

Maine Wetland Program Plan

2011-2016



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**Prepared by the
Maine Wetland Interagency Team pursuant to the
U.S. Environmental Protection Agency's
Enhancing State and Tribal Wetland Programs (ESTP) Initiative**



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Maine Wetland Program Plan

This Plan provides a framework and direction over the next six years for the State of Maine to move toward reaching the overall goals listed below and to further strengthen the core elements of the wetland program in Maine. This plan was compiled by the Maine Department of Environmental Protection (DEP) with input from the Maine Interagency Wetlands Workgroup. This group included various representatives from Maine DEP, and representatives from the Maine Natural Areas Program, the Maine Department of Inland Fisheries and Wildlife, the Land Use Regulation Commission, the Maine State Planning Office and the Maine Forest Service. The group identified the actions and activities necessary to reach the goals. The plan should be considered a work in progress that will be revisited and revised as needed. The goals listed below reflect a revised version of the goals originally listed in the Maine State Wetlands Conservation Plan issued by the Maine State Planning Office in Sept. 2001.

- Goal One:** Identify and protect wetlands systems of statewide significance through fee acquisition, conservation easements, or other tools for permanent conservation.
- Goal Two:** Increase the knowledge base about Maine's wetlands through surveying, monitoring, research, and assessment to establish wetland condition, identify trends, and the causes and sources affecting wetland change.
- Goal Three:** Provide effective and responsible levels of protection and restoration of Maine's wetlands systems through an efficient regulatory program.
- Goal Four:** Promote the appreciation, stewardship and voluntary protection of wetland resources by private landowners, towns, and non-governmental entities.
- Goal Five:** Improve coordination between agencies with respect to wetland policies and regulatory programs to ensure efficiency in effort, consensus in outcome, and consideration of wetlands at the landscape scale.
- Goal Six:** Develop and maintain a wetland program, including a geospatial database, to track historic wetland loss, wetland compensation, and other wetland areas placed in permanent conservation, and to use the database to assess and evaluate progress.

Maine's landscape is graced with abundant and diverse wetlands (approximately 5 million acres of freshwater and 157,500 acres of tidal or coastal wetlands). To keep these wetland resources healthy and functioning will take both regulatory and non-regulatory approaches. Some of the threats to wetland resources include: land development or urbanization through increased impervious surfaces, and the associated indirect, secondary and cumulative impacts. Other threats include habitat fragmentation, invasive species, climate change, and non-point and storm water pollution. It is intended that the goals and activities in this Plan consider and address these threats to Maine's wetlands.

The core elements utilized to organize this plan are those identified by the U. S. Environmental Protection Agency as part of their Enhancing State and Tribal Wetland Programs (ESTP) Initiative. The tables that follow list activities under each element, and the goals from above that would apply to that element. The table also lists recently completed actions related to each element. The four core elements are:

1. Monitoring and Assessment
2. Regulatory Activities, including 401 Certification
3. Voluntary Restoration and Protection
4. Water Quality Standards for Wetlands

List of Planned Activities (2011-2016) by Core Element

Core Element 1: Monitoring and Assessment:

Goal 2: Increase the knowledge base about Maine's wetlands through surveying, monitoring, research, and assessment to establish wetlands condition, identify trends, and the causes and sources affecting wetlands change

Goal 6: Develop and maintain a wetland program, including a geospatial database, to track historic wetland loss, wetland compensation, and other wetland areas placed in permanent conservation, and use the data base to assess and evaluate progress

Objective 1: Develop a monitoring and assessment strategy consistent with *Elements of a State Water Monitoring and Assessment Program for Wetlands (EPA, 2006)*

Responsible agency(s)	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential Partners
MDEP Biomonitoring Program	Included wetlands in MDEP Comprehensive Surface Water Ambient Water Quality Monitoring and Assessment Strategy	Update Comprehensive Strategy as needed/required (covers 2005-2015)					x		EPA Region 1
MDEP Biomonitoring Program	Developed core indicators to assess wetland condition, including aquatic macroinvertebrates, algae, water chemistry and physical habitat indicators								
MDEP Biomonitoring Program	Integrated wetlands biological monitoring and assessment with river and stream program using rotating basin monitoring approach								
MNAP	Created vegetation-based monitoring protocol for Ecological Reserves in open wetlands								

Responsible agency(s)	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential Partners
MNAP and MDIFW	Surveyed, databased, and mapped rare, exemplary and high value wetlands hosting rare and endangered species statewide through the Ecoregional Survey Project initiated in 1997 and to be completed in 2011								
MDEP Biomonitoring Program, MNAP		Evaluate use of vegetative indicators to supplement condition assessments (such as floristic quality assessment index) Based on results of evaluation incorporate use of vegetative indicators into existing monitoring protocols	X	x	X	X	X	X	NRCS, USEPA
MNAP & MDIFW		Develop list of RTE wetland plants, natural communities, ecosystems, and geographic areas in need of assessment and conduct field inventory and assessment; Develop list of RTE wetland animals and geographic areas in need of assessment and conduct field inventory and assessment; Conduct landscape analysis, field inventories, landowner outreach, data analysis, and database management to address data or assessment needs, update historic information, conduct environmental review, assist in conservation planning, and provide management recommendations to landowners. Also relevant to Core Element 3.	X x X	X X X	X X X	X X X	X X X	X X X	USEPA, TNC, and private landowners, land trusts
MNAP & MDIFW		Evaluate conservation status (such as GAP status) of RTE wetland plants, animals, and natural communities. Also relevant to Core Element 3.		X	X	X	X	X	TNC, DOC

Responsible agency(s)	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential Partners
MNAP & MDIFW		Compare current status of wetland types and wetland species to condition 10-20 years ago through development of Biodiversity Report Card	x	x	X	x	x	x	TNC, USFWS, Maine Audubon, MDEP, LURC
DEP, SPO		Conduct analysis of wetlands impact data in historic wetland loss tracking database Make improvements to wetlands loss tracking database in order to address information gaps and increase utility.	X	X	X X	 X	 X	X	LURC, MNAP, TNC
MDIFW & MNAP		Support a part to full-time wetland habitat and GIS specialist to support and implement aquatic and wetland related database management, mapping, and analysis efforts. Also relevant to Core Element 2.	x	X	x	x	x	x	USEPA

Objective 2: Implement a sustainable monitoring program consistent with the wetlands monitoring strategy

Responsible agency(s)	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential Partners
MDEP Biomonitoring Unit	Completed comprehensive Biomonitoring Program QAPP in accordance with EPA approved Quality Management Plan	Conduct yearly reviews and update QAPP and related SOPs as appropriate	x	X	x	x	x	x	EPA Region 1
MDEP Biomonitoring Unit	Wetland biological monitoring pilot initiated in 1998, then later incorporated into river and stream Biomonitoring Program	Conduct biological monitoring on a rotating basin schedule as specified in the Comprehensive Surface Water Ambient Water Quality Monitoring and Assessment Strategy and Biomonitoring Program QAPP. Also conduct monitoring for special research needs and management questions as requested (i.e. regulatory programs, Baxter State Park, Acadia National Park, Maine Ecological Reserves)	x	X	x	x	x	x	Various State and Federal agencies, tribes and NGOs

Responsible agency(s)	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential Partners
MNAP and MDIFW		Conduct surveys and monitoring of wetland habitats and species associated with proposed or potential restoration and conservation projects, as a proactive support effort for In Lieu Fee mitigation.	x	X	x	x	x	x	USEPA, TNC, SPO, MDEP
MDEP Biomonitoring Unit	Criteria for biological monitoring reference sites defined	Collect and analyze biomonitoring data from additional reference sites and obtain multi-year reference data from existing sites to identify potential long-term trends.	x	X	x	x	x	x	Various State and Federal agencies, tribes and NGOs
MNAP		Establish wetland ecoreserve monitoring plots Conduct scheduled ecoreserve monitoring Refine or edit wetlands monitoring protocol for ecoreserves Update and maintain wetland ecoreserves monitoring data Conduct analysis of ecoreserve monitoring data.	x	X	x	x	x	x	USEPA, MDIFW, MBPL, TNC MDEP
MNAP and MDIFW		Complete statewide documentation of location, extent, composition, and quality of high value wetland types hosting rare and endangered plant and animal species and rare, exemplary wetland communities.	X	X	X				TNC
MDEP Biomonitoring Unit	Biomonitoring data housed in Oracle database and integrated with other DEP water quality data. Data available to the public via Google Earth.	Update and maintain biomonitoring data in DEP's EGAD database as new data are collected	x	X	x	x	x	x	MDEP EGAD coordinator and office of Information Technology
MNAP, SPO		Update and maintain database of potential wetland conservation and restoration sites; work to integrate database with other developing efforts Coordinate efforts to develop inclusive database of restoration sites for proactive and compensatory restoration work.	x	X	x	x	x	x	USEPA, TNC, MDEP

Responsible agency(s)	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential Partners
MDEP Biomonitoring Unit	Developed macroinvertebrate metrics, tolerance values and environmental inference models to evaluate wetland condition. Incorporated land use/land cover data into analyses	Construct and test linear discriminant model to predict attainment with aquatic life criteria based on macroinvertebrates Develop algae metrics, tolerance values and statistical models to evaluate wetland condition and predict attainment with aquatic life criteria.	x	X X	 x	 x	 x	 x	
MNAP, MDIFW		Use reference data on frequency and location of significant wetland habitats to conduct conservation planning for protection of resource and high value integrated upland-wetland sites	x	X	x	x	x	x	TNC, BPL, USFWS
MDEP Biomonitoring Unit	Completed draft Biological Condition Gradient model for wetland macroinvertebrates.	Refine BCG model for macroinvertebrates based on new data analysis and peer review.	x	X					EPA Region 1, NEBAWWG

Core Element 2: Regulatory Activities, including 401 Certification

Goal 3: Provide effective and responsible levels of protection and restoration of Maine's wetland systems through an efficient regulatory program.

Goal 5: Improve coordination between agencies with respect to wetland policies and regulatory programs to ensure efficiency in effort, consensus in outcome, and consideration of wetlands at the landscape scale.

Objective 1: Administer regulatory activities efficiently and consistently

Responsible agencies	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential Partners
MDIFW and MDEP	Developed definitions, mapping protocols, and regulatory programs for wetland-associated Significant Wildlife Habitats -- e.g. Inland Waterfowl and Wading Bird Habitat, Significant Vernal Pools	Review and adapt regulatory program and protocols related to Significant Wildlife Habitats if necessary depending on outcome of current proposed legislative changes	X	X					

Responsible agencies	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential Partners
LURC		Prepare application instructions and pamphlet that explains the LURC and Army Corps requirements for wetland permits	x	x					USACOE
LURC		Revise wetland guidance to establish clear in-lieu-fee procedures	x	x					
LURC		Revise regulations, especially vernal pool regulations and incorporate current science		x					
DEP		Explore creating a general permit for statewide small wetland impacts (<15,000 SF) under certain conditions. Use this process to track impacts, and to collect locational data and function and value information. Consider reassessing thresholds.	x	x					
		Work toward geo-referencing wetland impacts by polygon and linking to compensation parcels		x	x				
DEP		Improve tracking of license applications by moving to EFIS system		x					
LURC		Improve tracking system to better track development trends, wetland impacts and wetland loss		x	x				MDEP
SPO, MDEP		Establish advisory group to assess perceived regulatory overlap and duplication; draft recommendations as needed to address results of assessment	x	x	x				MEREDA, MMA, MDIFW, USACOE, USFWS, TNC, MAS, others

Objective 2: Evaluate regulatory activities to ensure environmental results

Responsible agencies	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Partners
MNAP & MDIFW		Develop new mapping protocols and protection guidelines for all rare wetland species potentially subject to environmental review; Provide support for a part to full-time wetland habitat and GIS specialist at MDIFW and/or MNAP to develop mapping protocols, protection guidelines, and conduct environmental review.	x	x	x	X	x	x	USEPA
MNAP, DEP		Prepare elements of Compensation Planning Framework, as required by ACOE for continuation of ILF program. Follow up on data gaps and research needs identified through compensation planning framework process.	x	x	x	x	x	x	USACOE, TNC, SPO stakeholders
DEP		Work toward strengthening enforcement and implementation of shoreland zoning regulations	X	X	X	X	X	X	
DEP		Maintain existing penalties and fees	X	X	X	X	X	X	
DEP, MNAP, IFW, SPO		Gather to share information on who has what data related to wetlands and consider making more data available through google earth							

Core Element 3: Voluntary Restoration and Protection

Goal 1: Identify and protect wetlands systems of statewide significance through fee acquisition, conservation easements, or other tools for permanent conservation.

Goal 4: Promote the appreciation, stewardship and voluntary protection of wetland resources by private landowners, towns and non-governmental entities.

Objective 1: Clearly and consistently define restoration and protection goals throughout the state

Responsible agencies	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential partners
SPO, DMR, DEP		Improve stream connectivity by identifying in-stream barriers and prioritizing areas for restoration. Also relevant to Core Element 1.	X	X	X	X	X	X	Stream Connectivity Work Group
MDIFW & MNAP		Review and refine Beginning with Habitat Focus Areas and connectivity maps with respect to wetlands and significant wetland habitats and species, as needed.	x	x	X	x	x	x	TNC, Maine Audubon, SPO, MDOT
MDIFW		Develop action list of specific BWH program improvements that when implemented will benefit wetland outreach	x	x	X	x	x	x	MNAP, USEPA, USFWS, TNC, SPO, Maine Audubon
SPO & MDMR		Develop watershed-based prioritization process for barrier removal and habitat restoration	x	x	x				MDOT, MDIFW, TNC, MDEP, USFWS
SPO		Provide technical assistance for restoration project planning, implementation and monitoring	x	x	x	x	x	x	MDMR, MDOT, MDIFW, GOMC, USFWS
MNAP, SPO & MDEP		Using information about identified threats and historic losses, coordinate with relevant resource agencies to identify priorities and develop strategies for wetland protection and restoration. Also relevant to Core element 1	x	x	X	X	X	X	USEPA, TNC, MFS, DMR, MDIFW, NOAA, USFWS, NRCS

Responsible agencies	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential partners
ME Interagency Wetland Work Group		Consider gathering input from stakeholders to update the 2001 Wetland Conservation Plan and to inform the ongoing Wetland Program Plan Priorities Develop method to inform and update members of ongoing activities and pertinent issues.	X	X	X	X	X	X	Diverse federal, state, NGO, private, and professional stakeholders

Objective 2: Protect wetlands from degradation or destruction

Responsible agencies	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential partners
SPO		Provide technical assistance to municipalities on the “ecosystem values” wetlands provide	x	x	x	x	x	x	BwH, NEMO, RPC’s, USEPA, MAS
SPO, MDEP		Investigate opportunity for towns to implement parts of NRPA through delegated authority and possibility of creating linkage between growth areas and expedited permitting	X	X	X				BwH, USACOE, USEPA
MDIFW		Collect data on rare and significant wetlands and wildlife and incorporate into environmental review and provide to regulatory agencies, land managers, and Beginning w Habitat	X	X	X	X	X	X	
SPO, MDIFW		Promote the use of BwH maps at the municipal level. Enhance training for CEO’s/town planners regarding the importance of local wetland features and functions.	X	X	X	X	X	x	CEO training

Responsible agencies	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential partners
SPO, MDIFW SPO, UMO		Promote the use of local wetland ordinance tools (such as SPO model ordinance). Consider utilizing Conservation Commissions to inventory local wetland resources and coordinate local protections . Engage towns to undertake wetland mapping process to identify priority wetland resources.	X X	X X	X X	X X	X X	X X	Regional councils, MAP,MAS,UMO
MNAP		Evaluate/improve sustainable forestry certification programs to better incorporate wetland protections, and educate “auditors” for the certification programs in order to properly evaluate wetland protection and management techniques.		X	X	X	X	X	DOC
Maine Interagency Wetlands Work Group		Incorporate consistent message regarding the importance of protecting wetland systems at the landscape level.	X	X	X	X	X	X	BwH, NEMO
SPO, MNAP		Address landscape level wetland conservation and assessment needs by initiating outreach efforts to towns, land trusts, and large landowners, evaluating options for conservation incentives, evaluating research and data gathering needs, and identifying current protection levels. Also relevant to Core Element 1.	X	X	X	X	X	X	TNC, NRCS
Maine Interagency Wetlands Work group		Check the status of a certification program for those practicing wetland science in Maine, pursue such a program if not currently on track		x					MAWS

Core Element 4: Water Quality Standards for Wetlands

Objective 1: Ensure that wetlands are treated as waters within state and tribal water quality programs.

Responsible agencies	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential partners
MDEP	Wetlands defined in State wetlands regulatory statute (mirrors federal definition)								
MDEP	Wetlands implicitly included in definition of “waters of the State” (confirmed by AG’s office)								
MGS, DEP, SPO		Review definition of coastal wetlands with regard to sea level rise	x	x					

Objective 2: Develop wetland- specific water quality standards

Responsible agencies	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential partners
MDEP Biomonitoring Program	Confirmed with AG’s office and EPA that designated uses and narrative criteria for other surface waters apply to wetlands, including aquatic life use. Also confirmed that State anti-degradation policy applies to wetlands.	Review existing designated uses and narrative criteria uses to determine any appropriate modifications for wetlands.	x	x					Other DEP water quality programs, EPA Region I
MDEP Biomonitoring Program	Compiled and analyzed approximately 10 years of physical, chemical and biological (macroinvertebrate) data.	Develop wetland-specific numeric water quality standards for wetlands, including biological criteria for macroinvertebrates and algae.	X	X	X	X	X	X	Other DEP water quality programs, EPA Region I

Responsible agencies	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential partners
	Developed metrics, tolerance values and inference models for macroinvertebrates to inform numeric criteria development.								

Objective 3: Incorporate wetland-specific water quality standards into agency decision making

Responsible agencies	Completed Activities	Planned activities	2011	2012	2013	2014	2015	2016	Potential Partners
MDEP Biomonitoring Program		Provide technical support and wetland water quality class attainment information to DEP licensing programs to aid in permit decisions and monitoring requirements	x	x	x	X	x	x	
LURC		Staff training to improve consistency in field decision making, and introduce new regulatory information to field staff	x						Maine Dept of Ag, IFW, USACOE, MDEP
MDEP Biomonitoring Program	Conducted pilot study to determine usefulness of biological monitoring to evaluate mitigation success, including attainment of aquatic life criteria.	Complete data analysis and final report for pilot study to evaluate biological integrity of compensatory mitigation sites	x						MDEP Division of Land Resource Regulation (DLRR)
MDEP Biomonitoring Program	Used DEP macroinvertebrate monitoring data to report on wetland aquatic life use attainment in 2010 305b/303d lists based on narrative biocriteria.	Conduct follow-up monitoring for impaired/threatened wetlands listed in the 2010 305b/303d report, and for wetlands lacking sufficient information for attainment determinations. Incorporate additional water quality criteria into monitoring programs as available -ongoing (rotating basins). Update 303d list for wetland elements in 2012, 2014 and 2016.	x	x	x	X	x	x	Various State and Federal agencies, tribes and NGOs

List of abbreviations:

AG	Attorney General
BwH	Beginning with Habitat
CEO	Chief Elected Official
DOC	Department of Conservation
EGAD	Environmental Geographic Analysis Database
ESTP	Enhancing State and Tribal Programs
GOMC	Gulf of Maine Council
LURC	Land Use Regulation Commission
MAPSS	Maine Association of Professional Soil Scientists
MAS	Maine Audubon Society
MAWS	Maine Association of Wetland Scientists
MBPL	Maine Bureau of Parks and Lands
MDEP	Maine Department of Environmental Protection
MDIFW	Maine Department of Inland Fisheries and Wildlife
MDMR	Maine Department of Marine Resources
MDOT	Maine Department of Transportation
MEREDA	Maine Real Estate and Development Association
MFS	Maine Forest Service
MGS	Maine Geological Survey
MNAP	Maine Natural Areas Program
NEBAWWG	New England Biological Assessment of Wetlands Workgroup
NEMO	Non-point Education for Municipal Officials

NGO	Non-governmental organization
NRCS	Natural Resource Conservation Service
RPC	Regional Planning Commission
RTE	Rare, threatened and endangered species
SPO	State Planning Office
TNC	The Nature Conservancy
UMO	University of Maine- Orono
USACOE	U. S. Army Corps of Engineers
US EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

