

Implementing Maine's Climate Action Plan

Maine Department of Agriculture, Conservation and Forestry

**Amanda E. Beal, Commissioner
&**

Judy East, Executive Director, Land Use Planning Commission

MCAP Strategies and DACF

- A. Embrace the Future of Transportation
- B. Modernize Maine's Buildings
- C. Reduce Carbon Emissions in Maine's Energy and Industrial Sectors
- D. Grow Maine's Clean-Energy Economy and Protect our Natural Resource Industries
- E. Protect Maine's Environment and Working Lands and Waters: Promote Natural Climate Solutions and Increase Carbon Sequestration
- F. Build Healthy and Resilient Communities
- G. Invest in Climate-ready Infrastructure
- H. Engage with Maine's People and Communities about Climate Impacts and Program Opportunities

D. Grow Maine's Clean-Energy Economy and Protect our Natural Resource Industries

1. Take advantage of new market opportunities:

- Grow Maine's forest-products industry through bioproduct innovation, supporting economic growth and sustainable forest management and preservation of working lands.
- 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.

E. Protect Maine's Environment and Working Lands and Waters

1. Protect natural and working lands:

- 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.
- 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.

E. Protect Maine's Environment and Working Lands and Waters

2. Develop new incentives to increase carbon storage:

- 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.
- Increase the amount of financial incentives available for climate friendly land management practices that sequester carbon and support climate change resilience.

E. Protect Maine's Environment and Working Lands and Waters

3. Expand outreach to offer information, technical assistance:

- 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, MFS, DIFW, DMR and UMaine.
- Improve monitoring to understand and manage the response to climate change.

F. Build Healthy and Resilient Communities

1. Empower local and regional community resilience efforts:

- Provide state leadership for robust technical assistance and funding to communities by 2024 to support local and regional climate resilience initiatives.

2. Adopt official sea-level rise projections:

- Incorporate official state sea-level rise projections into regulations by 2022 and require regular updates to ensure the projections utilize the latest scientific data.

F. Build Healthy and Resilient Communities

3. Emphasize resilience through land-use planning and legal tools:

- Develop and implement updated land use regulations, laws, and practices by 2024 in order to enhance community resilience to flooding and other climate impacts.
- By 2024, Maine will have convened stakeholder processes to make specific recommendations for changes in state regulations on the following land use issues: clean energy siting; land use practices; community flood risk reduction; and anticipating growth.

G. Invest in Climate-ready Infrastructure

1. Assess climate vulnerability and provide climate-ready design guidance:
 - Complete a statewide infrastructure vulnerability assessment by 2023, as well as develop and implement design standards for resilience in infrastructure projects.
2. State Infrastructure Adaptation Fund & predevelopment assistance
 - Launch a State Infrastructure Adaptation Fund and pre-development assistance program in 2021, designed to leverage federal recovery support in the short-term, and in the long-term to address the significant and ongoing infrastructure adaptation needs of the future.

H. Engage with Maine People and Communities

1. Raise awareness about climate change impacts and opportunities:
 - Launch a multifaceted, ongoing communications effort in 2021 based on the Climate Action Plan to raise public awareness and understanding about climate change in Maine, the state's climate response actions, and climate-related programs and opportunities.
 - Workforce is the key component of Maine's transition to a clean energy economy. By supporting educational and training paths for Maine people, and attracting a talented, diverse workforce to Maine, the clean energy industry has the potential to create new, sustained opportunities in sectors such as solar, wind, bioproducts and energy efficiency that are poised for major growth in the coming decade.

A scenic landscape view of a forested valley with mountains in the background under a cloudy sky. The foreground is filled with dense green and yellow trees, likely in autumn. The middle ground shows a vast expanse of forested hills and valleys. In the distance, a range of mountains is visible under a sky filled with soft, grey clouds.

Bureau of Parks and Lands

Andy Cutko, Director



Bureau of Parks & Lands

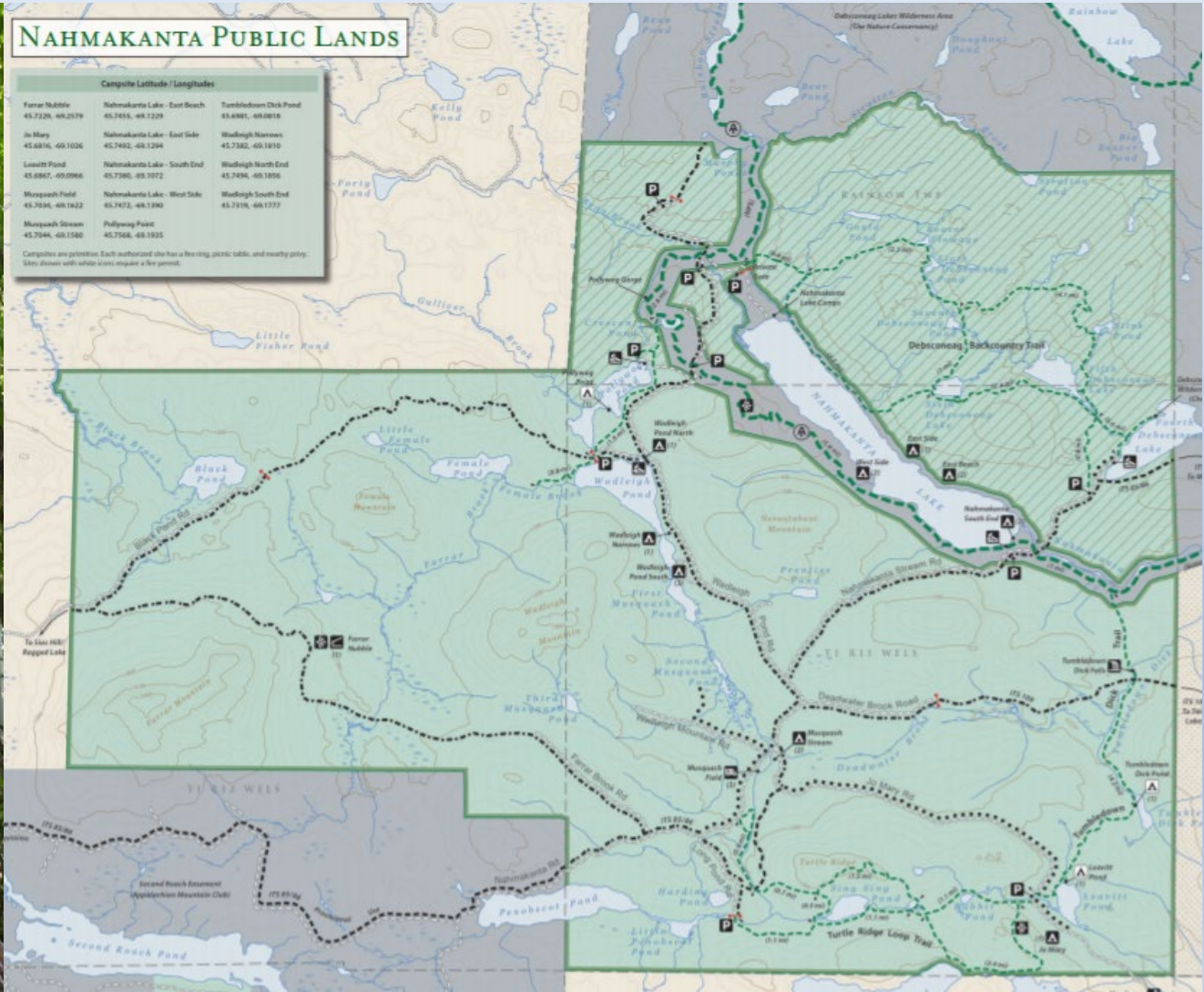
Protects and manages the natural and cultural resources on 634,000 acres of Public Reserved Lands and more than 100,000 acres of State Parks in order to offer a wide range of recreational and educational opportunities and provide environmental and economic benefits for present and future generations



www.ParksAndLands.com

Maine's Public Lands:

Sustainably Managed Forests & Ecological Reserves



Ecological Reserves

store and sequester a LOT of carbon...

- **On average, Ecological Reserves store 30% more carbon than Maine's managed forests on a per-acre basis**
- **35,000 metric tons of carbon/year are sequestered in BPL Ecological Reserves, equivalent to the yearly emissions of 7,500 cars.**



Puhlick, J.J., and Weiskittel, A.R. 2021. Carbon stocks and sequestration on ecological reserves in Maine. General Technical Report. (DRAFT)

Sustainably Managed Forests

- **Carbon Sequestration:** Maintain high forest stocking & productivity
- **Resilient Forests:** Diverse tree species & age classes withstand a changing climate
- **Preparation:** Forest roads & extreme weather
- **Acquisition:** Advancing Maine's goal to conserve 30% of our natural and working lands



Carbon Stored in Wood Products

Maine Forest Service

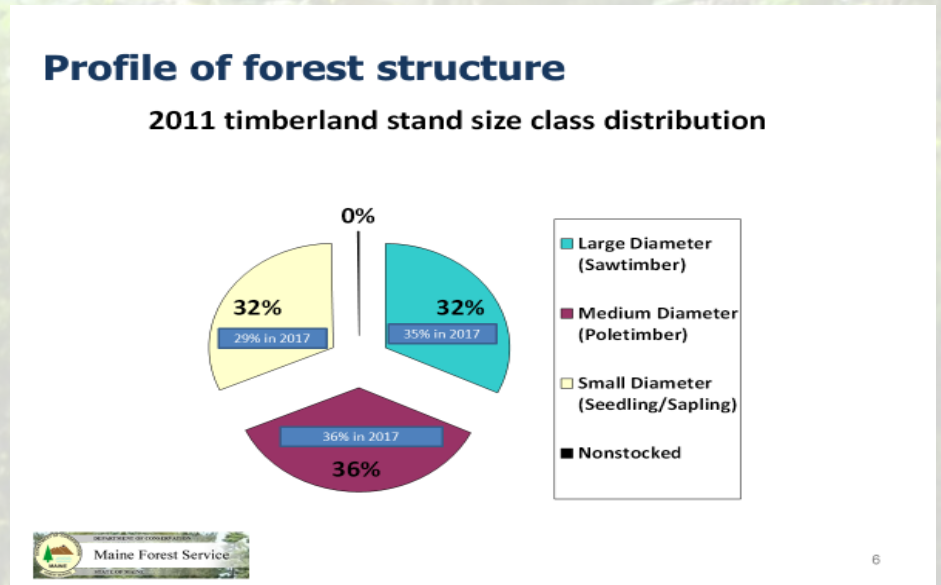
Patty Cormier, Director



A Snapshot of our Maine Forests:

- 23 Billion Trees >1" DBH Representing 50 Tree Species
- Sound Tree Volume Has Increased over 1 billion Cu. Ft. from 2013 to 2018.
- Our forests contain 2,071 Million Metric Tons of Carbon
- Rate of Growth to Removal is 1.4 to 1

We are losing an estimated 23 Acres/Day to Conversion to other uses



Our Role Now with Respect to Climate Change initiatives:

- Landowner Outreach
 - Twenty three percent of Maine's 17.6 million acres of forest land are owned by family woodland owners (4.1 million acres), largely in southern and central Maine. About 74,000 family woodland owners own between 10 and 1000 acres. Over 90% own 100 acres or less.
- Natural Resource Training
- Forest Health
- Urban Forestry
- Forest Inventory and Analysis Plots
- Fire Control
- Maine Carbon Program/ Task Force
- Regulatory Intervention
- Tree Growth Tax Law

Future Initiatives:

- Increase Technical Assistance, Boots on the Ground
- Practice Based Incentives
- Outreach/Education
- USDA State and Private Forestry Funding
- Long Term Monitoring
- Carbon Offset Programs



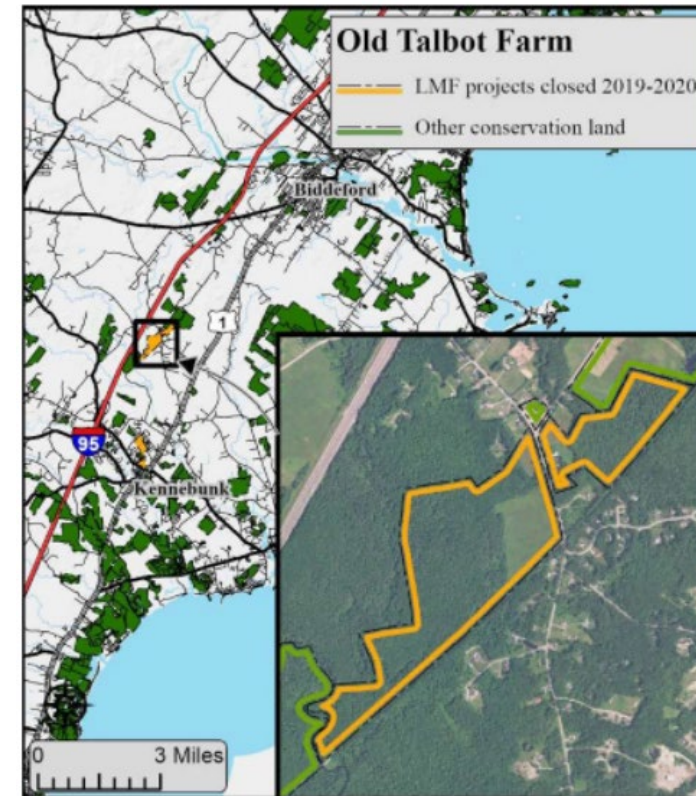
Bureau of Agriculture, Food, and Rural Resources

Nancy McBrady, Director

E.1 Protect natural and working lands

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.

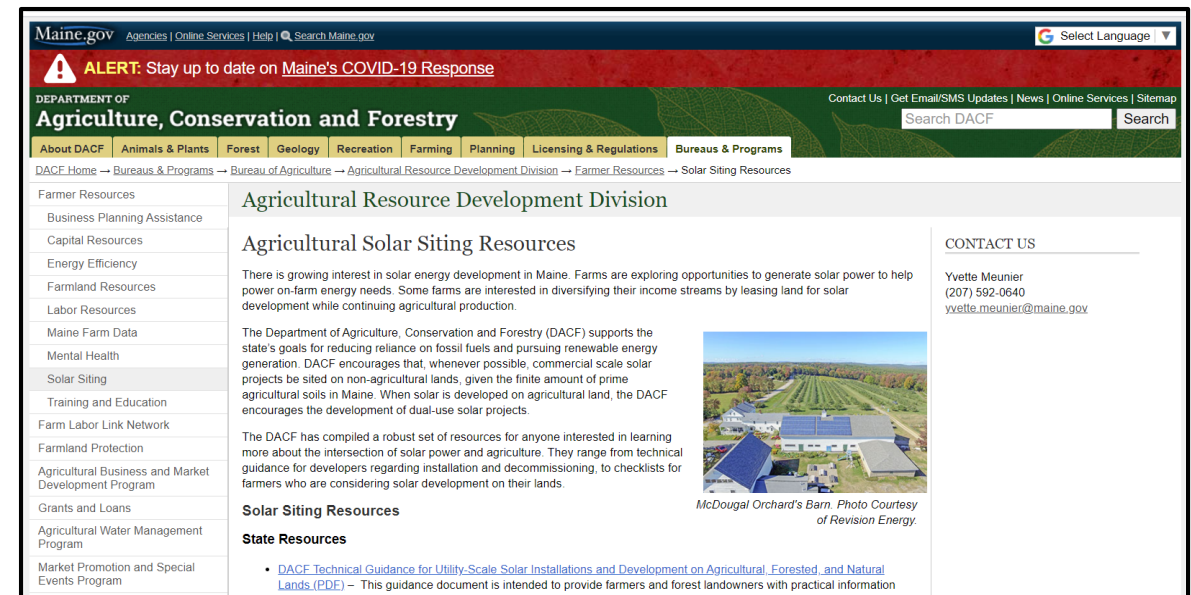
- Land for Maine's Future: 41 farmland projects; 9,755 acres designated for farmland use.
- Voluntary Municipal Farm Support Program
- Technical Assistance
 - Farmland and Tree Growth Property Tax laws
 - Municipal inquiries about farmland preservation



E.1 Protect natural and working lands

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.

- May 2020: Issued *Determining Prime Farmland Soils and Soils of Statewide Importance for Siting Solar Projects in Maine*.
- October 2020: Issued *Technical Guidance for Commercial Solar Installation and Development on Agricultural, Forested and Natural Lands*.
 - Solar Basics; General Permitting Considerations; Tax and Mortgage Considerations; Solar Siting Best Management Practices (pre-, during, and post-construction, incl. decommission).



Maine.gov Agencies | Online Services | Help | Search Maine.gov Select Language

ALERT: Stay up to date on [Maine's COVID-19 Response](#)

DEPARTMENT OF **Agriculture, Conservation and Forestry** Contact Us | Get Email/SMS Updates | News | Online Services | Sitemap Search DACF Search

About DACF | Animals & Plants | Forest | Geology | Recreation | Farming | Planning | Licensing & Regulations | Bureaus & Programs

DACF Home → Bureaus & Programs → Bureau of Agriculture → Agricultural Resource Development Division → Farmer Resources → Solar Siting Resources

Farmer Resources

- Business Planning Assistance
- Capital Resources
- Energy Efficiency
- Farmland Resources
- Labor Resources
- Maine Farm Data
- Mental Health
- Solar Siting
- Training and Education
- Farm Labor Link Network
- Farmland Protection
- Agricultural Business and Market Development Program
- Grants and Loans
- Agricultural Water Management Program
- Market Promotion and Special Events Program

Agricultural Resource Development Division

Agricultural Solar Siting Resources

There is growing interest in solar energy development in Maine. Farms are exploring opportunities to generate solar power to help power on-farm energy needs. Some farms are interested in diversifying their income streams by leasing land for solar development while continuing agricultural production.

The Department of Agriculture, Conservation and Forestry (DACF) supports the state's goals for reducing reliance on fossil fuels and pursuing renewable energy generation. DACF encourages that, whenever possible, commercial scale solar projects be sited on non-agricultural lands, given the finite amount of prime agricultural soils in Maine. When solar is developed on agricultural land, the DACF encourages the development of dual-use solar projects.

The DACF has compiled a robust set of resources for anyone interested in learning more about the intersection of solar power and agriculture. They range from technical guidance for developers regarding installation and decommissioning, to checklists for farmers who are considering solar development on their lands.

Solar Siting Resources

State Resources

- [DACF Technical Guidance for Utility-Scale Solar Installations and Development on Agricultural, Forested, and Natural Lands \(PDF\)](#) – This guidance document is intended to provide farmers and forest landowners with practical information

CONTACT US

Yvette Meunier
(207) 592-0640
yvette.meunier@maine.gov

McDougal Orchard's Barn. Photo Courtesy of Revision Energy.

E.1 Protect natural and working lands

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

- Partnerships with Soil and Water Conservation Districts, NRCS, UMCE, and ag service providers
- Agricultural Water Management Board
- Grants and Loans
- Technical Assistance (e.g., soil health, sustainability resources; plant health/IPM).



USDA NRCS



Bureau of Resource Information and Land Use Planning

Robert G. Marvinney, Director and State Geologist

E.1 Protect natural and working lands

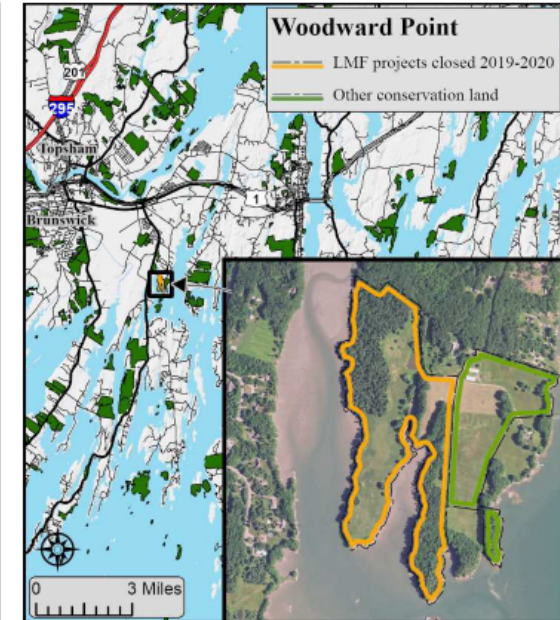
Increase by 2030, the total acreage of conserved lands in the state to 30% through voluntary, focused purchases of land and working forest or farm conservation easements.

Land for Maine's Future

- Developing strategies to ensure LMF is a strong partner in the State's goal of promoting and enhancing the resiliency of Maine's natural resources.

PROJECT DESCRIPTION:

Woodward Point consists of undeveloped uplands comprising 59.92± acres with access to tidal flats & nearly 9,000 lineal feet of undeveloped coastal shoreline along Woodward Cove and "Little Bull Pen" tidal flats and natural environs support two commercially important shellfish beds, provide state significant waterfowl and wading bird habitat, and habitat for feeding and roosting shorebirds. Extensive fields, fringing woodland and forested wetlands on the property serve as an important buffer to the adjacent intertidal resources; the open fields provide outstanding habitat for grassland birds as well as expansive views to nearby islands, to the outer New Meadows River, to salt marshes, and to Woodward Cove. The property is undeveloped except for an earthen impoundment that creates a farm pond of less than one (1±) acre.



E.1 Protect natural and working lands

Focus conservation on high biodiversity areas to support land and water connectivity and ecosystem health.

Improve monitoring to understand and manage the response to climate change.

Maine Natural Areas Program

Ecological Inventory and Monitoring:

- Landscape level natural resource assessments and inventory for at-risk plants, natural communities and ecosystems.
- Long-term monitoring of Ecological Reserves and coastal wetlands.
- Early detection and management of invasive plants.



F.1 Empower local and regional community resilience efforts

Municipal Planning Assistance Program

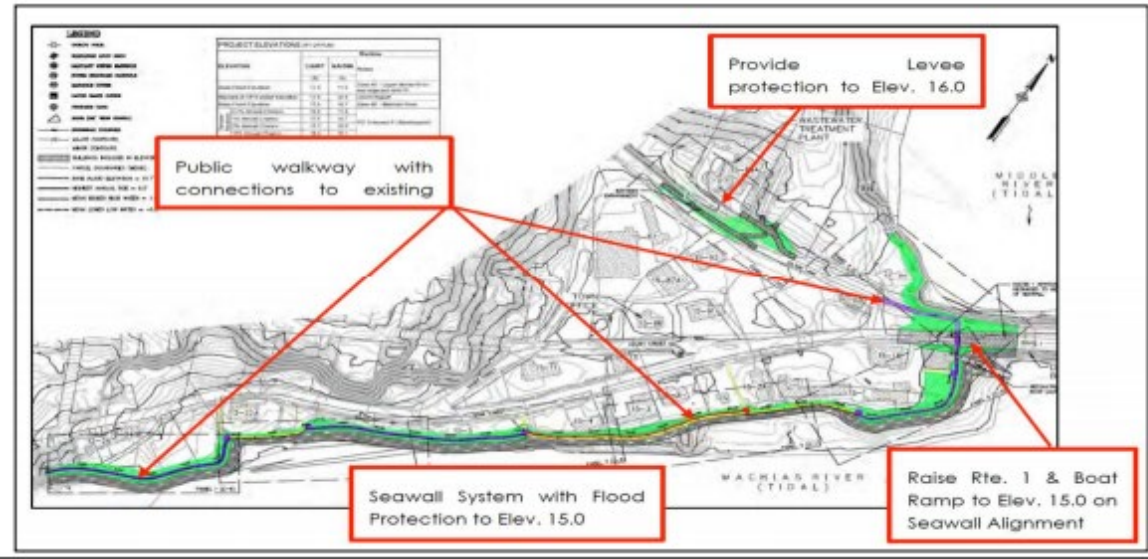
- Coastal Community Grants – helping municipalities plan for resilience.
- Technical Assistance Grants to Regional Planning Organizations – providing planning assistance to towns and regions

❖ Need: Increased planning capacity at all levels of government.



COASTAL COMMUNITY GRANTS:
Coastal Resiliency

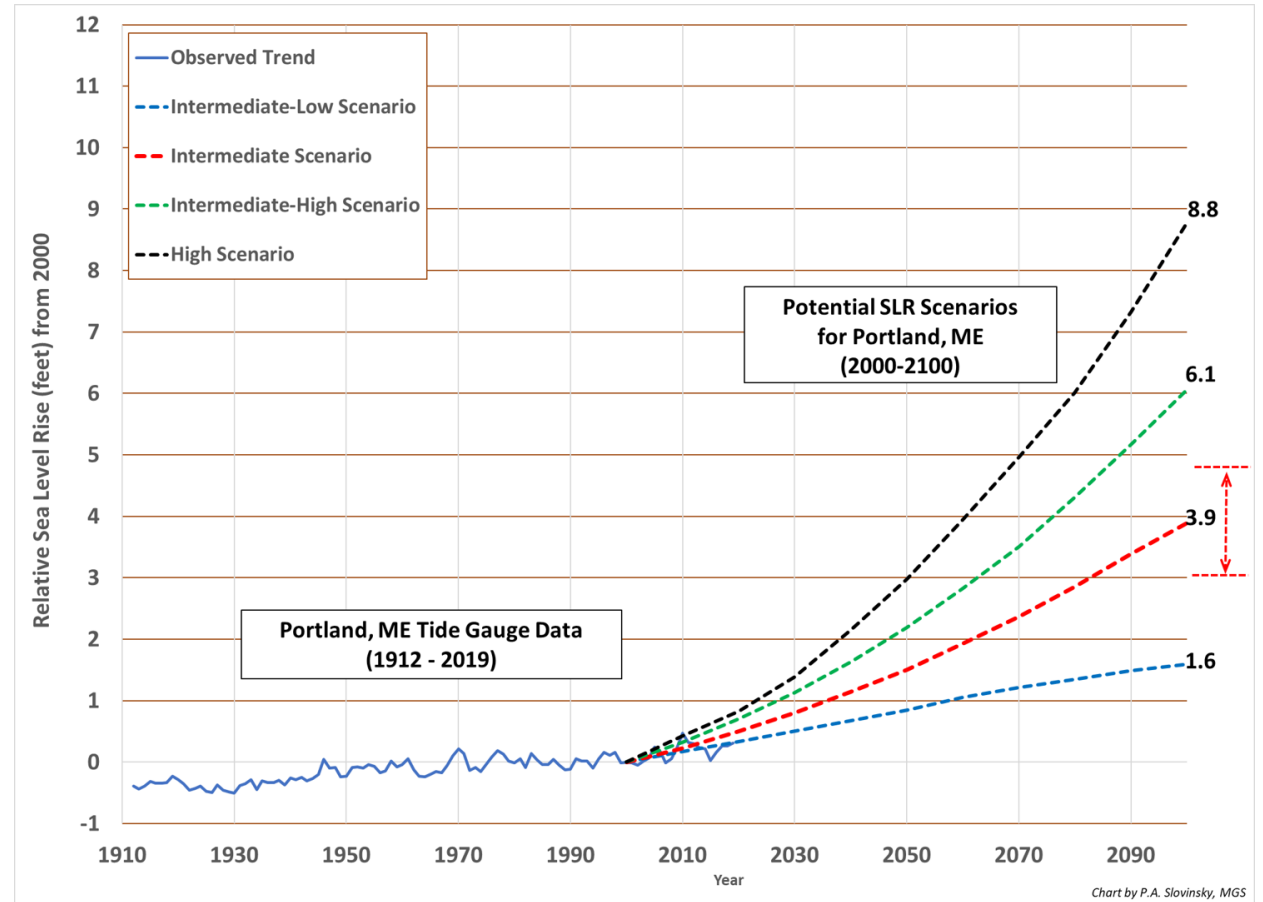
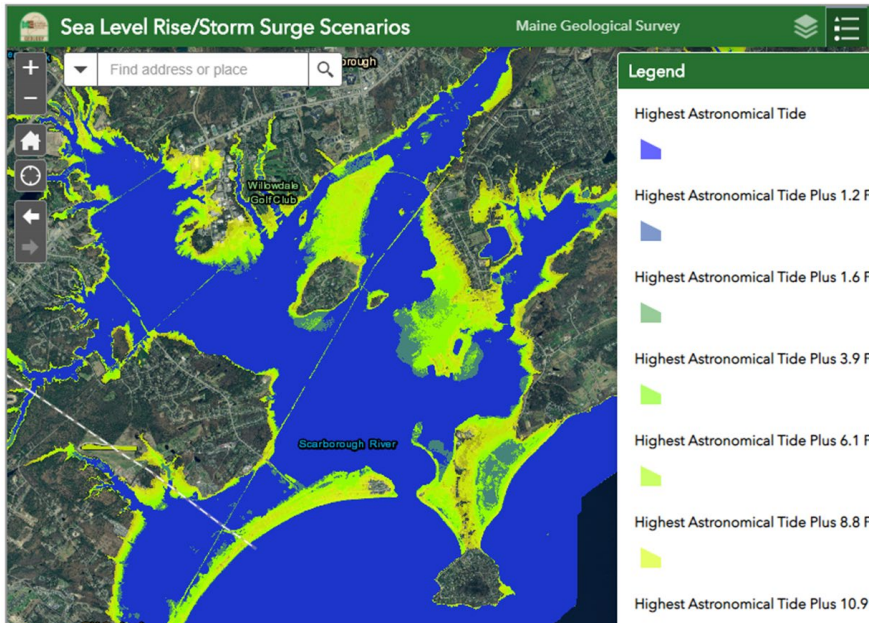
Town of Machias Downtown Waterfront Resilience and Renewal



F.2 Adopt official sea-level rise projections

Maine Geological Survey

- Assessing the best science for forecasts of se-level rise by 2100.
- Mapping coastal areas inundated under different scenarios.



F.3 Emphasize resilience through land-use planning and legal tools

Maine Land Use Planning Commission (LUPC)

- Rulemaking initiatives to update LUPC floodplain management standards.
- Support to stake-holder processes and inter-agency working groups to update land use regulations, laws, and practices to enhance community resilience to flooding and other climate impacts.





QUESTIONS AND DISCUSSION