

**Maine Climate Council
 Natural and Working Lands Work Group Meeting
 Tuesday, October 31, 2023; 9:30 am - 12:30 pm
 Deering Building, Room 101, Blossom Lane, Augusta**

If attending remotely, please register at
<https://us02web.zoom.us/meeting/register/tZUvcuurrTMrEtOH0TdBXdMjUOAtaZgRVZtW>
 You will then receive a confirmation email with the meeting link and passcode.

Desired Outcomes - By the end of this meeting, we will have:

- Spent time getting to know one another –our backgrounds, areas of interest, and expertise
- Shared the history of the Natural and Working Lands Work Group and its recommendations to the Maine Climate Council
- Discussed progress made on the various recommendations since December 2020
- Reviewed the objectives of this update process, taking place through early June 2024
- Provided an opportunity for public input

Agenda

What	When
Welcome - Amanda, Tom	9:30 – 9:40
Introductions – Jo D., All	9:40 – 10:30
Working Agreements to Guide our Work – Jo D.	10:30 – 10:40
How Did We Get Here? A History of the NWL Work Group – Tom, Amanda, Jo D., Original WG Members	10:40 – 11:15
Break	11:15 – 11:25
Progress Since 2020 – Discussion of Achievements and Gaps - All	11:25 – 11:55

Objective of Update Process, and Associated Structure – Jo D.	11:55 – 12:15
Public Comment	12:15 – 12:25
Wrap-up; Next steps	12:25 – 12:30

Note: Agenda item times are subject to change based on the progress of the group

Natural and Working Lands Working Group Membership List

Co-Chairs

Tom Abello
Amanda Beal

Governor's Office
Commissioner of Agriculture, Conservation & Forestry

Members

Bethany Atkins
Sen. Richard Bennett
Hannah Carter
Rep. Dean Cray
Andy Cutko
Norm Daigle
Phillip deMaynadier
Molly Docherty
Dana Doran
Maureen Drouin
Ivan Fernandez
Ellen Griswold
Ches Gundrum
Sen. Henry Ingwersen
Tony Jenkins
Gary Lamb
Craig Lapine
Melissa Law
John Naylor
Rep. Margaret O'Neil
Darren Ranco
Kaethe Rice
Jeff Romano
Silvan Shawe
Heather Spalding
Pat Strauch
Karin Tilberg
David Trahan
Carol Weymouth

Department of Inland Fisheries & Wildlife
State Senate
University of Maine
State House of Representatives
DACF Director of Parks & Lands
Hannaford
Department of Inland Fisheries & Wildlife
DACF Maine Natural Areas Program
Professional Logging Contractors of Maine
Maine Conservation Voters
University of Maine
Maine Farmland Trust
Maine Audubon Society
State Senate
USDA Natural Resource Conservation Service
Hallowell City Manager
DACF Director of Agriculture, Food & Rural Resources
Bumbleroot Organic Farm
Rosemont Market
State House of Representatives
Penobscot Nation; University of Maine
Waterville High School
Maine Coast Heritage Trust
Cultivating Community
Maine Organic Farmers & Gardeners Association
Maine Forest Products Council
Forest Society of Maine
Sportsman's Alliance of Maine
Maine Association of Conservation Districts

Staff

Jo D. Saffair
Tom Gordon

DACF Commissioner's Office
DACF Commissioner's Office

Maine Climate Council Natural and Working Lands Work Group

Working Agreements

10.20.23 DRAFT

- Meetings will start and end on time.
- When meetings are held in person, Committee members will make every effort to attend in person to maximize learning, communication, and collaboration.
- Cameras will remain on during virtual meetings to facilitate communication and understanding.
- Meeting materials will be shared in advance of meetings with sufficient time for review.
- Come prepared, having read meeting materials and completed assignments.
- Be present and engaged.
- Strive for equal airtime, enabling all to participate fully.
- Listen with curiosity and an openness to learning and understanding.
- Adopt a creative problem-solving orientation.
- Name the tension, kindly.
- Humor is welcome!

N&WL Final Report to Maine Climate Council - June 8, 2020

Dear Members of the Maine Climate Council:

On behalf of the Natural and Working Lands (NWL) Work Group, we are very pleased to recommend the attached five overarching strategies and corresponding sub-strategies which, if implemented, would enable Maine's natural and working lands to offset the vast majority of Maine's greenhouse gas emissions and create far greater resilience within Maine's forestry, agriculture, and outdoor tourism sectors.

Over the past eight months, the members of the NWL Work Group met at least two dozen times, either in full group or in sub-group, to understand in detail the climate changerelated threats to Maine's working forests, agricultural lands, and natural lands, and the potential these lands hold in offsetting Maine's greenhouse gas (GHG) emissions. We devoted individual meetings to each of these three major land types, learning from academic, departmental, nonprofit, and industry experts, with Work Group members reading extensive technical materials in advance of each meeting. Public attendance and participation was high at nearly all meetings, and the Work Group benefitted from these individuals' comments and suggested technical resources. A two-week public input period to react to draft strategies elicited 75 pages of comments from 91 individuals and organizations. This feedback significantly influenced the Work Group's final strategies.

We are pleased to report that this process resulted in the unanimous support by the entire Work Group (but for one sub-strategy in which one Work Group member's opposition is noted) **of all proposed strategies and sub-strategies submitted today.**

Maine's extensive natural and working lands play an absolutely essential role in capturing atmospheric carbon. Currently, Maine forestland sequesters the equivalent of 75% of Maine's GHG emissions. The State's natural and working lands hold a tremendous potential - with greater focus and investment - to sequester even more carbon and offset further emissions from all other sectors of Maine's economy.

The proposed strategies - taken as a whole - can deliver this potential. The majority of the sub-strategies are time-tested methods, proven to be highly effective. Every additional acre of natural and working land conserved and actively managed for climate outcomes will bring Maine closer to its goal of carbon neutrality, while every acre lost to development or not actively managed will make the State's goal less attainable.

Maine has a powerful story to tell. It is the most heavily forested state in the country (more than 89%). Our natural and working lands have always been among our greatest assets, serving as the foundation for our strong natural resource-based economy. For generations these lands have provided good paying jobs, food, wildlife habitat, and opportunities for recreation. With proper investment, we can add to that long list of

positive attributes and declare Maine's natural and working lands a major driver in Maine achieving its goal of carbon neutrality by 2045.

Thank you for your consideration. We look forward to discussing these strategies on June 18th, and throughout the summer and fall as the Council evaluates these and other recommendations.

Sincerely,

Amanda Beal, Commissioner, Maine Department of Agriculture, Conservation & Forestry

Tom Abello, Senior Policy Advisor, Governor's Office

**Maine Climate Council
Natural and Working Lands Work Group
Final Strategy Compilation
June 8, 2020**

- 1. Protect and conserve working and natural lands and waters through a dedicated, sustained funding source to support a robust forest products and agricultural economy, increase carbon storage opportunities, avoid future emissions, and enhance climate adaptation and resilience**
 - a. Increase permanent protection of forest land and farmland (especially prime agricultural soils and soils of statewide significance) via conservation easements and fee acquisition
 - b. Conserve areas of high biodiversity value and areas that support land and water connectivity and ecosystem health, as informed by Beginning with Habitat Focal Areas and other conservation planning tools from Maine’s natural resource agencies
 - c. Revise scoring criteria for state and federal land conservation funding sources (e.g. Maine Natural Resource Conservation Program, Land for Maine’s Future Program, Forest Legacy Program, and Maine Outdoor Heritage Fund) to incorporate climate mitigation and resiliency goals into grant criteria and project selection

- 2. Create new and update existing financial incentives and support for private land management and infrastructure that supports climate mitigation and adaptation**
 - a. Establish a stakeholder process to develop a voluntary, incentive-based Maine forest carbon program (practice and/or inventory based) for woodland owners of 10 to 5,000 acres, and forest practitioners, to increase carbon storage and encourage forest management while maintaining current timber harvest levels (**See Question 6. Further details on Strategy 2a. Maine Forest Carbon Program Considerations**)
 - b. Address land taxation policy through legislation introduced by the Governor to:
 - i. Update the Open Space Current Use Taxation Program in a manner that incentivizes climate-friendly land management practices, makes it more attractive to woodland owners, and enables landowners to move between Tree Growth and Open Space as land management objectives change
 - ii. Update Farmland Current Use Taxation Program in a manner that encourages broader use of the Program and incentivizes farmland management practices with climate mitigation and adaptation benefits
 - iii. Operationalize and fund the currently eligible but unused “wildlife habitat” criterion of the Farm and Open Space Tax Law (36 M.R.S. §1101-1121) to provide landowner

financial incentives for conserving parcels with land and water resources of high biodiversity value, including species and habitats at risk of decline from climate change

- iv. Maintain the Tree Growth Tax Law as an established program for landowners committed to active forest management
 - c. Provide funding to support the use of agricultural and forestry mitigation and adaptation practices; incentivize infrastructure and technology upgrades to support the adoption of those practices including on-farm renewable energy use and other strategies to reduce fossil-fuel usage
 - d. Reduce CO₂ emissions from fossil fuels used for building heat/power by encouraging the consideration of installation of efficient modern wood heat/power technology in homes, businesses, schools, hospitals and other institutions
 - e. Encourage high quality on-the-ground performance by loggers, and facilitate the use of low-impact timber harvesting equipment
 - f. Increase funding to improve aquatic connectivity at private and publicly owned barriers (including dams and road-crossing infrastructure), using Stream Smart practices for freshwater bridges and culverts, Coast Wise practices for tidal crossings, and a temporary steel bridge cost share program for forestry operations (administered by the Maine Forest Service), thereby reducing flooding damage, supporting habitat functionality, and responding to sea level rise
 - g. Provide financial support to strengthen Maine's food systems, so that more food can be produced and processed locally, distributed efficiently, and priced affordably
- 3. Provide technical assistance on natural climate solutions to landowners, land managers and agricultural producers**
- a. Forestry Assistance: Add significant field forester capacity to the DACF's Maine Forest Service to support landowner and land practitioner adoption of carbon-friendly and resilient forest management practices, through outreach, education, and technical assistance
 - b. Agricultural Assistance: Make natural climate solutions (such as soil health practices) a priority in federal and state agricultural programs, and increase technical service provider capacity to Soil & Water Conservation Districts, University of Maine Cooperative

Extension, NRCS, and non-governmental organizations to assist producers in using known and emerging agricultural practices with mitigation and adaptation benefits

- c. Natural Land Assistance: Increase technical service provider capacity to DIFW's Beginning with Habitat Program and DACF's Maine Natural Areas Program to support towns, land trusts, land managers, and landowners in their efforts to conserve native species and land and water resources vulnerable to climate change and to address climate-related threats such as invasive species

4. Update and refocus state programs and policies to address climate mitigation and resilience

- a. Continue and enhance climate-friendly public land management practices
 - i. Update DACF's Bureau of Parks & Lands Integrated Resource Policy (IRP) to incorporate current climate science and management priorities for enhancing landscape and species resiliency and mitigating climate change
 - ii. Maintain support for, and consider expansion of, the state's Ecological Reserve System (ERS), and update ERS legislation and mandates to reflect new science on climate change threats, mitigation opportunities, and landscape resiliency
 - iii. Incorporate principles of climate science and landscape resiliency when evaluating and prioritizing future land acquisitions by DACF and DIFW
- b. Update existing policy and staffing needs to support comprehensive, accurate, and timely environmental review of land and water resources and permitting of projects under environmental regulations, thereby ensuring smart development, shoreland protection, and appropriate renewable energy project siting
- c. Assess and improve state, regional and local land use planning efforts, policies and regulations to promote climate mitigation, resilience, and adaptation, as well as carbon storage
 - i. Enhance existing and develop new land use planning tools and policies that encourage greater state coordination to reconcile competing land uses and promote efficiency, particularly with regard to environmental review
 - ii. Prioritize the retention of valuable working and natural lands, especially prime agricultural soils and forest land, in balance with renewable energy development

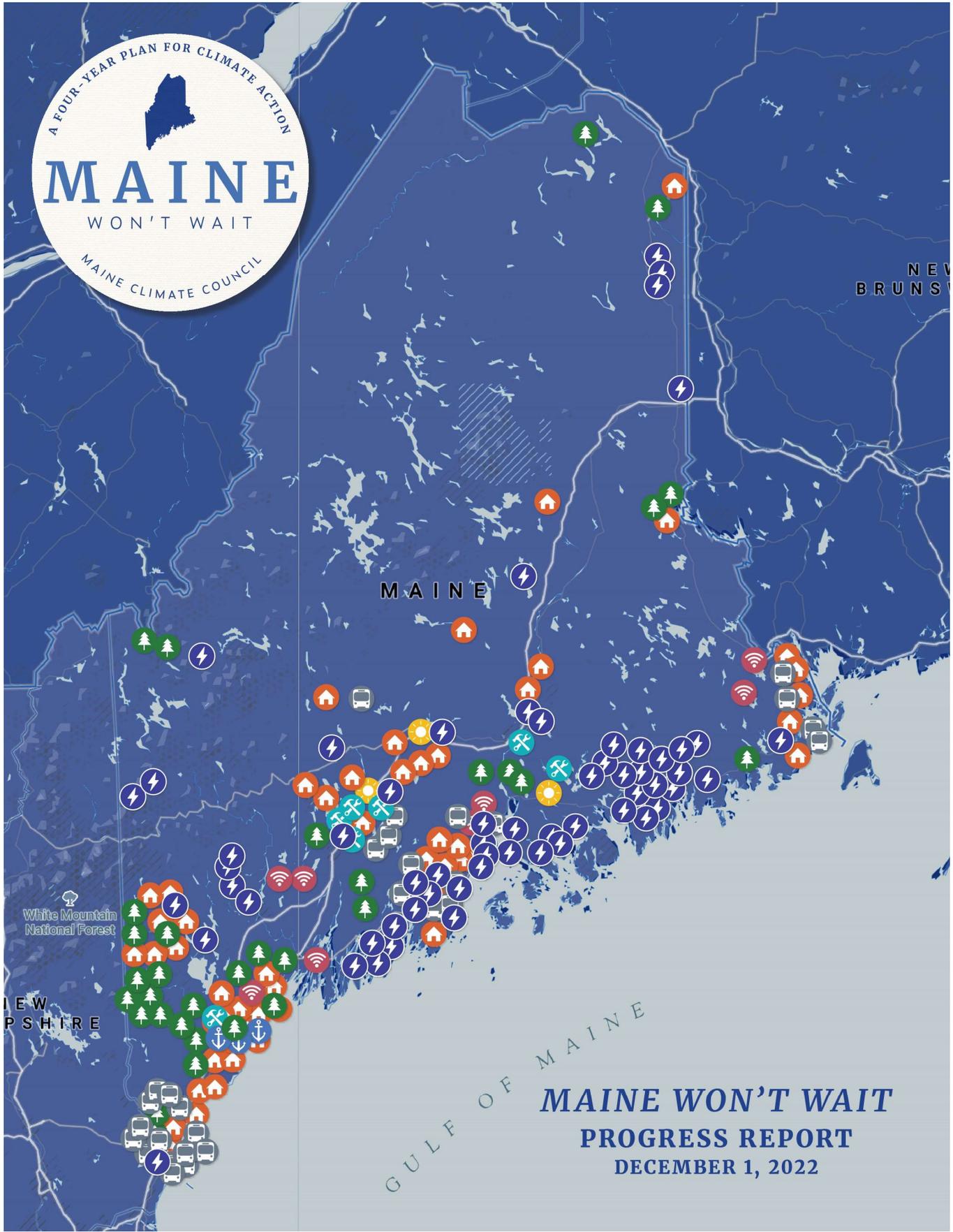
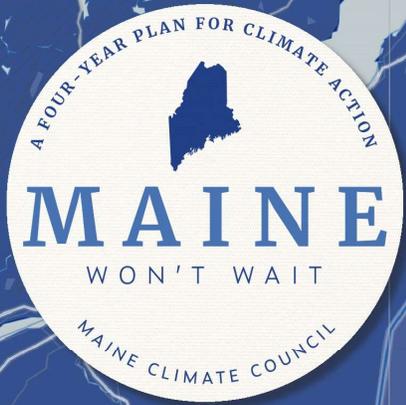
- d. Increase climate education related to forestry, agriculture and natural lands, through public school curricula, consumer awareness, and landowner information
- e. Develop and enhance marketing programs for Maine forest products, in coordination with programs such as ForMaine, focused on climate-friendly bio-based wood market innovation including Cross Laminated Timber (CLT), cellulosic insulation, pyrolysis oil, nanocellulosic materials, advanced biofuels, and bioplastics. Issue an Executive Order to seek opportunities in State construction projects to use Mass Timber (including CLT) building technologies, and to encourage related manufacturing facilities to locate in Maine

5. Strengthen research and development, and monitoring of climate mitigation and adaptation practices

- a. Create a sustained source of funding for research on climate change and climate mitigation and adaptation strategies
 - i. Conduct research in support of agriculture and forestry mitigation and adaptation practices
 - ii. Promote research and monitoring to inform adaptive management practices designed to conserve climate-sensitive species and habitats
- b. Establish the University of Maine as the coordinating hub for partnerships among academia, the private sector, and state government in Maine, for research on forestry, agriculture, and natural land-related climate concerns
- c. Continue to invest in the University of Maine research facilities in their efforts to become a globally recognized hub for climate-friendly bio-based wood market innovation, including Cross Laminated Timber (CLT), cellulosic insulation, pyrolysis oil, nanocellulosic materials, advanced biofuels, and bioplastics
- d. Promote research, development and planning efforts supporting the growth and stability of Maine food systems

Climate Plan Strategies Relevant to Natural & Working Lands

Outcomes
Develop and enhance innovation support, incentives, building codes, and marketing programs to increase the use of efficient and climate friendly Maine forest products, including mass timber and wood fiber insulation.
Analyze policies, including the potential for long-term contracts, needed to advance new highly efficient combined heat and power production facilities that achieve significant net greenhouse gas reductions.
Grow Maine’s forest-products industry through bioproduct innovation, supporting economic growth and sustainable forest management and preservation of working lands.
Establish the University of Maine as the coordinating hub for state-applied research on forestry, agriculture, and natural land-related climate concerns, including research and development of climate-friendly bio-based wood-market innovation; and research around climate-friendly agricultural practices.
Increase the amount of food consumed in Maine from state food producers from 10% to 20% by 2025 and 30% by 2030 through local food system development.
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.
Focus conservation on high biodiversity areas to support land and water connectivity and ecosystem health.
Revise scoring criteria for state conservation funding to incorporate climate mitigation and resiliency goals.
Develop policies by 2022 to ensure renewable energy project siting is streamlined and transparent while seeking to minimize impacts on natural and working lands and engaging key stakeholders.
Maine DEP will conduct a comprehensive, state-wide inventory of carbon stocks on land and in coastal areas (including blue carbon) by 2023 to provide baseline estimates for state carbon sequestration, allowing monitoring of sequestration over time to meet the state’s carbon neutrality goal.
Establish by 2021, a stakeholder process to develop a voluntary, incentive-based forest carbon program (practice and/or inventory based) for woodland owners of 10 to 10,000 acres and forest practitioners.
Engage in regional discussions to consider multi-state carbon programs that could support Maine’s working lands and natural resource industries, and state carbon neutrality goals.
Increase the amount of financial incentives available for climate friendly land management practices that sequester carbon and support climate change resilience.
Update the Open Space Current Use Taxation Program and maintain the Tree Growth Tax Law.
Increase technical service provider capacity by 2024 to deliver data, expert guidance, and support for climate solutions to communities, landowners, farmers, loggers, and foresters at DACF, DIF&W, DMR, and the University of Maine.
Provide state leadership for robust technical assistance and funding to communities by 2024 to support local and regional climate resilience initiatives.
Develop and implement updated land use regulations, laws, and practices by 2024 in order to enhance community resilience to flooding and other climate impacts.



MAINE WON'T WAIT
PROGRESS REPORT
DECEMBER 1, 2022

This dashboard tracks numerical targets included in *Maine Won't Wait* to inform the public and help evaluate whether evidence-based adjustments, enhancements or replacements to policies are needed in pursuit of the plan's climate objectives. Over time, the dashboard will expand to include other key *Maine Won't Wait* metrics as updated data becomes available, new programs are established, and state and federal climate investments are realized.



82,326
New Heat
Pumps
since 2019

Goal: 100,000
new by 2025



9,112
Homes
Weatherized
since 2019

Goal: 17,500
by 2025



22%
of Maine
Land
Conserved

Goal: 30%
by 2030



127
Communities
in Resilience
Partnership


Goal: 100
Communities
by 2023

maine.gov/climateplan/dashboard

STRATEGY C: Reduce Carbon Emissions in Maine’s Energy and Industrial Sectors through Clean Energy Innovation

Initiate a Stakeholder Process to Transform Maine’s Electric Power Sector

Power sector stakeholder process by 2022.

- LD 1959 An Act Regarding Utility Accountability and Grid Planning for Maine’s Clean Energy Future, sets service standards for utility operations and requires grid planning to improve system reliability and climate change protection planning. It instructs the PUC to undertake a 5-year process for integrated grid planning that includes a robust stakeholder process. The Governor’s Energy Office (GEO) is actively engaging with the PUC, utilities, environmental NGOs, and other stakeholders to design this stakeholder process.
- LD 936 established a goal of 750 MW, of distributed generation under the net energy billing programs. The bill also set a limit on distributed generation resources between 2 and 5 MW eligible for enrollment in net energy billing and concludes the program for these resources on December 31, 2024. In addition, LD 936 established a stakeholder group to “consider various distributed generation project programs to be implemented between 2024 and 2028 and the need for improved grid planning.” The GEO convened the Distributed Generation Stakeholder Group to issue recommendations that support continued development of renewable energy in Maine through cost-effective distributed generation. The group delivered its initial report to the Legislature on December 31, 2021 and will deliver a final report by January of 2023.

Accelerate Emissions Reductions of Industrial Uses and Processes

Launch Industrial Task Force by 2022.

- The Industrial Task Force was established to promote collaboration, innovation and grant opportunities to support greater energy efficiency in the industrial sector and the reduction of industrial and large business emissions. Since September 2021, the Industrial Innovation Task Force has met quarterly to discuss relevant topics for industrial decarbonization including Efficiency Maine’s Commercial and Industrial Custom and Prescriptive Program, Maine’s emissions profile, national

trends for industrial decarbonization, carbon sequestration, wasted heat and heat recovery, and federal funding opportunities.

- Maine DEP adopted a new rule, effective October 2022, requiring new stationary generators of at least 1,000 brake horsepower (747 kilowatts) to meet Tier V emission standards or limit operation to 500 hours per year. These standards will limit criteria pollutant emissions and promote the use of lower carbon fuels from new industrial facilities such as aquaculture and ensure that upgraded generators at existing facilities minimize emissions.
- Maine has joined a multi-state Northeast consortium to explore funding opportunities through the Department of Energy’s (DOE) Regional Clean Hydrogen Hubs initiative. Partners include the states of New York, Rhode Island, Connecticut, New Jersey, and Massachusetts, as well as a diverse set of public and private hydrogen ecosystem partners from across the region. The coalition will focus on the integration of renewables - such as onshore and offshore wind, hydropower, and solar PV - into clean hydrogen production, and the evaluation of clean hydrogen for use in transportation, including for medium and heavy-duty vehicles, heavy industry, and power generation applications or other appropriate uses consistent with decarbonization efforts in tandem with electrification.

Encourage Highly Efficient Combined Heat and Power (CHP) Facilities

Analyze CHP policies.

- The Industrial Innovation Task Force is considering CHP policies as part of its scope.
- LD 1202: An Act To Establish a Wood-fired Combined Heat and Power Program was signed into law by Governor Mills. It encourages the development of combined heat and power projects. The net generating capacity of a program participant may not be less than 3 megawatts or more than 10 megawatts, and the total net generating capacity of all program participants combined may not exceed 20 megawatts.

PROGRESS UPDATE

Take Advantage of New Market Opportunities

Support Maine’s natural resource economies to adapt to climate change impacts.

- The pandemic served as a powerful catalyst as consumers sought out, and innovative producers developed, new ways of purchasing Maine-grown and harvested foods. Expansion of core processing infrastructure could increase Maine’s agriculture and seafood production capacity, unlock new market opportunities, and improve their resilience to climate effects or market disruptions. The Maine Jobs & Recovery Plan includes three initiatives to support the economic recovery of Maine’s natural resource industries – forestry, fishing and farming – from impacts due to the COVID-19 pandemic. In the last year, the Governor’s Jobs Plan has awarded approximately \$41 million in economic recovery funds to 391 businesses in these heritage sectors across all 16 counties in Maine.
 - To support the economic recovery of Maine’s seafood industry, the Department of Marine Resources established the \$16 million Maine Seafood Dealer and Processor COVID-19 Response and Resilience Grant Program (SDPP), administered by Maine Technology Institute. The program committed nearly \$16 million in federal funds, including \$10 million allocated through the Maine Jobs and Recovery Plan, to help seafood dealers and processors in Maine recover from the COVID-19 pandemic, invest in technology and infrastructure, and increase resiliency to future market disruptions.
 - The Department of Agriculture, Conservation and Forestry (DACF) established the Agricultural Infrastructure Investment Program to provide nearly \$20 million in recovery grants through the Maine Jobs and Recovery Plan to Maine farm and food processing businesses. These grants can be used for equipment purchases, construction, facilities improvement, utility upgrades,

capacity-enhancing technology, technical assistance, and other capital expenses. Improving agricultural infrastructure will allow this sector to increase production and storage capacity, enhance supply chain resilience, and drive growth within the state’s agricultural and food economy while increasing the overall production of Maine-grown foods. Sixty-four grants were awarded and will be administered by the Department.

Grow Maine’s forest-products industry through bioproduct innovation.

- Governor Mills announced the \$20 million Forest Recovery Initiative grant program through her Maine Jobs & Recovery Plan in November 2021. The first phase of the program provided financial relief to 219 forest products industry businesses that experienced negative impacts from the pandemic to help them sustain the viability of their business. The second and final phase of the program, administered by the Maine Technology Institute (MTI), will provide grants to support forward-looking forestry projects that address new market demands, provide new sustainable products, or otherwise advance the long-term stability of the forestry industry.





- The Pandemic Recovery for an Innovative Maine Economy (PRIME) Fund, administered by the Maine Technology Institute (MTI), will award \$39 million in grants to help Maine technology companies recover from the pandemic, invest in new products and business lines, attract new customers, and create long-term economic growth. The fund focuses on businesses engaged in Maine's targeted technology sectors, which include biotechnology, composites and advanced materials, forestry and agriculture, marine industries, and precision manufacturing.

Establish the University of Maine as the coordinating hub for state-applied research on forestry, agriculture, and natural land-related climate concerns.

- The University of Maine has launched the Maine Climate Science and Information Exchange (MCSIE) to coordinate climate science in support of *Maine Won't Wait*. MCSIE is developing a data-

base of current climate science research in and about Maine and will engage with stakeholders to identify information needs. MCSIE has three areas of specialization: marine ecosystems and coastal communities, agriculture and food systems, and forests and forest products. (See Strategy E updates for more information about MCSIE.)

- The University of Maine's Advanced Structures and Composites Center is expected to receive \$26 million as part of the federal budget appropriations process which will partially fund a new facility called the GEM Factory of the Future. The funding will also be used to conduct research in the facility to advance large-scale, bio-based additive manufacturing using technologies such as artificial intelligence, high-performance computing and arrays of large 3D printers and subtractive systems. Work would include research on the manufacture and testing of large new systems made from bio-based and other advanced materials, focusing on digital manufacturing processes.

Increase the amount of food consumed in Maine from state food producers from 10% to 20% by 2025 and 30% by 2030.

- The availability of current data on the total amount of food consumed in Maine from state producers is limited and varies widely depending on the food commodity, and it is not clear if the 10% target for food consumed in Maine that was reported in *Maine Won't Wait* accurately captures the current overall baseline.
- Maine DACE estimates that for the healthcare sector in Maine, Maine-grown food sourcing is hovering around 5-7%. Maine prisons are working towards an overall goal of 20% Maine-sourced food by 2025, and today typically procure between 10 and 30% of their food from Maine food producers. In Fiscal Year 2022, \$375,000 was spent toward buying local food for public schools, including \$125,000 from the Local Food Fund.
- The US Department of Agriculture's (USDA) Agricultural Marketing Service awarded \$1.3 million in funding and signed a cooperative agreement with Maine to establish "Maine Food for Maine People," a project that will expand marketing opportunities for underserved producers and aggregators. Maine will partner with the Good Shepherd Food Bank, Cultivating Community, and Mi'kmaq Farms to purchase over \$1 million worth of agricultural products from no fewer than seven socially disadvantaged producers. These partners will target farms that are black-owned, women-owned, or Native-owned or otherwise meet the USDA definition of socially disadvantaged. It is estimated these beneficiaries will represent upwards of 100 individual businesses. Through the "Maine Food for Maine People" project, food will be distributed through established and emerging pathways to feed underserved Maine communities. These pathways include existing Eligible Recipient Agencies of The Emergency Food Assistance Program (TEFAP) and tribal pantry networks, as well as innovative, culturally responsive distribution models rooted in community demand.

- The Maine Milk Commission estimates that 67% of all milk produced in Maine is staying in Maine and 26% of Maine's production going to provide milk to the greater Boston metropolitan area.
- The DACE estimates, based on US agricultural census data, that approximately 30% of food grade grains stay in state for processing and local use.

Launch the Maine Seafood Business Council by 2022.

- The EDA-funded SEA Maine (SeaMaine - Seafood Economic Accelerator for Maine) market development committee is conducting a Strengths, Opportunities, Aspirations, and Results analysis based on existing and anticipated market studies to sustain and grow the marine economy, and look for opportunities to collaborate with Maine food, agriculture, and life science sectors. The subcommittee will develop a plan to increase Maine's competitiveness and support efforts to market Maine's seafood economy, attract investment, and connect the sector to new markets and resources.

Clean-Energy Jobs and Businesses in Maine

Clean energy economy workforce initiative by 2022.

- Maine's Clean Energy Partnership was established to advance Maine's clean energy, climate, economic development, and workforce goals – including the Governor's goal of doubling Maine's clean energy and energy efficiency jobs by 2030. Supported by \$6.5 million in the Maine Jobs and Recovery Plan, the Governor's Energy Office has created an Advisory Board to work with leading experts to sustain attention and promote collaboration to address emerging needs, build new and expand existing supply chains, and support opportunities for Maine in these fast-growing fields.
- As of the end of 2021, there were roughly 14,500 clean energy workers across Maine and 142,000 workers employed in clean energy-related occupations. The sector saw significant job growth prior to the global pandemic; from 2016 through 2019

clean energy businesses grew their workforce by 11 percent—creating roughly 1,500 jobs in three years. The sector saw a strong post-pandemic recovery, adding 656 jobs between 2020 and 2021. Over the next decade, the state’s environmental and clean energy statutory requirements and goals will create continued demand for clean energy jobs. With clean energy workers in the state indicating high satisfaction with their careers, Maine has a significant opportunity to bridge the workforce gap by expanding outreach and raising awareness of clean energy careers among key populations.

Clean tech innovation support by 2022.

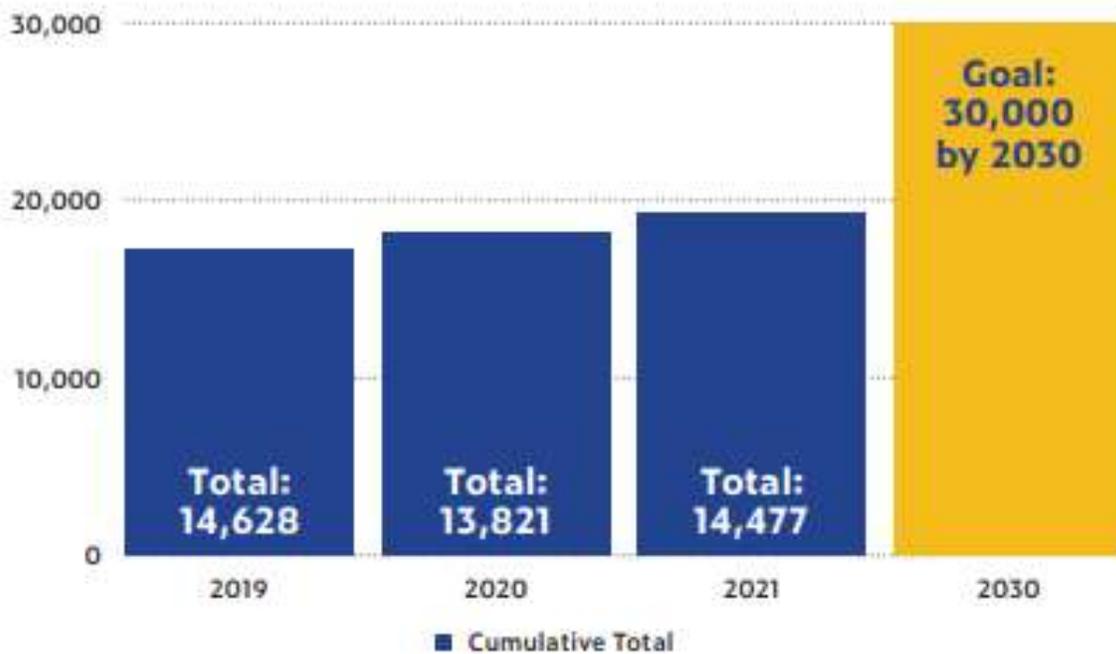
- The Clean Energy Innovation Initiative, through the Clean Energy Partnership, will use \$2.25 million from the Maine Jobs and Recovery Plan to fund programs that support clean energy small businesses and startups, which will lead to

expanded innovation in the sector, and provide relief to those businesses that have been impacted by the pandemic. These supports may include fiscal relief from pandemic impacts, funding for business planning services and technical assistance, and opportunities for mentorship.

Shovel-ready Infrastructure Projects by 2021.

- The Maine Infrastructure Adaptation Fund awarded nearly \$20 million in funds to 13 communities around Maine to protect vital infrastructure from effects of climate change. Infrastructure Adaptation Fund recipients will use the funds for projects to address flooding along ocean and riverfronts, protect stormwater and wastewater systems, install culverts to reduce flooding; and ensure energy availability during extreme storms. (The Fund is described more fully in Strategy G.)

Maine Clean Energy Jobs



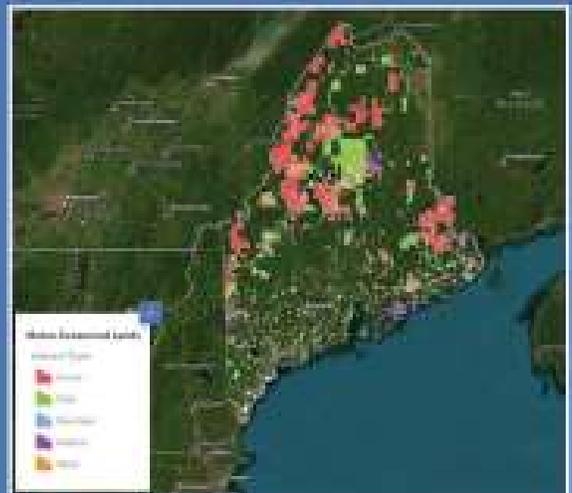
**STRATEGY E: Protect Maine’s Environment and Working Lands and Waters:
Promote Natural Climate Solutions and Increase Carbon Sequestration**

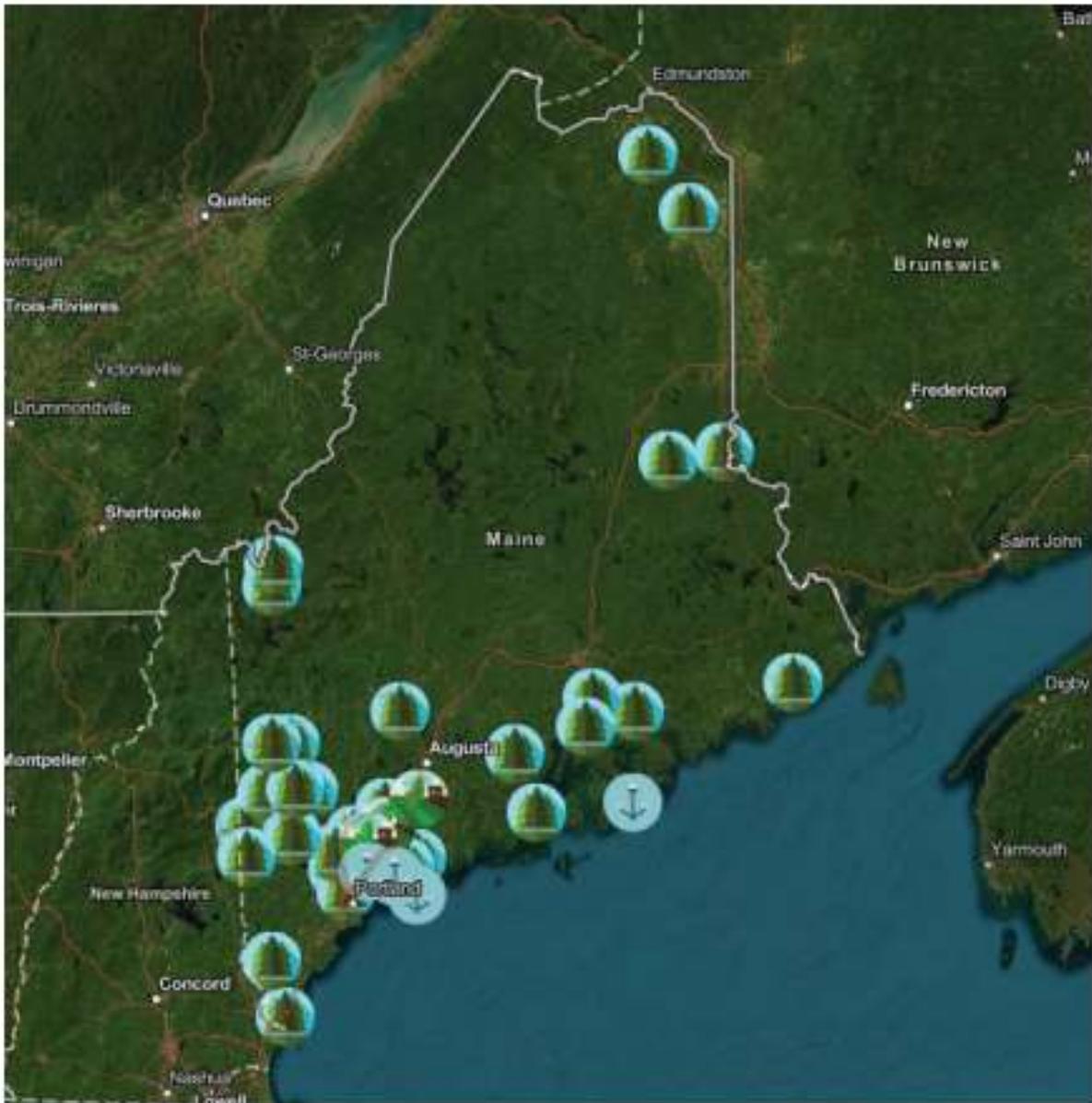
Climate change and development are harming Maine’s natural and working lands and waters, which are key to the state achieving its goal of carbon neutrality by 2045, signed into law by Governor Mills in 2022. Maine is nearly 90% forested, among the most forested states in the country, and there are significant opportunities for ongoing and increased carbon sequestration – including in Maine’s working forests and lands as well as ocean opportunities, also called blue carbon. Protecting Maine’s natural and working lands and waters helps store carbon while supporting our fishing, farming, forestry and outdoor recreation industries and providing important co-benefits, such as clean drinking water, important wildlife habitat, and helping to moderate severe flooding events.

Historic Funds Awarded from Land for Maine’s Future Program

Maine’s natural and working lands and waters are key to the state achieving its carbon neutrality commitment by 2045. Maine’s conserved lands are estimated at 22% as of October 2022. To support the climate plan’s land conservation goal of 30% by 2030, the Land for Maine’s Future (LMF) program has approved 37 new projects in the last year since Governor Mills and the Legislature reinvigorated the program with \$40 million in new State funding through the biennial budget. The projects will preserve working farmland, working waterfronts, and working forests, and support recreation and nature-based learning for public schools and communities.

New LMF projects announced in 2022 total nearly \$16 million and are expected to leverage more than \$37 million in matching federal and private funds. In addition, the LMF board has recently added new Equity and Community Accessibility scoring criteria for the 2023 request for proposals (RFP). They include whether the project serves low income or otherwise disadvantaged communities, provides greenspace in areas where outdoor recreation opportunities are limited, and is accessible from neighborhoods, schools, downtowns, public transportation stops, and village centers.





Lands for Maine's Future awarded conservation projects in 2022, including Working Waterfront (anchor icons), Conservation and Recreation (tree icons), and Farmland (green field and brown tractor) projects.

Year	Total acres conserved	New acres conserved/year	% ME land area
2020	4,224,773		21.5%
2021	4,278,314	53,541	21.7%
2022	4,336,762	58,448	22.0%

PROGRESS UPDATE

Protect Natural and Working Lands and Waters

Increase by 2030 the total acreage of conserved lands in the state to 30%.

- In 2022, the Department of Agriculture, Conservation, and Forestry (DACF) estimates that 4,336,762 acres or 22.0% of Maine's lands are conserved. Updated data in the Maine conserved lands database also allows for the upward revision of the 2020 baseline to 21.5% of Maine's lands. More than 50,000 acres of new lands were conserved annually in 2021 and 2022.

Develop conservation targets for Maine's forest cover, agriculture lands, and coastal areas by 2021.

- To help inform future conservation targets, the Department of Agriculture, Conservation and Forestry in close collaboration with public and private partners reviewed land conservation accomplishments since the 1997 Land Acquisition Priorities Advisory Committee (LAPAC) and identified acquisition gaps which will be used to inform to future acquisition priorities. Results from the LAPAC report are expected in early 2023.
- The Maine Bureau of Parks and Lands received a \$20,000 grant from the Maine Outdoor Heritage Fund to work with the Maine Department of Inland Fisheries and Wildlife (DIFW) and the Maine Natural Areas Program on updating conservation priorities for the state, incorporating climate change consideration.

Focus conservation on high biodiversity areas.

- Beginning with Habitat (BwH) collaborators including the Maine Natural Areas Program (MNAP), DIFW, and Maine Nature Conservancy recently revised the designation process for Focus Areas of Statewide Ecological Significance to better ensure integrity, transparency, and repeatability. The revised process provides consistent and

defensible methods of determining how much surrounding landscape is needed to adequately safeguard the natural features driving Focus Area designations. These methods result in Focus Area designations that incorporate a sufficient area of landscape to maintain their natural function and ecological integrity—factors that are essential for climate resilience.

- Scoring criteria for LMF applications includes biological diversity, including long-term protection of BwH designated Focus Areas of Statewide Ecological Significance.
- The Maine Department of Marine Resources (DMR) is distributing more than \$7 million in ARPA funds for stream and tidal restoration projects that improve fisheries, ecosystem function and protect public safety.
- Maine Natural Resources Conservation Program (MNRCP) awarded \$5,713,069 for 24 projects in 2021, which was the highest amount awarded since the program began in 2008. These funds were used for the restoration and enhancement of 393 acres of wetland resources and to preserve 4,373 acres of aquatic resources, significant wildlife habitat, and upland and riparian buffer. 2022 awards are expected to be announced soon.

Revise scoring criteria for state conservation funding to incorporate climate goals.

- State agencies have upgraded the scoring criteria for state grant programs to require applicants to improve climate resilience (such as hazard mitigation and emergency management, resilience, habitat improvement, public safety, and more) into several state conservation programs. This includes the Lands for Maine's Future Program, as required by statute, and the Maine Outdoor Heritage Fund both of which prioritize projects that address climate change

Develop clean energy siting guidelines by 2022.

- The Governor's Energy Office and the Department of Agriculture, Conservation and Forestry convened the Agricultural Solar Stakeholder Group in 2021 to make policy recommendations to balance the need to protect Maine's current and future farmland against the need to develop sources of renewable solar energy. The group released its report in January 2022 on the Agricultural Solar Stakeholder Group website.
- The Maine Department of Environmental Protection provided guidance on their website for solar development on closed landfills.
- Bipartisan legislation passed in 2021 established solar decommissioning requirements to ensure solar energy structures are removed from lands at end of life or when no longer in use. Decommissioning plans for solar development on farmland must provide for the restoration of that farmland sufficient to support resumption of farming or agricultural activities (P.L. 2021, ch. 151)
- Pursuant to legislation, the Governor's Energy Office convened the Distributed Generation Stakeholder Group to recommend a cost-effective successor program for distributed generation resources.

The stakeholder group hosted a land use-focused work session in October 2022, seeking feedback from a broad range of stakeholders on land use matters to incorporate into the successor program proposal due to the Legislature at the end of 2022.

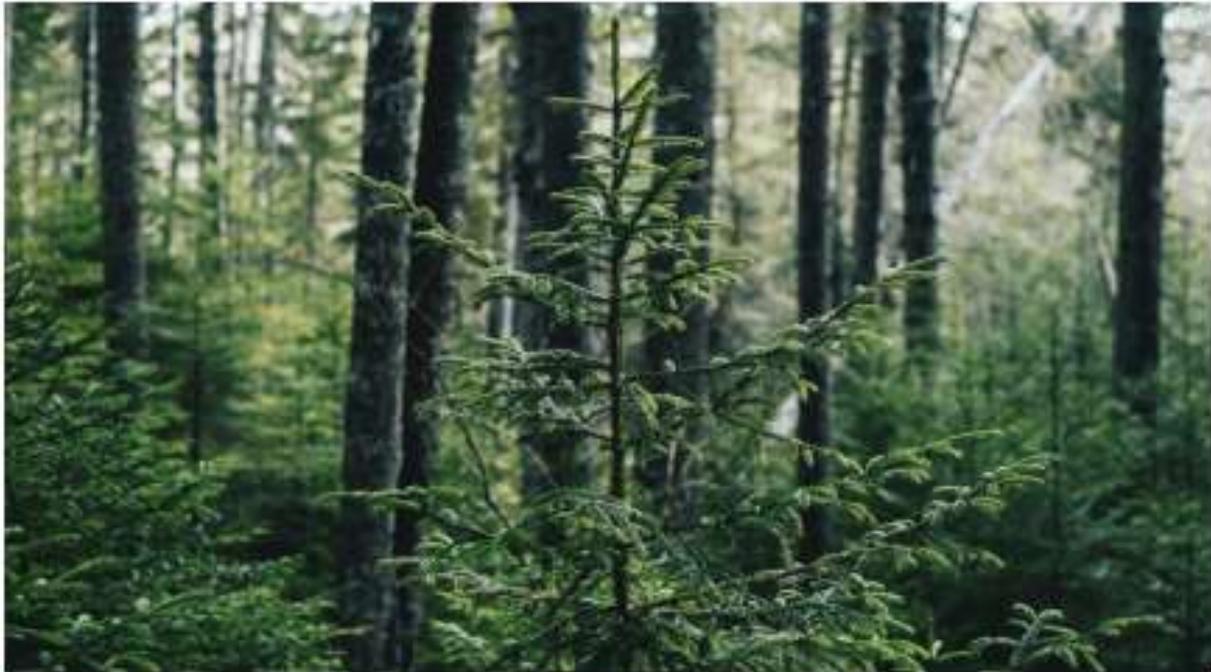
Develop New Incentives to Increase Carbon Storage

Inventory carbon stocks on land and in coastal areas to provide baseline estimates for state carbon sequestration by 2023.

- The Department of Environmental Protection (DEP) has released the 2022 biennial greenhouse gas emissions inventory update, which for the first time includes gross and net emissions estimates. The inventory estimates that 75% of 2016 gross greenhouse gas emissions are balanced by sequestration in Maine's environment, including forests and wood products, wetland, agriculture, urban biomass, inland and coastal waters, and soils.
- The DEP released 2021 low tide imagery and a seagrass GIS layer from Eliot to Cape Elizabeth and conducted new eelgrass mapping from Cape Elizabeth to Phippsburg during summer 2022. Seagrass and salt marsh mapping along the entire



Underwater eelgrass field verification, Casco Bay, summer 2022.



coast of Maine, funded by Governor Mills and the Legislature in the biennial state budget, will commence in 2023 from Phippsburg to St. George. Seagrass and salt marsh mapping will be repeated annually on a rotating basis along the entire coast as directed by the Legislature.

- The Coastal Blue Carbon Group, co-chaired by the Maine Department of Marine Resources, is hosting a scientific workshop reviewing new and emerging coastal “blue carbon” sequestration science in early 2023.

Engage stakeholders to develop a voluntary, incentive-based forest carbon program for woodland owners of 10 to 10,000 acres (by 2022); Financial incentives for climate friendly land management practices; Update the Open Space Current Use Taxation Program and maintain the Tree Growth Tax Law.

- The Governor’s Forest Carbon Task Force made recommendations to encourage forestland management practices that increase carbon storage specifically on woodland owners of 10 to 10,000 acres while maintaining harvest levels overall. The Task Force recommendations include to “Encourage, promote, and incentivize the voluntary adoption of climate-friendly forest management practices” and “Promote climate-friendly timber harvest-

ing practices and support the use of low-impact harvesting equipment”. The recommendations also include to “Identify a suite of potential changes to the Open Space Current Use Taxation program that integrate carbon management elements into the program.”

Engage in regional discussions about multi-state carbon programs.

- Maine leaders continue to participate in early regional multi-state discussions about shared goals and policies related to carbon sequestration and potential future program opportunities.

Expand Outreach to Offer Information and Technical Assistance

Increase technical service provider capacity to deliver data, expert guidance, and support for climate solutions to communities, farmers, loggers, and foresters by 2024.

- The Department of Agriculture, Conservation and Forestry (DACF) has recently hired a Soil Scientist to develop, manage, and direct the Department’s new Healthy Soils Program, created by statute in 2021. The position is a key resource for leading climate-smart agricultural practice education, training, and information exchange to staff,

relevant state agencies, resource partners, and constituents ranging from agricultural producers to the general public.

- DACF will hire a forest resource management planner specializing in carbon and 3 new foresters by early 2023 to provide training and education to landowners and promote forest management practices that support adaptation and resiliency; the positions are funded in the state biennial budget.
- DACF's Bureau of Resource Information and Land Use Planning (BRILUP) is hiring a senior planner to provide inter-program, inter-Bureau, and inter-Departmental coordination and support toward implementing State climate strategies that support regional and community actions.
- DACF, DIFW, and the University of Maine completed a Soil Carbon Incentives Study which provides a summary of relevant scientific literature on soil carbon management practices for agriculture, forestry, and wetlands. The report provides recommendations to the Legislature to provide additional assistance to landowners to maintain and enhance soil carbon.
- DIFW has recently hired a Climate Coordinator within the Beginning with Habitat (BwH) program, to coordinate agency efforts related to the impacts of climate change on Maine's fisheries, wildlife, and habitats. This position increases the Department's capacity to provide technical assistance to state and local governments and conservation partners, as well as representing the agency on climate-related technical, scientific, and stakeholder groups.
- DIFW has also developed an automated forest management plan review tool, housed within the BwH group. The new tool allows reviewers from DACF and DIFW to review forest management plans more efficiently and effectively for priority natural resources and landscape features. The new process will improve agency response time to landowners and enhance the scope of voluntary management suggestions offered.

- DMR will soon hire two habitat restoration coordinators to oversee new spending for stream connectivity and coastal habitat restoration.

Launch the Coastal and Marine Information Exchange (by 2024)

- See below.

Enhance Monitoring and Data Collection to Guide Decisions

Establish a "coordinating hub" for key climate change research and monitoring by 2024.

Create the framework and begin pilot for a coordinated, comprehensive monitoring system by 2024.

- The new Maine Climate Science Information Exchange at the University of Maine (MCSIE) focuses on marine ecosystems and coastal communities as one of its three primary areas of specialization. MCSIE is developing a database of current climate science research in and about Maine serving as a boundary spanning entity engaging scientist, policy maker, and manager stakeholders to bring science to decision-making in real time and identify information needs.
- Maine DEP and DMR are participating in an ocean climate collaborative with academic and non-profit partners to coordinate and improve Maine-focused coastal and ocean acidification monitoring relevant to meeting the goals of *Maine Won't Wait*.
- DMR has established a new Division of Ecology and Environment in its Bureau of Marine Science, which emphasizes scientific research and environmental monitoring to support fisheries. DMR's Bureau of Public Health has increased harmful algal bloom monitoring, initiated a vibrio monitoring program, and initiated intertidal sentinel monitoring sites to assess long-term changes and provide early warning to presence of new invasive species or habitat shifts.
- DMR invested over \$14 million from the Maine Jobs and Recovery Plan to support research and policy initiatives related to lobster fishery monitoring, addressing gaps in the understanding of the

- presence of North Atlantic right whales in the Gulf of Maine, and other industry trends. To ensure long-term environmental and economic sustainability of Maine's ocean fisheries and coastal habitats the Department is launching a Fisheries Connectivity and Habitat Restoration Program to fund more fish and coastal habitat revitalization projects.
 - DMR will also expand public health testing capacity for shellfish to support growth of Maine's aquaculture and wild harvest sectors and invest in Maine Marine Patrol equipment upgrades and facility repairs to better serve and protect Mainers who make their living from the sea.
 - DMR and its partners completed its annual monitoring of salt marsh "sentinel sites", measuring the health of marshes and their ability to build sediment to keep up with sea level rise.
- Incorporate climate research and climate change-related technologies into Maine's research and development priorities.**
- In 2021, two Maine companies earned \$250,000 awards through the first "Maine Clean Energy Innovation Challenge" through the Maine Technology Institute.

Maine Climate Science Information Exchange

The University of Maine has launched the Maine Climate Science and Information Exchange (MCSIE) to coordinate climate science in support of *Maine Won't Wait*, with federal funding secured by Maine's congressional delegation and additional private funding. MCSIE is an office of climate science information coordination based at the University of Maine in service to all of Maine.

MCSIE has three primary areas of specialization: marine ecosystems and coastal communities, agriculture and food systems, and forests and forest products.

MCSIE is developing a database of current climate science research in and about Maine and will engage with stakeholders to strengthen the linkage between the most recent science and decision-making while identifying information needs to inform policy and research development. MCSIE serves as a boundary spanning entity, linking scientists, managers, and policymakers. MCSIE encompasses the development of a database of current climate science research in and about Maine, and specialists who engage in networking stakeholders, building teams, and identifying information needs.

MCSIE will strengthen Maine's ongoing science knowledge base supporting the work of the Maine Climate Council, working groups, subcommittees, and those throughout Maine engaging in an informed and cost-effective climate response. MCSIE will also include professional development opportunities for graduate and undergraduate students to engage in this work. A pilot MCSIE program began in 2022 with private funding. Beginning in 2023, MCSIE will be supported by a two-year National Oceanographic and Atmospheric Administration (NOAA) STM grant. The funding will allow MCSIE to hire additional staff, continue building a database of ongoing climate research, establish stakeholder networks around priority areas in *Maine Won't Wait*, and begin the development of a framework for climate science data and monitoring coordination based in the Maine Climate Office at the University of Maine.



Select Examples of Recent Progress by Maine State Government Agencies on Natural and Working Lands Recommendations

Agriculture

- In 2022, Governor Mills signed legislation establishing the Maine Farmer Drought Relief Grant Program within the Department of Agriculture, Conservation and Forestry (DACF) to support Maine farmers in identifying and accessing new water sources to overcome the adverse effects of drought conditions and climate change. In 2023, in response to the Governor's budget, the Legislature approved \$1 million in funding for FY25 to monetize the Fund and established an ongoing General Fund appropriation of \$300,000 beginning in FY25. DACF is currently developing rules for the Fund to launch the program in July 2024.
- Healthy Soils Program – In 2021, the Legislature established the Healthy Soils Program in DACF. In 2023, in response to the Governor's budget, the Legislature approved \$1.5 million in funding for FY25 and established an ongoing General Fund appropriation of \$500,000 beginning in FY25. DACF is currently developing an online clearinghouse for healthy soils information and technical assistance.
- Soil and Water Conservation Districts – In 2023, in response to the Governor's budget, the Legislature approved \$200,000 in supplemental annual funding from DACF beginning in FY24. This 50-percent increase in funding will allow Conservation Districts to provide more outreach and technical assistance to landowners for soil conservation and climate resilience.
- In 2023, the Legislature passed [LD 1881](#) (P.L. 2023, Chapter 448), *An Act Regarding Compensation Fees and Related Conservation Efforts to Protect Soils and Wildlife and Fisheries Habitat from Solar and Wind Energy Development and High-impact Electric Transmission Lines Under the Site Location of Development Laws* granting DACF new permitting authority over certain solar energy development projects. No solar energy development five (5) acres or greater may be constructed wholly or partially on “high-value agricultural land” after September 1, 2024, without a permit from DACF. Individuals must pay a compensation fee or other form of compensation for any portion of development that is located on high-value agricultural land. Mitigation fees will be used to conserve more farmland.

Land Conservation

- DACF's Land for Maine's Future (LMF) program received a historic \$40 million biennial budget allocation in FY22/23. Made possible through this funding, the LMF program has closed 11 additional projects in 2023 totaling 13,500 acres. Additionally,

LMF has allocated funding for 17 projects in 2023 which once closed would add approximately 24,000 acres to Maine's conserved lands portfolio.

- In 2023, the Department of Inland Fisheries and Wildlife (DIFW) conserved nearly 10,000 acres of land, including its largest-ever single land acquisition. These acres include habitat for numerous species of wading birds and waterfowl, wintering deer, wild brook trout, and rare species. All parcels are open for public access. Forty-six percent (4,561 acres) of these new acquisitions were located in Focus Areas of Statewide Ecological Significance, notable for their significant biodiversity values.
- Working with longstanding conservation partners, DACF's Bureau of Parks and Lands currently has 7 active land conservation projects underway with funding secured. Projects range in size from under 200 to over 13,000 acres and are located in diverse regions of the state. These projects total over 35,000 acres and will be completed with more than \$22 million in federal and state funding, including from the Forest Legacy Program, Land and Water Conservation Fund (LWCF), North American Wetlands Conservation Act (NAWCA), Readiness and Environmental Protection Integration (REPI), Maine Natural Resource Conservation Program (MNRCP), and LMF.
- Additional staffing capacity - via a Climate Coordinator and a Landowner Biologist - at DIFW in the Beginning with Habitat program has allowed for increased outreach to landowners, land trusts, and municipalities, and participation in regional and watershed-level climate planning initiatives. Staff have developed and presented climate and resiliency-themed information to towns, land trusts, woodlot owners, and schools; and hosted informational tables at conferences for the Community Resilience Partnership, Maine Municipal Association, and Maine Association of Conservation Commissions. These efforts have helped to advance understanding of the impacts of climate change on Maine's wildlife and habitats, the importance of biodiversity and landscape scale connectivity, and provided direct technical assistance to key user groups (in support of Strategies E.1.2 and E.3.1).
- In 2023, DIFW launched its new Environmental Review Resource Map Tool (<https://www.maine.gov/ifw/programs-resources/environmental-review/index.html>). The tool provides access to preliminary screening-level information on known habitats and species occurrences relevant to environmental consultations by DIFW, including Endangered, Threatened, and Special Concern species occurrences and habitats, Essential Habitats, Significant Wildlife Habitats, and other important resources. Habitat descriptions are also provided for selected species. This tool is a preliminary screening tool for environmental consultants, developers, and regulatory agencies pursuing potential development activities and regulatory processes and is intended to inform development activities and help to minimize impacts to important resources. It supports but does not replace formal environmental reviews with DIFW.
- Using funds from the Maine Jobs and Recovery Plan, DACF's Bureau of Parks and Lands has completed 15 infrastructure projects spanning 12 parks, including upgraded culverts and bridge work and other improvements with climate resilience measures

incorporated into their design. There are nearly 100 other state park projects in the pipeline.

Forestry

- The increase in technical assistance capacity within the Maine Forest Service (MFS) has begun with the hiring of the first of three field forester positions funded through the FY22 budget process, as well as a Senior Planner/Forest Carbon Specialist that will be joining MFS in the near future.
- Current legislation proposes revisions to the Open Space Tax Law that would incentivize carbon-friendly land management.
- MFS is working to increase its technical capacity through staff training and contracted assistance to improve analyses and reporting on forest carbon in conjunction with its Forest Resources Assessment program. This will enable the program to develop further analytic tools for modeling and measuring forest carbon and provide useful ~~forest carbon~~ data on climate impacts and forest carbon for a variety of applications, including the state's carbon budget.
- MFS participates in a multi-state project, Securing Northeast Forest Carbon, to advance understanding and application of climate impacts and responses in forestry, as well as understanding of forest carbon accounting and markets (without endorsing any particular carbon credit scheme).