



DRAFT STRATEGY RECOMMENDATIONS:

There is growing evidence that practices that increase carbon sequestration have numerous benefits, including: increased productivity, improved infiltration, greater soil moisture holding capacity, improved air quality, reduced heat island impacts in urban areas, and better fish and wildlife habitat. If carefully designed and governed, natural and working land programs can also reduce energy and health care costs, create jobs, generate increased revenue for landowners and managers, and address equity and racial justice.

The Commission and the Oregon Watershed Enhancement Board (OWEB) have heard a number of common themes from stakeholders regarding how the state should adjust existing—and design new—strategies to ensure they work for communities and land managers, and are effective at meeting our outcome goals:

- Ensure that equity is fully embedded in the prioritization and design of natural and working lands strategies.
- Inform the strategies with the best available science and traditional ecological knowledge.
- Focus on environmental and climate adaptation co-benefits as well as high carbon returns.
- When possible, take a systems approach that starts with carbon sequestration in natural and working lands but integrates investments in GHG reduction across sectors; and
- Apply continuous improvement processes to ensure the strategies are as effective as possible.

In addition, the Commission has received input on a number of specific strategies the state should advance to establish a sequestration program and invest in climate smart management practices. The following draft recommendations attempt to capture the diverse input we have received to date.

There are a number of investments the Legislature should make for the 2021-2023 Biennium to jump-start Oregon's natural and working lands sequestration program in keeping with stakeholder input by funding:

- *Develop a natural and working lands implementation plan (described more fully below).*
- *Improvements to Oregon's natural and working lands inventory data.*
[Note: Specific recommendations for enhancements to forest, agricultural and rangelands, and blue carbon inventories are in final development and should be ready for discussion at the June Commission meeting.]
- *Oregon Department of Forestry's request to increase support for expansion of their urban forest program.* Trees in cities provide environmental and health benefits including improved air quality, reduced runoff into local streams and rivers, natural cooling, and reduced energy consumption. As ODF noted in their request for expanded funding, canopy cover is an environmental justice issue. Recent research found that low-income neighborhoods have less tree cover than high-income neighborhoods in 92% of U.S. cities evaluated. Wealthier households have, on average, about 15% more tree cover and live in neighborhoods that are around 1.5°C cooler than low-income

neighborhoods. The difference in tree cover between low-income and high-income neighborhoods in the Portland/Vancouver metropolitan area was 18%. In 67% of U.S. communities, neighborhoods dominated by people of color have less tree cover than neighborhoods dominated by white people, even after accounting for trends in income. Studies show that communities of color and low-income households are more likely to be exposed to air pollutants, which have been shown to cause and amplify respiratory and cardiovascular illnesses. Encouraging incorporation of municipal forests would be a good addition to other natural and working land investments. The state should consider including smaller municipalities that may not be included in some definitions of urban areas to extend the opportunity to more communities.

- *OWEB's request for the Oregon Agricultural Heritage Program.* Oregon Agricultural Heritage Program (OAHP) was created by the State Legislature established in 2017. As described on their web page, "Oregon's well-managed agricultural lands are the cornerstone of the state's rural communities. They support valuable fish and wildlife habitat and enhance other natural resources. Yet farms and ranches are increasingly challenged by fragmentation of farmland, conversion of farmland to non-farm uses, complex regulations, and planning for generational transfers." They further state that OAHP "was established to help address these challenges" by creating a grant program to provide voluntary incentives to farmers and ranchers to support practices that maintain or enhance both agriculture and natural resources such as fish and wildlife on agricultural lands. The Oregon Agricultural Heritage Program Commission has already established rules for the program's Administration, Conservation Management Plans, Covenants & Easements, Technical Assistance, and Succession Planning roles. OWEB has requested \$5 million in spending authority to launch fund the program for the 2021-2023 Biennium. The Commission supports Legislative approval of General Funds to launch the OAHP.
- *Oregon Department of Agriculture's request for funding for a Soil Health Specialist.* Creating a Soil Health Specialist position would help Oregon farm managers increase adoption of climate smart agricultural practices. Among other duties, the Soil Health Specialist would: promote soil health to Oregon agricultural communities; promote farmer-to-farmer learning about soil health; collaborate on outreach and education efforts; collaborate with local partners and landowners to conduct soil health demonstration projects; and highlight soil health improvement efforts by Oregon's farmers and ranchers; provide input to conservation funding programs about soil health priorities; serve as a liaison with researchers in the state regarding soil health priorities; and build relationships with other states and organizations that already have soil health programs.

In addition to the immediate actions the Legislature should take to jump start a natural and working lands program, state agencies should take steps now to position the state to capitalize on federal investments in natural and working lands strategies that are being considered by the Federal Administration and Congress. In the past year there has been growing interest and support for increasing investments in natural climate solutions – practices that increase sequestration in the land sector in Congress (e.g. Growing Climate Solutions Act; REPLANT Act; Senate Trillion Trees and Natural Carbon Storage Act; Rural Forest Markets Act) and President Biden's Administration.

President Biden's Executive Order on Climate Change the important role America's farmers, ranchers, and forest landowners as well as coastal communities have in combating the climate crisis and reducing greenhouse gas emissions. The Executive Order identified a goal putting "a new generation of Americans to work" conserving and restoring public lands and waters, bolstering community resilience, increasing reforestation, increasing carbon sequestration in the agricultural sector, protecting biodiversity, improving access to recreation, and addressing the changing climate through the creation of a Civilian Climate Corps with an emphasis on equity. It directs the Secretary of Agriculture to collect input on how to best use Department of Agriculture existing programs, funding, and financing capacities to encourage

the voluntary adoption of climate-smart agricultural and forestry practices. OWEB and the Oregon Departments of Agriculture and Forestry submitted extensive recommendations to USDA. A copy of the State's recommendations can be found [here](#).

In May, US Department of Agriculture released a [Climate-Smart Agriculture and Forestry \(CSAF\) Strategy: 90-Day Progress Report](#) in response to their initial request for input. The overarching elements and underlying specifics were consistent with the State's recommendations. By analyzing these federal opportunities and aligning Oregon's approach we can most efficiently and effectively include natural and working lands in our overall climate mitigation strategy. Stakeholders voiced support for this approach.

Over the course of the next year the state should take the following additional steps:

1) Develop a natural and working lands implementation plan.

A Natural and Working Lands Council should be convened to build on the public engagement completed to-date and develop an implementation plan that: (A) establishes the activity, funding, and community impact goals and metrics necessary to meet the outcome goal; (B) evaluates existing local, state, and federal natural and working lands programs, policies, and investments to help identify opportunities to incentivize climate smart management; (C) prioritizes programs and investments; and (D) includes a feasibility study of funding mechanisms to increase technical assistance capacity, research, incentives, and other investments needed to support a transition to climate smart management practices.

This final element is important. We can achieve some increases in sequestration by including a climate mitigation lens in existing natural and working lands programs. However, to achieve the ambitious goals we recommend, new funding will be needed to strengthen education, engagement, and technical assistance efforts; to increase and deploy nature based solutions in and around our built environment; to help producers adopt climate smart agricultural and forestry practices; and to protect and restore natural habitats that sequester carbon. To be most efficient and effective, the support needs to be predictable and easy to access.

A number of other U.S. Climate Alliance states have convened such work groups and councils and conducted feasibility studies. Oregon could benefit from work done in these states to inform our approach.

2) Design and support the creation of centers of excellence for research on sequestration in natural and working lands in Oregon.

With Oregon's carbon-dense westside forests, diverse and productive agricultural and range lands, and high-carbon tidal wetlands, we have the potential to make a significant contribution to climate mitigation by implementing climate-smart practices on natural and working lands. Creating centers of excellence in Oregon Universities would help support a transition to climate-smart land use and management practices.

3) Maintain and enhance Oregon's land use laws and planning tools for protecting the carbon sequestration potential of Oregon's natural and working lands.

As described in testimony to the Commission by the Department of Land Conservation and Development (DLCD), "Since 1973, Oregon's statewide land-use planning program has sought to maintain resource lands in the face of increasing development by maintaining forest and agricultural land under protective zoning and limiting growth to areas within urban growth boundaries. Research

shows that Oregon’s land-use planning system in western Oregon yields significant gains in carbon storage equivalent to a reduction of 1.7 million metric tons of carbon dioxide (CO₂) emissions per year. Continued protection of resource lands means land remains undeveloped and available for implementation of farm and forest practices that sequester carbon and contribute to drawdown.”

In addition, DLCDC is currently conducting rulemaking for its Climate Friendly and Equitable Communities Program. This program will assist municipalities “extend Oregon’s legacy of protecting natural and working lands by encouraging growth in urban areas where people can walk, bike, or take transit to meet their daily needs.”

4) Support the implementation of climate smart forest management across all ownerships in Oregon.

The greatest potential for increasing carbon sequestration in Oregon is associated with the management of Oregon’s forests and the wood products they produce. The Commission heard a wide range of input from stakeholders regarding the importance of increasing sequestration in Oregon’s forests and reducing emissions from wildfires. The Commission encourages the Legislature and the Board of Forestry to:

- *Expand our urban forest canopy to enhance equity across all neighborhoods.*
- *Adopt improvements to the Oregon Forest Practices Act drawing from the outcomes of the Forest Accord negotiations and recommendations in the Oregon Board of Forestry’s [Draft Climate Action Plan](#).*
- *Create a blue-ribbon panel to develop a strategic plan for extending rotations on state and private forest lands while maintaining or enhancing Oregon’s milling infrastructure.*
- *Expand capacity to collect and store seed, grow seedlings, and plant and maintain trees on understocked forest lands.*
- *Increase protections for mature and old growth forests through greater investments in fee land acquisitions and easement programs.*
- *Expand the use of prescribed fire and targeted forest health treatments to reduce emissions from wildfire, reduce mortality from drought, prevent increased pest outbreaks, and make our forests and communities more resilient.*
- *Work with federal land managing agencies to implement practices that increase net sequestration on federal lands through Oregon’s Shared Stewardship Agreement.*
- *Expand the Agricultural Heritage Program to include support for forest landowners.*

6) Invest in Climate Smart Agricultural practices on Oregon’s crop and rangelands.

The Oregon Global Warming Commission recommends the Legislature create an integrated soil health and climate smart agriculture program in Oregon with investments in leadership and coordination at the ODA, agricultural research programs at OSU, and technical assistance through OSU Extension and Soil and Water Conservation District partners. For Oregon’s diverse croplands, investments in soil health practice adoption as well as pathways that integrate trees into agricultural lands (including silvo-pasture practices and edge of field and riparian plantings). Riparian vegetation provides carbon sequestration benefits and can also support adaptation by providing filtration of nutrients and sediment from overland flows, promoting bank stability, and providing shade.

Several states have, or are developing, soil health programs. Practices such as conservation tillage, cover cropping, nutrient management, and crop rotation not only sequester carbon and avoid emissions, but have the co-benefits of increased crop production, reduced soil erosion, decreased nutrient loss/use, improved soil moisture, and increased water quality. A broad soil health program

that would support projects enhancing implementation of the above-mentioned soil resiliency practices.

Native grasslands and sagebrush ecosystems cover a large portion of Oregon, provide important fish and wildlife habitat, and support rural agricultural operations. Wildfires increase the likelihood of invasion of annual grasses, especially in the relatively warm and dry portions of the northern Great Basin. Implementation of practices to reduce the likelihood of annual grasses invasions into native grasslands and sagebrush-steppe ecosystems are critical to maintaining these benefits and protecting carbon stores and future sequestration rates.

7) Increase protection and restoration of carbon rich ecosystems tidally influenced coastal ecosystems.

Oregon's kelp forests and tidally influenced coastal wetland ecosystems including seagrass beds, marshes, scrub-shrub wetlands, and forested swamps and sometimes referred to collectively as "blue carbon" function as important natural carbon sinks. According to the [Pacific Northwest Blue Carbon Working Group](#), "Carbon sequestration has been shown to be very high in tidal wetlands. On a per-acre basis, tidal wetlands store 3-5 times more carbon than tropical forests." Unfortunately, Oregon has lost 58 percent of its emergent tidal wetlands and over 70 percent of its forested tidal wetlands. In addition to sequestration carbon, Oregon's blue carbon ecosystems provide a range of social, economic, and environmental benefits, such as fish/shellfish rearing sites, buffers against sea-level rise and amelioration of ocean acidification.

In 2020, DLCD got a grant from the National Fish and Wildlife Foundation to engage coastal communities in a formal process to develop a planning framework to advance coastal resilience in Oregon's estuarine areas. The project is designed to empower coastal communities to plan and implement coastal resilience activities and leverage existing planning frameworks to accomplish broader resiliency goals and restoration priorities. The Commission recommends that the Department of Land Conservation and Development:

- *Complete the pilot testing coastal adaptation and resilience planning for Tillamook and Coos Bays to include a focus on the protection and enhancement of estuarine ecosystem services including carbon sequestration; and*
- *Develop a robust Blue Carbon Strategy to mitigate and adapt to climate change on the Oregon Coast.*

Such efforts would focus on the ability of healthy estuarine areas to provide vital benefits to the community, ecosystem, and economy while performing long-term carbon storage and sequestration of GHGs.