



**Annual Environmental Conference 2018  
Workshop Descriptions  
and  
Fundamentals for Conservation Commissioners Units Content**

**Workshop Series A  
10:00 a.m.—11:30 a.m.**

**1. Local Climate Adaptation Planning and Action (CLIMATE CHANGE)**

We are not going to be able to prevent climate change. In addition to cutting greenhouse gas emissions, we must also prepare for the changes ahead. The state has initiated a Municipal Vulnerability Preparedness (MVP) Program that provides grants to communities to integrate climate adaptation planning into municipal plans, such as master plans and hazard mitigation plans. Find out how you can get involved in climate adaptation planning in your community and learn about how you can use the Massachusetts Wildlife Climate Action Tool to identify steps you can take at a local or regional level to help maintain healthy wildlife populations and ecosystems. This workshop is intended to help conservation commissioners and environmental leaders learn how to obtain a seat at the table with fellow community stakeholders.

Speakers: Katie Theoharides, EOEEA Assistant Secretary of Climate Change  
Scott Jackson, Extension Associate Professor, UMass Amherst; Conservation Commissioner, Town of Whately; MACC Director

Moderator:

**2. The Coastal Manual: Guidance for Protecting Storm Damage Prevention and Flood Control Functions of Coastal Resource Areas (COASTAL)**

The Mass DEP and the Mass Office of Coastal Zone Management developed the Coastal Manual to provide guidance to conservation commissions and project applicants to address the impacts of proposed projects that are likely to affect the storm damage prevention and flood control functions of coastal resource areas. The Coastal Manual clarifies Mass DEP's interpretation of the Wetlands Protection Act Regulations and addresses a number of frequently asked technical and procedural questions related to their implementation. Topics to be covered include determining the landward extent of tapering coastal dunes, best practices for minimizing impacts from coastal engineering structures, and more. This workshop is a must for commissioners and environmental consultants serving coastal communities.

Speakers: Lealdon Langley, Director, Wetlands and Wastewater Program, Mass DEP  
Rebecca Haney, CFM, Coastal Geologist, Mass Office of Coastal Zone Management

Moderator:

**3. Don't Just Map It, Conserve It! Conservation Success Stories**

Looking for a user-friendly conservation mapping tool? Hear how a conservation agent and land protection specialist used the updated MAPPR 2.0 tool to go from mapping resource areas to conserving them, including wetlands, a cold water stream, and prime agricultural land. Learn what conservation commissions can gain from this simple, web-based tool to identify conservation priorities. MAPPR 2.0 has been enhanced with updated open space and parcel data and now features analysis by multi-town land trusts. Based on feedback from users, we've

added prime farmland soils and drinking water protection data. This interactive workshop will let the audience experience the tool in real time and work together to consider how to move from mapping conservation priorities to permanently protecting them.

Speakers: Stefanie Covino, Coordinator, Shaping the Future of Your Community Program, Mass Audubon  
Jeffrey Legros, Conservation Agent, City of Gardner  
Janet Morrison, J.D., M.S., Land Conservation Consulting

Moderator:

#### **4. Protecting Massachusetts Vernal Pools**

Vernal pools are an important component of healthy ecosystems across the state, and they receive a host of legal protection under federal, state, and local wetland regulations. Their ecological functional values are at the root of why we protect them; and their variety, temporary nature, and fluctuations are at the root of much confusion over how we protect them. We will explore and explain both their function and best practices for their protection, and learn about the efforts made by the Attleboro Conservation Commission to protect vernal pools. This workshop will be geared to an audience already familiar with vernal pool certification methodology.

Speakers: Matthew R. Burne, Walden Woods Project  
Leo P. Kenney, Vernal Pool Association  
Nicholas Wyllie, Conservation Agent/Environmental Planner, City of Attleboro

Moderator:

#### **5. An Open Discussion for Conservation Commissioners: Getting the Job Done with or without Staff**

Bring your difficult questions to a round table discussion with colleagues from across the state for a peer-moderated exploration of issues commissions are facing. This will be a lightly moderated, informal, open discussion for sharing ideas, questions, and answers on all topics conservation commission—**in towns without staff as well as those with staff**. This “roundtable discussion” could include such diverse topics as basic roles and responsibilities, finances, interpersonal relations, record keeping, divisions of labor, and balancing the big picture. How do you handle the load if your commission has limited or no staff support? Participants are encouraged to suggest a topic or question in advance (contact Michele Girard at [michele.girard@macccweb.org](mailto:michele.girard@macccweb.org)) or come to the session with a question or topic to discuss and your own experience to help contribute to the discussion. An experienced agent, assistant, and commission member will help guide the discussion.

Speakers: Jennifer Steel, Senior Environmental Planner, City of Newton; MACC Director  
Jacquie Goring, Conservation Assistant, Town of Stow  
Roberta Flashman, Conservation Commissioner, Town of Ashby

#### **6. Hands-on Plant ID: Common Woody Plants of Massachusetts Freshwater Wetlands (INLAND)**

*DOUBLE SESSION—PLEASE SIGN UP FOR BOTH 6A and 6B*

This workshop will focus on the most frequently encountered trees, shrubs, and woody vines of swamps, bogs, marshes, and other freshwater wetlands in Massachusetts. This two-block session will include both hands-on identification and PowerPoint presentations that will cover characteristics used in field identification and photos and descriptions of each plant. The classroom set-up will include both herbarium and live winter specimens. These and additional photos and field guides will help attendees recognize common freshwater woody wetland plants in the field using the most prominent features of each plant. This workshop is intended for beginners and may also serve as a refresher on basic wetland plant identification for others.

Speakers: Amy Ball, PWS, CWS, Senior Ecologist, Horsley Witten Group, Inc.; MACC Director  
Sally Zielinski, PhD, Botanist/Environmental Journalist/Artist; MACC Education Committee Member

Karro Frost, Conservation Botanist, Natural Heritage and Endangered Species, MA Division of Fish and Game; Conservation Commissioner, Town of Hardwick  
Moderator: Karro Frost, Conservation Botanist, Natural Heritage and Endangered Species, MA Division of Fish and Game; Conservation Commissioner, Town of Hardwick

#### **7. Wildlife Habitat Assessments: How Commissions can Evaluate Potential Impacts to Wildlife (INLAND)**

Protecting valuable wildlife habitat is critical to maintaining biodiversity and sustainable ecosystems. Wildlife habitat is a protected interest under the Wetlands Protection Act and Conservation Commissions are tasked with evaluating projects for impacts to important wildlife habitat. In this workshop, we will discuss how important wildlife habitat is defined, how to evaluate Wildlife Habitat Evaluations (WHEs), and mitigation and other mechanisms to protect valuable habitat. This workshop assumes that attendees have a working knowledge of when WHEs are required and how WHEs should be completed.

Speakers: P. Chase Bernier, CWB, Project Manager, BSC Group, Inc.  
William Daniels, Conservation Commission Chair, Town of Ayer  
Bonnie Tillotson, Conservation Commissioner, Town of Ayer

Moderator: Lee Curtis, Senior Associate and Manager of Ecological & GIS Services, BSC Group; MACC Director

#### **8. Protecting Conservation Land Under Article 97 of the Massachusetts Constitution**

Article 97 of the Amendments to the Massachusetts Constitution protects public land taken, acquired, or designated for conservation purposes by requiring a two-thirds vote of the Legislature before such land is disposed of or used for another purpose. But as the supply of land available for new construction dwindles, Article 97 lands are coming under increased pressure. Because land held by conservation commissions is usually protected by Article 97, it is important for commissioners to understand the meaning and application of Article 97. This workshop will discuss the law and policy implementing Article 97, including the EOEEA Article 97 Land Disposition Policy and recent court decisions. This workshop is intended for commissioners and land trust members eager to stay current with land protection advocacy efforts

Speakers: Luke Legere, Esq., Partner, McGregor & Legere, P.C.  
Kathleen O'Donnell, Esq., Attorney at Law

Moderator: Rebekah Lacey, Esq., Counsel, Miyares and Harrington LLP; MACC Director

### **Workshop Series B 1:15 p.m.—2:45 p.m.**

#### **9. What can Conservation Commissions do to Improve Climate Resilience? (A lot, Actually)**

Local and state experts will share examples, resources, and tips on how to use Green Infrastructure to improve climate resilience, water quality, and plan for increasingly heavy storms. They will review the state's new Municipal Vulnerability Preparedness grant program and discuss the conservation commission's experience and role in the process. Learn how you can use "Low Impact Development" practices to improve community climate resilience in both new and redevelopment projects – from siting and design to funding and implementation.

Speakers: Stefanie Covino, Coordinator, Shaping the Future of Your Community Program, Mass Audubon  
Sara Burns, Water Resource Scientist, The Nature Conservancy  
Colleen Brown, Conservation Agent, Town of Swansea

Moderator:

**10. US Army Corps of Engineers Regulatory Program Updates: Federal Jurisdiction, Wetland Delineation, and the New Massachusetts General Permit**

Conservation commissioners review many Notices of Intent that also require permits from the Army Corps of Engineers, and the applicants are often not aware of this. This workshop will provide: a) a refresher on the regulatory jurisdiction of the Corps of Engineers under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899, including a review the differences between state and federal regulatory jurisdictional boundaries; b) an overview of the Corps' wetland delineation methodology and how it differs from Mass DEP's; c) an overview of the information the Corps needs when permitting projects such as dam removals and mosquito control; and d) an introduction to the new Massachusetts General Permit.

Speakers: Alan Anacheke-Nasemann, Ecologist, Army Corps of Engineers  
Paul Sneeringer, Program Manager, Army Corps of Engineers  
Sarah Wilkinson, Project Manager, Army Corps of Engineers

Moderator:

**11. Dam Removal: A Panel Discussion with Experienced Conservation Commissioners (INLAND)**

With more than 50 dams removed in Massachusetts in the past 10 years, dam removal continues to be a high priority for restoring rivers, improving public safety, and improving resilience to climate change. Many conservation commissions have reviewed multiple successful dam removals and have become experts at the process. This workshop will include a short status update on dam removal in Massachusetts from the MA Division of Ecological Restoration, followed by a panel discussion with three commission staff that have had multiple dam removals take place in their towns.

Speakers: Beth Lambert, Director, Division of Ecological Restoration, MA Department of Fish and Game  
Michele Restino, Conservation Agent, Town of Taunton  
Robert Douglas, Conservation Director, Town of Andover  
Paula Terrassi, Conservation Agent, Town of Pepperell

Moderator:

**12. Assessing Ecological Disruption and Risk of Failure for Road-Stream Crossings**

A recently completed pilot project in the Deerfield River Watershed developed and tested approaches for assessing ecological disruption, risk of failure (structural, hydraulic and geomorphic), and potential for disruption of emergency medical services (EMS) due to failure, for road-stream crossings. Data from these analyses are available via a web-based tool, the Stream Crossings Explorer (SCE). A version of the SCE is being developed for all of Massachusetts and 12 other northeastern states. As assessment protocols developed in the Deerfield are implemented in other areas, we will be better able to work with emergency managers and highway officials to address both ecological and transportation vulnerabilities associated with road-stream crossings.

Speaker: Scott Jackson, Extension Associate Professor, UMass Amherst; Conservation Commissioner, Town of Whately; MACC Director

Moderator:

**13. Creating Tidmarsh Wildlife Sanctuary: Restoring Hope in a Climate Changing World**

This workshop will highlight a promising new concept in conservation - ways in which nature can be made more resilient to the impacts of climate change at almost any location. In addition, it will showcase the important role that ecological restoration will play in conservation going forward. Using the creation of the Tidmarsh Wildlife Sanctuary as a compelling case study, the audience will discover how lessons learned at Tidmarsh can be applied elsewhere with powerful impact. This workshop will especially benefit those involved with land conservation planning and land management.

Speakers: Robert Wilber, Director of Land Conservation, Mass Audubon

Alex Hackman, Tidmarsh Restoration Project Manager, Division of Ecological Restoration, MA  
Department of Fish and Game  
David Gould, Director of Marine and Environmental Affairs, Town of Plymouth

Moderator:

#### **14. River Smart Communities: A Practicum on Rivers and Living with Rivers**

Following the introduction to rivers and the principal recommendations behind RiverSmart Communities provided at AEC 2017, this workshop will focus on practical knowledge, guidance, and practice for conservation commissions. We will 1) use multiple case studies to discuss fluvial hazards and the science that drives rivers; 2) provide specific recommendations for policy change that will help MA communities improve their flood resilience; and 3) provide guidance for appropriate culvert replacements that provide aquatic organism passage and storm resilience through a small group practicum exercise. Attendees will receive a copy of the RiverSmart report, *Supporting New England Communities to Become River-Smart*. A small group exercise will provide participants an opportunity to review realistic river-related Notices of Intent and discuss their merits and deficiencies. Sufficient time will be provided for attendees to raise river-related questions or issues they may have struggled with as conservation commissioners.

Speakers: Nick Nelson, Fluvial Geomorphologist, Regional Director, Inter-Fluve, Inc.; MACC Director  
Eve Vogel, Professor of Geography, UMass Amherst

Moderator:

#### **15. (6B) Hands-on Plant ID: Common Woody Plants of Massachusetts Freshwater Wetlands (INLAND) DOUBLE SESSION—CONTINUED FROM 6A**

This workshop will focus on the most frequently encountered trees, shrubs, and woody vines of swamps, bogs, marshes, and other freshwater wetlands in Massachusetts. This two-block session will include both hands-on identification and PowerPoint presentations that will cover characteristics used in field identification and photos and descriptions of each plant. The classroom set-up will include both herbarium and live winter specimens. These and additional photos and field guides will help attendees recognize common freshwater woody wetland plants in the field using the most prominent features of each plant. This workshop is intended for beginners and may also serve as a refresher on basic wetland plant identification for others.

Speakers: Amy Ball, PWS, CWS, Senior Ecologist, Horsley Witten Group, Inc.; MACC Director  
Sally Zielinski, PhD, Botanist/Environmental Journalist/Artist; MACC Education Committee  
Member  
Karro Frost, Conservation Botanist, Natural Heritage and Endangered Species, MA Division of Fish  
and Game; Conservation Commissioner, Town of Hardwick

Moderator: Karro Frost, Conservation Botanist, Natural Heritage and Endangered Species, MA Division of Fish  
and Game; Conservation Commissioner, Town of Hardwick

#### **16. Does Massachusetts Need a Wetland Ecological Function Assessment Method?**

Since wetlands and other aquatic resources first became subject to federal regulation in the mid-1970s, federal and state agencies, NGOs, and others have been developing methodologies for assessing the ecological functions of wetlands. The methods were developed primarily to predict the effects of wetland alteration and to determine appropriate types and amounts of compensatory mitigation. Methodologies continue to evolve, and conceptual development and field-testing are ongoing. This workshop is intended for those with experience in the scientific, technical, regulatory, and policy aspects of the Massachusetts wetlands program. It will provide a brief history and overview of several methodologies, then focus on discussing whether Massachusetts should develop a methodology for use under the Wetlands Protection Act.

Speaker: Matt Schweisberg, PWS, Wetland Strategies and Solutions, MACC Officer

Moderator:

**Workshop Series C**  
**3:00 p.m.—4:30 p.m.**

**17. Assessing Invasive Plant Control Options**

This workshop will explore the process of developing an effective invasive plant control strategy to fulfill the responsibility land managers have to maintain, enhance, and restore the landscapes they are serving. We will explore the impact of invasive plants on ecosystem functions and services, and review available treatment methods, associated costs and benefits. Meadow restoration work in the Town of Lexington will serve to illustrate the process of planning, implementing, and maintaining a small-scale municipal invasive plant management project. The role of volunteers and paid consultants, native plant restoration, and application of available funding options in Lexington will be included.

Speakers: Joan Deely, Project Manager, Land Stewardship, Inc.; Conservation Commissioner, Town of Northfield  
Chris Polatin, Restoration Ecologist, Land Stewardship, Inc.; Conservation Commissioner, Town of Gill  
Jordan McCarron, Conservation Stewardship Coordinator, Town of Lexington

Moderator:

**18. How the National Flood Insurance Program Works in Your Community**

This workshop is geared to new commissioners and commission staff. Topics will include a definition and description of floodplains, both National Flood Insurance Program (NFIP) and local programs; the use of various online mapping tools to find and examine the floodplain; an understanding of the complete NFIP definition of “development” and resulting community responsibilities; and the non-construction requirements of the NFIP.

Speakers: Joy Duperault, Director, Flood Hazard Management Program, State NFIP Coordinator & Hazard Mitigation Officer, MA Department of Conservation & Recreation, Office of Water Resources

Moderator:

**19. The New Chapter 91 General License Certification Process for Small Docks and Piers**

Residential owners of small docks and piers need to obtain a Chapter 91 General License for their structures. Chapter 91 now has a NEW General License Certification process that offers small dock and pier owners a self-certification option for obtaining the license. They must meet specific eligibility requirements to qualify, and one requirement is that they receive an Order of Conditions from their conservation commission before submitting their chapter 91 application to Mass DEP. Conservation commissioners serving in communities with tidelands or other waterways (e.g. Great Ponds) should be aware of this new regulatory requirement and how it is tied to the Chapter 91 self-certification process.

Speakers: Ben Lynch, Section Chief, MassDEP Waterways Regulation Program  
Nancy Lin, Outreach and Training Manager, Mass DEP Wetlands and Waterways Program

Moderator:

**20. Tools, Approaches and Science for Incorporating Climate Change in Your Commission's Work (CLIMATE CHANGE)**

This workshop demonstrates how to use web-based tools, such as the NRCS Web Soil Survey and The Nature Conservancy's Resilient Land Mapping Tool, which will allow you to incorporate climate change into conservation commission work and create resource-based maps at the community and project site levels. The TNC Resilient Land Mapping Tool will help you to identify and map the most climate-resilient wetlands (and uplands) in your community, while the new interpretive map features within Web Soil Survey enable users to create maps of wetland soil organic carbon storage, soil health and resiliency. This workshop will also provide a brief overview of the science that illuminates the disproportionate role that wetlands play in the global carbon cycle and in providing

ecological climate resiliency, as well as their unique vulnerabilities to climate change. Drawing on the work of the Yale Program on Climate Change Communication, strategies for communicating within your community about climate change and wetlands will be discussed. This workshop will be geared to commissioners and environmental professionals who want a deeper understanding of soil science and climate-resilient wetlands.

Speakers: Gillian Davies, PWS, NHCWS, RSS, and CESSWI; Senior Ecological Scientist, BSC Group, Inc., Immediate Past President of the Society of Wetland Scientists  
Maggie Payne, Resource Soil Scientist, Natural Resource Conservation Services, United States Department of Agriculture

Moderator:

### **21. Conservation Applications of Unmanned Aerial Systems (aka DRONES)**

Take off and explore the exciting applications of remotely collecting data with drones. Learn about aerial video and imagery, orthophotography, 3D modeling, and FAA flying rules and regulations from a commercially licensed remote pilot. Operating an UAS (unmanned aerial system) can produce data unobtainable from traditional methods from the ground. The latest drones and accompanying software allow for the monitoring and tracking of erosion and the calculation of sediment stockpiles. Vegetation health can be monitored and mapped from the sky using NDVI cameras, highlighting specific areas that need attention. Beautiful imagery and high definition video can be collected, and unreachable locations such as beaver dams and dangerous slopes can be inspected and monitored with ease. Attend this workshop to discover the countless conservation opportunities that can be revealed through UAS data collection.

Speakers: Lee Curtis, Senior Associate and Manager of Ecological & GIS Services, BSC Group; MACC Director  
George Andrews, GIS Analyst, BSC Group, Inc.

Moderator:

### **22. Protecting Eelgrass Meadows and the Ecosystem Services They Provide (COASTAL)**

Eelgrass meadows provide many important benefits for coastal communities, including improved water quality, nursery habitat for fish and shellfish, increased primary production, and protection from erosion and wave damage. New research has found that they are also important sites of carbon capture and storage, thus serving as a critical buffer to ocean acidification and climate change. We will discuss the biology and ecology of eelgrass meadows and examples of tools and methods for conservation, restoration and protection of these vital coastal habitats and the ecosystem services they provide. We will highlight some existing local bylaws in Massachusetts that protect this resource and which may provide a template for other communities.

Speakers: Phil Colarusso, US Environmental Protection Agency  
Julie Simpson, MIT Sea Grant Program  
Alyssa Novak, Boston University

Moderator: Matt Schweisberg, PWS, Wetlands Strategies and Solutions, LLC; MACC Officer

### **23. Green Infrastructure Goes Mainstream: Understanding its Benefits and Applications**

This two-part workshop will include a presentation to update participants on the benefits, costs, design requirements, and applications of the latest advancements in Green Infrastructure practices. The second part of the workshop will include a hands-on interactive exercise, during which participants will have the opportunity to “green-up” a conventional parking lot design with green infrastructure practices and report out on the pros and cons of different design options.

Speakers: Richard A. Claytor, Jr. P.E., President, Horsley Witten Group  
Geoffrey Glover, E.I.T., Civil Engineer, Horsley Witten Group

Moderator:

#### **24. Culvert Replacements: Cost Effective, Critical Investments in Road and Natural Infrastructure**

For stream crossings projects, commissions must evaluate several considerations, including cost of replacement, to determine whether projects comply with the stream crossing standards. Although regulatory compliance is the main driver for meeting the Stream Crossing Standards, the economics and public safety benefits are one of the reasons communities can justify these projects as cost-effective, critical investments. However, most DOTs have not been incorporating risk reduction and reduced maintenance cost benefits into project planning and decision making. Using assessment data collected by the North Atlantic Aquatic Connectivity Collaborative, several online tools and case studies, the workshop will present the case that culvert replacements are cost-effective, critical investments in our road and natural infrastructure. Participants will learn about available funding through the Division of Ecological Restoration's Culvert Replacement Municipal Assistance Grant Program which encourages municipalities to replace culverts with better designed crossings that meet the stream crossing standards and provide storm crossing resiliency.

Speakers: Carrie Banks, Regional Planner, Division of Ecological Restoration, MA Department of Fish & Game  
Scott Jackson, Extension Associate Professor, UMass Amherst; Conservation Commissioner, Town of Whately; MACC Director

Moderator:

#### **Fundamentals for Conservation Commissioners**

**10:00 a.m. – 12:30 p.m.**

**Unit 205: *Effective Erosion and Sediment Control***

Content: Soil erosion processes; jurisdiction and regulations; control applications; best management practices; incorporating ESC in conservation commission decision making.

Instructor: Paul J. McManus, LSP, PWS, President, EcoTec, Inc.

Assistant:

**Unit 201: *Getting Home Before Midnight: How to Run an Effective Meeting***

Content: Meeting preparation; participants and their interests; group dynamics; recordkeeping; Public Records Law; communication techniques

Instructor: Nathaniel Stevens, Esq., Senior Associate, McGregor & Legere, P.C.; Conservation Commissioner, Town of Arlington

Assistant:

**2:00 p.m. - 4:30 p.m.**

**Unit 103: *Plan Review and Site Visit Procedures***

Content: Understanding how to read maps and engineered plans; site visits—what to bring, soils, slopes, and wetland lines, checking for erosion and sediment controls

Instructor: Michael Howard, PWS, CWS, Principal & Manager, Ecological Sciences Group, Epsilon Associates, Inc.; MACC Officer

Greg Hochmuth, RS, PWS, CWS, Williams & Sparages, LLC

Assistant:

**Unit 206: *Stormwater Requirements for Wetlands Protection***

Content: Stormwater hydrology; MA Stormwater Standards; MA Wetlands Protection Act requirements and options; reviewing submittals; and issuing effective Orders of Conditions

Instructor: Ingeborg Hegemann, CWS, PWS, Senior Vice President, BSC Group, Inc.

Assistant: