



Date: April 29, 2021

To: William Hohenstein, Director
USDA Office of Energy and Environmental Policy

From: Alexis M. Taylor, Director, Oregon Department of Agriculture
Meta Loftsgaarden, Executive Director, Oregon Watershed Enhancement Board
Peter Daugherty, State Forester

Re: Docket Number USDA-2021-0003

We appreciate the opportunity to provide input to the U.S. Department of Agriculture (USDA) regarding its climate change strategy and USDA's attention to this critical issue. The Oregon Department of Agriculture (ODA), Oregon Department of Forestry (ODF), and Oregon Watershed Enhancement Board greatly value USDA's role and the USDA resources to contribute toward addressing large and complex environmental problems.

Our agencies have observed wide-ranging impacts of climate change on Oregon's agriculture, food, and forestry industries and those working in these industries. We have been a part of the state's response to multiple disasters exacerbated by a changing climate. We also see great potential for agriculture and forestry to contribute to climate change mitigation and to increase its resiliency to the conditions of a changing climate.

In 2020, our agencies adopted an agency climate change plan in response to Governor Kate Brown's Executive Order 20-04. This order directed several state agencies to establish climate change plans, created a climate justice task force, and directed the Oregon Global Warming Commission to provide recommendations to the Governor regarding adopting of a carbon sequestration goal on natural and working lands.

Our agencies have also participated in multiple interagency efforts at the state level to identify climate change mitigation and adaptation opportunities and needs. Through our collaboration with agencies, stakeholders, and community members in these efforts, we have identified key needs and priorities for agriculture, forestry and other natural and working lands.

The following responses to selected questions in USDA's request for comments are taken from several strategies collaboratively developed at the state level, including our agencies' climate action plans, the state's climate change adaptation framework, the climate equity blueprint, and a framework to incentivize climate-friendly practices on natural and working lands in Oregon.

1. Climate-Smart Agriculture and Forestry Questions

A. How should USDA utilize programs, funding and financing capacities, and other authorities, to encourage the voluntary adoption of climate-smart agricultural and forestry practices on working farms, ranches, and forest lands?

1. How can the USDA leverage *existing* policies and programs to encourage voluntary adoption of agricultural practices that sequester carbon, reduce greenhouse gas emissions, and ensure resiliency to climate change?

General recommendations:

Expand existing Farm Bill programs that offer multiple natural resource benefits including climate change mitigation and support for early adopters. We strongly recommend expanding investments in existing USDA programs such as the Conservation Stewardship Program, Environmental Quality Incentives Program, Regional Conservation Partnership Program, Joint Chiefs' Landscape Restoration Partnership and Conservation Reserve Program. These existing incentive programs offer the following advantages over carbon banking or offset programs while providing significant climate change mitigation benefits.

- These programs support practices that sequester carbon, protect and improve water quality, enhance wildlife habitat, and conserve water.
- The programs offer greater flexibility and less risk than carbon banking or offset programs.
- These existing programs are already well-known and have seen strong participation by agricultural landowners.
- States and technical advisors have working relationships with existing programs and federal staff to implement these programs.

An essential element of expanding federal programs is to fund the corresponding federal and local staffing support. Federal and local staff located in field offices are critical to facilitating landowner engagement, working with landowners to identify appropriate conservation practices on their land, providing help in submitting grant applications, and providing technical

assistance (TA) to plan and support the delivery of practices and strategies. To be most effective, allow as much flexibility at the state and local delivery level to determine best practices given local conditions.

Further, forest and agricultural landowners have specifically identified the need for making federal assistance applications more understandable and streamlined. The application process for federal technical, financial and disaster-relief assistance is a high barrier for many operations that may not have the staff time or resources to collect the requisite information and to properly fill out and submit successful applications. Funding local partners to assist landowners with federal applications would meaningfully support implementing more conservation practices on-the-ground.

As part of expanding support of the Conservation Stewardship Program (CSP), we recommend more significant support for early adopters of conservation practices. This could include an increased base payment for those verified in accomplishing significant improvements toward resource conservation goals. The original goal of CSP was to reward early adopters while also encouraging additional conservation. In recent years, it appears that the program has moved away from providing incentives to early adopters. Rewarding proactive conservation is an important part of public investment in ecosystem services, and should be returned to the CSP.

Keep existing Farm Bill programs flexible to recognize changing technologies and regional diversity. With the nation's diversity of crops, landscapes, climates, and rapidly evolving technologies and new research, there is significant variation in the way growers apply conservation practices across the landscape. In addition, not all practices work everywhere. Incentive program design should be flexible enough to recognize regional diversity and incentivize mitigation and adaptation outcomes even as specific implementation technologies and activities change over time.

Offer incentives for longer durations. The carbon sequestration benefit of many conservation practices is greater the longer the practices are in use. For example, Oregon has found that farmers do not experience the long-term benefits of cover cropping until the fourth or fifth year of adoption. For annually implemented strategies, five to ten years' eligibility under USDA incentive programs (such as EQIP and CSP) is a reasonable time frame consistent with other USDA programs. The same time frame is reasonable for practices that involve a long-term and involved maintenance component, such as riparian buffers under CREP. However, extended periods (e.g., 10-30 years) can deliver even greater mitigation and adaptation benefits. To incentivize strategies that provide long-term benefits, the USDA incentive programs could be

structured to provide greater incentives the longer the time commitment to maintain the practice.

Consider increasing federal cost share rates. For practices that have environmental co-benefits but do not show immediate economic returns for producers, such as machinery, equipment, and infrastructure upgrades that reduce fossil fuel use, consider increasing cost share rates above 50 percent. The availability of higher cost share for practices that require substantial upfront investments and have an extensive payback period is necessary to facilitate adoption of these practices.

Permanently protecting farmland from conversion is another key strategy providing significant long-term benefits. Through increased funding of the Agricultural Conservation Easement Program and Agricultural Land Easements (ACEP/ALE), landowners would receive a much needed boost in technical and financial assistance that can make a real difference in conserving wetlands, and agricultural and forest lands that will provide long-term agricultural production, environmental quality, and wildlife habitat benefits.

Review insurance programs to eliminate disincentives and encourage conservation. We recommend a comprehensive review of existing insurance programs and risk management tools to remove any barriers or disincentives to practices such as cover cropping, water conservation, and other climate change mitigation and adaptation strategies. Insurance program regulations and the Good Farming Practices Handbook should also recognize all existing USDA-NRCS conservation practice standards and clarify that they are all allowable on insured farms, ranches, and forest operations. This will help insurance programs serve as a risk management tool that can lead to improvements consistent with climate goals.

Expand federal Crop Insurance programs to include cover crops. Cover crops can increase carbon sequestration in the soil. Both annual and perennial cover crops offer climate adaptation benefits by reducing erosion, retaining soil moisture, and scavenging excess nutrients. Establishing cover crops may be encouraged by reducing the risks associated with loss of cover crops from extreme weather events through crop insurance.

Promote consistency across county lines. Farmers, ranchers and forest managers often work land that crosses county borders, and differences in incentive rates and requirements between counties complicate compliance with and reimbursement from programs administered by NRCS and FSA.

Allow stand-alone practices for program eligibility purposes. Conservation practice implementation would be encouraged if farmers have the option of adopting affordable conservation practices without a commitment to adopting multiple enhancements simultaneously. For example, allowing and prioritizing sign-ups for EQIP that fund cover cropping could expand adoption of this valuable yet under-used practice.

Recognize fossil fuel reduction benefits of existing practices when setting priorities for funding. Many practices and projects that are already eligible for USDA programs can help reduce the use of carbon-intensive fuels, in addition to sequestering carbon. Examples include reduced-till or no-till farming, as well as nutrient management projects that reduce fertilizer use. The fuel use reduction benefits of these practices should be factored into the estimate of environmental benefits to prioritize practices for funding.

Increase research into sequestration, emissions reduction, adaptation practices and regenerative agriculture at USDA and increase funding for Sustainable Agriculture Research and Education. A significant expansion of research investments is needed to understand better the types and locations of practices that can be most beneficial in mitigating climate change. In addition, given that climate change is rapidly accelerating, adaptation practices that make agriculture more resilient to the effects of climate change should be given high priority for funding. Stakeholders have particularly identified soil health baseline and inventory information as a top research priority.

An expansion of research by the Agricultural Research Service (ARS) focused on understanding baseline information and benefits of practices under conditions in the Pacific Northwest has been identified as a high priority by stakeholders in order to assist farmers and ranchers make more informed decisions on a finer scale. Soil health baseline and inventory information in particular was identified by stakeholders as an urgent need since research to date has primarily focused on Midwest soils and climate, which often does not translate into what farmers and ranchers in Oregon will experience. In addition, the Sustainable Agriculture Research and Education Program has helped develop and deploy sustainable practices that are used by all types of farms with all types of cropping systems. Increased investments in these programs will help diverse farms mitigate and adapt to climate change.

Expand USDA programs to reduce food loss and waste (FLW). Food waste decomposing in landfills is another source of GHG that offers significant potential for emission reductions. The 2018 Farm Bill included new programs to reduce FLW, including funding for states to harvest, package and transport donated agricultural commodities and funding for community composting and digester projects. USDA should pursue expansion of these programs,

particularly those that prevent food loss and waste. USDA should also continue its partnership with the FDA and EPA to reduce FLW in a coordinated and collaborative effort.

At the same time, it is important to producers to recognize their current efforts that reduce food waste. For example, there is already extensive collaboration between food processors and livestock producers to recycle food processing byproducts for livestock feed. Farmers also may allow imperfect produce to be harvested by local organizations to benefit food banks. Recognizing such efforts encourages more producers to participate in these key efforts to reduce food loss and waste.

Fund support of Invasive Species Early Detection and Rapid Response (EDRR) programs. In many cases, climate change makes it easier for invasive species to gain a foothold when introduced into a new environment. Invasive species also impact the productivity and resiliency of working lands to changing climate conditions. Invasive plant and pest species affect soil health, reduce crop and timber productivity, increase wildfire risks and reduce the ability of working lands to sequester carbon.

Early detection and rapid response (EDRR) is a critical component of successful invasive species management. EDRR demands a widespread and comprehensive network of trained detectors and “boots on-the-ground” to implement rapid response strategies before invasive species can become established. Maintaining and expanding funding for invasive species prevention programs is critical to help agriculture and forestry adapt to climate change.

Practice Specific Recommendations:

Prioritize practices for funding in existing Farm Bill conservation programs that provide co-benefits, identified as a prominent need by stakeholders. Below are some examples of highly beneficial practices.

- Practices that promote soil health on croplands. These practices include cover cropping and no-till farming. In addition to sequestering carbon, these practices reduce soil erosion; help crops better withstand pests, disease, and drought; and protect water quality. Cover cropping in particular would benefit from additional prioritization. Although it is widely recognized as a beneficial practice, the USDA Economic Research Service notes that cover crop adoption is well behind other practices such as no-till farming.
- Targeted, management-intensive grazing practices. In addition to sequestering carbon, these practices keep pasturelands and rangelands more productive and help them withstand invasions by noxious weeds.

- Irrigation modernization practices. These practices include soil moisture monitoring, irrigation scheduling, equipment upgrades, and piping open irrigation ditches. These investments will help irrigators adapt to the changing climate and gain greater use out of each drop of water used. In some cases, depending on the energy source to power irrigation equipment, these investments will also help reduce greenhouse gas emissions associated with energy use to pump water.
- Practices that promote recycling of nutrients. These practices include composting and recycling of manure and agricultural residues. These practices can keep beneficial nutrients and organic matter out of waste streams and maximize the value of these materials. They can also result in a reduced need for commercial fertilizer applications and can promote soil health.
- Practices that help farmers and ranchers protect and enhance fish and wildlife habitat, promoting resiliency of fish and wildlife populations under changing climate conditions. In addition to practices that provide habitat for fish and wildlife on agricultural lands, such as streamside vegetation, structural practices can help facilitate habitat access while allowing farming activities to continue. Tide-gates are crucial as sea levels rise, both to protect agricultural land for production and to allow fish passage to increase habitat range.

2. A. What *new* strategies should USDA explore to encourage voluntary adoption of climate-smart agriculture and forestry practices?

Invest in research and equipment adoption programs that reduces carbon-intensive fuel reliance. Equipment can be the most significant capital investment in agricultural and forestry operations. The best technology available remains dependent on carbon-based fuels. Stakeholders are searching for ways to reduce their reliance and volume of consumption of these fuels, thereby lowering associated greenhouse gas emissions and reducing operating costs overall.

It is recommended to explore strategies to assist producers in upgrading equipment currently in operation to the best technology available. For example, a financial assistance program can reduce the cost barrier to retrofitting or upgrading diesel engines to the next *Tier* certification, while being flexible in responding to the new technologies currently being innovated. A voluntary program should factor in elements beyond potential emission and fuel reductions to examine the increased efficiencies on the land, reduced environmental impacts of older equipment, and capacity to integrate additional climate smart technologies across an entire operation.

Provide infrastructure funding that would be used to provide biofuels for large vehicles like long and short haul trucks, trains, or production machinery. This could help to reduce the use of fossil fuels and increase the demand for biofuels.

Fund targeted support at land-grant universities and climate hubs. Extension services are less available to counsel farmers and ranchers in new practices as state budgets have reduced funding and the focus of activities has been steered to other work. Consider establishing a grant program specifically for Extension Service conservation research and outreach to ensure appropriate practices are eligible for USDA incentives and to counsel farmers and ranchers on practices that provide climate mitigation and adaptation benefits.

Support continued research into practices that reduce livestock emissions and support deployment of research results to market. The livestock sector has made national commitments to partner with other organizations to reduce emissions. Continued research investments into feed additives and other strategies is critical.

Existing investments have yielded some promising results, and further research and market development investments should be made to explore the feasibility of widespread production and adoption. For example, *Asparagopsis Taxiformis*, or red seaweed, has been found by scientists to reduce livestock methane emissions. This and other promising strategies should be further explored.

Institute a voluntary Forest Carbon Easement Program akin to the Forest Legacy program. Identifying and conserving carbon dense forests that are at risk of conversion or harvest would store and sequester carbon for longer periods. A climate-smart forestry approach would require active forest management to ensure that the forest would be maintained as a carbon sink in the long-term. These forests would provide many additional ecosystem services. The active management requirement would help support rural communities and economies while providing the incentive for the landowner to maintain the carbon stored on the landscape.

B. How can partners and stakeholders, including tribal, state and local governments and the private sector, work with USDA in advancing climate-smart agricultural and forestry practices?

USDA should increase its capacity to meaningfully partner with communities on climate-related decision-making and project implementation by: 1) Designating staff to create and manage a new climate justice program to promote and track local capacity-building to engage in climate related planning and project implementation; and 2) Hiring and training a diverse workforce skilled in strategic community partnership building. USDA should also continue its

outreach and engagement efforts with farmers, ranchers, and forest managers to ensure their involvement in efforts to advance climate-smart agricultural and forestry practices.

USDA should support capacity building among tribes, community-based organizations (CBOs), and local governments and create more opportunities to participate in decision-making. By building the capacity of organizations to participate in decision-making, USDA can help ensure a more inclusive public engagement process. Capacity-building measures include:

- Providing funding, technical assistance, resources, training, and tools for community partners.
- Creating accessible, user friendly data tools (addressed in more detail under the tools question) and timely communications strategies to inform decisions by tribal, state and local governments, CBOs and individual landowners.
- Inviting representatives from community-based organizations (CBOs) and local governments to decision-making processes (such as rulemaking) and providing the assistance needed to participate.
- Sponsoring landowner-led conservation practice demonstration projects.
- Using participatory scenario planning, place-based planning, and other locally focused tools to advance local adaptation and resilience building activities.
- Developing and supporting local monitoring projects.
- Sponsoring conferences aimed at non-governmental organizations; tribal, state and local governments; city and county land use planners; and others covering the status of climate change in the region, resource availability, planning tools, and technology transfer.
- Ensuring technical assistance and other materials are available in multiple languages.

Partner with NGO's and the private sector to establish mutually beneficial climate-smart utilization strategies and materials. Many areas of the economy are looking for more information on the climate impacts of both raw materials and finished materials; establishing consistent and standardized climate impact and lifecycle analysis information would allow producers to demonstrate the climate benefits and tradeoffs of different materials to consumers. This has largely been done in Europe and could be used as a model. Perhaps ANSI or ISO certifications or standards would be an appropriate route to explore.

C. How can USDA help support emerging markets for carbon and greenhouse gases where agriculture and forestry can supply carbon benefits?

Improve carbon accounting for working lands. Tools that assist landowners and managers in calculating conservation practice impacts on production and GHG emissions would aid

decision-making to participate in emerging carbon markets. These need to be standardized across sectors and the country and potentially internationally so different locales can be compared on the same metric.

Ensure choices are available to provide multiple incentive options for GHG reductions and carbon sequestration. USDA conservation incentive programs should remain available as an option in addition to carbon markets. Agricultural producers and other prospective participants may prefer USDA incentive programs because they may be more familiar with accessing these programs and perceive them as lower risk with predictable, stable incentive payments.

If carbon markets are developed, incorporate the following elements.

- Establish national standardization of carbon accounting and measurement systems.
- Ensure accessibility by farms and forests of all sizes.
- Reward practices that have proven benefits and continue to invest in research for other practices.
- Create a producer-friendly system to participate.
- Incorporate a mechanism to manage risks (i.e. failure of practices due to climate conditions or loss of agricultural or forest lands to wildfire)
- Establish mechanisms to ensure certainty of carbon pricing and minimize volatility.
- Provide market incentives for good practices regardless of perfect accounting availability.

D. What data, tools, and research are needed for USDA to effectively carry out climate-smart agriculture and forestry strategies?

Support soil health inventories and research on soil carbon sequestration potential. Healthy soils provide various climate resiliency benefits that are important to farms, ranches, and forests. Healthy soils keep cropland productive, hold more moisture, provide resistance to natural pests and diseases, keep crops and vegetation resilient in the face of natural disasters, and help protect air and water quality. Healthy soil practices retain carbon in the soil and, in some cases, reduces farmers' energy use, fertilizer-related GHG emissions, and harmful exposures. A better understanding of different soil types' ability to hold water, soil compaction levels, carbon storage potential, and soil pH would help the states prioritize carbon sequestration technical assistance and other investments and assist landowners and managers in identifying effective management practices to improve soil health.

Continued research is needed into the effects of conservation practices on GHG emissions and agricultural and forestry productivity. Research results should be published in a

consistent, user-friendly format. In some areas, there is an overall lack of data, while for other parameters, data is not used effectively because it is not consolidated, accessible or provided in an understandable, user-friendly format. Data compatibility and quality are common challenges, and national standards would help consolidate data sets for broad use.

One specific example of a research need in Pacific Northwest no-till cropping systems is the need to identify strategies to prevent the development of herbicide resistance in weeds. This is an issue particularly in fields that have been in no-till for several years. The challenge of herbicide-resistant weeds in long-term no-till cropping systems could impede farmers' ability to keep land in no-till and fully realize the carbon sequestration benefits of this practice if it is not addressed through preventive research.

Create user-friendly platforms to share data: A user-friendly platform will help locate, understand, and use data created by USDA. Having data that is already visualized or interpreted is often more helpful to the average user than downloading a spreadsheet. Standardized information technology platforms and tools are necessary for agencies to communicate virtually and to store, share, and display processed information in partnership with other agencies, stakeholders, and the public.

Enable Communities to Help Shape Data Questions and Products: To build an inclusive and trustworthy data gathering process, partner with community-based organizations (CBOs) and local governments to ensure that data reflect the reality on-the-ground. This could include taking a community-based participatory research (CBPR) approach that enables communities to help shape data questions and products in ways that are responsive to local needs and priorities. Programs can also build-in 'community science' methods of engaging with the general public on climate-specific projects to incorporate on-the-ground observations, lived experiences, and local perspectives.

Provide Training on Use of Databases. In many cases, climate, soil health, conservation practice impacts, and other data may already be available but local government staff or community partners are often unaware of its availability or are unable to access the data in ways that can inform decisions in a timely manner. Training on the use of available data would be most effective by increasing local technical assistance partner capacity, creating training videos and facilitating peer-to-peer learning. For example, the Oregon Climate Change Research Institute (OCCRI) and OSU's Natural Resources Digital Library offer trainings on how to use tools like [The climate toolbox](#) and [Oregon Explorer](#).

Continue to support research related to forest and land management. The State of Oregon is working with the states of Washington and California and the U.S. Forest Service's Pacific Northwest Research Station on co-produced research that will describe anticipated social, economic, and climate change impacts related to forest management and other types of land management. These studies are needed to evaluate potential management scenarios such as conservation tillage and nutrient management. Further, continued support of basic research into factors that support resiliency on working lands that is key to successful climate adaptation including research into drought tolerate crops and impacts on pollinators from changing seasonal plant emergence.

Work to establish an easy assessment of changes in carbon storage and flux. Further explore remote sensing tools that would be able to provide estimates of biomass on the landscape. High temporal scale re-measurement would provide more rapid estimates than are available utilizing current plot based systems. The potential of space based LIDAR and associated technologies should be explored and enhanced, including potential assessment of emissions on large scale events like wildfires or winter storms.

Support ocean health and blue carbon ecosystem monitoring and research. Blue carbon ecosystems provide for carbon sequestration and provide a range of social, economic and environmental benefits, such as fish/shellfish rearing sites and buffers against sea-level rise. We recommend that USDA collaborate with other federal agencies to monitor ocean health, including changing ocean temperatures, acidification, harmful algal blooms, domoic acid concentrations in seafood, pollution (organic, plastics, pathogens) and biodiversity including the health of keystone species. In addition, we recommend collaborative support of state and multi-state efforts to manage and address ocean health concerns.

E. How can USDA encourage the voluntary adoption of climate-smart agricultural and forestry practices in an efficient way, where the benefits accrue to producers?

Expand support for existing Farm Bill programs that support climate-smart practices that also have other important co-benefits. Please see our response to question A.1.

Support natural resource-based business resilience to a changing climate. Business continuity planning, access to emergency capital, and resources focused on economic resilience support the survival and growth of agricultural and timber industry businesses.

Leverage Federal Emergency Management Agency (FEMA) Funds to repair critical infrastructure. Create a climate change adaptation program to repair critical infrastructure

damaged by extreme weather events that can leverage federal funds such as FEMA's Pre-Disaster Mitigation Grant Program.

Expand federal disaster relief programs to include small and beginning producers. Many current federal relief funds are allocated to large operators who experience bigger losses and tend to have experience in applying for disaster relief. Special assistance to secure relief funds needs to be focused on small and beginning producers that are even more vulnerable to failure when natural disasters hit.

Promote the use of green infrastructure. Green infrastructure incorporates the natural environment into traditionally engineered projects to provide multiple benefits, including support for ecosystem integrity and functions in developed areas. Green infrastructure may include site-specific management and watershed-level techniques such as land preservation and the restoration of wetlands, side channels, riparian vegetation, and floodplains that naturally store water and reduce runoff. Protecting water quality and quantity, in light of anticipated reductions in water availability during periods needed for working lands, is key to resiliency for farms, ranches and forests as the climate changes.

2. Biofuels, Wood and Other Bioproducts, and Renewable Energy Questions

A. How should USDA utilize programs, funding and financing capacities, and other authorities to encourage greater use of biofuels for transportation, sustainable bioproducts (including wood products), and renewable energy?

Provide infrastructure funding for biofuels available to large vehicle owners like long and short haul trucks, trains, or production machinery. This could help to reduce the use of fossil fuels and increase the demand for biofuels.

Work to increase utilization of long-lived wood products in place of higher carbon cost materials like cement and steel. Using wood in larger or multi-storied buildings stores the carbon in that wood for long periods and has also been shown to provide mental health benefits to the occupants of the buildings. Using existing programs at higher funding levels to reduce barriers to acceptance and increasing funding to research organizations working on mass timber and wood utilization are all options.

B. How can incorporating climate-smart agriculture and forestry into biofuel and bioproducts feedstock production systems support rural economies and green jobs?

Increasing of residual harvest utilization and creating a market for the whole tree could increase the need for primary and secondary processing. The multiple co-benefits include needing an increased workforce to process the materials, providing opportunities for employment at new fuel conversion facilities, and reducing wildfire risk through thinning and forest health treatments.

C. How can USDA support adoption and production of other renewable energy technologies in rural America, such as renewable natural gas from livestock, biomass power, solar, and wind?

Encourage pricing entities and subsidies that stabilize the price of renewable power. Uncertainty about renewable energy prices inhibits development, or in many cases the successful maintenance of, renewable energy projects. USDA could encourage stability through subsidies and longer-term contracts. Contracts of 10-years or more would also provide more financial certainty for operators and require guaranteed Pro-forma and operational warranty from any project developer—with any subsidy dependent upon the project producing nameplate output. USDA could sequester and direct a third of subsidy funds for small and medium sized projects and co-op or community-based projects.

3. Addressing Catastrophic Wildfire Questions

A. How should USDA utilize programs, funding and financing capacities, and other authorities to decrease wildfire risk fueled by climate change?

Establish climate change mitigation and adaptation language into existing funding flows. Prioritize projects that demonstrate a clear path towards mitigation or adaptation on the landscape through appropriate stocking levels, utilization of adapted vegetation, long-term maintenance through prescribed fire and follow up treatments, or consideration of the climate change impacts to the identified and prioritized landscapes.

Utilize Shared Stewardship Agreements and Good Neighbor Authority to implement climate-smart practices and prioritization. Ensure that climate-smart approaches are utilized to prioritize projects that get funding and take a holistic look at the issues at hand including fire, insects, diseases, and drought, all of which are highly impacted by climate change.

Determine where climate refugia are and explicitly put funds towards preserving those locations on the landscape. These may be areas of high value in the future, and they should be prioritized and protected through treatment and adaptation measures. These areas may exist

in locations that are already seeing the extreme impacts of our changing climate and should be prioritized towards the top of funding criteria.

B. How can the various USDA agencies work more cohesively across programs to advance climate-smart forestry practices and reduce the risk of wildfire on all lands?

Enhance regional coordination to reduce wildfire risks and minimize damage. Climate change is associated with increases in mean annual and seasonal temperatures and evapotranspiration in much of the western United States. As a result, the vegetation becomes drier during summer and early autumn and therefore is more likely to burn in the presence of an ignition source and high winds.

- Promote appropriately managed targeted grazing to reduce fuel loads and invasive species.
- Expand forest, shrubland, and grassland management to reduce fuel loads and increase resiliency to fire.
- Work cooperatively across ownerships or jurisdictional boundaries to reduce the frequency of extreme wildfires.
- Continue to support Rangeland Fire Protection Associations (RFPAs) and their suppression efforts in rural and remote areas.
- Encourage private landowners to reduce fuel loads through voluntary programs such as EQIP, and other grant or cost sharing opportunities.
- Identify potential human ignition sources relative to high risk wildfire areas to improve public education and asset management practices.
- Work and coordinate with sibling agencies (e.g. Interior) to conduct work across all lands.

C. What additional data, tools and research are needed for USDA to effectively reduce wildfire risk and manage Federal lands for carbon?

Managing specifically for carbon will need a greater understanding of the application of current tools and potential reconsideration of the mechanism of forest restoration and resiliency. More research on the carbon impacts of rapid reforestation and utilization of assisted migration methodologies would benefit the post-fire management of federal lands where there may be current management strategies to let the impacted areas reforest naturally. There may be additional stressors on the regeneration of the forest landscape under climate change that are barriers to fully realizing carbon sequestration goals.

Additional, high-temporal estimation of the storage and flux would only add to the knowledge of forest carbon cycles and provide information that could be compared with other sectors that are able to report on an annual basis their emissions, flux into pools, or improvements.

Frequent updates to quantitative risk assessments would provide a tool for mitigation prioritization. Having and maintaining up-to-date information of the state of the risk posed to forests and communities is essential to appropriately managing the landscape. These assessments should also include a mechanism to look at the climate change impacts on the values and look ahead at the risks posed to the landscape, not be solely rooted in past observation and assumptions.

D. What role should partners and stakeholders play, including tribal, state, and local governments, related to addressing wildfires?

In Oregon, roughly forty percent of the forest land is non-federal. These non-federal partners and stakeholders have a vested interest in managing their lands and those of the neighboring federal lands, particularly in areas of the state where we see the O and C lands with extreme intermixing of the federal and non-federal ownerships. Many of these partners and stakeholders have become involved in managing federal lands through forest collaboratives, the Good Neighbor Authority, and more recently, Shared Stewardship. All land approaches are needed to work across boundaries to reduce wildfire losses and other forest health issues like insects and diseases. These partners can help to facilitate and prioritize areas for treatment, conduct work on adjacent lands, and provide meaningful input on the management of the federal lands.

Tribes have expertise on traditional fire suppression methods, such as prescribed burns, that can be employed to reduce wildfire risks. We should take the opportunity to re-visit and learn from tribes that have been working with the landscape to manage fire risks for generations.

4. Environmental Justice and Disadvantaged Communities Questions

A. How can USDA ensure that programs, funding and financing capacities, and other authorities used to advance climate-smart agriculture and forestry practices are available to all landowners, producers, and communities?

Employ tools to identify and involve diverse and frontline communities, including tribes, communities of color, and low-income, natural resource dependent, and rural communities.

Collaborate with federal agencies on a process to identify climate-vulnerable communities most affected by federal policy, planning, and project-level decisions.

Creating accessible, user friendly data tools (addressed in more detail under the tools question) and **timely communications strategies** to inform decisions by tribal, state and local governments, CBOs and individual landowners.

Expand USDA program eligibility criteria to include climate-vulnerable populations and geographic areas by defining climate-vulnerability and allowing special consideration of qualified applicants/projects.

Develop a nationally standardized methodology for applying social cost of carbon rates. Development of a methodology akin to the consumer price index or inflation rate that programs could use to establish payments, cost shares, or the costs of alternatives would be useful to address some of the environmental justice cost issues.

B. How can USDA provide technical assistance, outreach, and other assistance necessary to ensure that all producers, landowners, and communities can participate in USDA programs, funding, and other authorities related to climate-smart agriculture and forestry practices?

Please see our response to Question 2B on page 8 which addresses community engagement.

Support agricultural and forestry business continuity planning, access to emergency capital, and resources focused on economic resilience while adapting to changing climate-driven conditions.

C. How can USDA ensure that programs, funding and financing capabilities, and other authorities related to climate-smart agriculture and forestry practices are implemented equitably?

Please see our response to Question 2B on page 8 which addresses inclusive engagement.

Expand USDA program eligibility criteria to include climate-vulnerable populations and geographic areas by defining climate-vulnerability and allowing special consideration of qualified applicants/projects.