May 30, 2024

Dear Hannah and Melanie:

The Natural and Working Lands Work Group is pleased to submit its final recommendations to the Maine Climate Council to supplement and update the important recommendations it developed in 2020 for the state's climate action plan, *Maine Won't Wait*.

The Natural and Working Lands Work Group selected three of its original recommendations to define further through this 2024 update process:

- Increase the total acreage of conserved lands in the state to 30% by 2030;
- Increase the amount of food consumed in Maine from state food producers to 30% by 2030 through local food system development; and
- Establish an incentive-based forest carbon program for woodland owners to increase carbon sequestration and storage.

Maine's significant land base consisting of working forests, active agricultural land, and natural lands is the envy of the region and the nation. These lands play an essential role in sequestering carbon, offsetting Maine's greenhouse gas emissions, supporting a vibrant food system, and providing essential habitat for biodiversity protection and species migration, all necessary attributes to mitigate and adapt to climate change.

These expanded recommendations identify the most promising approaches Maine can take to increase protected land, local food consumption, and forest carbon sequestration. While the recommendations are distinct, there are commonalities in approach. Collectively, they require a commitment to and investments in research and monitoring, expanded capacity, technical support, incentives, planning, public engagement, stewardship, and long-term funding. With these further investments, the state can maximize the potential of its natural and working lands to mitigate climate change and support community and natural resource resilience.

Thank you for your leadership in promoting climate action by overseeing the update to *Maine Won't Wait*. We look forward to working with you and the rest of the Maine Climate Council to advance these recommendations over the next six months.

Sincerely,

Amanda E. Beal, Commissioner
Maine Department of Agriculture, Conservation and Forestry

Thomas Abello, Legislative Director
Office of the Governor

MAINE CLIMATE COUNCIL
NATURAL AND WORKING LANDS WORK GROUP
RECOMMENDATIONS

May 30, 2024

30% Land Conservation Recommendations

Introduction

The Natural and Working Lands Working Group reviewed *Strategy E, Recommendation 1- Protect Natural and Working Lands and Waters* from *Maine Won't Wait.*

- *Increase by 2030 the total acreage of conserved lands in the state to 30% through voluntary, focused purchases of land and working forest or farm conservation easements.*
- *Additional targets should be identified in partnership with stakeholders to develop specific sub-groups for these conserved land for Maine's forest cover, agriculture lands and coastal areas.*
- *Focus conservation on high biodiversity areas to support land and water connectivity and ecosystem health.*

Maine is rich in contrasts between the boreal and temperate, freshwater, saltwater, upland and wetland, alpine, and lowlands. The state's 33,315 square miles includes 17.5 million acres of forestland interspersed with rugged mountains, over 700,000 acres of productive farmland, more than 5,600 lakes and ponds, roughly 5 million acres of wetlands, 31,800 miles of rivers and streams, 4,100 miles of coastline, and 4,613 coastal islands. Most of Maine's conserved lands consist of large working forest easements in northern and eastern Maine. Southern Maine, with a higher population density and numerous biodiversity' hot spots,' has a lower proportion of conserved lands. Maine has been most successful in conserving wetlands and mountaintops with high ecological, scenic, and recreational values. Compared to forestlands and wetlands, farmland conservation lags significantly behind, with only 3.5% conserved, and Maine has historically provided significantly less public funding for farmland conservation than all other states in the northeastern U.S. (Due to this lack of farmland protection, this set of recommendations includes a stand-alone section for farmland funding and conservation planning.)

Maine's conserved forestlands and farmlands also play a vital role in the state's economy by providing wood for our mills and food for our people and by enabling jobs for farmers, loggers, foresters, truckers, park rangers, and others. Moreover, conserved lands form the backbone of Maine's outdoor recreation economy, valued at more than $3 billion per year.

The *Maine Won't Wait* 2023 Update notes that 4,357,462 acres, or 22.2% of Maine, are permanently conserved through fee and/or easement. Over recent years, Maine has conserved about 50,000 acres annually; to reach the 30% goal, this rate will need to increase *nearly fivefold.*

Our sub-group recognized that the 2030 goal should represent a milestone rather than an end in itself; land conservation will surely need to continue beyond 2030.

The following is a collaboratively developed definition of 'conserved lands':

> "Conserved Lands" means any natural and working land that is durably* protected and provides natural resource-based benefits. These benefits can include clean water, healthy soils, habitat for diverse and thriving populations of plants and wildlife, food security, climate resiliency, carbon storage, and cultural, economic, and outdoor recreational opportunities for all Maine people.
>
> **Durable includes lands under permanent fee or conservation easements (meeting GAP status 1-3) in the Maine Conservation Lands GIS layer) or natural and traditionally managed lands identified in government-to-government relationships with Wabanaki Nations in Maine. Durable lands do not include temporary protections by such tools as, for example, lease agreements, shoreland or municipal land use restrictions, carbon offset projects, or areas enrolled in tree growth or other open space current use tax law provisions.*

Many discussions focused on the importance of evaluating Maine's suite of conserved lands (both current and future) through a lens of equity and inclusivity. The benefits of conserved lands should be equitably distributed and inclusive to all Maine residents, with a focus on ensuring access for marginalized communities. Specific recommendations are included below.

Although sub-group discussions focused on permanent land conservation, we also recognized the value of other programs that maintain Maine's landscape in functional, compatible land uses. These compatible land uses include many municipally owned lands and Tree Growth, Open Space, and Farmland' current use' tax programs. Collectively, these compatible land uses, together with permanently conserved lands, account for 65.9% of Maine. (Note that although the definition above suggests the inclusion of tribally owned lands, the 65.9% figure excludes approximately 330,000 acres of those lands, which comprise 1.7% of the state. The role of tribal lands and tribal interests/needs in state land conservation needs further discussion and engagement with tribes). One suggestion for tracking this 'compatible land use' statistic is to recommend *no net loss*.

Sub-group discussions recognized that not all values will be conserved on every acre – that is, some acquisitions will feature ecological attributes while others may focus on sustainable resource production or accessible outdoor recreation. Group discussions also touched on a wide range of related topics, including the importance of the forest economy (and balance between reserves and working forests), recognizing other community needs (e.g., housing, economic growth), and workforce housing for conservation employees.

Recommendation 1: Priorities

Focus land protection efforts in areas with high biodiversity value, high carbon storage and sequestration, cultural and economic importance, and/or which offer opportunities to improve public access equitably.

Metric: *Through voluntary, focused purchases of land and conservation easements, increase the area of conserved lands in Maine by at least 1.5 million acres by December 2030 with the following targets in mind:*

- Conserve land within Beginning with Habitat Focus Areas of Statewide Ecological Significance, add new State and private-owned ecological reserves (including high carbon forests), and increase fee and easement conservation for important terrestrial and aquatic areas that ensure landscape-level connectivity as identified through efforts such as a new statewide landscape conservation blueprint (referenced as an action item in the recommendation on increasing capacity).

- Conserve lands that fill gaps in equity for land use, cultural significance, and access. Conservation efforts should prioritize properties that support the goals of and secure land to the Wabanaki Nations; increase open space opportunities for Maine residents located within a 10-minute walk of where they live; include ADA-accessible trails and boat access within 10 miles of Maine population centers; protect working waterfronts; amongst others. Focusing land conservation efforts on ensuring equitable access and use for marginalized communities will help provide cultural, economic, and recreational opportunities for all Maine people.

- Sustain ecosystem services and lands needed for carbon storage and sequestration and natural resource-based industries by securing significant and well-distributed working forest conservation, including productive lands for storage and sequestration and durable wood product production and new fee and easement conservation within source drinking water watersheds (including for Portland and Lewiston-Auburn) to ensure water quality without additional water treatment measures.

Recommendation 2: Farmland

Safeguard the state's agricultural resources by doubling the permanently protected farmland in Maine by 2030 through a comprehensive and collaborative strategy that brings increased state funding, capacity, and new strategies to this work.

Metric*: Annually invest $20 million in state funding toward permanent conservation of Maine's farmland, with the goal of protecting at least 7% of the state's presently undeveloped farmland by 2030. Develop a strategy to continue and fund this work past 2030, with a goal of no net loss of farmland.*

- Establish a well-funded, sufficiently staffed, stand-alone state program or mechanism (in addition to Land for Maine's Future) to prioritize the efficient flow of farmland conservation resources in collaboration with non-profit and federal partners, which includes both traditional easement acquisition as well as seamless support for alternative methods of protecting farmland outside of the process (Buy/Protect/Support/Sell, community land trust/non-profit acquisitions, etc.).

- Commission a Maine Farmland Action Plan to articulate goals and strategies regarding Maine's farmland resource and agricultural economy beyond 2030, identifying the highest priority lands to secure against nonagricultural development along with affordable and achievable pathways to farmland access and development of practical tools and programs for supporting Maine's agricultural economy.

- Recognizing that farmland viability is critical to this recommendation, expand funding for state programming and infrastructure (such as grant, loan, and assistance programs) that have a tangible, positive impact on farm viability in Maine.

Recommendation 3: Funding

Significantly expand the funding and funding eligibility for fee and easement acquisition through existing and new land conservation programs, including the Land for Maine's Future Program.

***Metric**: By December 2025, Maine has established permanent conservation funding that generates at least $50 million per year (excluding farmland, which is addressed in Recommendation 4).*

- Establish permanent and ongoing funding for the Land for Maine's Future Program; consider a variety of mechanisms, including mitigation funding, real estate transfer tax, re-allocation of outdoor goods or rooms and meals tax, enhancement of dedicated funds for resource conservation (deer yards, stream buffers, etc.), and others (in part) to create a match for federal funds.

- Advocate for increased, sustained, and more flexible federal conservation funding that supports state, tribal, and non-governmental efforts (e.g., a new Forest Conservation Easement Program). Examples of critical funding include the Forest Legacy Program, Pittman-Robinson Funds, North American Wetlands Conservation Act, Land and Water Conservation Fund, and others.

- Streamline state processes for conservation funding and grant review, approval, and administration.

Recommendation 4: Capacity

Expand public and private capacity to support all conservation acquisition and stewardship elements, including participatory planning efforts, acquisition and due diligence, ongoing land management and monitoring, and program evaluation and accountability.

***Metric**: By 2030 (and using 2023 as a baseline), increase the conservation acquisition and stewardship staff of land management agencies in proportion to the acreage of land owned,*

under easement, and other legal stewardship responsibilities, and develop a plan for long-term land uses for the State of Maine.

- Ensure agency staffing keeps pace with acquisition and stewardship responsibilities, including land acquisition, grant, database administration, land management, and monitoring.

- Create incentives to expand the network of land acquisition contractors, including appraisers, surveyors, and legal services, and recruit conservation workers (land stewards, park rangers, foresters, ecologists) that reflect the diversity of current and future generations.
- Over the next three years, state agencies should work with a coalition of partners and large landowners, as well as Wabanaki Nations, in government-to-government relationships to develop a non-regulatory statewide landscape conservation blueprint. This action allows a collaborative process to unfold for setting goals to and beyond 2030 for the conservation and management of key places for biodiversity, recreation, and ecosystem services (drinking water, timber products, etc.) in the broader context of land use in Maine's natural and working lands while respecting individual management objectives of private landowners. This strategy addresses the following 2020 Maine Won't Wait recommendation: *"Additional targets should be identified in partnership with stakeholders to develop specific sub-goals for these conserved lands for Maine's forest cover, agriculture lands, and coastal areas."*

Deliverable Template Questions:

1. Impacts

Mitigation: Maine's natural landscape is vital to mitigating greenhouse gas emissions: each year, Maine's forests sequester an amount of carbon equal to at least 60 percent of the state's annual carbon emissions, a figure that rises to 75 percent when durable forest products are included. In addition, conserved lands also provide innumerable other benefits – maintaining wildlife habitat, ensuring clean water, providing access to food, and creating recreational opportunities that support the physical and mental health of all of Maine's people. Preserving land prevents conversion to other uses that would typically result in higher energy use and emissions rates. An increase in climate-friendly farming practices on permanently conserved farmland can enhance long-term carbon sequestration in soils, helping to mitigate an increase in greenhouse gas emissions.

Workforce and Economic Opportunity: Maine's natural landscapes are central to the state's economy and high quality of life. Maine's outdoor economy provides $3.3 billion through jobs and tourism dollars. Additional conserved lands will support the health of these industries. Farmland conservation investments provide critical capital for farm businesses, supporting infrastructure and equipment improvements and reducing debt. Purchased agricultural conservation easements directly support the viability of the farm economy, often leading to opportunities for new and beginning farmers to develop their businesses and generate ongoing

revenue for businesses that provide inputs or services for farms.

One challenge related to the conservation and agricultural workforce is the need for more affordable housing for seasonal workers. Similarly, wages for entry-level workers can create challenges for workforce recruitment and retention. Agencies and organizations involved in hiring should create incentives and best recruitment practices that increase the number of conservation workers and increase access to conservation careers for priority populations. (One group member recommended an analysis of hiring barriers associated with increasing workforce diversity. While this action merits consideration, it was considered beyond the scope of this Work Group.)

Resilience: Conserved lands increase the resilience of the landscape. Healthy and intact ecosystems are less susceptible to pests, and conserved lands provide important buffers to flood waters, rising sea levels, and other natural disasters, including fire. Accordingly, conservation practitioners should consider the value of conserved lands for natural climate solutions, including flood mitigation, coastal buffering, and mitigation of storm damage. Conserved lands also allow habitat connectivity, essential for shifting species ranges from warming climate conditions. In addition, farmland conservation contributes to the resilience of Maine's food system in the face of future climate-related disruptions to the global supply chain.

Equity: Future conservation must consider equitable land access for underserved populations and communities. There is also a growing focus on expanding conservation opportunities for and with Wabanaki tribes. Affordable and equitable land access in the agricultural space has been and will continue to be accomplished primarily through farmland conservation and the purchase of conservation easements. The purchase of agricultural conservation easements and associated farmland conservation tools are often used to conserve land, make land affordable, and help lower-income and socially disadvantaged populations overcome the lack of capital as a land access barrier. As the pace for agricultural land conservation expands, affordable and equitable land access opportunities will also be critical as farmers of color, New American farmers, and other underserved communities continue to seek avenues to participate in Maine's food system.

Proven Strategy and Feasibility: Maine has an excellent track record of federal funding, collaboration among public agencies and conservation groups, and public support for conservation. Maine also has property owners typically willing to engage in conservation alternatives for their land—in other words, the project 'pipeline' presents opportunities for increased conservation. However, the feasibility of the 30% goal is dependent on funding and capacity. We estimate that up to *$1.5 billion* of funding could be required over six years (with an average land cost of $1,000/acre).

2. Cross-over

Coastal and Marine: Funding for land conservation will likely include properties that conserve coastal ecosystems and working waterfronts.

Resilience: Projects emphasizing habitat connectivity, landform diversity, and land conservation will support ecological resilience. The Community Resilience Work Group would be another cross-over group, as it looks at human populations and vulnerabilities to climate-related disasters, such as flooding, wildfires, and human health.

Energy: The State's renewable energy development goals intersect directly with its land conservation goals.

3. Priority Populations

Populations: Efforts to fund land conservation should recognize the importance of low-income and marginalized populations, particularly those with limited access to conserved lands and conservation funding. In addition, consideration should be given to expanding funding for land conservation opportunities for Wabanaki tribes. Regarding increased farmland conservation, in line with recent experience and trends, affordable and equitable land access opportunities will increase for low-income and socially disadvantaged groups (including BIOPC and New American farmers).

Impacts: The majority of Maine's conserved lands lie in undeveloped, rural parts of the state, raising concerns about the equitability of property tax responsibilities. Meanwhile, conserved lands in more developed parts of coastal and southern Maine may disproportionately benefit affluent populations. Farmland protection, if not done carefully, can result in protected high-value estate properties without any agricultural production.

Sources of Information: The State's Conserved Lands database is the foundation of all analyses conducted on conserved lands. While there is an increasing pool of studies regarding the impacts of conserved lands on marginalized communities at the regional or national scale (e.g., *Distribution of Capitalized Benefits from Land Conservation*, Lang et al. 2023), our Work Group is not aware of any such studies from Maine.

Implementation: Conservation actions should consider the impacts of land access, property tax implications, and workforce development (e.g., jobs for loggers, farmers, or park staff). These considerations can be enhanced by engagement with local communities as part of the acquisition and management planning process for conserved lands. Farmland conservation activities should prioritize increasing equitable access to affordable land and coordinate closely with groups representing socially disadvantaged farmers. In addition, state agencies should continue to seek ways for tribal input and collaboration through, for example, the Conservation Delegation of the First Light program and other avenues.

4. Timeframe (*Short-term: by 2025; Mid-term: by 2030; Long-term: by 2050 or beyond*)

Efforts should be made to identify and create a permanent land conservation funding mechanism (or mechanisms) by the end of 2025. Recognizing the need for the pace of farmland conservation to rapidly increase to bring Maine in line with the rest of the northeast, investment is needed immediately to achieve the goal of doubling the amount of farmland protected in Maine by 2030.

5. Implementation

- Legislative action would be needed to create permanent state funding sources to conserve lands and farms and to increase 'head count' to boost state agency capacity where needed.

- Incentives may be needed to increase the number of appraisers, surveyors, and legal staff required for due diligence efforts.
- Advocacy will be needed to maintain or increase various federal land and farm conservation funding programs.
- Collaboration and teamwork will be needed among public agencies, conservation groups, and landowners.

6. Measuring Outcomes

The Maine Climate Council currently has a dashboard metric for conserved lands based on the Conserved Lands GIS data layer administered by the Department of Agriculture, Conservation and Forestry (DACF). Various other databases and GIS layers maintained by DACF and the Department of Inland Fisheries and Wildlife (DIFW) track progress on land conservation and protection of specific habitats. Note that the Climate Council's Science and Technical Team previously estimated that the rate of land conservation needed to increase threefold to reach the 2030 goal, and the NWL group estimates that the rate needs to increase fivefold. This difference reflects variations in the definitions of conservation used, the lengths of time considered, and the specific time periods used for the calculation. Furthermore, both estimations indicate that the rate of conserved land will need to substantially increase to meet the 30% by 2030 goal, and the NWL WG strategies were updated with this in mind.

30% Maine Food by 2030 Recommendations

Introduction

The Natural and Working Lands Work Group identified specific actions to accomplish the *Maine Won't Wait* goal of increasing the amount of food consumed in Maine from state food producers to 30% by 2030 through local food system development.

About a third of all human-caused greenhouse gas emissions are linked to food.[1] Moreover, climate-related disruptions pose a serious threat to the production and transportation of food around the globe. These realities make strengthening Maine's food system a fundamental climate strategy for no fewer than three reasons: we can reduce the climate impacts of transporting food long distances; we can reduce dependence on fragile global supply chains; and we can enhance the state's ability to support climate-friendly agricultural practices, including cover cropping, reduced/no-till, crop rotation, soil carbon/organic matter amendments, agroforestry, and rotational grazing – a power that is largely lost with imported food.

The overarching recommendation to accomplish this goal is to create a state-level food plan; this is a necessary precursor to strategic improvements in Maine's food system. The working group acknowledged that there have been important, NGO-led food system planning efforts in Maine and that the State itself has created plans for aspects of Maine's food system—notably a plan to reduce food insecurity and a plan to support the marine economy. However, the state has no comprehensive plan for its food system, a system that impacts every resident and two significant heritage industries. A food planning process involving the State, the University of Maine, and other key institutional players will have the capacity to bring together a broad range of stakeholders and collect baseline information about Maine-grown food production and consumption. It will also include recommended policies, expanded funding mechanisms, new programs, and additional cooperation, which the State, academic institutions, businesses, and non-profits will implement. While the creation of this plan is underway, the recommendations to increase the viability of food businesses and ensure that more consumers can access local food can be implemented.

Recommendation 1: Create a Maine Food Plan

a. Identify funding for the state food planning process and identify key goals for the plan.
b. Align food plan recommendations with those of existing Maine strategic plans.
c. Center community involvement, particularly youth and priority populations, in every phase of plan creation, especially in strategic decision-making.
d. Create a local food definition and metrics that can be adopted and used statewide.

Recommendation 2: Strengthen the viability of Maine farms, fisheries, and other food producers through expanded, equitable, and ongoing access to funding, technical assistance, and processing and distribution infrastructure.

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[1] United Nations (n.d.). *Food and Climate Change: Healthy diets for a healthier planet*. Climate Action. Retrieved April 22, 2024, from https://www.un.org/en/climatechange/science/climate-issues/food#:~:text=Food%20needs%20to%20be%20grown,emissions%20is%20linked%20to%20food.

a. Maintain and expand access to farmland, working waterfront, and other key pieces of the food supply chain infrastructure.
b. Establish permanent funding for the State to help producers navigate the technical assistance and funding opportunities available throughout the state, with a focus on reaching priority populations.
c. Establish permanent funding for infrastructure development that aligns with the scale, geography, and food type needs and increase the capacity of the Maine Agriculture, Food and Forest Products Investment Fund.
d. Target funding to support producers in adopting climate change mitigation and resilience strategies, including the Maine Healthy Soils Program.
e. Create an inventory of the current food processing, storage, and aggregation capacities and evaluate the infrastructure gaps and needs.

Recommendation 3: Create more Maine markets for Maine producers and increase access to Maine food.

a. Develop a marketing plan to increase the consumption of Maine food that supports consumer education efforts focused on the climate-related, economic, and nutritional value of Maine food; aligns DACF's Real Maine and the Maine Sea Grant's Seafood Directory towards the 30% Maine food by 2030 goal; and educates consumers about local food preparation.
b. Leverage State contracting and appropriations to incentivize the purchase of local foods and establish permanent funding for equitable local food access programs. Direct State investments should grow from $1.75 million to $4 million annually to support existing[2] and innovative programming in support of local food procurement, local food access, and food equity initiatives.
c. Support producers to diversify market channels and identify and connect with profitable Maine markets for their products.

Deliverable Template Questions:

Recommendation 1: Create a Maine Food Plan

1. Impacts

If 30% of food purchased in the state were grown, fished, and raised in Maine, climate change impacts would be reduced, primarily by reducing the greenhouse gas emissions associated with long-distance food transportation. Increasing Maine's food production with a focus on local markets will strengthen the resiliency of our food system in the face of inevitable future climate-driven disruptions.

Increasing the number of consumers of Maine food and the amount they purchase will strengthen the economic viability of the farms throughout the state, an important natural heritage industry.

[2] Existing programs that receive State funding or pass-through funding from the State include Local Food for Schools, Maine Senior FarmShare, Maine Harvest Bucks, Farm Fresh Rewards, Mainers Feeding Mainers, Fishermen Feeding Mainers, Local Food Purchase Assistance, Farm to Institution Incentives, and the WIC Farmers Market Nutrition Program.

Many producers could scale up, enabling them to hire more workers, which would help to strengthen rural communities, or smaller farms can grow opportunities to diversify, develop value-added products, or innovate in other ways to access new markets and customers.

Increasing local food availability, together with removing market barriers for producers and customers, will enable all people in Maine to have access to high-quality, nutritious, and delicious Maine-grown food.

Food system questions evoked the most passionate engagement from youth participants, and we recommend that engagement be encouraged and leveraged through a youth-centered planning process.

2. Cross-over

Coastal and Marine Working Group
Materials Management Task Force

The Working Group coordinators met regularly with the coordinators of the three relevant Working Groups as recommendations were being developed.

3. Priority Populations

Populations - Priority populations are disproportionately impacted by food insecurity,[3] and many work in the farming, fishing, food processing, and food distribution industries. Strengthening the local food system will positively impact many priority populations by increasing economic activity and making healthy, local food more accessible through various market channels, including those serving low-income people.

Many farms and food processing businesses are in rural areas with limited access to public transportation. Most farms in Maine are small businesses, and many farm owners earn below the poverty line. Farm workers and food processing workers are often low-income, migrant workers, new Mainers, undocumented workers, and members of tribal nations.

Impacts – Strategic investments in these businesses will improve their economic sustainability, enabling them to flourish and expand.

Supporting Maine's food producers will make local food more available. There will need to be continued focus to ensure that Maine-grown food is affordable and accessible to everyone throughout the state.

Sources of Information - The *USDA Census of Agriculture* and *Everyone at the Table: Maine's Roadmap to End Hunger by 2030* provide data on how priority populations are engaged in agriculture and food purchasing and consumption.

[3] Everyone at the Table: Maine's Roadmap to End Hunger by 2030, p 15-19.

Result of engagement - This subgroup had little input from priority populations. Those invited from priority populations could not attend because of time constraints. We hope the Mitchell Center process will help fill these gaps and strengthen these recommendations.

Implementation - As noted in Recommendations 1c, the participation of priority populations will be critical to the creation of an effective and equitable Maine food plan. The process for creating a Maine food plan should be designed to explicitly incorporate input from priority populations. Increasing access to land and food infrastructure, technical assistance, and funding should focus on reaching priority populations. The expansion of food access programs and the creation of new ones should be prioritized and done in collaboration with people from priority populations.

a. **Timeframe** (*Short-term: by 2025; Mid-term: by 2030; Long-term: by 2050 or beyond*)

All of these actions could be implemented in the short term. The outcomes for creating a local food definition will be realized in the mid-term while the outcomes from creating a food plan will be seen in the long-term.

4. Implementation Next Steps

☒ Legislation, rules/regulation, internal program guidance changes
☒ Establishment of a new program or a fund,
☒ Conduct additional research
☒ Coordinate with other parties/agencies/states

University of Maine Cooperative Extension (UMCE) has secured funding for some aspects of a strategic food plan. The State could collaborate with the UMCE to create a more comprehensive plan. DACF should identify additional funding for the state food plan by working with state, federal, private, and philanthropic funders to leverage additional funds.

The planning process can provide an opportunity to coordinate activities outside DACF across other state agencies, including the Departments of Economic and Community Development, Health and Human Services, Energy, Marine Resources, Inland Fisheries and Wildlife, and others, to ensure that the plan aligns with the goals and plans of those agencies. The process can also leverage and support the ongoing work of non-state entities, including the Maine Food Strategy, Focus Maine, CEI, New England Food Planners Partnership, and others.

DACF is positioned to support the development of a plan, including by helping to identify funds to implement the recommendations, and work with food system partners to act on the recommendations. Outputs should include key food system infrastructure inventories and a Maine food system data dashboard.

5. Measuring Outcomes

A state-level food plan would enable the state to make strategic decisions about strengthening the Maine food system. One of the outcomes of the plan could be the creation of definitions and

metrics with which the food system's strengths and challenges can be evaluated. This increased understanding of the food system could enable the State to identify funding, policy, and programmatic priorities. Through the planning process, the Maine food system may become better networked, with various businesses, agencies, and non-profits increasing collaboration and working toward common goals. Policies could be implemented to remove barriers and enable equitable, climate-friendly growth in the Maine food system.

Though many of these metrics should be included in the state food plan, several specific metrics should measure actions toward creating more viable farms, fisheries, and other food producers, including the acreage in farmland, the number of working waterfront facilities, the key food supply chain infrastructure, and the funding available to navigate technical assistance, develop infrastructure, and adopt climate-friendly agricultural practices.

Creating a cohesive Maine-based food marketing strategy will increase consumer awareness of the benefits of purchasing local food and make them more interested in choosing it. Food producers will also diversify the channels through which they market their products. As a result, local food sales at all market channels will likely increase. By expanding food equity programs, more low-income children and adults will have access to healthy local food, and public health outcomes will improve.

Together, these recommendations are intended to create a Maine food system that is more equitable, economically robust, and environmentally sustainable. Ultimately, the success of the three recommendations will measured by whether we meet the 30% Maine food target.

Recommendation 2: Strengthen the viability of Maine farms, fisheries, and other food producers through expanded and ongoing access to funding, technical assistance, and processing and distribution infrastructure.

1. Impacts

Same as Recommendation 1.

2. Cross-over

Same as Recommendation 1.

3. Priority Populations.

Same as Recommendation 1.

4. Timeframe (*Short-term: by 2025; Mid-term: by 2030; Long-term: by 2050 or beyond*)

All the actions can be implemented in the short-term, aside from maintaining and expanding access to farmland and the working waterfront, will take place in the mid-term. Realizing the outcomes of creating an inventory of the food processing and storage facilities will take place in the short-term, while the outcomes of establishing targeted funding streams will take place in the

mid-term. The outcomes of expanding access to farmland and the working waterfront will be realized in the long term.

5. Implementation Next Steps

☒ Legislation, rules/regulation, internal program guidance changes
☒ Establishment of a new program or a fund,
☒ Conduct additional research
☒ Provide education or training
☒ Coordinate with other parties/agencies/states

DACF should lead many of these efforts in collaboration with Soil and Water Conservation Districts, the University of Maine Cooperative Extension, the USDA Natural Resources Conservation Service, the Department of Economic and Community Development, and the Division of Marine Resources. In addition, DACF should work with non-profit technical assistance providers, including MOFGA, Maine Farmland Trust, and others. They should also collaborate with funders, such as Community Development Financial Institutions, including CEI; local credit unions, including Farm Credit East; and philanthropic organizations, including those in the Maine Food Funders Network.

6. Measuring Outcomes

These actions will enable businesses that grow, raise, produce, harvest, catch, and distribute food to be more financially and environmentally sustainable. It will be important to capture baseline measurements of economic and sustainability indicators and then track these over time. These measurements may include the number of farms and food businesses, the profitability of farms and food businesses, the amount of food produced, and the number of people employed in the food sector. It will also be useful to measure the amount of funds distributed, the number of recipients, and the return on investment of that funding.

Regarding sustainability measures, acres of land in conservation and a reduction in food production activities that negatively impact climate change should be tracked.

Increased viability of farms and food businesses could also positively impact the farming, fishing, and food-producing community. Increasing numbers of young and beginning farmers and fishermen, as well as lower stress/improved mental health among farmers and food producers, would be indicators of success.

Recommendation 3: Create more Maine markets for Maine producers and increase access to Maine food.

1. Impacts.

Same as Recommendation 1.

2. Cross-over

Same as Recommendation 1.

3. Priority Populations

Same as Recommendation 1.

4. Timeframe (*Short-term: by 2025; Mid-term: by 2030; Long-term: by 2050 or beyond*)

The actions to create a marketing plan and increase food equity will take place in the short term, and the outcomes will be realized in the mid-term.

5. Implementation Next Steps

☒ Establishment of a new program or a fund
☒ Provide education or training
☒ Coordinate with other parties/agencies/states

Real Maine and the Division of Marine Resources could lead the development of a comprehensive in-state marketing plan for Maine food. They could partner with many organizations offering nutrition education to strengthen and align the work.

The State should pursue additional funding to expand existing food equity programs and work to create new programs to reach additional populations. They should pursue federal, state, and philanthropic funds to expand this work and partner with non-profits focusing on food justice and equity.

6. Measuring Outcomes

Ultimately, metrics would be guided by the state food plan. In the short term, farm and fishing indicators include the value of harvests by indicator crop and the value of landings by indicator species. To capture new market channels identified by producers, the number of new products sold in Maine and the number of new channels will be collected. Understanding consumer purchases of Maine foods and consumer sentiments will strengthen this recommendation.

Forest Carbon Recommendations

Introduction

The Forest Carbon Task Force, established by Executive Order in 2021, identified multiple recommendations aimed at increasing forest carbon sequestration and storage in Maine forests. Three key principles formed the starting point for these previous recommendations and the new set of recommendations below because they are foundational to Maine forests successfully sequestering and storing more carbon. These principles were:

- Maintaining existing forestland ("keeping forests as forests") is fundamentally important if forests are to make a growing contribution toward achieving the State's climate goals;
- Improving forest condition through widespread adoption of climate-friendly forest management practices is equally important to increase forest carbon; and
- Increasing economically viable markets for low-grade wood is necessary to facilitate adoption of carbon-enhancing forest practices.

The Natural and Working Lands Work Group re-affirms these principles. Forests in Maine are the primary contributor to carbon sequestration and storage, and maintaining as much forest land as possible is essential to meeting Maine's climate goals. The management of Maine forestland is closely linked to its capacity to provide climate-related and other important ecosystem services, including contributing to human health with clean air and water, and supporting local and regional wood markets. Yet forest carbon management, inventorying, and accounting are parts of a highly dynamic field, and new programs and methodologies are constantly emerging.

Informed by these realities, the following three new recommendations aim to increase carbon sequestration and storage in Maine forests while also ensuring these forests continue to support other critical economic, environmental, and cultural values.

Recommendations

1. **Provide incentives to forest landowners, foresters, and loggers to increase the implementation of climate-friendly practices.**

    a. Maine's Open Space current use taxation program should be updated to include the broadly supported modifications proposed in LD 1648 (131st legislature) that incorporate incentives for forest owners to adopt climate-friendly land management practices.

    b. With further funding, the Maine Forest Service (MFS) should expand the WoodsWISE incentives program and include climate-friendly management strategies in forest management plans.

    c. MFS and other entities should identify additional technical and financial resources to increase the implementation of climate/carbon-friendly forest management and timber harvesting practices; provide cost-share assistance to loggers to purchase low-impact

harvesting equipment and implement carbon-enhancing forest management practices; and support the voluntary use of professionals and service providers who follow protocols to validate the implementation of climate-smart practices.

d. Given the rapidly evolving availability, content, and geographic focus of carbon-offset and practice-based forest carbon programs for forest landowners, Maine should explore potential opportunities to increase the suitability and availability of incentive programs for Maine's forest landowners that increase forest carbon sequestration and storage while maintaining a robust forest economy.

e. DACF's Bureau of Parks and Lands (BPL) should explore the potential benefits of engaging in forest carbon pilot projects that increase carbon sequestration and/or storage, maintain forest sector jobs, provide new revenue streams for the management of the self-funded Public Reserve Lands System, and contribute practical knowledge on climate-friendly forest management practices.

f. Coordinate with existing forest sector development initiatives to help improve markets for low-grade wood that help make implementation of climate-smart forest management practices financially viable.

g. Continue to engage in a multistate collaboration with state agencies and universities in consultation with landowners regarding the role of forest carbon sequestration in reducing net greenhouse gas emissions, which, among other benefits, will help inform the State of Maine as it defines how it will account for voluntary/regulatory carbon sequestration markets in its emissions accounting approach.

2. **Increase the availability of technical assistance, training, and education for forest landowners, foresters, and loggers to increase the application of climate-friendly forest practices.**

a. MFS, in collaboration with others, should develop and maintain up-to-date materials and provide training on extreme weather BMPs, forest carbon offset programs, other revenue-generating forest carbon programs, current use taxation programs, and other strategies, targeting outreach to specific audiences - such as landowners of over 40 acres, new woodland owners, farmers, foresters, and loggers - to expand the implementation of climate-friendly forest management practices, resulting in increased forest carbon sequestration and storage.

b. MFS should work with partner entities to increase and diversify forest sector-related natural resource professional capacity to apply climate-friendly forest management practices.

3. **Improve forest carbon data, monitoring, and verification to support forest policy-making and outreach program development.**

a. With further funding, the MFS Forest Resource Assessment program should work with the Maine Department of Environmental Protection and the University of Maine to develop a climate-focused forest data and monitoring program that continuously produces the best available information on Maine's forest composition, management, and harvest activity, and forest carbon sequestration and storage, and identifies climate-driven forest health and resilience metrics, to better inform climate-friendly forest management practices and public policy decision-making.

Deliverable Template Questions:

Recommendation 1 (Incentives)

1. **Impacts**

Mitigation - Providing financial incentives to forest landowners, foresters, and loggers that enables them to implement climate/carbon-friendly forest management and timber harvesting practices will have a direct mitigation impact through increased forest carbon sequestration and storage.

Adaptation and Resilience - Providing financial support to forest landowners, foresters, and loggers will enable them to implement forest management strategies that improve resilience and adaptation in the face of a changing climate. Climate-friendly forest management can reduce wildfires and other climate hazards and safeguard neighboring communities. It also can increase ecosystem services such as wildlife habitat and connectivity and water quality protection.

Workforce/Economic Opportunity - Engaging more forest landowners in managing their forests will lead to more active timber management, and will create economic opportunities for technical service providers, loggers, and landowners. This strengthens one of the state's primary natural heritage industries.

Achieving Equity – These financial incentives will make the development of forest management plans and the implementation of climate-friendly forest management practices accessible to previously underserved populations.

Additional Costs - Providing financial incentives to forest landowners, foresters, and loggers to implement climate-friendly forest management and harvesting practices will require the identification and/or development of new public funding mechanisms or funding from the private or non-profit sector. Funding from practice-based forest carbon programs is a potential source of new funding.

Proven Strategy/Feasibility - Providing direct financial support to forest landowners to incentivize adoption of certain forest management practices is a rapidly evolving field. New voluntary and regulatory forest carbon markets and associated implementation approaches are emerging each year. Barriers include program complexity and length of commitment.

2. **Cross-over**

Community Resilience WG

3. **Priority Populations**

Populations - Rural communities (family woodland owners), natural resource industries, small businesses (logging and contractor businesses), and previously underserved populations of forest landowners who have a presumed higher-than-average potential to increase carbon sequestration and storage on their lands, including those with over 40 acres, new woodland owners, and farmers. Climate-smart forestry has indirect benefits for people with health vulnerabilities.

Impacts - Financial incentives to increase carbon sequestration and storage would provide new economic opportunities for rural landowners and loggers.

Sources of Information - MFS surveys confirm that landowners with a forest management plan are far more likely to manage their forest in ways that improve forest condition and associated ecosystem services than those without a plan. Surveys also confirm that small forestland owners face barriers to engaging in forest carbon programs due to program complexity and cost of entry.

Result of Engagement – The Natural and Working Lands Work Group did not engage in further outreach beyond the makeup of the Forest Carbon Subgroup.

Implementation (via consultation/access by Priority Populations) – MFS will need to develop approaches that target outreach to priority populations to ensure increased access to financial incentives and other funding opportunities.

4. **Timeframe** (*Short-term: by 2025; Mid-term: by 2030; Long-term: by 2050 or beyond*)

- Implementation and realized outcomes should be achievable in the short/mid-term (2025-2030), dependent on additional funding allocations. The actions are ongoing.

5. **Implementation Next Steps**

Type:- Legislation; Establishment of a new program or fund; Coordinate with other parties/agencies/states.

Next Steps: Many of the actions depend on securing stable and adequate funding to implement. Partnerships must be developed to modify existing or develop new programs.

6. **Measuring Outcomes**

Standard metrics include the number of new forest landowners with forest management plans; the number of forest landowners who received funding and are implementing carbon-friendly forest management practices; the amount of acreage engaged; the number of acres enrolled in revised Open Space Tax Program climate-enhancing options; the use of practices by loggers; and

the total forest carbon sequestration and storage in Maine's forests. Metrics should also include an ongoing assessment of the relative impact of different climate-enhancing forest management practices to identify those that result in the greatest carbon sequestration and storage over time. Baseline data are needed to measure progress. MFS's BMP monitoring program could be adapted to test and verify educational and operational ground performance.

Recommendation 2 (Technical Assistance/Training/Education)

1. **Impacts**

Mitigation - Would directly enhance mitigation of greenhouse gas emissions by increasing carbon sequestration and storage through better implementation of climate-friendly forest practices.

Adaptation and Resilience - Climate-friendly forest practices have the benefit of increased resilience of the forest resource, allowing for greater adaptation in the face of climate change. These practices also have co-benefits related to the creation and maintenance of wildlife habitat and improved connectivity if implemented on a wide scale. Decreased negative impacts from major storm events, wildfires, or other natural disasters would also be an outcome.

Workforce/Economic Opportunity - Engaging new forest landowners and others not currently managing their forests could lead to more active timber management and create economic opportunities for foresters, loggers, and landowners. This would strengthen one of the state's key natural heritage industries.

Achieving Equity - Targeted outreach to underserved landowner groups can ensure priority populations are engaged. Existing cost-share programs make the development of forest management plans accessible to previously underserved populations.

Additional Costs - An existing training network already exists, although it would likely require additional resources to handle additional demand and outreach needs. Materials will need to be maintained and distributed through ongoing outreach, which may require additional MFS staff.

Proven Strategy/Feasibility - Landowner outreach and direct technical assistance are proven strategies that lead to active landowner engagement with their land. Barriers include a shrinking pool of consulting foresters in Maine and ongoing difficulty filling open MFS forester positions with qualified candidates.

2. **Cross-over**

Community Resilience WG (through flood mitigation); Transportation (wood haulers); Building, Infrastructure/housing (wood products)

3. **Priority Populations**

Populations - Rural communities (family woodland owners), natural resource industries, small businesses (logging and contractor businesses), and previously underserved populations of forest landowners who have a presumed higher-than-average potential to increase carbon sequestration and storage on their lands, including those with over 40 acres, new woodland owners, and farmers. Climate-smart forestry has indirect benefits for people with health vulnerabilities.

Impacts - The Equity Subcommittee recommended (Ch. D, Goal 2) providing workforce training opportunities for natural resource industry workers to help adapt to a changing climate. This recommendation aims to increase and diversify forest sector-related natural resource professional capacity. The Equity Subcommittee also recommended (Ch. E, Goal 1) expanding access to natural resource grants for priority communities.

Sources of Information - The lack of individuals entering forestry professions in Maine and nationwide is broadly understood. A myriad of industry assessments by the public and private sector confirms this.

Result of Engagement – The Natural and Working Lands Work Group did not engage in further outreach beyond the makeup of the Forest Carbon Subgroup.

Implementation (via consultation with/access by Priority Populations) – MFS will need to develop training materials that target the unique needs of priority populations and provide targeted technical assistance to priority populations that results in increased access to technical assistance.

4. **Timeframe** (*Short-term: by 2025; Mid-term: by 2030; Long-term: by 2050 or beyond*)

Implementation and realized outcomes should be achievable in the short/mid-term (2025-2030). The actions will need to be ongoing.

5. **Implementation Next Steps**

Type: Provide education/training; Coordinate with other parties; Internal program guidance changes; Establishment of a new program or a fund

Next Steps: New training opportunities can build upon multiple existing training programs. Certain educational resources can be developed with existing MFS staff. Increased landowner outreach will require filling vacant MFS forester positions. Increasing and diversifying professional capacity will require collaboration between MFS, the University and community college system, and the private sector.

6. **Measuring Outcomes**

Outcomes could be measured by the number of individuals trained on climate-friendly forest management practices, including the number of individuals from priority populations. Requiring such training to be incorporated into Woodland Resource Action Plans is one possible approach. Increases in the availability and diversity of forest sector-related natural resource professionals could also be tracked. Additional metrics could be established to document which practices are being implemented and on how many acres. MFS's BMP Monitoring Annual Report could gauge the effectiveness of training in climate-smart practices. Baseline data are needed to measure progress.

Recommendation 3 (Data/Monitoring/Verification)

1. **Impacts**

Mitigation - This would improve the accuracy of data to validate climate-smart initiatives, confirming whether Maine is meeting its climate commitments. It is necessary to accurately quantify the CO2e sequestered and the amount reduced over time. It will confirm whether the intended outcomes of lower atmospheric GHG and reduced co-pollutant impacts on human and ecosystem health are being achieved.

Adaptation and Resilience – This would increase the likelihood and risk of climate hazards by improving the efficacy of GHG reductions. Improved forest carbon data will inform management decisions that lead to increased ecosystem services such as water quality protection, erosion control, and wildlife habitat and connectivity. Improved data access could improve community engagement in climate-smart programming and educational activities.

Workforce/Economic Opportunity - This would create job/economic benefits through the University of Maine to assist the MFS in the development and maintenance of a climate-focused forest data and monitoring program.

Achieving Equity - One barrier could be access to technology (internet, smartphone, computer) to adequately access and use the data. An improved carbon measurement and verification system assures that priority populations are included in the data used for decision-making. The recommendation is currently silent on specific details that encompass culture, historical access, and low-income and communities of color and is also silent on tribal communities, including the potential impact of issues of trust and sovereignty in the management of data necessary for improved carbon accounting. However, the data could be useful for assessing and mitigating the impacts on these communities.

Additional Costs - Any useful set of data/tools would likely cost several $100K in staffing and other expenses to develop and then an annual budget of $100K to maintain. At a minimum, funding would be needed to develop a prototype and solicit public feedback on how this information could best be distributed and used. USFS and EPA are possible funding sources.

Proven Strategy/Feasibility - Current technology can be used at the outset, but data collection techniques must keep pace with emerging technology. Financial and workforce capacity are

current barriers to implementation. Generally, other states are spending more than Maine on monitoring and data management of carbon budgets.

2. **Cross-over**

Community Resilience WG. Coastal and Marine WG for blue carbon data and monitoring. Buildings, Infrastructure, and Housing WG and Energy WG with likely recommendations that rely on forest products to meet their goals (biomass, mass timber, etc.). More generally, intersection with other WGs is through Maine's biennial GHG reporting and carbon budget development that encompasses GHG sources and sinks across all sectors.

3. **Priority Populations**

Populations - The majority of Maine forestland is located in the state's rural and low-income communities. Forest management, timber harvesting, and wood processing are all vital components of the state's forestry sector, one of Maine's major natural resource industries. The sector is comprised largely of small businesses.

Impacts - The Equity Subcommittee recommended (Ch. E, Goal 2) consulting with priority populations, including tribal communities on climate change-related data collection. This forestry recommendation would increase access to forest carbon data by these communities.

Sources of Information - The Forest Carbon Subgroup included representatives of woodland owners and small businesses from Maine's rural communities.

Result of Engagement – The Natural and Working Lands Work Group did not engage in further outreach beyond the makeup of the Forest Carbon Subgroup.

Implementation - The MFS, DEP, and the University of Maine will need to consult and partner with priority populations to develop data collection and monitoring protocols, including participatory approaches to data collection, and ensure maximum usability of climate data by priority communities.

4. **Timeframe** (*Short-term: by 2025; Mid-term: by 2030; Long-term: by 2050 or beyond*)

Increased data collection will first require funding to support staffing. Implementation and initial outcomes should then be achievable in the short/mid-term (2025-2030). The need, however, is continuous. New data could potentially be the next (11th) DEP GHG reporting cycle.

5. **Implementation Next Steps**

Type: Legislation; Coordinate with other parties/agencies; Establishment of a new program or a fund; Conduct additional research.

Next Steps: Secure funding. MFS, UMaine, DEP to identify key individuals; solicit input to identify data acquisition and analytical needs to develop a framework that complements other relevant reporting frameworks (e.g., USEPA, IPCC, UNEP).

6. Measuring Outcomes

Metrics should measure the extent of improved access to Maine forest carbon data by priority populations. Progress will be evident by improved precision, accuracy, and completeness of Maine carbon budget calculations and improved understanding of the relationship between Maine calculations and those of other states and federal agencies (e.g., USFS FIA, USEPA).