Maine Wetland Monitoring and Assessment Strategy

Association of State Wetland Managers
Wetland Program Plan
Monitoring and Assessment Webinar
September 18, 2012

Jeanne L. DiFranco

Maine Department of Environmental Protection

Biological Monitoring Program

Agency Participants:

Maine Department of Environmental Protection (MDEP)

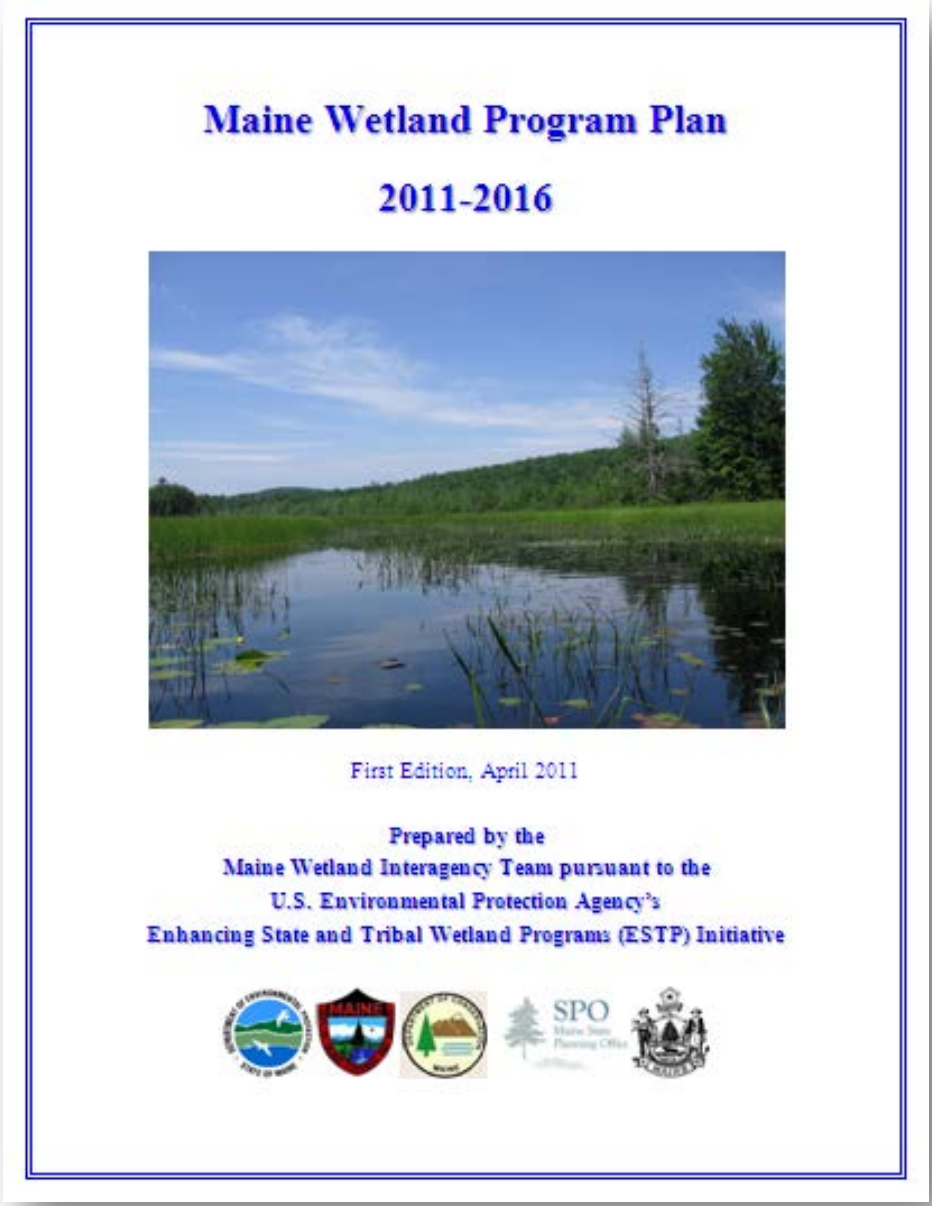
Maine Department of Inland Fisheries and Wildlife (MDIFW)

Maine Forest Service (MFS)

Maine Land Use Planning Commission (LUPC) - (formerly LURC)

Maine Natural Areas Program (MNAP)

Former Maine State Planning Office (SPO) – (agency no longer exists)



Additional Potential Partners Identified in the WPP
(Monitoring and Assessment Core Element)

- US Environmental Protection Agency (EPA)
- New England Biological Assessment of Wetlands Work Group (NEBAWWG)
- US Fish and Wildlife Service (USFWS)
- Natural Resources Conservation Service (NRCS)
- Maine Bureau of Public Lands (MBPL)
- Maine Tribes
- Maine Audubon
- The Nature Conservancy
- Land trusts
- Private land owners

Core Element 1: Monitoring and Assessment

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

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

Objective 1: Develop a Monitoring and Assessment Strategy – Completed Activities

MDEP Biological Monitoring Program:

- Included wetlands in Comprehensive Water Quality M&A Strategy (2005-2015)
- Developed core indicators to asses wetland condition
- Integrated wetland and stream water quality monitoring (rotating basin approach)

MNAP:

- Vegetation based protocol for ecological reserves

MNAP and DIFW

- Ecological Survey Project – surveyed and mapped rare, exemplary and high value wetlands statewide

Objective 2: Implement a Sustainable Monitoring Program – Completed Activities

- MDEP Biological Monitoring Program:
- EPA approved QAPP and Quality Management Plan
- Defined reference criteria (biological monitoring sites)
- Wetland data housed in Oracle database with other DEP water quality data
- Physical, chemical and biological wetland data publicly available via Google Earth
- Developed macroinvertebrate metrics and other statistical analysis tools; provisional model to predict aquatic life use attainment (completed in 2012)

Planned WPP Activities Overview

Objective 1:

- Develop vegetative indicators and M&A protocols (MDEP/MNAP)
- Inventories, assessments, trend analysis, mapping and conservation planning for RTE species and natural communities (MNAP/MDIFW)
- Improve wetland loss tracking and analyze wetland impact data (MDEP)
- Enhance GIS capabilities for wetland database management, mapping and analysis (MDIFW/MNAP)

Planned WPP Activities Overview

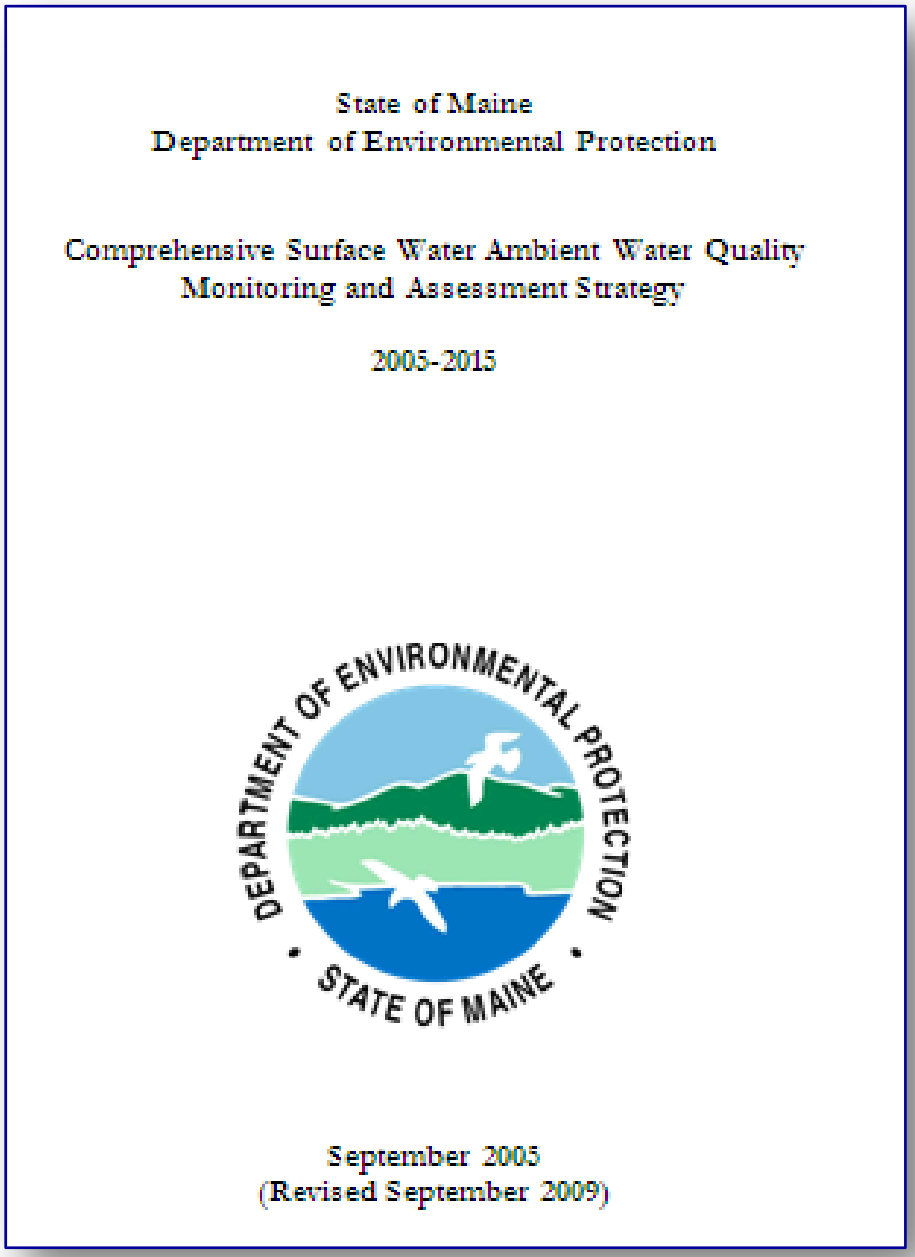
Objective 2:

- Annual monitoring - rotating basin schedule (MDEP)
- Expand reference site network; include long-term data (MDEP)
- Develop/implement aquatic life use criteria for wetland invertebrates and algae (MDEP)
- Survey/monitor potential restoration and conservation wetlands to support In Lieu Fee program and planning efforts (MNAP/MIFW)
- Expand and refine Ecoreserve monitoring (MNAP)
- Update/maintain database of potential restoration and conservation sites (MNAP)

MDEP Comprehensive Water Quality Monitoring and Assessment Strategy (includes wetlands)

Goal 1. Monitor and predict the condition of Maine's water resources

Goal 2. Communicate, collaborate and coordinate with organizations, agencies, and the general public


State of Maine
Department of Environmental Protection

Comprehensive Surface Water Ambient Water Quality Monitoring and Assessment Strategy

2005-2015

DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE OF MAINE

September 2005
(Revised September 2009)

MDEP Comprehensive Water Quality Monitoring and Assessment Strategy

Goal 1. Monitor and predict the condition of Maine's water resources

- Provide information to protect/maintain/restore physical, chemical and biological integrity
- Provide water quality information in relation to standards, reference conditions, or other comparison measures
- Provide information to develop/amend new water quality standards
- Identify water quality conditions, impairments, causes, and sources
- Provide information on water quality trends
- Identify new or emerging problems
- Evaluate success of current policies and programs

MDEP Comprehensive Water Quality Monitoring and Assessment Strategy

Goal 2. Communicate, collaborate and coordinate with organizations, agencies, and the general public

- Increase public knowledge, involvement in water resource monitoring, assessment and management
- Promote efficient and effective monitoring and assessment programs
- Develop effective and timely reporting
- Collect and disseminate useful, standardized data to supplement state monitoring and assessment programs
- Advise water resource management bodies (Maine legislature, natural resource agencies, regulated community) on water quality status and trends

Maine DEP Biological Monitoring Program

- Resides within MDEP water quality assessment program
- Integrated approach for rivers, streams and freshwater wetlands
- Determines if water bodies are attaining aquatic life criteria
- Provides data and technical support to other programs

Benefits of Integrated Monitoring for Wetlands, Rivers and Streams

- Draws upon previous monitoring program experience
- Decreases start-up time for new monitoring initiatives
- Reduces duplication (and cost) in all phases of monitoring and assessment
- Results in a more holistic watershed assessment
- Considers ecological relationships among wetlands, streams and other water bodies

Shared Resources and Collaboration

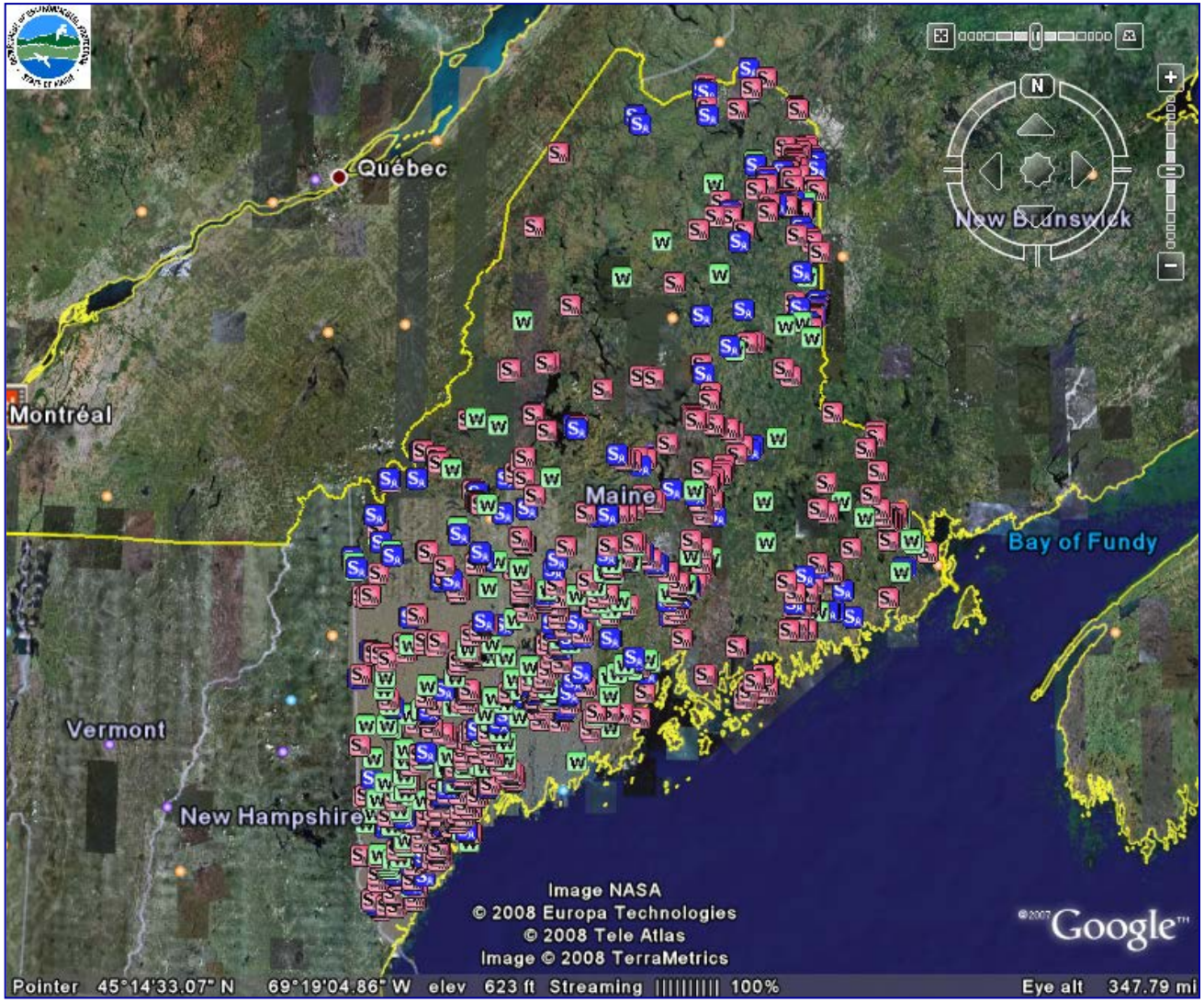
- Staff, including seasonal employees
- Field equipment, vehicles
- Contract management (taxonomy, laboratory analysis, etc.)
- Data management, quality assurance
- Integrated QAPP, SOPs

Using Monitoring and Assessment Results

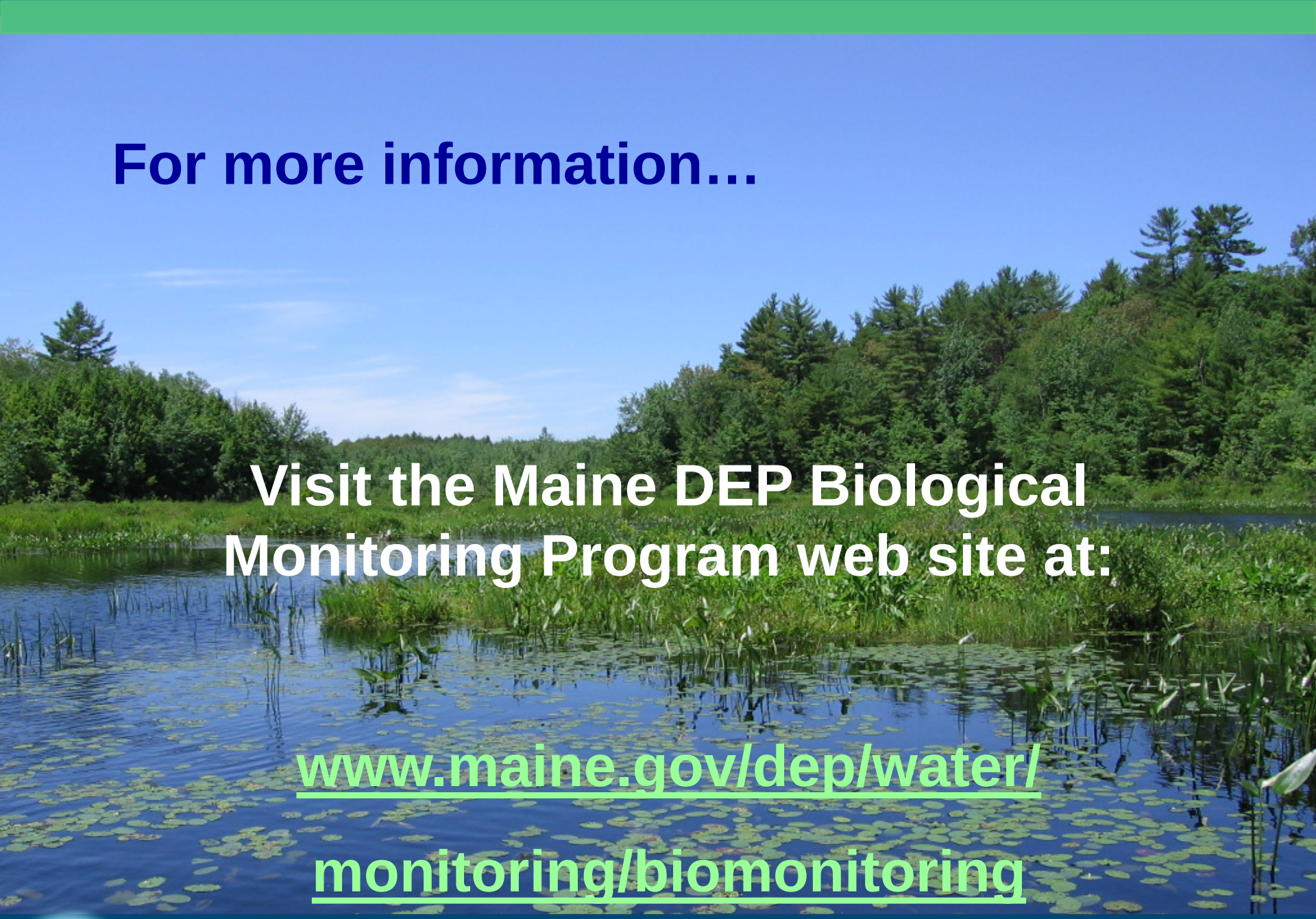
- Monitor ambient condition, identify threats
- Develop/support biological criteria
- Inform permit decisions (discharges, hydropower, wetland/stream alterations, etc.)
- Integrated watershed assessments
- Evaluate mitigation success
- Support 305b/303d process
- Target conservation and restoration efforts
- Support wetland education and outreach activities

Google Earth Biomonitoring Site

- Site locations
- Physical, chemical and biological data
- Photos and reports



For more information…



Visit the Maine DEP Biological Monitoring Program web site at:

www.maine.gov/dep/water/monitoring/biomonitoring


www.maine.gov/dep