work we and others are doing to find markets for that biomass. It's not economical as you well know.

Senator MCSALLY. Yes.

Ms. CHRISTIANSEN. Just to remove it. To burn it all and put smoke in the air and we are working on multiple fronts, our forest products lab, our wood innovations work on a marketplace solution to biomass.

Now, in the meantime, 4FRI has been really a leader in teaching us this difficulty we have in how much of viable timber versus how much biomass and how we bring the right proposal forward of what the requirements are that meets a business model that's reasonable.

Senator MCSALLY. Yes, is there, I mean, as you know, the market-based solution is the challenge, right? Because slash and unmarketable trees can be supplies. They can be used to generate electricity, but it is just not lucrative as far as being cost-efficient compared to other modes. How do you address any of those market-based issues when it comes to even using it for electricity generation?

Ms. CHRISTIANSEN. Yeah, electricity generation has, you know, it doesn't, it just doesn't attract, in many cases, the dollar return for the milliwatts produced when you have significant haul costs. But we're looking far beyond just electricity generation, torrefied wood, it's a way to, basically a replacement for coal. Nano technology, cellulosic nano technology, we can build car frames and, you know, put in concrete to lighten the load. There's multiple other options that we are getting near to some. We have the technology. How we scale it up to be marketplace is the next bridge that we're working on.

Senator MCSALLY. Okay, thanks.

The Phase 2 RFP has been delayed multiple times. Now that it is out for review, the due dates and contract award dates have been delayed multiple times also. Now some of the delays are largely due to listening to stakeholders and improving the RFP which is commendable, but it is important that we adhere to an aggressive timeline. Can you just share on the record when you expect the contract to be awarded at this point?

Ms. CHRISTIANSEN. Yeah, you're exactly right. I was personally involved in the decision to extend it based on really informative feedback with potential bidders. And the proposals are due in May. It's our top priority to evaluate in the summer months and we will award in early fall and it's a priority stay on that timeline.

Senator MCSALLY. Okay, thank you. I am over time.

Ms. CHRISTIANSEN. You're welcome.

The CHAIRMAN. Thank you, Senator.

Senator Heinrich.

Senator HEINRICH. Thank you, Madam Chair.

Chief, according to a recent USGS report about the economics of forest restoration across the West, for each million dollars that we invest in landscape-scale forest restoration programs, communities actually see more than \$2.2 million in economic output. Not only do these projects bring jobs and livelihoods to rural economies, but they protect our drinking water, and they decrease the risk of wild-fire not only on those lands but in the adjacent communities. Yet in this budget request, you have zeroed out the collaborative forest landscape restoration program, zero.

For a little context, this program has treated roughly 55,000 acres in recent years on the Santa Fe National Forest alone. Oftentimes, this is several times more, from two to four times more acres, than our timber program touches. Budgets are a statement of priorities and values. What I want to know is why this Administration doesn't value this critical restoration tool more?

Ms. CHRISTIANSEN. Senator, I really appreciate how you framed that question because you're absolutely right, the multiple benefits of forest restoration, what's created in communities, this nation, the nation's forests provide over 60 percent of the drinking water for the U.S. It really is profound.

With that said, as I said in my opening statement, some difficult choices and tradeoffs were made in this budget submission and we are committed to the collaborative spirit of shared stewardship, investing in priority work to get outcomes that are important for the particular states and communities in these forest communities. And I'd be happy to work with you as you all move forward.

Senator HEINRICH. I just don't see a zero as a tradeoff. I would point out that businesses in the State of New Mexico are now funding more of this kind of landscape scale restoration than the entire Federal Government proposal in your budget. That says something about priorities and values.

And in addition, I was dismayed to see the budget request, yet again, cuts the Land and Water Conservation Fund to nearly nothing, \$14 million in total, zero for the Forest Service. It actually takes \$8 million in existing projects away from the BLM. And I can't tell you how popular that program is with the entirety, practically, of my constituency. It is the one place where you get sports-

men, conservationists and outdoor rec enthusiasts all on the same page because it is the most effective program for creating access and protecting habitat. I don't understand why access and habitat are not priorities in this budget.

Ms. CHRISTIANSEN. Yes, I do hear you, Senator. This Administration, again, it took some really prioritized focus and acquiring new lands was not the priority because we need to take care of the lands, the roads and the systems that we have and that was the choices and tradeoffs that we made.

Senator HEINRICH. Oftentimes, what that means is that there are public lands that the public cannot access and we have heard a lot of rhetoric out of this Administration about access. LWCF is the tool to move that from rhetoric to reality on the ground.

I am down to a minute here, so I want to get one last question in and this relates to what Senator Manchin raised around the maintenance backlog. We have a number of campgrounds in New Mexico that have been closed for years. One was damaged in a 2012 fire and still has not reopened. I don't think that is unique to my state. With the current funding structure, how long would it take the Forest Service to work through its maintenance backlog and get some of those campgrounds reopened?

Ms. CHRISTIANSEN. You know, for our roads and trails, and I can get back to you specifically on the campground piece, but for our roads and trails, we would need \$445 million per year for the next ten years in addition to the, what's appropriated to clear the backlog.

Senator HEINRICH. And what is the number this year in your budget?

Ms. CHRISTIANSEN. The number this year, I can get—it's around, let me get that for you. It's \$453 million.

Senator HEINRICH. Thank you.

The CHAIRMAN. Senator Gardner.

Senator GARDNER. Thank you, Madam Chair. Thank you, Director Christiansen for being here today and your service today.

You may have addressed this already in previous questions, I apologize for repeating a question if it was already asked. About ten months ago we talked about the Aerial Firefighting Use and Effectiveness Study. A year ago, we said that it would be coming soon. The year before that we said it would be coming soon. The year before that we said it would be coming soon. Is it coming soon? The year before that it was coming soon.

Ms. CHRISTIANSEN. Yes, Senator, that is deserved, that question is and I guarantee you it is coming soon. I understand—

Senator GARDNER. But what is taking so long?

Ms. CHRISTIANSEN. Yeah, you know, I'd be glad to come in and give you a really detailed briefing, but let me give you the high points. We completely had—didn't know what we didn't know on the complexity of this kind of study. This was going on while we were going to the next generation of air tankers. Of course, we have to put the remote sensing devices on these air tankers. The questions, the performance measures, the data standards, the—

Senator GARDNER. Well, let me just stop you. So when you say coming soon, is that next year I get to ask you again or—?

Ms. CHRISTIANSEN. No, this spring.

Senator GARDNER. This spring.

Ms. CHRISTIANSEN. This spring, guarantee you.

Senator GARDNER. Alright, so before June?

Ms. CHRISTIANSEN. Yes, sir.

Senator GARDNER. Okay, thank you.

Over the last several years the Forest Service has seen a 40 percent turnover, as is my understanding, in staffing and 40 percent of the non-fire workforce has been either converted to fire workforce or left the service altogether. Given this current staffing situation, I would like to have a conversation about what we are doing to fill in the gaps in non-fire staffing, like law enforcement and fire prevention, and I want to talk a little bit about what is happening in my own state.

In Summit County, Colorado, a population of 30,000 people, they have now, they wrote a letter to me last year. They passed a tax increase on themselves in the county, over \$1 million a year toward a variety of wildfire prevention and mitigation strategies, including paying for six—they themselves, the county, the people of the county, are taxing themselves to pay for six seasonal forest service staff to conduct fire prevention work on the Dillon Ranger District of the White River National Forest, the busiest forest in our country. One full-time, year-round, USFS, Forest Service employee working on fire mitigation projects as Forest Service contractors conducting fire mitigation timber cuts over time for fire prevention patrols on Forest Service land by Summit County Sheriff's office and fire mitigation projects on Summit County open space adjacent to Forest Service land. Now that we have the budget cap adjustment in place, is the Forest Service looking to address the situations like the one I just described in Summit County and throughout the State of Colorado?

Ms. CHRISTIANSEN. Yeah, we really appreciate that kind of shared services collaboration. What the community is doing to really step in and help fill those gaps, it's really significant.

In regards to what we call the fire funding fix, we absolutely appreciate the work of Congress that it stabilized our budget so we aren't continuing to put more into fire, but it really is the process of budget development and appropriations process to increase the funding for those services. So we really are looking forward to working with you on that.

Senator GARDNER. Will you be filling the gaps in the non-fire staffing that I talked about in both law enforcement and fire prevention?

Ms. CHRISTIANSEN. It will fill the gaps to the extent that we get appropriations to do so, Senator.

Senator GARDNER. This will allow us so that we don't have to have local counties doing tax increases to do the job of the Forest Service?

Ms. CHRISTIANSEN. Yes, Senator.

Senator GARDNER. Thank you.

Obviously, I remain concerned with the number of air tankers under contract with guaranteed availability to support efforts around the country. I know there is a private study that is being released this week which examined the Forest Service's wildfire data between, I think, 2015 and 2019 showing that when a large

air tanker, a very large air tanker, is deployed against a fire in the first four to six hours, fires lasted an average of less than one day. But for far too many fires in this country, that has not been the case, oftentimes lasting 20 more days plus or significantly beyond that. Billions of dollars are being shouldered by taxpayers, businesses and the community as a result.

We don't have the study. So without that study how are you justifying the number of air tankers you have come up with for exclusive use contracts and can you provide this Committee with the data informing that decision and are you confident that during a bad fire you are—there is sufficient air tanker capacity available to the Forest Service?

Ms. CHRISTIANSEN. Yes, I am confident, to answer the last question first, and yes, we'd be glad to give you more detailed information on how we really analyze those decisions.

I can guarantee you we have them, we will have the most air tankers we've had in over ten years, this fire season. And call-when-needed is, we can put those on as we see the fire danger increasing, so it's not that we call 'em up and, you know, we have to wait two days. We call 'em up as we see—

Senator GARDNER. At a higher rate, right? That is a more expensive contract?

Ms. CHRISTIANSEN. Yeah, but we, at a higher rate, but only when we use them versus we have to pay them for a guaranteed amount of time. So it's a bit of an art and a science, I will say, on how we find the right balance to be responsive, to make sure we have the right resources in aerial firefighting in the uptick, but we're responsive with our budget and our spending.

Senator GARDNER. Thank you. I have some additional questions for the record.

Thank you, Chairman.

The CHAIRMAN. Thank you, Senator.

Senator Wyden.

Senator WYDEN. Thank you, Madam Chair.

Chief, it is great to have you. Let me start with the Wildfire Disaster Funding Act which, I think, most people believe is the biggest change in firefighting policy in decades and in effect, for those who didn't follow it, it basically says we are going to fight the big fires from the disaster fund and then we are going to liberate all that money to focus on prevention. We wrote it, all of us were involved in it, we wrote it in this room.

My first question is, what can you tell us, because this is the first year of implementing this transformative law, how is it going in terms of being able to liberate money to get at this backlog that Senator Manchin and Senator Heinrich and everybody else is asking you about? The backlog in my state alone is 2.5 million acres of NEPA-ready, hazardous fuels/prescribed fire projects. So my first question is how is it going in terms of the first year when we really ought to have new money liberated because we finally said we are not going to have this bizarre policy where we keep raiding the prevention money to fight big fires? How are we doing in terms of getting that money out of the disaster fund to go after the backlog?

Ms. CHRISTIANSEN. Thank you, Senator. We do continue to appreciate very much on—this is significant support and leadership

on this, it was profound and it is a fire funding—oh, thank you—[mic was off] the fire funding fix is profound and I do have to clarify something. So it stabilized the Forest Service constrained budget. So we weren't—we didn't have to, the ten-year average that we have to fund first with fire, that has been stabilized, as you know, to the 2015 ten-year average. So we don't have that continued erosion. That isn't very helpful.

The second part of the fire funding fix was because we have the disaster relief account now for the big fires, the chances of having to borrow mid-season are, you know, reduced, practically won't happen. But the idea that we have gotten additional monies, that's what this conversation is about, that is the Appropriations Act. What we are doing in the Forest Service is to say, we're going to prioritize, we're going to be a good investment and the funds that this budget process, this appropriation process, gives us, we are going to put to good use and you're going to see a good investment.

Senator WYDEN. I am very much for the new money and that is why my colleagues' questions were good.

Ms. CHRISTIANSEN. Yes.

Senator WYDEN. I also believe that if you are no longer raiding prevention, you can use prevention money to hit these targets. I would like to ask you to provide us month-to-month treatment targets for reducing hazardous fuels, at least in my state, but I think my colleagues are going to ask as well. Can you do that, give us month-to-month treatment targets for reducing hazardous fuels?

Ms. CHRISTIANSEN. Yes, Senator, I might ask if we could do it quarterly because there's a little bit at play. We set quarterly targets is how we do it, but if you need month, we'll do it by month.

Senator WYDEN. Great. I think, because this is becoming the fire season, if we could say, the first couple of months we need monthly targets, and after that we will do quarterly. Is that agreeable to you?

Ms. CHRISTIANSEN. Okay, yes.

Senator WYDEN. Great.

Ms. CHRISTIANSEN. And I would like to just point out that this budget does propose a \$65 million increase in hazardous fuels.

Senator WYDEN. I saw that. Okay.

Second, Senator Manchin and I have been very interested in finding some fresh approaches to deal with prescribed fire and, as we always do, we talk with the Chair because we always try to work on these issues together. But as you know, there is a lot of interest in prescribed fire, streamlining the regulatory hurdles, developing a prescribed fire workforce. How are we doing on that?

Ms. CHRISTIANSEN. We are making, well, we are making far more progress on getting more prescribed fire done on the ground, particularly in the West where we need to break through those cultural and social barriers. In the Pacific Northwest, in particular, we increased our prescribed fire activity. As you know, in many, many of our landscapes across this country, fire is the number one treatment tool and we've got to keep increasing.

Senator WYDEN. Let me do this because I am almost out of time. If you could give me a written answer on the prescribed fire plan. Senator Manchin and I want to work together—

Ms. CHRISTIANSEN. You bet.

Senator WYDEN. —with all of our colleagues on both sides.

Last question. You might want to give this to me in writing because I am over my time. I am very interested, as you and I have talked about, in looking at new technologies in terms of fire-fighting, particularly one that I hear a lot about is the ability to fly helicopters at night or in low visibility. If you can give us a short answer, I can probably get another 15 seconds out of my friend the Chair, but you will also give me a response in writing on these technologies.

Ms. CHRISTIANSEN. I will.

The short answer is we have been, we've had night flying operations in Southern California for the last handful of years. We learned a lot. It is an investment, but we have some known, very known capabilities in the right place to use night flying operations.

Senator WYDEN. Great.

Thank you, Madam Chair.

The CHAIRMAN. Thank you.

Senator Daines.

Senator DAINES. Thank you, Madam Chair.

Chief, good to have you here and thanks for testifying on the Forest Service budget. It was also really good to be discussing these issues at that Forestry Forum we had two weeks ago and our meeting yesterday with you and your team and thanks for being here again today. I was encouraged to find the Forest Service budget prioritize wildfire suppression, shared stewardship principles, increasing efficiencies and set a very quantifiable target of timber output target of four billion board feet.

However, if that is the good news, here is one of my major concerns. I believe it is unacceptable that the Administration continues to eliminate funding for the Land and Water Conservation Fund, known as LWCF. LWCF is a critical tool in Montana to protect and enhance our public and recreational access to our public lands. In fact, I, along with 52 other Senators, have co-sponsored bipartisan legislation to make the LWCF funding permanent and will continue pushing for full mandatory funding for LWCF in working across the aisle with my colleagues on getting our important bill across the finish line. Unfortunately, there are not too many things that unite Congress anymore. As we saw earlier last year, public lands do, and I think this is one of the pieces of legislation that will.

Sixty-two percent of Montanans stated that wildfires threatening homes and property are a serious problem. We see the effect of that certainly breathing the smoke in the summertime. This should come as no surprise as there are 1.6 million acres in the wildland urban interface that are at high risk of wildfire. I do appreciate the budget prioritizes public safety by requesting robust funding for wildfire suppression and important vegetation management; however, it is litigation, litigation from fringe groups, that continues to delay time-sensitive wildfire risk reduction projects.

There is one lawsuit currently jeopardizing over 130 projects in Montana alone. This particular case is one of many copycat lawsuits that follow the Ninth Circuit's Cottonwood decision. This court decision established a new procedural requirement that amounts to a mere paperwork exercise with no benefit. Even the

Obama Administration agreed that this case, and I quote, “had the potential to cripple forest management.” That is right out of the Obama Administration. We were working this when he was President, and they were spot on.

The impact of this case has tied up hundreds of projects damaging the health of our forests and threatening jobs. In fact, just last month, in Townsend, Montana, Broadwater County, 70 Montanans were laid off when RY Timber was forced to close a mill citing chronic timber supply challenges exacerbated by litigation. The irony is, as you stand at that mill, you are looking at thousands, tens of thousands, hundred thousands of acres of forested land and our public lands, our national forests, and we can’t go in to do some commonsense thinning that reduces the risk of wildfire and keeps these folks employed. As with any mill closure this will surely have a ripple effect in the community. These are not prosperous communities. These are important, good paying jobs and the families are devastated.

My question, Chief, is can you explain the impacts of Cottonwood and do you believe there is a conservation benefit to this new requirement?

Ms. CHRISTIANSEN. The consequences are severe, I will say that up front. It’s—we are committed to do our environmental and our Endangered Species Act due diligence consultation. But this Cottonwood decision is duplicative in that it requires us, anytime there’s any new information on a forest land management plan, that’s the general plan that we lay out for every 15 to 20 years, and it requires us to consult on any new information. When we are going to consult on any project we’re going to directly do on the ground. So, it’s duplicative. It takes numerous resources away from getting work done on the ground, but worse, it just prevents the work getting done, the resiliency in the forest to protect communities and the way of life of public lands in Montana.

Senator DAINES. How does litigation impact wildfire reduction project and overall, the visitor’s experience to our national forests?

Ms. CHRISTIANSEN. Well, it just prevents us from getting the critical treatments on the ground because we’re tied up in litigation. We’re enjoined. We can’t move forward and recreationists have to live with smoke. Communities have to live with smoke. The economic prosperity of communities are compromised, as you just talked about, with RY in Townsend. It’s a significant rippling impact and it’s not just in Montana anymore, it’s in the bigger footprint of the Ninth Circuit.

Senator DAINES. Yes, and I am out of time. My last point, and I will wrap up here, is that my wife and I are avid backpackers, like a lot of Montanans are. We are always, during the August recess here, leaving DC and getting to spend time in the high country in Montana. We literally have to watch the fire reports to make sure we can get into some of the areas in Southwest Montana to make sure they are open—back to the impact of access to public lands.

Thanks for your testimony.

Ms. CHRISTIANSEN. Thank you.

The CHAIRMAN. Thank you, Senator Daines.

Yes, it is, Senator Hirono.

Senator HIRONO. Yay, thank you.

Chief, as you know, biosecurity is of great importance to Hawaii and the Pacific region and, of course, by protecting our forests and environment from invasive species, we are also reducing the likelihood that these pests make their way to the mainland. Unfortunately, our current biocontrol facilities in Hawaii that are utilized by both the state and Forest Service are outdated and we are in need of a new state-of-the-art, biosecurity research facility jointly owned and managed by the state and federal partners, including the Forest Service, that would allow our researchers to test different biocontrol methods for combating some of the world's worst pests.

The state has allocated some \$180,000 for planning and scoping the possibility of a facility but federal support is currently needed, and I would like your commitment to work with me and my staff in exploring the possibility of a new biocontrol research facility in Hawaii because we are the invasive species capital of the country.

Ms. CHRISTIANSEN. Gateway, how's that?

Senator HIRONO. Gateway, yes, that's fine.

Ms. CHRISTIANSEN. We appreciate your leadership on this and Hawaii's stance on this, and I'd be happy to work with you to see what we can do.

Senator HIRONO. Thank you.

I also want to thank you for the interagency cooperation that has gone into helping Hawaii combat a pathogen that has been devastating the native ohia trees called Rapid Ohia Death. You mentioned that our forests account for over a vast majority of the nation's drinking water and that is certainly the case with our ohia forests because they are part of watersheds. Money from the state and private forestry account has been critical to helping our folks on the ground in Hawaii address Rapid Ohia Death (ROD). I am disappointed to see that the President's budget makes severe cuts to our program that is so important to Hawaii, and I will work with my colleagues in Congress to see that the program is funded more adequately.

Along those lines, I appreciate your support for a forest pathologist at the Institute of Pacific Islands Forestry, but Hawaii is in desperate need of that position becoming permanent so they can support our state biosecurity plan and help address existing and emerging pests and pathogens such as Rapid Ohia Death and support for this position would be leveraged with funds from the University of Hawaii and the State of Hawaii. I would like your commitment to work with me and my staff to see about establishing a permanent, jointly-funded forest pathologist in Hawaii.

Ms. CHRISTIANSEN. We'd be happy to work with you on that. We have some great scientists out there on biocontrols and other things and it's—there's a great multiagency effort and we are committed to be, remain a part of that.

Senator HIRONO. Good.

The President's budget proposes closing the Pacific Southwest Research Station which oversees research and development in California, Hawaii and the U.S.-affiliated Pacific Islands and merging it with the Pacific Northwest Research Station. And while the Forest Service knows that this closure will not result in the cessation

of research in that region, it is not clear what this proposal specifically means for the future of the Institute of Pacific Islands Forestry, or IPIF, in Hawaii. Will you have experts on your staff brief my staff on any impacts of this proposed closure on the Pacific Islands as well as the future that the Forest Service envisions for IPIF?

Ms. CHRISTIANSEN. Absolutely. I have been out to IPIF and I have personally seen how integrated they are, and we'd be happy to work with your staff.

Senator HIRONO. Thank you.

You noted that you are making progress on the issue of preventing sexual harassment and retaliation in the Forest Service and there were a number of recommendations made in the IG report because this is an ongoing problem for the Forest Service, and you did say that while you are improving that it takes time to improve the culture. I was curious to know, seeing the list of the report, where on January 5th, 2020, the agency, your agency, closed about 88 percent of the 2,215 cases of harassment reported since August 2017. I realize that you are focusing on your hiring methods, the kind of questions that you ask of your potential hires, you are really focusing on the need to report these instances and the training and, of course, the investigation of this kind of misconduct. But I am curious to know, who is doing the harassing and who are the victims of the harassment? I take it they are all employees. So is it your male employees who are harassing the female employees? Is that the usual circumstance?

Ms. CHRISTIANSEN. We can get you more specific demographics. There's, you know, harassment is, it knows no boundaries. I would say the preponderance is between gender, but it is not only—we have specific demographics on what kind of lines of work and we're studying that and looking at the trend lines and it's a bigger conversation than now but I'd be glad to get back to you with more information.

Senator HIRONO. Yes, so I am interested in how, who is actually, you know, doing the harassing, what you are doing in terms of diversifying your employee base and all of those kinds of aspects.

Ms. CHRISTIANSEN. I'd really love to come visit with you.

Senator HIRONO. Thank you.

Thank you, Madam Chair.

The CHAIRMAN. Thank you.

Senator Cantwell.

Senator CANTWELL. Thank you, Madam Chair.

Chief Christiansen, great to see you. Thank you so much.

Obviously, no one can argue that nationally and internationally the fire seasons are with us everywhere from Australia to Alaska, so a lot is going on. One of the things I am pleased to see is there is \$15 million in the President's budget to implement the Technology Advancement Act that Senator Gardner and I pushed through. That is everything from GPS locators to real-time fire information. We did a great demonstration of this in Spokane that I loved. We were at a fire station, literally, in the garage of the fire station, and they lit a can outside. But you couldn't see the fire, it was hidden. But the heat detection sensor that we had, an aerial

sensor, could detect it and showed it on our monitor. There was a “hot spot” and we got to get right on it.

We are just such a firm believer in this technology. What can we do now to speed up the deployment of this technology? CBO had estimated that you could do the whole Wildfire Management Technology Act for just \$8 million. So we feel like a lot can go forward this fire season. What can we get done with that money?

Ms. CHRISTIANSEN. Yeah, the money is really appreciated and it, you know, to whatever levels Congress does choose to fund, we stand ready to be able to implement. Now, you know, funding it is the highest priority on being able to have the resources, but we have to make sure we invest in the right way. So we are moving out now, regardless of whether these funds come forward or not, on doing some pilot tests around these resource trackers.

The technology is changing, you know, weekly and so we’re working interagency in three, we have three different scopes of questions in these three major pilots across the country with a incident—a command team to 100 percent of the fire personnel in another region, across agencies and there are different test types so that we can stand ready should we get the funding to deploy. We know the best investment and the best operating procedures, and we’re going to use existing funds to move that forward.

Senator CANTWELL. Well, I appreciate that and I would think that then when you look at the maps for what we get in a few months here and further into the early summer, you will look at that and make technology use projections based on where you think hot spots are or the biggest threats or——

Ms. CHRISTIANSEN. Well, on the resource trackers that’s more where we are considering what kind of fire activity we think we’ll have in those areas, but it’s capability, it’s the readiness of the cross, you know, the multiple agencies are affected. So we’re deploying that now because it’s a little bit more of a test that we need to get stood up now.

Senator CANTWELL. What about the GPS trackers for fire-fighters? That seems very easy to deploy and——

Ms. CHRISTIANSEN. Well, that’s what I’m talking about, the tracker, the resource tracker, the GPS tracker.

Senator CANTWELL. Okay, so that is just what—just that resource. Okay.

Ms. CHRISTIANSEN. Yes, yes. And then we’re, you know, we’ve been working on——

Senator CANTWELL. I mean, that is very low cost, right?

Ms. CHRISTIANSEN. I wouldn’t call it low cost with the amount of infrastructure that you have to put in place and the training and the capacity and maybe in the, you know, if we’re talking inter-agency, we’re talking 15,000 fire personnel and we put it on our, what I call, our militia that do do fire, there’s another 10,000. So it’s not low cost.

Senator CANTWELL. Right, but obviously we are looking for people when they are deployed not when they are—we have enough other problems, right?

Ms. CHRISTIANSEN. Yes.

Senator CANTWELL. So we are just looking for the deployed individuals——

Ms. CHRISTIANSEN. Absolutely.

Senator CANTWELL. —and tracking them.

Ms. CHRISTIANSEN. But in a high fire season, interagency, we can have 26,000, 27,000 folks deployed.

Senator CANTWELL. So, okay. And all at the same time?

Ms. CHRISTIANSEN. Yeah and peak parts of seasons, oh, yes. I mean, that's getting up there and breaking the record. We're usually around, depending on what kind of fire activity, we're usually, you know, anywhere from 5,000 to 20,000 in the height of a fire season but it's pressed close to 30,000.

Senator CANTWELL. Well, I would hope, you know, obviously we have lost Northwest people in some significant fires over the last two decades.

Ms. CHRISTIANSEN. You bet.

Senator CANTWELL. And we definitely would also like to see the weather forecaster, smoke forecasters, on the ground in those situations because we think that is critical as well.

Ms. CHRISTIANSEN. Yeah, Senator, if I could just quickly interrupt on the wildfire modernization piece. Our researchers are ready to deploy an app that will, you know, every firefighter has a smartphone that would give real-time escape routes and safety zones on their app as they move about. So there's all kinds of other capacities with this that we're growing.

Senator CANTWELL. Well, we will look forward to, obviously, being large and vocal advocates for this budget—

Ms. CHRISTIANSEN. You bet.

Senator CANTWELL. —and doing everything we can to help you get these things deployed. We think the challenge just grows every fire season, so we definitely want you to have every tool and are glad that you are going to embrace the modernization with or without this \$15 million, and clearly we want to get you those resources.

Ms. CHRISTIANSEN. You bet.

Senator CANTWELL. Thank you, Madam Chair.

The CHAIRMAN. Thank you, and Senator Cantwell, thank you for what you have been doing on that technology front. We appreciate it.

Senator Cortez Masto.

Senator CORTEZ MASTO. Thank you.

Chief, welcome. It is good to see you and your team here and your staff, and thank you for all the good work that you do.

I want to echo the comments that were made by the Chairwoman along with my colleagues and Senator Cantwell. From Nevada, wildfires—whether they are in the forest or rangeland—are a big issue for us as well. What I would like to talk to you about is local cooperative fire agreements.

Ms. CHRISTIANSEN. Oh, yeah.

Senator CORTEZ MASTO. Yes. I have had conversations at a wild-fire summit in my state, talking with our state and local folks and, as you know, the agreements between the Forest Service and our state and local governments are to aid and mutual assistance and resource transfer for local and regional wildfires. But with the intensity of the fires we see, now longer fire seasons are in sight, we

literally, in Nevada, a fire is occurring every month now. We are seeing, unfortunately, that happening.

Can you talk and discuss the limitations you are experiencing with these cooperative fire protection agreements and what long-term solutions should we be considering to improve the relationships? And let me give you an example. I think the Forest Service staff wrote an April 2019 issue summary noting the limits current law provides these agreements and the potential need to reassess how these are implemented. Maybe I am catching you off guard and if you can't respond to that now, I would love a follow-up on if there is something we need to do to address these local agreements.

Ms. CHRISTIANSEN. Yes. I can address it generally. I want to make sure what part of limitations you're referring to. So that we'll, we'd be happy to follow up on that, the particular, because there could be a couple ways this, these limitations are.

Let me just say that even the U.S., who is coveted around this globe, that we have the world's best wildfire response, we cannot do it unless we have capacity at the local, the state and the federal level. So with my background, 30 years in state government that tended to those local arrangements, I'm steadfast and that is how we have built this system. So all parts need to function. The limitations, I believe, are in how we deploy the local resources way outside of their jurisdiction.

Senator CORTEZ MASTO. Correct. That is correct.

Ms. CHRISTIANSEN. Okay, that's the part of the limitation. And you know, how we help each other within their jurisdictions or close to their jurisdictions, is solid. But that there's interpretations about the Federal Government being the banker to, you know, send people all over is what we're getting audits about. And so, we'd be glad to, you know, do some more briefing about that, understanding and would love to have your help on how we look at how we keep a continuous firefighting effort across this nation.

Senator CORTEZ MASTO. Thank you. What we will do is look forward to a follow-up with maybe you or your staff to talk a little bit more about it.

Ms. CHRISTIANSEN. Yes, absolutely.

Senator CORTEZ MASTO. Thank you. I appreciate that.

In Nevada, our Air National Guard is one of the, I guess, for lack of a better word—

Ms. CHRISTIANSEN. MAFFS.

Senator CORTEZ MASTO. MAFFS, our Modular Airborne Fire Fighting Systems, that is happening and we are very proud of it. They come and talk regularly. Thank you for the partnership. I have been there. I have toured it. I have seen not only what they bring to the wildfire suppression, not just in Nevada, but in the region, right?

I guess what I am hearing, and I have concerns about this, so I would love for you to address this. One, can you comment on the impact that the National Guard's current C-130H aircraft has had on firefighting efforts? Then I am hearing there is a potential that, as you know, our Air National Guard is looking to migrate to the C-130J and they are very excited about it, but now we are hearing funding for that aircraft may be diverted to the border wall and not

go toward the newer aircraft with the newer technology that will help with this aerial firefighting throughout the region. Could you address that and what you are hearing and the concerns that we are hearing from our Air National Guard in Northern Nevada?

Ms. CHRISTIANSEN. Yes, thank you, Senator.

I can say that the MAFFS capability, the mobile air frames, are the absolute important, we call it the surge capacity, when the private sector, we've maxed them out and we need additional capacity. MAFFS have time and time again been the critical resources that we call on. We love the partnership.

I cannot speak to the DoD funding, but I can say the Hs, the 130Hs are capable. The 130Js are a more modern platform that give us more options and effectiveness in fire response.

Senator CORTEZ MASTO. Thank you. I appreciate that. I look forward to following up with your staff as well.

Ms. CHRISTIANSEN. You bet.

Senator CORTEZ MASTO. Thank you.

The CHAIRMAN. Thank you.

Chief, I mentioned in my opening statement that while I appreciate the good efforts that the Forest Service is doing as you are working through this Roadless Rule and its application in Alaska, I mentioned that the effects of lifting it, I believe, have been misconstrued. I would ask you to speak, specifically, to what you believe the effect of lifting the Roadless Rule will actually be projected to have on the Tongass timber program.

And I will put it into context. We recognize that the DEIS projects that a full exemption would add approximately 185,000 acres to the timber base for future timber production. There are some who, again, are opposed to any level of timber harvest in the Tongass and they are saying this is what will be open and available, and yet Forest Service projections are that just 18,000 of those acres would be harvested over the next 100 years.

I am trying to put it into context. As I have been with folks in the Southeast this past week, I was reminding them that with the designations that are already in place, you have a full 80 percent of the Tongass that will never, ever, ever, ever be available for harvest. Can you speak to what the effect actually will be on the Tongass timber program?

Ms. CHRISTIANSEN. I can speak to that, yes, of course. And let's just put into context that the Tongass is far more than just timber. It's a multiple use forest. It provides many, many services.

The CHAIRMAN. Tourism, access for renewable——

Ms. CHRISTIANSEN. Energies.

The CHAIRMAN. ——energy projects.

Ms. CHRISTIANSEN. Systems.

So that's the context and timber is a piece of it and there's—so that's one slice of the analysis.

The CHAIRMAN. Right.

Ms. CHRISTIANSEN. And what the Roadless Draft Environmental Impact Statement looks at is where it is available. It doesn't project what would happen in a harvest. We are still bound by the Forest Plan, and then the Forest Plan guides the amount of harvest and then, of course, each particular activity needs to be analyzed and the amount of harvest——

The CHAIRMAN. So it is access, it is access.

Ms. CHRISTIANSEN. It's access, Senator.

The CHAIRMAN. It is reasonable access to all of the stakeholders.

Ms. CHRISTIANSEN. Of course, yes.

The CHAIRMAN. Yes.

Ms. CHRISTIANSEN. So the Roadless Rule itself does not dictate timber harvest. It dictates availability only, and there's the Forest Land Management Plan and then specific project proposals that would come after that.

The CHAIRMAN. I think this is part of the confusion. For timber this is really about the flexibility to make economic sales rather than increase harvests. Is that correct?

Ms. CHRISTIANSEN. Yeah.

The CHAIRMAN. You want to have the flexibility so that you can have the sales. I mean, we spoke earlier, and you recognized that the Prince of Wales project and the fact that a great deal of time and commitment had been made for that to accommodate that collaborative process, and then it gets stalled out because of litigation. So effectively, we put a lot of eggs in that basket and now we are seeing the situation that we have on the ground which, again, is the lowest timber harvested in, since we have been harvesting timber at just 5.6 million board feet. I think it is important to put in the context of the whole, what we are really talking about here with the proposal to lift the Roadless Rule.

I also mentioned, and you raised as well, the impact of the China timber tariffs. Retaliatory tariff rates on spruce were as high as 25 percent last year. We are the only national forest, the Tongass is the only national forest allowed to export whole logs and where we are sitting and where our market is, Asia, is pretty critical to us.

The irony here is that those who were told by Forest Service and others that you need to move away from old growth, you need to move to that second harvest, that young growth, that market, that they went out to build just happened to be a Chinese market. So they did everything that they were encouraged to do. Go find new markets. Move to a different—move away from old growth and yet, now they are in a situation where they are being left without a market at all. Is the Forest Service looking into possibly reexamining the stumpage rates to offset some of the effects of these Chinese tariffs?

Ms. CHRISTIANSEN. Yes, I'm very well aware of this major dilemma, Senator, and we are looking at everything within our law, our authorities of how we can do adjustments to accommodate these stumps, these stumpage rates. We're continuously looking at this.

The CHAIRMAN. Yes, this is a real challenge for us and, again, it is not something that we, perhaps, could have anticipated. But again, it is just the height of irony that those who felt they were being pushed out of one area did as was proposed and now they are sitting here, perhaps in a more desperate situation than anybody else.

Last question for you and, again, I think this just reflects on so many of the issues that we have as we are dealing with the Forest Service. They say, okay, move away from old growth. We move away from old growth to young growth, the market gets shut down

in China. They say well, focus on tourism, focus on that aspect of our forest which we are all about. We have extraordinary opportunities, but the complaints that we are hearing from recreation groups who have to wait months, sometimes years, to obtain a permit from the Forest Service in order to really enjoy them is again, yet, part of the continuing frustration.

When I was up in the state last week a constituent informed my staff that he has been waiting three years, three years for a permit to guide tourists on a hike to a scenic spot on Admiralty Island there in the Tongass. The hike is a mere 20 steps from a state-owned beach. So the frustration here is you say you can't harvest—we don't harvest. Look to tourism opportunities—but we are waiting years for permits. Now I know that in the past we have been able to blame some of the lack of staffing to move these permits through because of what was going on with fire borrowing, but we are beyond that now.

But I am still told that we have not recovered in the state in terms of the budget cuts that had moved forward some years back. There was agreement that Alaska took a heavier hit than most other areas, and we included language in the appropriations bill to try to rectify and adjust some of that. But we still continue to have challenges in being able to meet the staffing needs.

I met with Earl Stewart when I was up there, and we are looking to perhaps utilizing the ANILCA local hire a little bit better. But it is a challenge for us and as Forest Service has struggled to meet this challenge, Alaska has been on the short end of the stick when it comes to processes that work for not only the local people but those who are coming up from outside who want to avail themselves to tourist and recreational opportunities within the Tongass.

Ms. CHRISTIANSEN. Senator, I do hear your concern and I know it's not enough, but we are making progress. We've reduced the backlog of expired permits and those that are waiting for a new permit. We've set a priority. We are doing the hiring, the ANILCA local hire, and thanks to the fix that you did a few years back, that really makes it viable and resourceful for us. We're doing Centers of Excellence around growing the capacity and special use permits. We're streamlining our processes. There's several things we're doing.

I'll leave it there because Americans want to use these forests and we need to give them access and that's a, it's an, I mean, through some kind of, these are usually outfitter and guides. We have over 8,000 outfitters and guides across the system. It's really important that we be responsive to give them the access. So we are prioritizing the permits. We've made progress. We're doing additional hires. We're convening, there's some places where there's some conflict between big game hunting and the cruise industry. We've convened some local capacity to work out who's where and what. We're investing in—you and I were at Anan Wildlife Observatory and Mendenhall in some of the critical infrastructure. We do try to stick with our commitment that enjoying the Tongass and the Chugach National Forests is part of our duty of delivering our mission, and we will stay on it. I'm sorry to hear there's a three-year backlog, and I'd love to personally look at what that situation is.

The CHAIRMAN. Well, maybe what I can suggest is that you and I have an opportunity for a more detailed review——

Ms. CHRISTIANSEN. You bet.

The CHAIRMAN. ——of some of these issues that have presented themselves as sticking points.

Ms. CHRISTIANSEN. I'd be happy to.

The CHAIRMAN. With that, Senator Cortez Masto, did you have any follow-up?

Senator CORTEZ MASTO. I do, to just address this issue because I do agree, as we have Humboldt-Toiyabe which is the largest national forest in the Lower 48, very proud of it. But I noticed there is an 18 percent decrease in the forest and rangeland research account, and it proposes to eliminate research efforts related to wildlife, fish and recreation. How does that impact, that decrease, how does it impact what the Chairwoman was just talking about, the outdoor recreation that we want to promote, continue to support in our forest land?

Ms. CHRISTIANSEN. Yeah, thank you for that question. It would, the reduction in the research, recreation research, would impact our ability to do the capacity studies, the interface, the social trends and the biophysical capacity that the landscape have for the right kind of use on the right kind of land. We would not have those resources available to us to manage forward.

Senator CORTEZ MASTO. Okay, thank you.

Thank you.

Ms. CHRISTIANSEN. Thank you.

The CHAIRMAN. Chief, thank you for being here this morning. I know that folks will probably have follow-on questions.

Ms. CHRISTIANSEN. You bet.

The CHAIRMAN. We would appreciate your responses, and I will look forward to my meeting with you as well.

Ms. CHRISTIANSEN. Look forward to it.

The CHAIRMAN. With that, the Committee stands adjourned.

[Whereupon, at 11:32 a.m. the hearing was adjourned.]

APPENDIX MATERIAL SUBMITTED

**U.S. Senate Committee on Energy and Natural Resources
February 25, 2020 Hearing
The President's Budget Request for the USDA Forest Service for Fiscal Year 2021
Questions for the Record Submitted to Chief Victoria Christiansen**

Questions from Ranking Member Joe Manchin III

Question 1: Last week, I heard from several state foresters about plans to reduce current year funding for the Forest Inventory & Analysis program. The state foresters have told me that the Forest Service is rescinding \$3 million of the funding that was supposed to go to States and Forest Service regions to address "increased administration costs". I see that the budget proposal includes an additional \$1.45 million to cover increased "administrative expenses" for the Forest Inventory & Analysis program.

Can you explain to us what the problem is? Could the Forest Service use some of its carryover balances from last year for this program in order to make States whole until additional funding can be enacted for FY 2021?

Answer: The Forest Service will use \$2.6 million in carryover balances to mitigate the effects of unexpected information technology (IT) and overhead costs in the FIA program. These IT and overhead costs were planned for in the agency's FY 2020 budget; however, they were incorporated into the Forest and Rangeland Research budget line item in FY 2018 and FY 2019.

Question 2: A constituent recently forwarded me a report that documented data-discrepancies in Forest Service acreage tallies in Pocahontas County. Obviously, this is an important issue because the number of Forest Service acres in a county affects how much federal funding the County receives from programs such as the Payment in Lieu of Taxes program. I was excited to see in your budget proposal that the Forest Service is working with the Bureau of Land Management (BLM) to update your land records to make them more accurate.

After you finish aligning BLM's Cadastral National Spatial Database Infrastructure with Forest Service's Land Status Records System, will you report back to me as to whether you discovered a change in the tally of federal acres present in Pocahontas County, West Virginia?

Answer: The Forest Service is reviewing the records provided by your constituent to better understand their calculation of National Forest System acres in Pocahontas County. We will follow up with your office and the county after we finish our review.

Question 3: For many years, as part of the President's Budget justification, the Forest Service's Explanatory Notes have included a breakdown showing which National Forest System regions would receive which portions of the increases or reductions being proposed. Beginning a few years ago, the President's Budget proposal stopped providing this information, and only provided data on how funds previously (in the past two years) were distributed among National Forest System regions. This year's President's Budget proposal doesn't provide either. This information is very helpful to Members in understanding how various Forest Service proposals would play out on the ground.

U.S. Senate Committee on Energy and Natural Resources
February 25, 2020 Hearing
The President's Budget Request for the USDA Forest Service for Fiscal Year 2021
Questions for the Record Submitted to Chief Victoria Christiansen

Please provide the past two years of allocations and a proposed allocation for the proposed funding levels for FY 2021, for the regions of the National Forest System and for the Forest Service Research stations?

Answer: The Forest Service removed this special exhibit from our budget as part of our annual process to review our special exhibits and streamline our budget justification. The Forest Service does not propose Regional allocations for the President's budget, so that information is not available. The following table provides Regional allocations for FY17, FY18, and FY19.

Note: The difference between the enacted Fund and Program amounts and the amounts shown in the Forest Service Total columns is the Cost Pool assessment.

REGION, STATION, AND AREA ALLOCATIONS

Region, Station, and Area Allocations for Region 1 (Northern Region) and Region 2 (Rocky Mountain Region) (Dollars in Thousands)

Funds and Programs	Region 01 (Northern Region)			Region 02 (Rocky Mountain Region)		
	2017	2018	2019	2017	2018	2019
Capital Improvement and Maintenance						
Facilities.....	5,235	3,356	8,250	4,800	4,723	11,299
Infrastructure Improvement	0	0	0	0	0	0
Legacy Roads and Trails.....	0	0	0	2,750	0	0
Roads.....	13,217	17,947	17,044	16,653	20,713	19,825
Trails.....	8,769	8,118	8,804	6,726	5,970	6,577
Total, Capital Improvement and Maintenance.....	27,221	29,421	34,099	30,928	31,407	37,701
Forest and Rangeland Research						
Forest and Rangeland Research	0	0	0	0	0	111
Forest and Rangeland Research – FIA	0	0	0	0	0	0
Forest Products Lab	0	0	0	0	0	0
Total, Forest and Rangeland Research	0	0	0	0	0	111
Land Acquisition						
Acquisition of Lands for National Forests Special Acts.....	0	0	0	0	0	0
Acquisition of Lands to Complete Land Exchanges.....	0	0	0	0	0	0
Land Acquisition – Acquisition Management	548	476	499	577	510	537
Land Acquisition – Cash Equalization	0	0	0	0	0	0
Land Acquisition – Critical Inholding.....	0	0	0	0	0	0
Land Acquisition – Land and Water Conservation Fund.....	4,000	0	0	0	0	0
Land Acquisition – Recreational Access.....	0	142	0	0	0	0
Total, Land Acquisition	4,548	618	499	577	510	537

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Funds and Programs	Region 01 (Northern Region)			Region 02 (Rocky Mountain Region)		
	2017	2018	2019	2017	2018	2019
National Forest System						
Collaborative Forest Landscape Restoration.....	5,170	5,739	5,348	2,705	2,846	2,568
Forest Products	0	28,256	28,820	21,945	23,821	24,714
Grazing Management.....	5,499	5,070	5,213	7,357	7,264	7,524
Hazardous Fuels.....	0	24,174	27,442	0	24,946	29,964
Hazardous Fuels – Biomass	0	600	100	0	593	100
Integrated Resource Restoration	64,215	0	0	0	0	0
Inventory and Monitoring	0	0	0	0	0	0
Land Management Planning, Assessment and Monitoring.....	11,286	11,060	10,246	9,114	8,597	8,921
Land Management Planning	0	0	0	0	0	0
Landownership Management.....	4,825	4,766	4,721	5,897	5,753	5,686
Law Enforcement Operations	0	0	0	0	0	0
Minerals and Geology Management	8,520	7,718	7,759	7,475	7,555	7,673
Recreation, Heritage, and Wildmess ..	12,283	11,571	11,577	19,455	17,825	17,918
Vegetation and Watershed Management	0	14,846	14,171	12,238	11,509	11,909
Wildlife and Fisheries Habitat Management	0	9,343	8,589	7,830	7,570	7,784
Total, National Forest System	111,799	123,143	123,987	94,015	118,278	124,760
State and Private Forestry						
Community Forest and Open Space Conservation.....	0	0	0	0	0	0
Cooperative Forestry – Forest Legacy Program Administration	243	237	244	332	282	282
Forest Health Management – Cooperative Lands	1,104	1,244	1,450	1,485	1,653	2,004
Forest Health Management – Federal Lands	3,167	2,353	2,964	3,022	2,350	2,951
Forest Legacy Program	7,000	4,000	9,800	0	6,000	0
Forest Stewardship.....	544	515	593	1,023	992	1,177
International Forestry	0	0	0	0	0	0
Landscape Scale Restoration.....	0	918	1,200	0	900	300
National Fire Capacity	0	300	5,744	0	500	7,133
Rural Fire Capacity	0	1,025	1,110	0	1,531	1,638
Urban and Community Forestry.....	746	715	775	1,569	1,634	1,771
Total, State and Private Forestry	12,804	11,306	23,880	7,431	15,841	17,256
Wildland Fire Management						
Cooperative Fire Protection – State Fire Assistance.....	3,411	0	0	3,519	0	0
Cooperative Fire Protection – Volunteer Fire Assistance	1,004	0	0	1,583	0	0
Fire Operations – Suppression	0	0	0	0	0	0
Fire Preparedness.....	51,258	69,898	71,898	26,858	39,431	39,481
Fire Research and Development (NFP)	0	0	0	0	0	0

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Funds and Programs	Region 01 (Northern Region)			Region 02 (Rocky Mountain Region)		
	2017	2018	2019	2017	2018	2019
Hazardous Fuels.....	19,617	0	0	26,359	0	0
Joint Fire Sciences	0	0	0	0	0	0
Hazardous Fuels - Biomass Grants	0	0	0	0	0	0
Total, Wildland Fire Management	75,290	69,898	71,898	58,318	39,431	39,481
Cost Pools	39,127	39,660	39,485	35,328	36,011	35,860
Gifts, Donations, and Bequests for Forest and Rangeland Research	0	0	0	0	0	0
Management of National Forest Lands for Subsistence Uses	0	0	0	0	0	0
Range Betterment Fund.....	0	0	0	0	0	0
Grand Total	270,788	274,047	293,847	226,598	241,478	255,706

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Region, Station, and Area Allocations for Region 3 (Southwest Region) and Region 4 (Intermountain Region) (Dollars in Thousands)

Funds and Programs	Region 03 (Southwestern Region)			Region 04 (Intermountain Region)		
	2017	2018	2019	2017	2018	2019
Capital Improvement and Maintenance						
Facilities.....	4,273	4,418	15,969	4,164	4,415	13,680
Infrastructure Improvement	0	0	0	0	0	0
Legacy Roads and Trails.....	0	0	0	0	0	0
Roads	14,091	17,051	18,256	12,840	17,268	16,308
Trails	3,354	2,946	3,399	6,260	5,767	6,137
Total, Capital Improvement and Maintenance	21,718	24,416	37,624	23,264	27,450	36,125
Forest and Rangeland Research						
Forest and Rangeland Research	0	0	0	0	0	39
Forest and Rangeland Research – FLA	0	0	0	0	0	0
Forest Products Lab	0	0	0	0	0	0
Total, Forest and Rangeland Research	0	0	0	0	0	39
Land Acquisition						
Acquisition of Lands for National Forests Special Acts.....	0	0	0	0	0	0
Acquisition of Lands to Complete Land Exchanges.....	0	0	0	0	0	0
Land Acquisition – Acquisition Management	209	179	195	527	461	494
Land Acquisition – Cash Equalization	0	0	0	0	0	0
Land Acquisition – Critical Inholding	0	0	0	0	0	0
Land Acquisition – Land and Water Conservation Fund.....	0	0	0	0	0	0
Land Acquisition – Recreational Access.....	0	0	0	0	0	0
Total, Land Acquisition	209	179	195	527	461	494
National Forest System						
Collaborative Forest Landscape Restoration.....	4,839	5,338	4,951	2,172	2,396	2,222
Forest Products	0	15,236	15,632	0	13,090	13,962
Grazing Management.....	8,139	7,811	8,053	8,709	9,144	8,629
Hazardous Fuels.....	0	49,450	54,907	0	30,746	35,448
Hazardous Fuels – Biomass	0	483	100	0	100	100
Integrated Resource Restoration	45,365	0	0	48,139	0	0
Inventory and Monitoring	0	0	0	0	0	0
Land Management Planning, Assessment and Monitoring.....	10,371	9,303	9,508	11,916	12,054	11,566
Land Management Planning	0	0	0	0	0	0
Landownership Management	4,082	3,949	3,980	5,004	4,851	4,907
Law Enforcement Operations	0	0	0	0	0	0
Minerals and Geology Management	5,866	5,475	5,396	8,438	7,299	8,201

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Funds and Programs	Region 03 (Southwestern Region)			Region 04 (Intermountain Region)		
	2017	2018	2019	2017	2018	2019
Recreation, Heritage, and Wilderness ..	16,807	15,765	15,889	20,317	18,524	18,416
Vegetation and Watershed Management	0	8,926	9,357	95	14,041	12,077
Wildlife and Fisheries Habitat Management	0	8,420	8,127	0	8,580	8,987
Total, National Forest System	95,469	130,155	135,901	104,789	120,823	124,515
State and Private Forestry						
Community Forest and Open Space Conservation	0	0	0	0	0	0
Cooperative Forestry – Forest Legacy Program Administration	132	152	191	188	168	193
Forest Health Management – Cooperative Lands	963	1,007	1,077	871	1,035	1,046
Forest Health Management – Federal Lands	1,499	1,106	1,689	2,501	1,816	2,389
Forest Legacy Program	3,480	710	3,145	2,929	3,000	0
Forest Stewardship	443	400	407	386	355	406
International Forestry	0	0	0	0	0	0
Landscape Scale Restoration	0	300	594	0	300	876
National Fire Capacity	0	200	4,299	0	200	2,467
Rural Fire Capacity	0	927	981	0	376	416
Urban and Community Forestry	711	613	733	665	570	657
Total, State and Private Forestry	7,228	5,416	13,116	7,539	7,820	8,451
Wildland Fire Management						
Cooperative Fire Protection – State Fire Assistance	2,931	0	0	1,211	0	0
Cooperative Fire Protection – Volunteer Fire Assistance	817	0	0	386	0	0
Fire Operations – Suppression	0	0	0	0	1,600	0
Fire Preparedness	52,528	78,380	80,915	56,322	73,675	75,730
Fire Research and Development (NFP)	0	0	0	0	0	0
Hazardous Fuels	31,758	0	0	23,672	0	0
Joint Fire Sciences	0	0	0	0	0	0
Hazardous Fuels – Biomass Grants	0	0	0	0	0	0
Total, Wildland Fire Management	88,034	78,380	80,915	81,590	75,275	75,730
Cost Pools	38,698	39,316	39,145	38,489	39,131	38,965
Gifts, Donations, and Bequests for Forest and Rangeland Research	0	0	0	0	0	0
Management of National Forest Lands for Subsistence Uses	0	0	0	0	0	0
Range Betterment Fund	0	0	0	0	0	0
Grand Total	251,357	277,861	306,897	256,198	270,961	284,320

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Region, Station, and Area Allocations for Region 5 (Pacific Southwest Region) and Region 6 (Pacific Northwest Region) (Dollars in Thousands)

Funds and Programs	Region 05 (Pacific Southwest Region)			Region 06 (Pacific Northwest Region)		
	2017	2018	2019	2017	2018	2019
Capital Improvement and Maintenance						
Facilities.....	5,878	10,523	15,721	5,423	8,436	15,357
Infrastructure Improvement	0	0	0	0	0	0
Legacy Roads and Trails.....	5,218	0	0	6,451	0	0
Roads	15,020	21,410	23,028	17,907	25,595	25,438
Trails	5,845	5,715	6,481	6,025	5,669	6,333
Total, Capital Improvement and Maintenance	31,960	37,648	45,231	35,806	39,700	47,128
Forest and Rangeland Research						
Forest and Rangeland Research	0	0	0	0	0	0
Forest and Rangeland Research – FLA ..	0	0	0	0	0	0
Forest Products Lab	0	0	0	0	0	0
Total, Forest and Rangeland Research	0	0	0	0	0	0
Land Acquisition						
Acquisition of Lands for National Forests Special Acts.....	0	0	0	0	0	0
Acquisition of Lands to Complete Land Exchanges.....	0	0	0	0	0	0
Land Acquisition – Acquisition Management	798	697	759	630	546	583
Land Acquisition – Cash Equalization ..	0	0	0	0	0	0
Land Acquisition – Critical Inholding ..	0	0	0	0	0	0
Land Acquisition – Land and Water Conservation Fund.....	0	0	0	0	0	0
Land Acquisition – Recreational Access.....	0	0	0	0	0	0
Total, Land Acquisition	798	697	759	630	546	583
National Forest System						
Collaborative Forest Landscape Restoration.....	2,796	1,983	2,807	6,648	5,866	6,703
Forest Products	22,596	28,095	28,238	50,559	49,200	50,740
Grazing Management.....	3,466	3,431	3,332	3,833	3,576	3,677
Hazardous Fuels.....	0	52,779	68,126	0	37,524	40,717
Hazardous Fuels – Biomass	0	1,244	100	0	2,291	100
Integrated Resource Restoration	0	0	0	0	0	0
Inventory and Monitoring	0	0	0	0	0	0
Land Management Planning, Assessment and Monitoring.....	12,598	11,433	11,830	12,252	10,605	11,250
Land Management Planning	0	0	0	0	0	0
Landownership Management	6,669	6,563	6,585	5,235	5,049	5,133
Law Enforcement Operations	0	0	0	0	0	0
Minerals and Geology Management	4,658	5,030	4,902	3,921	4,081	3,705

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Funds and Programs	Region 05 (Pacific Southwest Region)			Region 06 (Pacific Northwest Region)		
	2017	2018	2019	2017	2018	2019
Recreation, Heritage, and Wilderness ..	22,498	20,953	21,357	19,126	18,338	17,994
Vegetation and Watershed Management	13,710	13,943	16,775	19,659	17,837	18,104
Wildlife and Fisheries Habitat Management	12,273	10,515	10,378	16,818	13,687	15,366
Total, National Forest System	101,265	155,969	174,429	138,051	168,053	173,488
State and Private Forestry						
Community Forest and Open Space Conservation	0	0	0	0	0	0
Cooperative Forestry – Forest Legacy Program Administration	288	275	297	336	235	284
Forest Health Management – Cooperative Lands	2,083	2,340	2,209	2,296	2,529	2,728
Forest Health Management – Federal Lands	3,547	2,584	3,733	5,097	3,742	5,389
Forest Legacy Program	4,565	12,700	0	7,218	10,900	2,200
Forest Stewardship	948	915	1,058	576	639	639
International Forestry	0	0	0	0	0	0
Landscape Scale Restoration	0	649	296	0	1,100	900
National Fire Capacity	0	380	4,460	0	200	6,530
Rural Fire Capacity	0	1,324	1,418	0	1,183	1,248
Urban and Community Forestry	2,717	2,173	2,718	827	661	806
Total, State and Private Forestry	14,147	23,340	16,190	16,349	21,189	20,724
Wildland Fire Management						
Cooperative Fire Protection – State Fire Assistance	5,635	0	0	2,221	0	0
Cooperative Fire Protection – Volunteer Fire Assistance	1,217	0	0	1,015	0	0
Fire Operations – Suppression	0	0	0	0	0	0
Fire Preparedness	238,174	293,578	293,614	69,632	99,861	101,000
Fire Research and Development (NFP)	0	0	0	0	0	0
Hazardous Fuels	56,681	0	0	32,195	0	0
Joint Fire Sciences	0	0	0	0	0	0
Hazardous Fuels – Biomass Grants	0	0	0	0	0	0
Total, Wildland Fire Management	301,707	293,578	293,614	105,062	99,861	101,000
Cost Pools	56,994	58,417	58,101	67,959	69,092	68,674
Gifts, Donations, and Bequests for Forest and Rangeland Research	0	0	0	0	0	0
Management of National Forest Lands for Subsistence Uses	0	0	0	0	0	0
Range Betterment Fund	0	0	0	0	0	0
Grand Total	506,871	569,649	588,325	363,858	398,441	411,597

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Region, Station, and Area Allocations for Region 8 (Southern Region) and Region 9 (Eastern Region)
(Dollars in Thousands)

Funds and Programs	Region 08 (Southern Region)			Region 09 (Eastern Region)		
	2017	2018	2019	2017	2018	2019
Capital Improvement and Maintenance						
Facilities.....	6,394	6,455	12,899	4,395	8,110	13,482
Infrastructure Improvement	0	0	0	0	0	0
Legacy Roads and Trails.....	3,860	0	0	3,193	0	0
Roads	19,656	22,147	24,267	15,068	18,651	19,508
Trails	6,576	5,947	6,638	4,933	4,424	4,675
Total, Capital Improvement and Maintenance	36,487	34,548	43,804	27,589	31,186	37,665
Forest and Rangeland Research						
Forest and Rangeland Research	95	95	0	0	0	0
Forest and Rangeland Research – FLA ..	0	0	0	0	0	0
Forest Products Lab	0	0	0	0	0	0
Total, Forest and Rangeland Research	95	95	0	0	0	0
Land Acquisition						
Acquisition of Lands for National Forests Special Acts.....	0	0	0	0	0	0
Acquisition of Lands to Complete Land Exchanges.....	0	0	0	0	0	0
Land Acquisition – Acquisition Management	977	855	970	1,225	1,055	1,072
Land Acquisition – Cash Equalization ..	0	105	0	0	0	0
Land Acquisition – Critical Inholding ..	0	0	0	0	95	0
Land Acquisition – Land and Water Conservation Fund.....	0	0	0	0	0	0
Land Acquisition – Recreational Access.....	0	0	0	0	0	0
Total, Land Acquisition	977	960	970	1,225	1,150	1,072
National Forest System						
Collaborative Forest Landscape Restoration.....	5,225	5,572	5,210	875	744	717
Forest Products	35,030	36,450	38,248	37,822	38,926	40,749
Grazing Management.....	554	552	567	554	517	531
Hazardous Fuels.....	0	40,401	46,685	0	12,296	14,161
Hazardous Fuels – Biomass	0	723	100	0	0	0
Integrated Resource Restoration	0	0	0	0	0	0
Inventory and Monitoring	0	0	0	0	0	0
Land Management Planning, Assessment and Monitoring.....	11,111	10,534	9,685	8,819	9,379	9,116
Land Management Planning	0	0	0	0	0	0
Landownership Management	6,305	6,090	6,072	6,124	5,932	5,853
Law Enforcement Operations	0	0	0	0	0	0
Minerals and Geology Management	4,269	4,409	4,028	4,924	4,631	4,789

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Funds and Programs	Region 08 (Southern Region)			Region 09 (Eastern Region)		
	2017	2018	2019	2017	2018	2019
Recreation, Heritage, and Wilderness ..	22,175	21,054	20,600	17,553	16,874	16,874
Vegetation and Watershed Management	14,688	12,614	13,427	15,713	17,767	18,330
Wildlife and Fisheries Habitat Management	16,003	15,758	15,773	12,100	13,296	13,245
Total, National Forest System	115,360	154,157	160,396	104,484	120,360	124,365
State and Private Forestry						
Community Forest and Open Space Conservation	0	0	0	0	0	0
Cooperative Forestry - Forest Legacy Program Administration	796	695	765	0	0	0
Forest Health Management – Cooperative Lands	6,766	7,166	13,749	0	0	4,862
Forest Health Management – Federal Lands	6,661	4,812	8,528	0	0	4,329
Forest Legacy Program	23,260	16,926	20,465	0	0	0
Forest Stewardship	4,158	3,470	4,530	0	0	0
International Forestry	0	0	0	0	0	0
Landscape Scale Restoration	205	4,167	4,167	0	0	0
National Fire Capacity	0	1,300	19,101	0	90	240
Rural Fire Capacity	0	4,207	4,449	0	0	0
Urban and Community Forestry	5,456	4,757	5,616	0	0	8,612
Total, State and Private Forestry	47,302	47,500	81,370	0	90	18,042
Wildland Fire Management						
Cooperative Fire Protection – State Fire Assistance	17,381	0	0	76	0	0
Cooperative Fire Protection – Volunteer Fire Assistance	4,079	0	0	0	0	0
Fire Operations – Suppression	0	0	0	0	0	0
Fire Preparedness	32,850	39,439	41,939	19,728	22,667	24,067
Fire Research and Development (NFP)	0	0	0	0	0	0
Hazardous Fuels	39,414	0	0	12,064	0	0
Joint Fire Sciences	0	0	0	0	0	0
Hazardous Fuels - Biomass Grants	0	0	0	0	0	0
Total, Wildland Fire Management	93,724	39,439	41,939	31,868	22,667	24,067
Cost Pools	42,394	43,347	43,154	35,820	36,274	36,099
Gifts, Donations, and Bequests for Forest and Rangeland Research	0	0	0	0	0	0
Management of National Forest Lands for Subsistence Uses	0	0	0	0	0	0
Range Betterment Fund	0	0	0	0	0	0
Grand Total	336,338	320,044	371,633	200,986	211,726	241,311

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Region, Station, and Area Allocations for Region 10 (Alaska Region) and Forest Products Lab (Dollars in Thousands)

Funds and Programs	Region 10 (Alaska Region)			Forest Products Lab		
	2017	2018	2019	2017	2018	2019
Capital Improvement and Maintenance						
Facilities.....	3,385	3,413	7,300	400	752	1,203
Infrastructure Improvement	0	0	0	0	0	0
Legacy Roads and Trails.....	532	0	0	0	0	0
Roads	6,589	7,899	7,342	0	0	0
Trails	3,240	3,205	3,073	0	0	0
Total, Capital Improvement and Maintenance	13,746	14,517	17,716	400	752	1,203
Forest and Rangeland Research						
Forest and Rangeland Research	31	31	31	19,722	24,517	21,597
Forest and Rangeland Research – FLA ..	0	0	0	0	0	0
Forest Products Lab	0	0	0	2,000	0	0
Total, Forest and Rangeland Research	31	31	31	21,722	24,517	21,597
Land Acquisition						
Acquisition of Lands for National Forests Special Acts.....	0	0	0	0	0	0
Acquisition of Lands to Complete Land Exchanges.....	0	0	0	0	0	0
Land Acquisition - Acquisition Management	147	134	156	0	0	0
Land Acquisition – Cash Equalization ..	0	0	0	0	0	0
Land Acquisition – Critical Inholding ..	0	0	0	0	0	0
Land Acquisition – Land and Water Conservation Fund.....	4,888	0	0	0	0	0
Land Acquisition – Recreational Access.....	0	0	0	0	0	0
Total, Land Acquisition	5,035	134	156	0	0	0
National Forest System						
Collaborative Forest Landscape Restoration.....	0	0	0	0	0	0
Forest Products	14,521	13,958	13,447	0	0	0
Grazing Management.....	0	0	0	0	0	0
Hazardous Fuels.....	0	781	760	0	0	0
Hazardous Fuels – Biomass	0	260	200	0	880	880
Integrated Resource Restoration	0	0	0	0	0	0
Inventory and Monitoring	0	0	0	0	0	0
Land Management Planning, Assessment and Monitoring.....	5,630	5,202	5,237	0	0	0
Land Management Planning	0	0	0	0	0	0
Landownership Management	3,359	3,325	3,308	0	0	0
Law Enforcement Operations	0	0	0	0	0	0
Minerals and Geology Management	2,818	2,661	2,295	30	0	0

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Funds and Programs	Region 10 (Alaska Region)			Forest Products Lab		
	2017	2018	2019	2017	2018	2019
Recreation, Heritage, and Wilderness ..	7,677	7,222	7,074	0	0	0
Vegetation and Watershed Management	4,946	5,042	5,568	0	0	0
Wildlife and Fisheries Habitat Management	7,573	7,557	7,499	0	0	0
Total, National Forest System	46,524	46,009	45,388	30	880	880
State and Private Forestry						
Community Forest and Open Space Conservation	0	0	0	0	0	0
Cooperative Forestry – Forest Legacy Program Administration	16	16	21	0	0	0
Forest Health Management – Cooperative Lands	1,354	1,120	1,457	0	0	0
Forest Health Management – Federal Lands	1,565	1,127	1,501	0	0	0
Forest Legacy Program	0	0	0	0	0	0
Forest Stewardship	512	391	494	0	0	0
International Forestry	0	0	0	0	0	0
Landscape Scale Restoration	0	0	0	0	0	0
National Fire Capacity	0	1,000	3,348	0	0	0
Rural Fire Capacity	0	385	440	0	0	0
Urban and Community Forestry	237	230	265	0	0	0
Total, State and Private Forestry	3,684	4,268	7,527	0	0	0
Wildland Fire Management						
Cooperative Fire Protection – State Fire Assistance	1,347	0	0	0	0	0
Cooperative Fire Protection – Volunteer Fire Assistance	292	0	0	0	0	0
Fire Operations – Suppression	0	0	0	0	0	0
Fire Preparedness	2,281	2,639	2,639	0	0	0
Fire Research and Development (NFP)	0	0	0	0	0	0
Hazardous Fuels	1,010	0	0	905	0	0
Joint Fire Sciences	0	0	0	0	0	0
Hazardous Fuels - Biomass Grants	0	0	0	0	0	0
Total, Wildland Fire Management	4,929	2,639	2,639	905	0	0
Cost Pools	15,906	16,098	15,935	33	13	46
Gifts, Donations, and Bequests for Forest and Rangeland Research	0	0	0	0	0	0
Management of National Forest Lands for Subsistence Uses	2,499	2,500	2,500	0	0	0
Range Betterment Fund	0	0	0	0	0	0
Grand Total	92,354	86,196	91,891	23,090	26,162	23,725

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Region, Station, and Area Allocations for Rocky Mountain Research Station and Northern Research Station (Dollars in Thousands)

Funds and Programs	Rocky Mountain Research Station			Northeast Research Station		
	2017	2018	2019	2017	2018	2019
Capital Improvement and Maintenance						
Facilities.....	643	782	1,808	75	759	2,380
Infrastructure Improvement	0	0	0	0	0	0
Legacy Roads and Trails.....	0	0	0	0	0	0
Roads	0	0	0	0	0	0
Trails	0	0	0	0	0	0
Total, Capital Improvement and Maintenance	643	782	1,808	75	759	2,380
Forest and Rangeland Research						
Forest and Rangeland Research	24,323	27,825	29,416	33,525	31,860	33,685
Forest and Rangeland Research – FLA ..	14,163	13,843	13,967	17,701	17,070	17,272
Forest Products Lab	0	0	0	0	0	0
Total, Forest and Rangeland Research	38,486	41,669	43,383	51,226	48,929	50,957
Land Acquisition						
Acquisition of Lands for National Forests Special Acts.....	0	0	0	0	0	0
Acquisition of Lands to Complete Land Exchanges.....	0	0	0	0	0	0
Land Acquisition – Acquisition Management	0	0	0	0	0	0
Land Acquisition – Cash Equalization ..	0	0	0	0	0	0
Land Acquisition – Critical Inholding ..	0	0	0	0	0	0
Land Acquisition – Land and Water Conservation Fund.....	0	0	0	0	0	0
Land Acquisition – Recreational Access.....	0	0	0	0	0	0
Total, Land Acquisition	0	0	0	0	0	0
National Forest System						
Collaborative Forest Landscape Restoration.....	0	0	0	0	0	0
Forest Products	265	265	265	0	0	0
Grazing Management.....	0	0	0	0	0	0
Hazardous Fuels.....	0	3,750	4,898	0	57	61
Hazardous Fuels – Biomass	0	0	0	0	0	0
Integrated Resource Restoration	0	0	0	0	0	0
Inventory and Monitoring	0	0	0	0	0	0
Land Management Planning, Assessment and Monitoring.....	0	0	91	0	0	8
Land Management Planning	0	0	0	0	0	0
Landownership Management	0	0	33	0	0	0
Law Enforcement Operations	0	0	0	0	0	0
Minerals and Geology Management	0	0	144	0	0	10

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	2017	2018	2019	2017	2018	2019
Recreation, Heritage, and Wilderness ..	29	275	55	56	0	0
Vegetation and Watershed Management	307	265	411	0	0	0
Wildlife and Fisheries Habitat Management	265	440	795	0	0	0
Total, National Forest System	865	4,995	6,691	56	57	80
State and Private Forestry						
Community Forest and Open Space Conservation	0	0	0	0	0	0
Cooperative Forestry – Forest Legacy Program Administration	0	0	24	65	65	65
Forest Health Management – Cooperative Lands	0	0	758	244	255	122
Forest Health Management – Federal Lands	99	99	521	0	0	0
Forest Legacy Program	0	0	0	0	0	0
Forest Stewardship	0	118	124	0	0	0
International Forestry	0	0	0	0	0	0
Landscape Scale Restoration	0	0	0	0	0	0
National Fire Capacity	0	99	99	0	0	0
Rural Fire Capacity	0	0	0	0	0	0
Urban and Community Forestry	0	0	0	0	25	225
Total, State and Private Forestry	99	317	1,527	309	345	412
Wildland Fire Management						
Cooperative Fire Protection – State Fire Assistance	99	0	0	0	0	0
Cooperative Fire Protection – Volunteer Fire Assistance	0	0	0	0	0	0
Fire Operations – Suppression	1,266	1,266	1,266	0	0	0
Fire Preparedness	1,089	3,317	3,327	0	0	0
Fire Research and Development (NFP)	1,105	0	0	171	0	0
Hazardous Fuels	797	0	0	57	0	0
Joint Fire Sciences	0	0	0	0	0	0
Hazardous Fuels - Biomass Grants	0	0	0	0	0	0
Total, Wildland Fire Management	4,356	4,583	4,592	228	0	0
Cost Pools	78	26	98	104	20	85
Gifts, Donations, and Bequests for Forest and Rangeland Research	0	0	0	0	0	0
Management of National Forest Lands for Subsistence Uses	0	0	0	0	0	0
Range Betterment Fund	0	0	0	0	0	0
Grand Total	44,528	52,370	58,099	51,999	50,110	53,913

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Region, Station, and Area Allocations for Pacific Northwest Research Station and Pacific Southwest Research Station (Dollars in Thousands)

Funds and Programs	Pacific Northwest Research Station			Pacific Southwest Research Station		
	2017	2018	2019	2017	2018	2019
Capital Improvement and Maintenance						
Facilities.....	350	429	500	23	400	555
Infrastructure Improvement	0	0	0	0	0	0
Legacy Roads and Trails.....	0	0	0	0	0	0
Roads	0	0	0	0	0	0
Trails	0	0	0	0	0	0
Total, Capital Improvement and Maintenance	350	429	500	23	400	555
Forest and Rangeland Research						
Forest and Rangeland Research	23,500	25,345	26,542	17,499	17,573	18,854
Forest and Rangeland Research – FLA ..	16,490	16,185	16,519	0	0	0
Forest Products Lab	0	0	0	0	0	0
Total, Forest and Rangeland Research	39,990	41,531	43,060	17,499	17,573	18,854
Land Acquisition						
Acquisition of Lands for National Forests Special Acts.....	0	0	0	0	0	0
Acquisition of Lands to Complete Land Exchanges.....	0	0	0	0	0	0
Land Acquisition – Acquisition Management	0	0	0	0	0	0
Land Acquisition – Cash Equalization ..	0	0	0	0	0	0
Land Acquisition – Critical Inholding ..	0	0	0	0	0	0
Land Acquisition – Land and Water Conservation Fund.....	0	0	0	0	0	0
Land Acquisition – Recreational Access.....	0	0	0	0	0	0
Total, Land Acquisition	0	0	0	0	0	0
National Forest System						
Collaborative Forest Landscape Restoration.....	0	0	0	0	0	0
Forest Products	0	0	0	0	0	0
Grazing Management.....	0	0	0	0	0	0
Hazardous Fuels.....	0	722	502	0	0	0
Hazardous Fuels – Biomass	0	0	0	0	0	0
Integrated Resource Restoration	0	0	0	0	0	0
Inventory and Monitoring	0	0	0	0	0	0
Land Management Planning, Assessment and Monitoring.....	542	542	541	32	32	32
Land Management Planning	0	0	0	0	0	0
Landownership Management	0	0	0	0	0	0
Law Enforcement Operations	0	0	0	0	0	0
Minerals and Geology Management	0	0	0	0	0	0

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Funds and Programs	Pacific Northwest Research Station			Pacific Southwest Research Station		
	2017	2018	2019	2017	2018	2019
Recreation, Heritage, and Wilderness ..	56	0	0	0	0	0
Vegetation and Watershed Management	156	181	181	82	27	48
Wildlife and Fisheries Habitat Management	0	0	0	0	0	0
Total, National Forest System	753	1,444	1,224	114	59	80
State and Private Forestry						
Community Forest and Open Space Conservation	0	0	0	0	0	0
Cooperative Forestry – Forest Legacy Program Administration	0	0	0	0	24	0
Forest Health Management – Cooperative Lands	269	294	296	59	82	30
Forest Health Management – Federal Lands	269	294	294	0	79	25
Forest Legacy Program	0	0	0	24	0	0
Forest Stewardship	0	0	0	49	49	0
International Forestry	0	0	0	0	0	0
Landscape Scale Restoration	0	0	0	0	0	0
National Fire Capacity	0	0	0	0	24	24
Rural Fire Capacity	0	0	0	0	0	0
Urban and Community Forestry	0	0	0	24	24	0
Total, State and Private Forestry	538	588	590	156	283	79
Wildland Fire Management						
Cooperative Fire Protection – State Fire Assistance	0	0	0	24	0	0
Cooperative Fire Protection – Volunteer Fire Assistance	0	0	0	0	0	0
Fire Operations – Suppression	0	0	0	0	0	0
Fire Preparedness	54	129	54	0	0	0
Fire Research and Development (NFP)	617	0	0	101	0	0
Hazardous Fuels	307	0	0	0	0	0
Joint Fire Sciences	0	0	0	0	0	0
Hazardous Fuels - Biomass Grants	0	0	0	0	0	0
Total, Wildland Fire Management	978	129	54	125	0	0
Cost Pools	33	13	26	20	20	26
Gifts, Donations, and Bequests for Forest and Rangeland Research	0	0	0	0	0	0
Management of National Forest Lands for Subsistence Uses	0	0	0	0	0	0
Range Betterment Fund	0	0	0	0	0	0
Grand Total	42,642	44,133	45,454	17,937	18,334	19,594

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Region, Station, and Area Allocations for Southern Research Station and International Institute of Tropical Forestry (Dollars in Thousands)

Funds and Programs	Southern Research Station			International Institute of Tropical Forestry		
	2017	2018	2019	2017	2018	2019
Capital Improvement and Maintenance						
Facilities.....	2,450	866	2,661	130	69	170
Infrastructure Improvement	0	0	0	0	0	0
Legacy Roads and Trails.....	0	0	0	0	0	0
Roads	0	0	0	0	0	0
Trails	0	0	0	0	0	0
Total, Capital Improvement and Maintenance	2,450	866	2,661	130	69	170
Forest and Rangeland Research						
Forest and Rangeland Research	28,615	26,552	28,369	2,689	2,157	2,827
Forest and Rangeland Research – FIA ..	18,184	17,772	17,931	0	0	0
Forest Products Lab	0	0	0	0	0	0
Total, Forest and Rangeland Research	46,799	44,324	46,301	2,689	2,157	2,827
Land Acquisition						
Acquisition of Lands for National Forests Special Acts.....	0	0	0	0	0	0
Acquisition of Lands to Complete Land Exchanges.....	0	0	0	0	0	0
Land Acquisition – Acquisition Management	0	0	0	0	0	0
Land Acquisition – Cash Equalization ..	0	0	0	0	0	0
Land Acquisition – Critical Inholding ..	0	0	0	0	0	0
Land Acquisition – Land and Water Conservation Fund.....	0	0	0	0	0	0
Land Acquisition – Recreational Access.....	0	0	0	0	0	0
Total, Land Acquisition	0	0	0	0	0	0
National Forest System						
Collaborative Forest Landscape Restoration.....	0	0	0	0	0	0
Forest Products	0	0	0	0	0	0
Grazing Management.....	0	0	0	0	0	0
Hazardous Fuels.....	0	191	191	0	0	0
Hazardous Fuels – Biomass	0	0	0	0	0	0
Integrated Resource Restoration	0	0	0	0	0	0
Inventory and Monitoring	0	0	0	0	0	0
Land Management Planning, Assessment and Monitoring.....	542	542	593	44	44	44
Land Management Planning	0	0	0	0	0	0
Landownership Management.....	0	0	0	0	0	0
Law Enforcement Operations	0	0	0	0	0	0

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Funds and Programs	Southern Research Station			International Institute of Tropical Forestry		
	2017	2018	2019	2017	2018	2019
Minerals and Geology Management	0	0	0	0	0	0
Recreation, Heritage, and Wildmess ..	0	0	0	0	0	0
Vegetation and Watershed Management	431	181	226	105	105	105
Wildlife and Fisheries Habitat Management	0	0	0	0	0	0
Total, National Forest System	972	913	1,010	149	149	149
State and Private Forestry						
Community Forest and Open Space Conservation	0	0	0	0	0	0
Cooperative Forestry – Forest Legacy Program Administration	0	0	0	151	71	258
Forest Health Management – Cooperative Lands	317	358	466	312	307	307
Forest Health Management – Federal Lands	438	438	454	11	8	10
Forest Legacy Program	0	0	0	0	1,375	1,275
Forest Stewardship	0	0	0	369	339	316
International Forestry	0	0	0	0	0	0
Landscape Scale Restoration	0	0	0	0	0	0
National Fire Capacity	0	0	0	0	23	416
Rural Fire Capacity	0	0	0	0	35	37
Urban and Community Forestry	0	0	0	393	379	397
Total, State and Private Forestry	755	796	920	1,236	2,536	3,016
Wildland Fire Management						
Cooperative Fire Protection – State Fire Assistance	0	0	0	417	0	0
Cooperative Fire Protection – Volunteer Fire Assistance	0	0	0	32	0	0
Fire Operations – Suppression	0	0	0	0	0	0
Fire Preparedness	100	100	100	0	0	0
Fire Research and Development (NFP)	71	0	0	100	0	0
Hazardous Fuels	191	0	0	0	0	0
Joint Fire Sciences	0	0	0	0	0	0
Hazardous Fuels – Biomass Grants	0	0	0	0	0	0
Total, Wildland Fire Management	362	100	100	549	0	0
Cost Pools	85	33	72	1,285	1,307	1,289
Gifts, Donations, and Bequests for Forest and Rangeland Research	0	0	0	0	0	0
Management of National Forest Lands for Subsistence Uses	0	0	0	0	0	0
Range Betterment Fund	0	0	0	0	0	0
Grand Total	51,422	47,031	51,063	6,038	6,218	7,453

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Region, Station, and Area Allocations for Northeastern Area and Albuquerque Service Center (Dollars in Thousands)

Funds and Programs	Northeastern Area			Albuquerque Service Center		
	2017	2018	2019	2017	2018	2019
Capital Improvement and Maintenance						
Facilities.....	0	114	100	250	250	3,075
Infrastructure Improvement	0	0	0	0	0	0
Legacy Roads and Trails.....	0	0	0	0	0	0
Roads	0	0	0	1,441	1,433	2,308
Trails	0	0	0	0	0	2,965
Total, Capital Improvement and Maintenance	0	114	100	1,691	1,683	8,347
Forest and Rangeland Research						
Forest and Rangeland Research	0	0	90	2,197	2,148	3,305
Forest and Rangeland Research – FLA ..	0	0	0	0	0	0
Forest Products Lab	0	0	0	0	0	0
Total, Forest and Rangeland Research	0	0	90	2,197	2,148	3,305
Land Acquisition						
Acquisition of Lands for National Forests Special Acts.....	0	0	0	0	0	0
Acquisition of Lands to Complete Land Exchanges.....	0	0	0	0	0	0
Land Acquisition – Acquisition Management	0	0	0	0	0	0
Land Acquisition – Cash Equalization ..	0	0	0	0	0	0
Land Acquisition – Critical Inholding ..	0	0	0	0	0	0
Land Acquisition – Land and Water Conservation Fund.....	0	0	0	0	0	0
Land Acquisition – Recreational Access.....	0	0	0	0	0	0
Total, Land Acquisition	0	0	0	0	0	0
National Forest System						
Collaborative Forest Landscape Restoration.....	0	0	0	0	0	0
Forest Products	0	0	0	3,509	3,519	1,971
Grazing Management.....	0	0	0	31	31	214
Hazardous Fuels.....	0	5	100	0	969	331
Hazardous Fuels – Biomass	0	2,469	250	0	0	0
Integrated Resource Restoration	0	0	0	0	0	0
Inventory and Monitoring	0	0	0	0	0	0
Land Management Planning, Assessment and Monitoring.....	0	0	0	300	300	0
Land Management Planning	0	0	0	0	0	0
Landownership Management	0	0	0	0	0	124
Law Enforcement Operations	0	0	0	671	678	1,261
Minerals and Geology Management	0	0	0	62	80	98

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Funds and Programs	Northeastern Area			Albuquerque Service Center		
	2017	2018	2019	2017	2018	2019
Recreation, Heritage, and Wilderness ..	0	0	0	3,127	3,044	8,591
Vegetation and Watershed Management	0	0	0	1,071	1,068	2,007
Wildlife and Fisheries Habitat Management	0	0	0	0	0	0
Total, National Forest System	0	2,474	350	8,771	9,689	14,596
State and Private Forestry						
Community Forest and Open Space Conservation	0	0	0	0	0	0
Cooperative Forestry – Forest Legacy Program Administration	1,356	1,311	1,311	30	30	0
Forest Health Management – Cooperative Lands	13,609	15,250	4,156	174	169	0
Forest Health Management – Federal Lands	5,710	6,195	643	270	216	72
Forest Legacy Program	7,495	5,000	16,495	0	0	0
Forest Stewardship	5,514	4,575	5,643	234	230	0
International Forestry	0	0	0	0	15	16
Landscape Scale Restoration	70	4,167	4,167	0	0	0
National Fire Capacity	0	2,150	14,629	0	0	0
Rural Fire Capacity	0	5,007	5,262	0	0	0
Urban and Community Forestry	8,763	7,563	254	88	35	0
Total, State and Private Forestry	42,517	51,217	52,559	796	695	88
Wildland Fire Management						
Cooperative Fire Protection – State Fire Assistance	13,270	0	0	0	0	0
Cooperative Fire Protection – Volunteer Fire Assistance	4,576	0	0	0	0	0
Fire Operations – Suppression	0	0	0	3,850	3,850	0
Fire Preparedness	30	0	0	14,393	12,956	21,523
Fire Research and Development (NFP)	0	0	0	0	0	0
Hazardous Fuels	355	0	0	555	0	0
Joint Fire Sciences	0	0	0	0	0	0
Hazardous Fuels - Biomass Grants	0	0	0	0	0	0
Total, Wildland Fire Management	18,231	0	0	18,799	16,806	21,523
Cost Pools	1,681	1,706	1,681	359,761	341,922	354,662
Gifts, Donations, and Bequests for Forest and Rangeland Research	0	0	0	0	0	0
Management of National Forest Lands for Subsistence Uses	0	0	0	0	0	0
Range Betterment Fund	0	0	0	0	0	0
Grand Total	62,429	55,510	54,781	392,014	372,943	402,521

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Region, Station, and Area Allocations for Washington Office and National/Unallocated (Dollars in Thousands)

Funds and Programs	Washington Office			National/Unallocated		
	2017	2018	2019	2017	2018	2019
Capital Improvement and Maintenance						
Facilities.....	6,979	10,530	4,752	830	67,043	1,681
Infrastructure Improvement	0	0	0	0	0	0
Legacy Roads and Trails.....	277	0	0	107	0	0
Roads	3,125	3,319	2,840	3,121	3,622	891
Trails	1,355	2,045	2,076	1,479	7,455	103
Total, Capital Improvement and Maintenance	11,736	15,893	9,667	5,536	78,120	2,675
Forest and Rangeland Research						
Forest and Rangeland Research	18,854	18,984	20,979	45,389	13,893	5,137
Forest and Rangeland Research – FLA ..	0	0	416	537	2,304	1,069
Forest Products Lab	0	0	0	0	0	0
Total, Forest and Rangeland Research	18,854	18,984	21,395	45,926	16,197	6,205
Land Acquisition						
Acquisition of Lands for National Forests Special Acts.....	0	0	0	950	1,700	700
Acquisition of Lands to Complete Land Exchanges.....	0	0	0	216	192	150
Land Acquisition – Acquisition Management	0	184	183	1,914	360	8
Land Acquisition – Cash Equalization ..	0	0	0	750	145	250
Land Acquisition – Critical Inholding ..	0	0	0	2,000	1,905	2,000
Land Acquisition – Land and Water Conservation Fund.....	130	0	0	30,395	50,035	57,962
Land Acquisition – Recreational Access.....	0	0	0	4,700	4,558	5,000
Total, Land Acquisition	130	184	183	40,925	58,895	66,070
National Forest System						
Collaborative Forest Landscape Restoration.....	0	0	0	9,570	42	0
Forest Products	22,553	16,433	11,951	3,488	356	867
Grazing Management.....	1,925	2,039	2,154	520	1,316	1,000
Hazardous Fuels.....	0	2,516	22,942	0	65,060	1,826
Hazardous Fuels – Biomass	0	2,357	4,306	0	0	7,970
Integrated Resource Restoration	1,220	0	0	509	0	0
Inventory and Monitoring	0	0	0	0	0	0
Land Management Planning, Assessment and Monitoring.....	49,555	50,613	52,855	536	1,127	578
Land Management Planning	0	0	0	0	0	0
Landownership Management	7,009	8,446	9,309	82	329	341
Law Enforcement Operations	107,069	109,703	111,013	1,687	1,718	1,673
Minerals and Geology Management	6,718	6,722	8,904	645	1,487	42

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Funds and Programs	Washington Office			National/Unallocated		
	2017	2018	2019	2017	2018	2019
Recreation, Heritage, and Wilderness ..	15,316	12,401	17,397	6,374	13,330	5,726
Vegetation and Watershed Management	18,039	17,207	16,945	431	5,036	954
Wildlife and Fisheries Habitat Management	5,784	6,900	6,347	721	517	263
Total, National Forest System	235,189	235,337	264,122	24,562	90,316	21,241
State and Private Forestry						
Community Forest and Open Space Conservation	0	0	0	2,000	4,000	4,000
Cooperative Forestry – Forest Legacy Program Administration	1,154	960	1,513	1,313	932	4
Forest Health Management – Cooperative Lands	859	462	1,523	3,365	2,888	916
Forest Health Management – Federal Lands	6,821	6,583	9,134	4,296	11,277	951
Forest Legacy Program	-24	14	0	0	0	4,210
Forest Stewardship	2,864	2,466	3,041	504	3,152	176
International Forestry	6,929	7,414	7,907	114	624	129
Landscape Scale Restoration	95	1,500	1,500	13,630	0	0
National Fire Capacity	0	7,972	8,501	0	63,667	2,113
Rural Fire Capacity	0	0	0	0	0	0
Urban and Community Forestry	2,338	2,027	4,359	1,592	5,200	418
Total, State and Private Forestry	21,036	29,398	37,479	26,813	91,739	12,919
Wildland Fire Management						
Cooperative Fire Protection – State Fire Assistance	2,893	0	0	23,564	0	0
Cooperative Fire Protection – Volunteer Fire Assistance	0	0	0	0	0	0
Fire Operations – Suppression	122,460	134,874	305,190	1,120,425	1,314,801	1,358,910
Fire Preparedness	243,469	294,796	203,773	271,380	49,533	33,538
Fire Research and Development (NFP)	0	0	0	17,630	0	0
Hazardous Fuels	13,260	0	0	96,803	0	0
Joint Fire Sciences	0	0	0	3,000	0	3,000
Hazardous Fuels - Biomass Grants	0	0	0	10,000	0	0
Total, Wildland Fire Management	382,082	429,670	508,963	1,542,803	1,364,335	1,395,448
Cost Pools	80,454	79,756	70,820	142,752	145,182	143,117
Gifts, Donations, and Bequests for Forest and Rangeland Research	0	0	0	45	45	45
Management of National Forest Lands for Subsistence Uses	0	0	0	1	0	0
Range Betterment Fund	0	0	0	2,320	2,065	1,700
Grand Total	749,481	809,222	912,628	1,831,683	1,846,893	1,649,421

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Region, Station, and Area Allocations Forest Service Total (Dollars in Thousands)

Funds and Programs	Forest Service Total		
	2017	2018	2019
Capital Improvement and Maintenance			
Facilities.....	56,078	135,841	132,841
Infrastructure Improvement	0	0	0
Legacy Roads and Trails.....	22,386	0	0
Roads.....	138,728	177,055	177,055
Trails.....	54,562	57,262	57,262
Total, Capital Improvement and Maintenance	271,754	370,158	367,158
Forest and Rangeland Research			
Forest and Rangeland Research	216,439	190,981	190,981
Forest and Rangeland Research - FIA.....	67,075	67,174	67,174
Forest Products Lab	2,000	0	0
Total, Forest and Rangeland Research	285,514	258,155	258,155
Land Acquisition			
Acquisition of Lands for National Forests Special Acts.....	950	1,700	700
Acquisition of Lands to Complete Land Exchanges.....	216	192	150
Land Acquisition – Acquisition Management	7,552	5,457	5,457
Land Acquisition – Cash Equalization	750	250	250
Land Acquisition – Critical Inholding.....	2,000	2,000	2,000
Land Acquisition – Land and Water Conservation Fund.....	39,413	50,035	57,962
Land Acquisition – Recreational Access.....	4,700	4,700	5,000
Total, Land Acquisition	55,581	64,334	71,519
National Forest System			
Collaborative Forest Landscape Restoration.....	40,000	30,526	30,526
Forest Products	212,287	267,603	269,603
Grazing Management.....	40,587	40,750	40,894
Hazardous Fuels.....	0	346,367	349,061
Hazardous Fuels – Biomass	0	12,000	14,306
Integrated Resource Restoration	159,448	0	0
Inventory and Monitoring	0	0	0
Land Management Planning, Assessment and Monitoring.....	144,648	141,366	142,103
Land Management Planning	0	0	0
Landownership Management.....	54,590	55,051	56,051
Law Enforcement Operations	109,427	112,099	113,946
Minerals and Geology Management	58,343	57,146	57,946
Recreation, Heritage, and Wilderness	182,850	177,176	179,468

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Funds and Programs	Forest Service Total		
	2017	2018	2019
Vegetation and Watershed Management	101,668	140,593	140,593
Wildlife and Fisheries Habitat Management	79,368	102,583	103,153
Total, National Forest System	1,183,216	1,483,260	1,497,650
State and Private Forestry			
Community Forest and Open Space Conservation	2,000	4,000	4,000
Cooperative Forestry – Forest Legacy Program Administration	6,400	5,453	5,453
Forest Health Management – Cooperative Lands	36,129	38,158	39,158
Forest Health Management – Federal Lands	44,973	45,078	45,578
Forest Legacy Program	55,947	60,625	57,590
Forest Stewardship	18,122	18,605	18,605
International Forestry	7,043	8,053	8,053
Landscape Scale Restoration	14,000	14,000	14,000
National Fire Capacity	0	78,105	79,105
Rural Fire Capacity	0	16,000	17,000
Urban and Community Forestry	26,126	26,605	27,605
Total, State and Private Forestry	210,740	314,682	316,147
Wildland Fire Management			
Cooperative Fire Protection – State Fire Assistance	78,000	0	0
Cooperative Fire Protection – Volunteer Fire Assistance	15,000	0	0
Fire Operations - Suppression	1,248,000	1,456,390	1,665,366
Fire Preparedness	1,080,146	1,080,399	998,545
Fire Research and Development (NFP)	19,795	0	0
Hazardous Fuels	356,000	0	0
Joint Fire Sciences	3,000	0	3,000
Hazardous Fuels - Biomass Grants	10,000	0	0
Total, Wildland Fire Management	2,809,941	2,536,789	2,666,911
Cost Pools	957,000	947,339	947,430
Gifts, Donations, and Bequests for Forest and Rangeland Research	45	45	45
Management of National Forest Lands for Subsistence Uses	2,500	2,500	2,500
Range Betterment Fund	2,320	2,065	1,700
Grand Total	5,778,611	5,979,328	6,129,216

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Question 4: With over 158,000 miles of trails, the Forest Service manages the largest system of trails in the Country. This year's budget reports that 59,400 miles of Forest Service trails were maintained in FY 19, which is an amazing testament to the work of outside Trails organizations and to the partnerships your agency has formed with them. However, this year's budget documents go on to say that only 24 percent of the National Forests' trails meet National Standards.

Does this mean that the trails that are being maintained are not being maintained to National Standards?

Is there anything additional the Forest Service can commit to doing to ensure that when Forest Service trails are being maintained, the trail workers adhere to National Standards? Alternatively, perhaps the National Standards are a "bar" that is set too high; and if it is not realistic that the Forest Service trails can be improved such that they meet the National Standards, will you consider revising the standards to a level to which your partners can adhere?

Answer: The National Quality Standards for Trails is a valuable management tool that establishes desired outcomes for National Forest System trails managed at a full-service level. The "Miles Meeting the National Standard" metric recognizes the need to provide an adequately safe and quality recreation opportunity, while acknowledging dynamic conditions in the natural environment and not setting the bar unrealistically high for real world trail conditions.

"Miles Maintained" and "Miles Meeting the National Standard" are two separate performance metrics, which accounts for the discrepancy. The "Miles Meeting the National Standard" measure provides an indicator of overall conditions across the trail system. The "Miles Maintained" measure allows the agency to track and report where maintenance work was accomplished during the year.

"Miles Maintained" tracks discrete maintenance tasks that occurred. However, in a given year trail crews do not necessarily complete all maintenance tasks on a given mile of trail that would be required for that mile to be in the condition to meet the National Quality Standards for Trails. This is similar to when a road's drainage ditches are cleaned out and shoulders are cleared of vegetation, but the road remains bumpy and requires resurfacing. In other words, while some maintenance activities were accomplished and the road is passable, it would still require additional work to meet the high quality standard for road maintenance.

The number of miles reported as being maintained reflect trail miles where at least one maintenance task was performed to agency standards that year. However, many trails also have extensive deferred maintenance needs which require significant resources, specialized equipment, and advanced technical skills that are beyond our partner and volunteer capabilities. Even when low complexity maintenance tasks are performed to

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agency standards on a given trail, extensive deferred maintenance can result in the trail not meeting the overall national standard.

Trails reported as meeting the National Standard must meet the three critical National Quality Standards for Trails; meet at least 80% of the other 13 National Quality Standards; and have little to no deferred maintenance. The majority of maintenance tasks are completed meeting the standard for those tasks. We continue to focus on providing improved training and support to trail staff, contractors, outfitters, guides, partners, and volunteers carrying out trail maintenance work.

Question 5: Chairman Murkowski, I, Senator Wyden, Senator Risch, and several other members of this Committee are continuing to work on a long-term solution, so that we do not have to keep doing these short extensions. Currently, we are looking at an endowment-based funding model where a fund would be established and the interest on the principal balance would be used to fund Secure Rural Schools payments in perpetuity. The Forest Service is responsible for administering several other county payment programs similar to Secure Rural Schools—such as Payments to Minnesota Counties, Land Between the Lakes Protection Payments, etc.

If a fund was established outside of the Forest Service to cover Secure Rural Schools payments in perpetuity, what would the pros and cons be of having some of these other county payment programs be covered from this account also? Would certain programs be better suited to this than others?

Answer: The Forest Service administers several state and county payment programs including payments to states in which National Forests are located under the Secure Rural Schools (SRS) Act. In addition to the SRS Act payments, the Forest Service also makes “special act payments,” namely, payments to counties in which National Grasslands are located under title III of the Bankhead-Jones Farm Tenant Act, payments to the State of Minnesota under the Thye-Blatnick Act of 1948, the Quinault payments to the State of Washington, the Smoky Quartz payments to the State of Arkansas, and payments to counties in which the Land Between the Lands National Recreation Area is located. The sum of these payments for 2018 was over \$255 million. The Secure Rural Schools payments are the only payments that are not entirely covered by receipts and requires a warrant from the U.S. Treasury. The funding for the special act payments has been stable, and because the payments are based on specific formulas and target specific beneficiaries, we question their suitability for inclusion in legislation.

Question 6: I am interested in your transition from the Resource Ordering and Status System (ROSS) to the new Interagency Resource Ordering Capability (IROC) system. Will all of the data that was stored in ROSS still be accessible and able to be queried in the future?

Answer: Yes, when ROSS was replaced by IROC, all of the historical data from ROSS was transferred to the Resource Ordering Data Warehouse (RODW) in March 2020 to ensure the data would be available for reporting purposes. RODW is a database used only

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for storing and providing historical resource data. Active data is being used in IROC, which allows for the mobilization of emergency responder resources.

Please provide for the last 20 years, the number of occurrences where an incident manager requested an air tanker and there were an insufficient number of air tankers available to fill the request (i.e., the number of Unable-To-Fill requests). Please provide the same information with regards to rotor-wing aircraft, Type 1 Incident Management Teams, and hand crews.

Answer: The National Interagency Coordination Center is the repository for historical data on unable-to-fill orders. Resource order requests may result in an unable-to-fill request for a variety of reasons, including: the requested type of resource is unavailable nationally; management decisions to use locally available resources and types that are more appropriate; national priorities shift objectives for a given type of resource, such as Type 1 handcrews, large or very large airtankers, Type 1 heavy helicopters, etc.

Table 1. USDA Forest Service resource orders that were unable to be filled from 2000-2019. Each item represents an individual request.

Resource Orders 'Unable-to-Fill'				
Year	Type 1 Incident Command Teams	Airtankers	Helicopters	Handcrews
2000	0	39	33	365
2001	0	15	8	26
2002	0	68	63	101
2003	1	67	134	488
2004	0	35	5	42
2005	0	111	25	61
2006	0	186	816	1399
2007	0	194	474	1199
2008	0	92	213	715
2009	0	14	23	69
2010	0	37	1	6
2011	0	195	151	149
2012	1	438	530	934
2013	0	284	278	813
2014	0	175	200	493
2015	3	175	390	1151
2016	0	269	58	471
2017	2	290	443	1343
2018	2	478	295	1015

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Resource Orders 'Unable-to-Fill'				
Year	Type 1 Incident Command Teams	Airtankers	Helicopters	Handcrews
2019	0	89	39	92

Question 7: In both dollars and as a percentage, how much of the funding appropriated for Hazardous Fuels Reduction in FY 2019 was spent on planning, preparing for, and implementing prescribed fires?

Answer: The Forest Service leverages an integrated landscape management approach to restoring and creating sustainable landscapes. Funding from multiple program areas contributes to the planning, preparation, and use of the full suite of tools available to affect change on the landscape. In FY 2019, \$349 million (80%) of all hazardous fuels funding was directed to the Regions and forests where planning was completed and fuels treatment projects were ready for implementation. In FY 2019, 2.6 million acres of National Forest System land and 300,000 acres of state lands received a hazardous fuels reduction treatment, for a total of 2.9 million acres. Of these, 1.2 million acres were treated with prescribed burning.

Questions from Senator Ron Wyden

Question 1: During the hearing we discussed the importance of increasing prescribed fire treatments to combat wildfire risk. Senator Manchin and I have been working on text for prescribed fire legislation that would increase the pace and scale of prescribed fire, streamline regulatory hurdles, and develop a prescribed fire workforce.

Will you commit to working with Ranking Member Manchin and I on this bill and to achieve more prescribed fire treatments on federal, state, and private lands?

Answer: Yes. Finding ways to accomplish more hazardous fuels work, in particular increasing the use of prescribed fire, in a safe manner is of great interest to the agency.

Question 2: During the hearing, we discussed using new technologies for fighting wildfire. You mentioned your efforts to incorporate night flying or flying in low visibility, and cited an example in California where night vision goggles have been used. However, that technology has limitations and several companies are working on alternative and autonomous capabilities as well.

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What is the Forest Service doing to encourage your aviation contractors to develop new technologies and will you commit to work with me to develop better incentives to bring modern technology to aerial firefighting?

Answer: Yes. In our efforts to continuously improve the safety and effectiveness of our wildland fire response, the agency welcomes the opportunity to work with you and your staff on further aviation modernization opportunities. The Forest Service is piloting several new aviation technologies in 2020 to evaluate the effectiveness of unmanned aerial systems, real-time resource tracking, and improved reconnaissance products.

The Forest Service hosts vendor conferences for airtankers, helicopters, other fixed-wing aircraft and unmanned aircraft. This provides a forum for these industries to submit proposals for new and emerging technology. Agency personnel also participate in many aviation related stakeholder engagements seeking out new technology that could make aerial firefighting safer, and more efficient and effective.

Question 3: The industry responses to the third round of Large Air Tanker contracts (Next Gen 3.0) were submitted on February 14th, 2019. The Forest Service has been evaluating these proposals for 53 weeks now.

Do you anticipate making contract awards at any time in the near future?

Answer: The awards were announced on March 26, 2020. On April 6, 2020, two companies protested the awards. The Government Accountability Office has up to 100 days to review the protests and issue a decision. The Forest Service will use call-when-needed airtankers to replace the five exclusive use airtankers on hold due to the protests.

Question 4: If Next Gen 3.0 is any guide, the Forest Service will need to publish the Next Gen 4.0 solicitation within the next six months to replace the Next Gen 1.0 aircraft at the end of their contracts.

Is there a contracting strategy in place to keep the Forest Service supplied with adequate numbers of aircraft?

Answer: Yes. The agency will follow the 2018-2022 Airtanker Modernization Strategy. Beginning with the award of Next Gen 1.0, the Forest Service began to modernize the delivery of aviation resources and used a five-year contract with five option years. The Forest Service will have the option to extend Next Gen 1.0 annually until Dec 31, 2022. The aviation program will continuously evaluate to ensure program delivery.

Question 5: How many of the large air tanker aircraft that the Forest Service is relying on for Call When Needed services in 2020 are currently on contracts outside the US? Does this concern you?

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Answer: Five airtankers with upcoming Forest Service contract periods were working in Australia this past winter. All five airtankers have returned to the U.S. and are either on contract or waiting on their contract start dates.

Wildfire is a worldwide problem. The international fire community works well together to provide the necessary support when and where needed. Vendors who provide this resource internationally are committed to their contracts in the U.S. and ensure they are available for their contracted periods with the Forest Service. The Forest Service continues to work with the vendors to adjust inspection schedules and maintenance, while maintaining airtanker response capability throughout the year.

Question 6: How much of the Forest Service appropriations for hazardous fuels treatments translate to actual Wildfire Risk Reduction acres treated?

Answer: The Forest Service total appropriations for hazardous fuels in FY 2019 was \$435 million. Of this, \$349 million (80%) was distributed to the Regions for target accomplishment on National Forest System lands. A total of 2.6 million acres of hazardous fuels were treated on National Forest System lands and an additional 300,000 acres were treated on state lands through the Rural Fire Capacity and National Fire Capacity assistance programs for a total fuels treatment of 2.9 million acres.

Question 7:

- a. What percentage of the annual Forest Service budget, outside of funds generated through timber sales, is needed to maintain the timber program?

Answer: The Forest Service conducts timber sales for a variety of purposes. As described in the President's 2021 Budget Request, the Forest Service requests \$385 million for the Forest Products budget line item to prepare timber sales in support of the target of 4.0 billion board feet. This is just over 7 percent of the agency's total discretionary funding request of \$5.3 billion (excluding \$2.04 billion for the Wildfire Suppression Operations Reserve Fund). The Forest Service conducts timber sales for a variety of purposes, so a variety of other line items, including Recreation, Heritage and Wilderness; Wildlife and Fisheries Habitat Management; Vegetation and Watershed Management; Land Use Authorization and Access; and Land Management Planning, Assessment and Monitoring also provide funding in support of timber sales.

- b. Do you utilize funds appropriated under other budget line items in addition to funds appropriated for timber to support achieving the flagship targets of acres treated and board feet of timber?

Answer: Yes, the Forest Service conducts timber sales for a variety of resource purposes. Other line items, including Recreation, Heritage and Wilderness; Wildlife and Fisheries Habitat Management; Vegetation and Watershed Management; Land

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Use Authorization and Access; and Land Management Planning, Assessment and Monitoring also provide funding in support to timber sales.

- c. How many Forest Service units are able to sustain their timber programs with timber receipts alone and how many do not?

Answer: None, if you consider all the costs associated with a timber sale. Costs related to project design, NEPA analysis, sale layout, cruise, appraisal, contract administration and timber program support staff exceed timber sale revenue. Although some high-value sales appear to cover production costs, the average sale receipts for a given unit do not support the program. However, salvage sale funds collected from timber sales, retained receipts from stewardship contracts, program revenue generated from Shared Stewardship and Good Neighbor agreements and other permanent and trust funds such as Knutson-Vandenberg (KV) and Salvage and brush disposal (BD) provide support to timber sales beyond the appropriated funds Congress provides to the agency.

Congress has recently provided authorities that are resulting in enhanced efficiencies. Through stewardship contracting, the Forest Service has the authority to use the receipts retained from the sale of timber to accomplish restoration work, such as timber sale preparation work affiliated with restoring an ecosystem, fuels reduction, wildlife habitat restoration, and reforestation activities. In addition, program revenue balances from timber sales completed through Good Neighbor Authority and Shared Stewardship can be used for a variety of work on National Forest System lands, including timber sale preparation, reforestation activities, hazardous fuel reduction, and wildlife habitat restoration.

Question 8: What is the proportion of the Forest Service budget that is devoted to fixed costs such as permanent salary and benefits, fleet, and facilities?

Answer: Forest Service discretionary funding devoted to fixed costs averages about 45% annually.

Question 9: What would it cost to address the recognized need to increase the pace, scale, and quality of forest restoration for wildfire risk reduction projects nationwide?

Answer: As described in the President's FY 2021 Budget Request, the necessary expenses for the Forest Service directly related to increasing pace, scale, and quality of forest restoration and for wildfire risk reduction is just over \$1.6 billion, although other budget line items do make indirect contributions to these activities. Budget Line items directly related to these activities are Land Management Planning, Assessment and Monitoring, Hazardous Fuels, Wildlife and Fisheries Habitat Management, Forest Products, Vegetation and Watershed Management, and Roads.

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Question 10: The agency has requested \$50 million for “scenario planning” regarding fire risk reduction. Where will these funds be targeted for investment, how will those project areas be determined, and what are the expected outputs, outcomes, and timeline? Can these funds be targeted for investment in the Collaborative Forest Landscape Restoration Program, which has a track record of success, not only in restoring large landscapes but also in rebuilding public trust in the Forest Service?

Answer: The agency will use these funds in areas of highest risk, where we can be most successful in reducing wildfire risk to communities and increase firefighter safety. Project areas will be determined using the best available science included in wildfire risk assessments and scenario planning investment tools developed by the research community. Shared Stewardship agreements and local collaborative efforts will be an important part of this process. This investment approach to work in high risk areas will provide a focused effort over multiple years and will significantly reduce wildfire risk to vulnerable communities where we can be most successful. The timeline for action is now; we have been planning for this new approach and are looking to implementation in FY 2021. We anticipate being able to increase our performance under our acres treated metrics for hazardous fuels management, and the agency is investigating new performance metrics associated with fire risk reduction.

The Collaborative Forest Landscape Restoration Program has a great track record of collaboration and success. Regardless of future funding levels, we are incorporating CFLRP lessons learned into our future collaboration efforts and core programs.

Question 11: The Joint Fire Science program has a clear track record of supporting management with the best available science. It also has fostered public-private partnerships across the country with a wide range of stakeholders over its history.

Was the change to funding this out of the Forest Service research program in FY19 successful or should the funding move back to Management to ensure cooperation between vested stakeholders?

Answer: Funding the Joint Fire Science Program (JFSP) out of the Forest Service Research mission area was successful in FY 2019 and FY 2020. The direct involvement of Forest Service Research with JFSP contributes to the ability of JFSP to deliver impactful science. Using an interagency project selection process that is competitive and transparent, JFSP informs risk-based wildfire prevention and management. Forest Service scientists and land managers are closely involved in the selection and oversight of funded projects. The JFSP Fire Science Exchange Network continues to provide the most relevant, current wildland fire science information to federal, state, local, tribal, and private stakeholders. Each year the network brings together thousands of fire, fuels, land, and natural resource managers, practitioners, and scientists for field tours, seminars, workshops, and training sessions. In FY 2019, researchers in federal agencies and state

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and private universities completed 25 JFSP-funded projects that provided new knowledge about fire and land management. Many of these studies involved close collaboration between agencies and universities. One recent example of the valuable science funded through JFSP is a study led by Portland State University in collaboration with the Wallowa-Whitman National Forest and the Umatilla National Forest to improve the understanding of the role of fire in determining forest structure in the moist mixed-conifer forests of the Pacific Northwest. Another example is a study led by the Forest Service's Rocky Mountain Research Station to incorporate next-generation fuels data into fire risk assessments to improve land managers' ability to plan for sage grouse habitat conservation and restoration.

Questions from Senator James E. Risch

Question 1: As you know, the aviation program is a critical part of the Forest Service's Preparedness and Suppression efforts, and appropriate planning is essential for that program to be a success. With that in mind, can you walk me through the agency's strategy for ensuring that there is a reliable supply of airtankers available for this season and beyond?

Answer: The agency will follow the 2018-2022 Airtanker Modernization Strategy. Beginning with the award of Next Gen 1.0, the Forest Service began to modernize the delivery of aviation resources and used a five-year contract with five option years. The Forest Service will have the option to extend Next Gen 1.0 annually until Dec 31, 2022. The aviation program will continuously evaluate to ensure program delivery.

- The current contract proposals for Large Air Tankers have been under consideration by the agency for nearly a year. Do you have a timeline for awarding these contracts?

Answer: The awards were announced on March 26, 2020. On April 6, 2020, two companies protested the awards. The Government Accountability Office has up to 100 days to review the protests and issue a decision. The Forest Service will use call-when-needed airtankers to replace the five exclusive use airtankers on hold due to the protests.

- Moreover, knowing the time it has taken the agency to consider these proposals, what is your strategy for replacing the next round of airtankers that will soon be at the end of their contracts?

Answer: As part of the agency's efforts to modernize its delivery of aviation resources, the Forest Service began using a five-year contract with five option years with the award of Next Gen 1.0. The Forest Service will have the option to extend Next Gen 1.0 annually until December 31, 2022.

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- Finally, what do you anticipate the demand will be for Call When Needed airtankers this fire season, and do you expect enough will be available given the support U.S. airtankers have provided the wildfire suppression efforts in Australia?

Answer: Call-when-needed aviation resources provide critical surge capacity, ensuring sufficient numbers of resources are available during times of peak activity. The frequency and scale of incidents during the 2020 fire year will factor heavily into the utilization of available call-when-needed resources; however, the agency does not anticipate any issues with having all contracted call-when-needed resources available.

Question 2: In Idaho, we have many examples of successful collaboration, with forest collaboratives spanning across the state. New forestry legislation often requires a collaborative process, including Shared Stewardship, which Idaho has taken a lead in, dedicating substantial State time and resources. With that in mind, in what ways does the Forest Service intend to continue to support collaboratives, and is the agency considering any new methods?

Answer: The Forest Service is committed to continuing our collaborative approach to establish shared priorities with partners and use the best science and new tools to reach common goals. The agency will continue to support collaborative groups at the local, regional and national levels.

For example, the Forest Service has embraced shared stewardship as a collaborative approach to achieve restoration across the landscape. Currently, we have 13 shared stewardship agreements with states. The Forest Service is continuing to use and develop science-based tools and new methods for collaboration to assist in defining focus areas for treatment. For example, we are working with partners in identifying outcome-based performance measures that we can integrate with others to tell a more comprehensive story of shared stewardship. This will ensure we monitor, track, report, and hold ourselves accountable. An example of this is the state of New Mexico and the Forest Service collaborating in scenario investment planning models to identify trade-offs that help guide management decisions on the ground.

As another example of creative approaches to collaboration, the Forest Service has 264 Good Neighbor Authority (GNA) agreements with 38 states. In 2019, timber volume offered through GNA doubled. The agency has made and continues to make significant investments in collaboration with states to grow and ensure success of the GNA program to increase the pace and scale of restoration.

Other examples of collaboration include:

- Ongoing collaborative approaches to develop innovative commercial uses for small diameter trees. The agency continues to provide wood innovation grants and fund innovative ideas such as the development and use of cross-laminated timber technology to construct tall buildings from mass timber, which is derived from small

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diameter trees. In FY 2019, Wood Innovation grants were awarded in 20 states for a total of 41 projects with match contributions.

- The agency is continuing to coordinate with the Bureau of Indian Affairs to develop self-determination contracts with Tribes and entering into Tribal and Alaska Native Biomass Demonstration Projects. These projects will promote biomass energy production, including biofuel, heat, and electricity generation, with the Forest Service providing the Tribes or Tribal Organizations with a supply of woody biomass to meet these needs.
- Since 2019, the Collaborative Forest Landscape Restoration Program (CFLRP) has engaged 23 collaborative groups in landscape-scale restoration. A Request for Proposals for new CFLRP projects was issued in 2019 and we are standing up a new CFLRP Federal Advisory Committee to review the 22 proposals received for new and extended projects in FY 2020. The final FY 2020 appropriations bill is funding the 13 CFLRP projects that are currently active. Regardless of future funding levels, we are incorporating CFLRP lessons learned into our future collaboration efforts and core programs.

Question 3: Over the last year, I have had near constant communication with the Forest Service regarding Secure Rural Schools (SRS) Resource Advisory Committees (RACs) quorums. After a year of multiple letters, phone calls, and questions and legislation in this Committee, finally RACs in Idaho and across other states are beginning to be filled. I appreciate your work to fill this Committees, but we don't want to find ourselves again in a situation where Title II funds that Congress has already appropriated cannot be disbursed in rural communities. You may be aware that this Committee passed legislation late last year to require a timeline for RAC nominees to be approved. Do you support this approach, and what steps is the agency taking to ensure RACs that do not qualify for the Farm Bill pilot program are being filled in a timely manner?

Answer: We greatly appreciate the Committee's interest in streamlining the RAC approval process. We look forward to exploring potential changes to the Administrative provisions implementing the Act, including the lengthy RAC member nomination process, in order to enhance community involvement and program delivery under Title II. The Forest Service is working with USDA to process RAC nomination packages as quickly as possible. In late 2019, USDA delegated approval of regular RAC nomination packages to the Under Secretary for Natural Resources and Environment, and more has been done to accelerate approval of some RAC appointments. Additionally, if a local unit is unable to recruit a 15-member committee, we can now request a waiver for the Secretary to approve a RAC of not fewer than 9 members, due to new authority in the 2018 Farm Bill. Lastly, consolidating previously quorum-less RACs is helping to bring diverse interests together to make recommendations for projects under Title II and therefore accomplish more work on the ground and provide jobs and economic stimulus to local communities.

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Questions from Senator Martin Heinrich

Question 1: There are campgrounds in New Mexico that have been closed for years. One was damaged in a 2012 fire, and still hasn't been reopened. With the current funding structure, how long would it take the Forest Service to work through its maintenance backlog for campgrounds and get sites like the South Fork campground reopened? Please specify the amount of funding needed per year, the projected number of years, and how the amount of funding needed for Fiscal Year 2021 under this calculation compares to the appropriated sums for Fiscal Years 2019 and 2020 and the Administration's Budget Request for Fiscal Year 2021.

Answer: Under the current funding structure, the Forest Service cannot keep up with the pace of deterioration on much of its infrastructure in the National Forest System resulting in a total deferred maintenance backlog of \$5.2 billion. Approximately \$404 million of this backlog is for developed recreation sites, of which, roughly \$215 million is for campgrounds. The agency estimates that it will require an additional \$50.5 million per year, above what is appropriated, for 10 years, to eliminate the developed recreation sites maintenance backlog.

The Forest Service continues to focus on the most pressing maintenance needs and ensure funding is invested in areas that will maintain public safety and generate the greatest public benefit. As directed by Congress, the Forest Service has developed a Comprehensive Capital Improvement Plan to prioritize funding for non-recurring maintenance and capital improvements.

Appropriated sums for fiscal years 2019 and 2020 and the Administration's Budget Request for fiscal year 2021 are listed in the table below.

Capital Improvement and Maintenance (Facilities) funding levels

FY19 Actual	FY20 Enacted	FY21 Request
\$148,000,000	\$154,000,000	\$152,501,000

Question 2: The Forest Service has been directed by Congress to "ensure the Nation does not lose its domestic sheep industry or bighorn sheep conservation legacy" by carrying out several directives, including "actions to resolve issues on allotments with a high risk of disease transmission," and to complete risk of contact analyses and share the findings with the public. The Forest Service has been encouraged to meet with stakeholders interested in collaborating on strategies and solutions to address the risk of disease transmission, and also to report to the Committee on implementation of the directives. The Interior and Related Agencies Appropriations bill report language for Fiscal Years 2016-2020 has included such language. Please provide a substantive reply describing the status of efforts in New Mexico to carry out this direction.

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Answer: The Carson National Forest (CNF) is the only National Forest in New Mexico where there is a high likelihood of domestic and bighorn sheep interactions. A number of management actions, as well as both quantitative and qualitative risk assessments, have been undertaken to address the potential of contact between domestic and wild sheep and associated disease transmission. Specific actions on the CNF include the development of Forest-wide practices to address the continued persistence of bighorn sheep on the landscape, and, the incorporation of special operating instructions on all domestic sheep allotments.

In 2014, the CNF began revising its Forest Plan using extensive public involvement and the best available science. Throughout the Forest Plan revision process, the CNF has engaged interested stakeholders in numerous ways regarding potential strategies and solutions to address disease transmission between domestic and bighorn sheep. For example, on the Santos Grazing Allotment, the Forest Service has convened the New Mexico Department of Game and Fish, the Bureau of Land Management, and several other state agencies and local working groups to better understand the population trends, migration patterns, and habitat use of the Rio Grande bighorn sheep herd in order to jointly explore questions about the probability of contact between domestic and wild sheep. These deliberations are ongoing and continue to inform the CNF's planning and management efforts.

Questions from Senator Cory Gardner

Question 1: Please provide the underlying data that informed the decision for the number of aircraft the Forest Service intends to maintain on Exclusive Use contracts for FY2021.

Answer: The target number of aviation resources was determined as part of the 2018 Aviation Modernization Strategy (18-28 Large Airtankers). The agency would be happy to provide a briefing on the methodology and data behind the Strategy. To access aviation resources, the agency leverages both exclusive use and call-when-needed contract vehicles. Utilizing a mix of both exclusive use and call-when-needed contract vehicles has proven to be an effective means of ensuring a baseline number of resources are always available while providing the ability to activate additional aircraft as necessary in response to increasing levels of fire activity.

Question 2: The Forest Service has been directed by Congress to "ensure the Nation does not lose its domestic sheep industry or bighorn sheep conservation legacy" by carrying out several directives including "actions to resolve issues on allotments with a high risk of disease transmission" and meeting with "stakeholders interested in collaborating on strategies and solutions to address the risk of disease transmission". The Interior and Related Agencies Appropriations bill report language for Fiscal Years 2016-2020 has included – the language is included in pending drafts of the FY20 appropriation. No reports have been delivered as

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requested, so please provide a substantive reply describing the status of efforts in Colorado to carry out this direction.

Answer: Bighorn sheep and domestic sheep interaction continue to be an important management issue, particularly in southwestern Colorado. Several key decisions have either recently been made or are expected within the next 12-18 months that involve bighorn sheep and domestic sheep management. It is imperative that forests with both bighorn sheep herds and domestic sheep grazing remain aware of the issues and that steps are taken to assess risk and make management adjustments where appropriate. The recent Snow Mesa-Wishbone grazing decision on the Rio Grande National Forest took measures to balance the interests of bighorn sheep and domestic sheep by authorizing domestic sheep grazing on a newly created Wishbone allotment. This decision is currently being litigated. The Weminuche landscape grazing analysis on the San Juan National Forest involves domestic sheep grazing on several allotments in the Weminuche Wilderness near a Colorado Parks and Wildlife area designated Tier 1 bighorn sheep population. The decision has been delayed as additional radio telemetry data is collected to better understand bighorn sheep movements in the area. The Rio Grande, Grand Mesa, Uncompahgre, and Gunnison National Forests are currently in the process of revising their forest plans and are taking steps to more broadly assess risk of contact across the planning area.

The Colorado Bighorn and Domestic Sheep Working Group was established in 2018 to work collaboratively on solutions to issues of concern associated with bighorn sheep and domestic sheep in Colorado, resulting in broader support for decisions involving bighorn sheep and domestic sheep grazing on federal lands. The purpose of the working group is to provide a forum where issues relating to the management of both bighorn sheep and domestic sheep can be discussed openly and respectfully using science-based information to make recommendations that address issues between bighorn sheep and domestic sheep.

Question 3: Given the differences in capabilities, why are large air tankers and very large air tankers considered in the same contact criteria?

Answer: Per Government Accountability Office decision B-416627_1, September 4, 2018, Very Large Airtankers and Large Airtankers are not to be solicited on separate contracts. The decision regarding which tool is most appropriate on a particular landscape or at certain times during an incident is made during the ordering process, starting with the incident commander.

Questions from Senator Mazie Hirono

Question 1: In February 2019 the USDA Office of Inspector General published an audit report on the Forest Service initiatives to address workplace misconduct. Within the audit was the Forest Service's Response to the Official Draft Report issued in November 2018 that included

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eight recommendations. The response noted that one recommendation had already been completed by the Forest Service and the other seven recommendations had estimated completion dates ranging from June to December 2019.

Has the Forest Service fully implemented all of the recommendations? If not, could you provide an updated timeline for estimated completion?

Answer: The Office of Inspector General (OIG) completed a final action verification (FAV) of all 8 recommendations in their February 11, 2019 report on Forest Service Initiatives to Address Workplace Misconduct (08601-0008-41). This report was posted on the USDA OIG website on July 15, 2020.

Question 2: The Office of Inspector General also submitted a document in July 2019 to the Forest Service that served to help identify standards, guidance, or best practices that agencies can use to measure progress in address sexual harassment and misconduct. Has the Forest Service utilized these suggestions in improving the workplace culture?

Answer: Yes, the agency is implementing a work environment agenda that addresses many of the ideas the OIG identified. For example, the OIG recommended establishing policies and oversight to set the tone and culture of our workplace, and holding employees accountable for following and upholding formalized models and standards. It also recommended following the CDC's principles for sexual violence prevention, which include creating protective environments and promoting social norms that protect against violence.

The Forest Service is implementing these recommendations by promoting a clear framework of values and behavioral expectations that apply to everyone in the organization; these values and behavioral norms are intended to stop all forms of harassment before they begin. The Forest Service is also following the OIG recommendation to offer multiple avenues for reporting and responding to allegations of misconduct. The agency established a Harassment Reporting Center to take in reports, and hired case managers to respond expeditiously and thoroughly to allegations. The agency also has case management liaisons to offer employee care throughout the reporting and investigation process. Finally, the agency plans to create an Ombudsman's Office later this year, which acts on the OIG's recommendation to offer a "restricted" reporting mechanism that may not lead to an active investigation.

Please see Appendix A for a complete list of the actions the Forest Service is taking to ensure a safe, resilient, and respectful workplace.

Question 3: As a follow-up to our verbal exchange regarding workplace harassment at the Forest Service, can you provide additional information on the specific demographics of those involved with instances of harassment? Can you provide any data on trends related to workplace

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harassment that the Forest Service has identified? Finally, please provide further information regarding the Forest Service's efforts to diversify the workforce.

Answer: Demographics of those involved in harassment cases.

The Forest Service regularly tracks data on all reports to our Harassment Reporting Center, findings of misconduct, and disciplinary actions. Appendix B provides demographic details in cases where misconduct was substantiated in 2018 and 2019.

Data trends related to workplace harassment.

The Forest Service has tracked and analyzed data gathered by our Anti-Harassment Program on a monthly basis for more than two years. From 2018 to 2019, the Forest Service saw a significant drop in complaints to both the Harassment Reporting Center (1,008 reports in 2018; 619 in 2019) and Office of Civil Rights (140 EEO complaints in 2018; 100 in 2019). A trend analysis is difficult at this time as the agency has only two full years of data since opening the Harassment Reporting Center.

Forest Services efforts to diversify the workforce.

Diversity is one of the Agency's core values, along with service, conservation, safety, and interconnectedness. We are committed to a diverse workforce and are taking several actions in line with that commitment. One key area of focus is diversifying our firefighting force. A new program in 2020 helps hire, train, and support groups that are under-represented. The program includes initiatives to hire and train more women in fire in the Forest Service's Southwest and Pacific Northwest regions and provide new training and leadership development for women firefighters in Montana, Illinois, and Florida. The program will also offer a variety of recruitment and training opportunities with schools and Job Corps Centers, focusing on under-represented groups to further diversify the Forest Service firefighting workforce.

Our new Direct Hire Authority offers managers more flexibility and a broader applicant pool to hire diverse candidates into the agency. For example, this authority simplifies the process of hiring candidates who have successfully completed the agency's diversity-focused Resource Assistants Program.

Questions from Senator Martha McSally

Question 1: As we discussed in the hearing, when we spoke at the USFS FY20 budget hearing last year, you committed to working with me to update the Region 3 Forestry Guidelines to make sure Phase 2 of Arizona's Four Forest Restoration Initiative, or 4FRI, is a success.

Shortly after that hearing, I introduced my bill, S.1849, the Accelerating Forest Restoration Act, which laid out very concisely the top asks from 4FRI stakeholders to make the project more efficient and economical. I appreciate the work Forest Service has done to implement several of

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the recommendations laid out in the bill. I would appreciate an update on a few specific elements.

My bill called for flexibility on marking low value timber. I understand local foresters have reduced the branding requirement down to 50% of the logs and have asked Washington for permission to drop that to zero. Will you be granting that permission? How will this be implemented in the 4FRI project?

Answer: Timber marking has not been dropped to zero due to existing law and regulation, but we will implement these requirements to the extent possible. The Southwestern Region will allow Contracting Officers to waive branding and painting where appropriate and consistent with existing law and regulation. The 4FRI will implement waiving of branding and painting as applicable and appropriate. We are happy to continue working with your office on this issue moving forward.

Question 2: S.1849 also outlined stakeholder requests to increase truck weight limits. I understand the State of Arizona has done their part to lift the weight limit on state roads but we are still waiting for Forest Service to finish analysis of their roads and bridges. What is the status of that review and when can we anticipate the forest service to implement weight restriction reform?

Answer: The recent review is complete and shows the 4FRI transportation system consists of 73 bridges and 12,534 miles of road including: 10,544 miles (native surface) of High Clearance Roads and 1,988 miles (126 paved, 1,678 gravel, 184 native surface) of Passenger Car Roads.

In close coordination between the Forest Service and Arizona Department of Transportation, different tractor trailer configurations will be considered as long as they are consistent with the Federal Bridge Formula (https://ops.fhwa.dot.gov/freight/publications/brdg_frm_wghts/). The Arizona Department of Transportation expanded the Healthy Forest Initiative, which is a permit process to allow increased load limits for timber transport. Under the original program, timber industry trucks could haul up to 90,800 pounds on nine state routes between Payson and New Mexico to sawmills, pellet plants, and other facilities in the White Mountains. The area covered by the Healthy Forest Initiative will be extended west to Williams and north to Tusayan. Additionally, trucks can haul up to 97,000 pounds with a tridem-tridem configuration.

Question 3: My bill calls for extending deck drying times to reduce the weight of the logs and allow more flexibility for harvesters to time when they sell their logs in the market. According to the ERI report, this practice has been authorized but as of Feb. 11, 2020 but it is not known to be in use. When will the Forest Service put this into practice and how?

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Answer: Extended decking is currently allowable on a case-by-case basis after evaluating the season and risks of fire and requires an operator or purchaser to request the use of this tool. Approval requires site-specific reviews, and formal requests should be provided in advance of planned implementation to avoid delays. One such request was submitted and approved in 2019; no additional requests have been submitted to the Forest Service at this time.

Question 4: The Snowbowl Road is a Forest Service road that takes more than 320,000 skiers and other visitors annually approximately seven miles from Flagstaff, AZ, to the Snowbowl ski area. It is vital to both public safety and the economy of the region. The road traverses up more than 1,600 feet over steep grades and switchbacks to a top elevation of 9,500 feet above sea level. As you would expect, this geography experiences extreme winter snowfall and freeze-thaw conditions. The road was last paved in the 1990s and is in desperate need of repair and upgrading. I understand the Forest Service has a general rubric and formula they use to determine which roads to repair. Does this decisions making process include factors such as volume of users, public safety and economic impact? How does the Snowbowl Road rank in the priority assessment?

Answer: The Forest Service road maintenance and improvement projects are evaluated and prioritized under the Comprehensive Capital Improvement Plan (CCIP) using the six benefit areas of active management, recreation and public use, fire, environment, research and development, and economic benefits. The Forest Service has invested approximately \$500,000 in the Snowbowl Road to correct immediate safety-related pavement and guardrail deficiencies since 2017. Due to other maintenance priorities, the agency is not able to fund any improvements this year, but if funding becomes available, we will consider improvements needed at Snowbowl among our other needs.

Questions from Senator Catherine Cortez Masto

Question 1: Recently, the Interior Department ordered the grounding of the bulk of its drone fleet, most of which is foreign-made, citing cybersecurity concerns. This order is having an impact on the ability of Interior and its bureaus to use drones for very similar types of missions to that of the Forest Service. Knowing there is a lot of interagency collaboration between the Forest Service and Interior, how has Interior's new policy had an effect on the Forest Service's ability to use drones over areas of neighboring jurisdiction with Interior or to train pilots via Interior's interagency drone training courses?

Answer: Due to recent Secretary of the Interior orders, if the Forest Service or a cooperator has a "designated unmanned aircraft system", they will be unable to fly on lands within the Department of the Interior jurisdiction. A "designated unmanned aircraft system" is still undefined, but is interpreted as anything containing foreign-made components.

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The Department of the Interior and the Forest Service unmanned aircraft systems programs are interagency in nature, from standards and procedures to training and operations.

The Forest Service has successfully worked with the Department of Interior to allow for the use of unmanned aerial systems for prescribed burning on Southeast National Forests in Fiscal Year 2020. This has enabled both Departments to evaluate the feasibility of utilizing unmanned aerial systems while addressing cybersecurity issues.

- Can you elaborate on these cybersecurity concerns and whether the Forest Service shares those concerns?

Answer: The Forest Service shares the same concerns that have been cited by the Department of the Interior and in response, the agency has taken measures to ensure necessary security protocols have been established, tested, vetted, and implemented for unmanned aircraft system (UAS) platforms that are being explored and piloted. Additionally, the UAS platform can be isolated from any information technology network which is another layer in a multi-faceted security protocol. The agency continues to cooperate with interagency cybersecurity subject matter experts, including the Department of Homeland Security, to ensure that our aviation assets are operating in full compliance with federal policy.

- Do you expect Forest Service to follow Interior's policy of grounding foreign-made drones?

Answer: The Department of Agriculture continues to evaluate this issue. No decision has been made at this time.

- With the grounding of drones, what sort of data is otherwise not being collected?

Answer: Data collection and other operations by UAS impacted by the Department of the Interior UAS grounding will be acquired by manned aviation assets. This includes resource management projects such as archeology surveys, timber surveys, and bridge engineering surveys. UAS with aerial ignition devices also support prescribed fire operations, reducing the risk to flight crews that otherwise conduct low level flight and manual aerial ignition operations in manned aircraft.

Question 2: Last year we discussed your efforts in addressing sexual harassment and the numerous complaints from within the Service. In your testimony, you note that the Forest Service has taken "significant steps to improve policies, raise accountability, upgrade reporting systems, and conduct training around the workplace environment to stop harassment, bullying, and retaliation and permanently change our culture." Would you be able to elaborate on this and provide the Committee with an update on the progress of the agency's Office on Work Environment and Performance? What demonstrable changes can you note and what feedback are you receiving from other Forest Service employees?

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Answer: The Forest Service is committed to ending harassment, managing conflict, and creating a work environment where every employee feels safe, valued, and respected. The Forest Service's Work Environment and Performance Office is leading the agency's efforts to instill clear organizational values and behavioral expectations of all employees. We have used employee feedback gathered from internal surveys, exit interviews, employee advisory groups and networks, and related channels to guide major improvements to our anti-harassment program and to design a suite of other activities to improve our work environment.

Please see Appendix A for a complete listing of the actions the Forest Service's Work Environment and Performance Office is taking to ensure a safe, resilient, and respectful workforce, as well as demonstrable results. This work remains a top priority for the Forest Service.

Question 3: Recent Interior Appropriations bills included report language referencing Bighorn Sheep Conservation directing USFS and BLM to implement a variety of solutions to ensure the Nation does not lose its domestic sheep industry or bighorn sheep conservation legacy. Please provide an update on what steps have been taken toward implementing this request.

Answer: Bighorn sheep and domestic sheep interaction continues to be an important management issue. National Forests with both bighorn sheep herds and domestic sheep grazing will ensure steps are taken to assess risk and make management adjustments where appropriate. We continue to work closely with livestock operators to ensure work-around options on the ground so domestic sheep grazing can continue. For example, we are working closely with the permittees to carefully route domestic sheep flocks around bighorn sheep sightings and foray points, and to maintain a mile distance from those points. We are working with permittees to use their allotments at different times of the year and route differently to avoid bighorn sheep. We are also exploring options on other allotments including conversion of cattle allotments to sheep allotments or using vacant sheep allotments for displaced operators.

Questions from Senator John Hoeven

Question 1: When you visited Western North Dakota last August, we discussed the staffing needs that exist in the region. Can you elaborate on some of the progress the Forest Service is making in terms of meeting these critical staffing needs?

Answer: The Region continues to prioritize hiring for critical positions that will address the backlog of oil and gas leasing permit requests on the Dakota Prairie Grasslands. In addition to providing housing for some positions, all Forest Service employees in Bismarck, Dickinson, and Watford City are receiving a 10% group retention incentive. The Forest Service is also taking steps in the interim to continue our work, including

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working with the local Bureau of Land Management Field Office to share resource specialists while Forest Service positions are filled.

Question 2: As you know, the Forest Service administers 20 publicly owned National Grasslands, totaling almost 4 million acres. In North Dakota, our grazing associations utilize Forest Service lands for grazing their livestock after paying grazing permit fees. How does the president's budget reflect the administration's ongoing commitment to our ranchers who depend on these grazing permits?

Answer: The President's FY 2021 Budget Request places a high priority on supporting ranchers and requests over \$58 million for Grazing Management. Secretary of Agriculture Sonny Perdue followed up with a memo to the Chief of the Forest Service in June 2020. The memo establishes vision, priorities, and direction to increase the productivity of national grasslands. The agency is also taking several actions that will benefit the ranching community. Last year the agency proposed revisions to its regulations implementing the National Environmental Policy Act. The proposal included Categorical Exclusions that would assist with the agency's administration of term grazing permits, trailing permits, crossing permits, and range improvement actions. The proposed Categorical Exclusions will increase our ability to better serve the public, and we anticipate finalizing the proposed regulations this summer. We continue to build and maintain good working relationships with Grazing Associations and National Forest System permittees to provide forage for livestock while using livestock grazing as a management tool to reduce fine fuels, control invasive plant populations, and provide habitat for native plants and animals.

Question 3: During your visit to North Dakota, you heard first-hand from ranchers who graze livestock on Forest Service land. These ranchers discussed their concerns that prairie dogs are causing significant damage to the land and forage ranchers depend on to raise their livestock. Can you share an update on the Forest Service's efforts to control prairie dogs on the Little Missouri National Grassland?

Answer: We are implementing the Prairie Dog Management Plan on the Little Missouri National Grasslands. Almost 6,000 acres have been treated over the last two years, and plans are in place to continue management efforts in fiscal year 2020. These efforts include working with the Grazing Associations to conduct additional treatments consistent with the Prairie Dog Management Plans and working with the Grazing Associations to complete effectiveness monitoring to gauge management plan success and identify ongoing shared stewardship needs.

Question 4: UAS has proven to be an invaluable tool with many uses, and the technology holds great promise for not just better stewardship of public lands across our federal land management agencies, but reducing the fire risk to surrounding communities by increasing the possibility of early detection. What role do you see UAS technology playing in the future of federal land management agencies, including the Forest Service?

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Answer: UAS are a key component of a modern aviation fleet that can support both land management and fire response operations. UAS have been used for aerial ignition on wildland fires and prescribed fires, natural resource management and data collection, archeology surveys, bridge inspections, and reconnaissance and intelligence collection. Expanded future uses include: law enforcement support for drug interdiction missions; timber survey and management; forest and range health surveys; and wildlife surveys. As the technology develops, the agency will continue to evaluate and deploy UAS where they can accomplish the Forest Service mission objectives in a safe and efficient manner.

Question 5: I worked closely with my colleagues on both the Senate Committee on Indian Affairs, and the Senate Committee on Agriculture, to secure a historic number of tribal provisions in the 2018 Farm Bill.

Among other things, the 2018 Farm Bill included a 638 self-determination contract pilot program at the U.S. Forest Service, which would allow tribes to enter into forestry management agreements, and better utilize Forest Service lands for fuel reduction, biomass energy, and other stewardship initiatives.

Can you provide an update on the implementation of that pilot program?

Answer: The Forest Service has taken several steps to implement the Tribal 638 Authority Demonstration Pilot.

- We established a Challenge-Cost Share Agreement with the Intertribal Timber Council to carry out the administrative, management, and establishment of demonstration projects.
- We executed new tribal collaboration authorities with strategic tribal partners who are actively engaged in natural resource management.
- We have built relationships with agencies in the Department of the Interior for more efficient implementation of the new authorities. Our relationship with the Bureau of Indian Affairs offers access to and leveraging of that agency's vast network of tribal contacts and experts in the field who are engaged in 638 agreements and contracts.
- We engaged with 14 tribal delegations and organizations to discuss interest, opportunity, and capacity to initiate a 638 demonstration/pilot.
- In July and August of 2020, we will hold webinars for up to 1,000 Forest Service employees and tribal partners on how the new 638 authority can be implemented.

By the end of this fiscal year, we plan to implement pilots in three Regions.

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Appendix A: FY 2020 Actions for Improving the Work Environment of the Forest Service, U.S. Department of Agriculture

*The Forest Service envisions a work environment where every employee feels safe, valued, and respected. To achieve it, we are creating a **values-based organization**, taking steps to **prevent** harassment, bullying, and retaliation, and **assessing** our progress along the way. We are providing **support** programs to empower employees, **addressing harassment** when concerns do arise, and ensuring **accountability**. This builds on the Forest Service's work of the past two years.*

Prevention

Creating a Values-Based Culture

The Forest Service is implementing its framework to become a Values-Based, Purpose-Driven, and Relationship-Focused agency. This framework names the Core Values of Service, Safety, Conservation, Interdependence, and Diversity, and a clear code of commitments and other practices that every agency employee is expected to demonstrate in their performance with the Forest Service. In 2020 every Forest Service employee will personally learn these values through interactive engagements led by peer Ambassadors, National New Employee Orientation, and Middle and Senior Leadership Programs.

Agency Commitment

The Forest Service holds employees and leaders accountable for preventing harassment, and corrects it when it occurs. This includes weekly evaluation of sexual and other harassment cases to ensure appropriate disciplinary actions are swiftly taken. All supervisors are to report any allegations of sexual harassment and/or sexual misconduct within 24 hours. In fiscal year 2020, over 500 middle and upper level agency leaders and managers will be required to take anti-harassment training specifically designed to clarify expectations and develop skills for leaders in their critical roles for creating workplaces that are free from sexual harassment and retaliation, and for creating a respectful and inclusive culture.

Reporting and Employee Care

In response to program reviews and employee feedback, the agency extended information, guidance and support services to report and address harassment and conflict. In fiscal year 2020, the Forest Service has increased staffing for its Conflict Management and Prevention program which has been highly successful in guiding both managers and employees to productively address workplace issues. We are also planning a new Ombudsman's Office to provide an impartial and safe place for employees to discuss concerns, reinforce a "speak-up culture," bring

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critical concerns to the attention of leadership, and refer employees to the support they need. The agency is piloting a Peer Support Program to help employees understand the tools, resources, and processes they can use to address incidents of harassment and conflict they may be experiencing.

Diversifying Our Workforce

We are improving the experiences of women in the Forest Service by increasing the representation of women, especially in Fire. We want our fire organization to be an exemplar for the rest of the Forest Service and the broader wildland fire community. In fiscal year 2020 we will select a few firefighting units to test a new approach to their fire readiness training that includes psychological preparation and interpersonal skills along with operational preparedness. A new \$1 million program in 2020 will help hire, train, and support more women and other under-represented groups in the work of our firefighting force.

Our new Direct Hire Authority offers managers more flexibility and broader applicant pools to hire diverse candidates into the agency. All individuals employed under contract, other formal agreements, and Administratively Determined personnel must submit the OPM form, OF-306, Declaration for Federal Employment. This helps eliminate the hiring of individuals who were fired or quit after being told they would be fired, for workplace harassment, indiscretions, or criminal activity.

Accountability

Misconduct Personnel Actions

As of May 4, 2020, the agency has closed 2,166 (92%) of the 2,365 cases of harassment reported since August 2017. We found misconduct in 462 (21%) of those cases. The agency took corrective action in roughly 91% of the closed cases where misconduct was identified, removing or terminating 36 employees. In the roughly 9% of cases where misconduct was found but no disciplinary action was taken, it was largely because the offender was either not a Forest Service employee at the time of the report, or left the agency before action could be taken.

Reducing Report Processing Timelines

Before implementing the Case Manager system in April 2019, the average time in process for harassment reports (from intake to closure) was 301 days. In cases reported since then, the average time has been reduced to 79 days. In 2019, the agency's Harassment Assessment and Reporting Team (HART) completed inquiries in an average of 30 days, down from 50 in 2018, and for March 2020 the average time was down to 23 days. The program is more transparent,

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efficient, and effective than ever at addressing underlying issues and being victim-centered and trauma-informed rather than process-heavy.

Implementing Office of Inspector General Recommendations

The USDA Office of the Inspector General has closed its audit of the Pacific Southwest Region and we are addressing all of its recommendations on a national level to improve how we take care of those who have been harassed, hold offenders accountable, and eliminate all forms of harassment.

Assessing Our Results

As a foundation of our efforts to end harassment, bullying and retaliation, and to improve work culture, we are tracking data to understand current experiences of our employees. We are reviewing the Federal Employee Viewpoint Survey results, exit interviews, and Harassment Reporting Center data to track progress toward improving the agency's culture. Our survey data will serve as a benchmark to measure the results of our actions to end harassment and create a safe and resilient work environment.

Addressing Harassment

Harassment Reporting Center

The Forest Service is working diligently to end harassment, provide protection, and hold those who commit such acts accountable. Based on employee feedback, the agency made major improvements to our Anti-Harassment Program. We expanded staffing to support local managers in meeting their responsibility to resolve harassment behavior and conflicts at the lowest level possible. Case managers evaluate every new report. The agency provides a Case Management Liaison to all employees who report sexual harassment; the liaison offers supporting resources and is a direct point of contact for any questions or concerns about how a case is being handled. The Anti-Harassment process is available to all employees and those who do business with the agency.

Related Services

For reports not under a formal inquiry or investigation, our program ensures appropriate leadership attention with guidance from case managers and assistance from the Conflict Management and Prevention Center, which offers alternative dispute resolution services including coaching, mediation, facilitated discussion, and group intervention. In addition, we offer alternative reporting options through the Equal Employment Opportunity process and the Office of the Inspector General hotline.

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Employee Support

Evolving Supervision

The Forest Service has identified our supervisory system as an area of high leverage to improve the quality of the Forest Service culture, mission results, and employee experiences. In 2020, we are evolving supervision in the agency by directly engaging supervisors and their employees to identify needs, and implementing prototype projects to increase direct support and skills development for this critical role. In the past year we strengthened supervisors' performance plans to emphasize leadership competencies that favor a safe, respectful, and resilient work environment free from harassment and discrimination. We updated agency processes for interviewing candidates and conducting employment reference checks to align hiring and promotion decisions with agency values.

Information and Resources

In fiscal year 2020, all Forest Service employees will receive refresher training on harassment prevention and employee conduct. Our New Employee Orientation, Experienced Supervisor and New Supervisor training, and online courses ensure supervisors and employees know about agency harassment reporting requirements. The agency contracted with the National Organization for Victim Assistance (NOVA) to train Harassment Reporting Center Case Managers and Case Manager Liaisons to take a victim-centered, trauma-informed approach in their work. The agency provided Bystander Intervention Training to 7,000 employees so they can safely intervene when they witness unacceptable behaviors. An online anti-harassment Leader Guide, Leader Quick Reference, and Pocket Card guide supervisors to get help with reports of harassment or conflict in the workplace, while webinars, tools, and resources clarify the harassment reporting and conflict-resolution processes for all employees. We are now also releasing a Work Environment Resource Guide that directs all employees to resources that may assist with a wide range of workplace issues. We continually offer high-quality courses on harassment, bullying, misconduct, civility in the workplace, civil rights, gender, bias, diversity, and inclusion.

Adapting and Learning

The Forest Service is committed to doing more to end harassment, assault, bullying, and retaliation. Many of our actions are based on employee feedback. Active dialogues between agency leadership and employees continue through dedicated advisory groups and networks across the agency. We are using these channels to explore initiatives such as a new Peer Support Program to help employees learn about all the support resources available to them, and an Ombudsman Program we plan to launch in 2020 to offer a confidential, independent problem-solving resource to all employees.

Appendix B: Data on demographics of affected individuals and offenders in cases where misconduct was identified.

Anti-Harassment FY18

Demographics of Affected Individuals and Alleged Offenders

Note:

Metrics for Affected Individuals includes data for all cases.

-Metrics for Alleged Offenders includes data only for cases resulting in substantiated misconduct.

-Dotted red line shows percentage of all FS employees in that demographic, indicating whether it is over- or under-represented among Affected Individuals or Alleged Offenders.



Appendix B: Data on demographics of affected individuals and offenders in cases where misconduct was identified.

Anti-Harassment FY19

Demographics of Affected Individuals and Alleged Offenders

Note:

Metrics for Affected Individuals includes data for all cases.

Metrics for Alleged Offenders includes data only for cases resulting in substantiated misconduct.

-Dotted red line shows percentage of all FS employees in that demographic, indicating whether it is over- or under-represented among Affected Individuals or Alleged Offenders.

