



**Annual Environmental Conference 2019  
Workshop Descriptions  
and  
Fundamentals for Conservation Commissioners Units Content**

**Workshop Series A  
9:45 a.m.—11:00 a.m.**

**1. Protecting Resource Areas/Wildlife Habitat along Electric Transmission Rights-of-Way**

As the demand for energy continues to rise, maintaining a safe and reliable electric transmission system has never been more critical. To expand and maintain electric transmission systems, energy companies often propose "linear projects" along a right-of-way that may inevitably cross wetland resource areas and wildlife habitats in multiple towns. Speakers will discuss the steps necessary to plan, design, permit, construct, and maintain electric transmission systems while keeping wetland and wildlife protection a priority, including consistency with the performance standards of the Wetland Protection Act. Presenters will provide several past project examples and case studies that further support how electric transmission projects can be successfully completed while protecting or improving wetland resource areas and wildlife habitat.

Speakers: Matthew Waldrip, CESSWI, PWS, Senior Environmental Specialist, Environmental Affairs Department, Eversource Energy  
Lauren Glorioso, Endangered Species Review Biologist, Natural Heritage and Endangered Species Program, Massachusetts Division of Fisheries and Wildlife

**2. Land Subject to Coastal Storm Flowage: Regulatory Performance Standards**

Massachusetts Department of Environmental Protection (MassDEP) reconvened The Land Subject to Coastal Storm Flowage (LSCSF) Advisory Group in 2018 to produce draft regulations that propose to adopt performance standards for LSCSF. MassDEP expects to release the public comment draft in early 2019. This workshop will preview the proposed regulations, explaining the need, rationale, and their implementation.

Speakers: Lealdon Langley, Director, Wetlands and Wastewater Program, Massachusetts Department of Environmental Protection  
Rebecca Haney, Coastal Geologist, Massachusetts Office of Coastal Zone Management

**3. Reviewing Wetland Mitigation Plans**

Constructing successful mitigation sites, especially small sites, can be tricky; there have been reports that constructed or replicated wetlands are often unsuccessful. However, we've also seen replication sites flourish. The goal of this workshop is to provide guidance to conservation commissions and others on reading and understanding wetland mitigation plans, including notes, specifications and drawings, and in writing effective and enforceable conditions to yield successful replication areas.

Speakers: Dwight R. Dunk, LP.D., PWS, BCES, Principal, Epsilon Associates, Inc.  
Matt Schweisberg, PWS, Principal, Wetlands Strategies and Solutions, LLC; MACC Officer

#### **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. This workshop will be geared to an audience already familiar with vernal pool certification methodology.

Speakers: Matthew R. Burne, Vernal Pool Association  
Leo P. Kenney, Vernal Pool Association

#### **5. Prioritizing Land Conservation: Data Sources and Tools**

Over the past several years, there has been a proliferation of GIS data and online tools to inform conservation decision-making. Examples include Biomap2, CAPS, Critical Linkages, Nature's Network, TNC's Resilient and Connected Lands, MA Climate Action Tool, and Mass Audubon's MAPPR Tool. Many of these data layers/tools are interrelated. This workshop will review these datasets and tools, and provide background information about their development, intended uses and how they can complement one another.

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

#### **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, Plant Conservation Biologist, Natural Heritage and Endangered Species, MA Division of Fish and Game; Conservation Commissioner, Town of Warwick

#### **7. Green Infrastructure Goes Mainstream: 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 Boston Public School 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

#### **8. Climate Resilience and MVP: Planning, Funding, Implementation**

Staff from the Executive Office of Energy and Environmental Affairs and a certified trainer will explain how conservation commissions and agents can engage in the Commonwealth's Municipal Vulnerability Preparedness (MVP) Program, from applying for grants to facilitate community-wide climate change vulnerability assessments to implementing priority strategies resulting from the municipal planning process. Special focus will be on cost-effective nature-based solutions that provide multiple co-benefits, including examples of climate-smart projects

throughout the Commonwealth – from dam removals to planting rain gardens, floodplain buyouts to riverside restoration.

Speakers: Ariel Maiorano, Assistant Coordinator, Shaping the Future of Your Community Program, Mass Audubon  
Margot Mansfield, Climate Change and Coastal Hazards Analyst, Massachusetts Executive Office of Energy and Environmental Affairs and Office of Coastal Zone Management

**Workshop Series B**  
**11:15 a.m.—12:30 p.m.**

**(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, Plant Conservation Biologist, Natural Heritage and Endangered Species, MA Division of Fish and Game; Conservation Commissioner, Town of Warwick

**9. Wetland Mitigation Success Report – Next Steps, and an Update of the Bordering Vegetated Wetland Delineation Manual**

This presentation will review the key findings of the MassDEP/UMass Wetland Mitigation Success Report and MassDEP's possible steps to address the policy and potential regulatory issues resulting from the report recommendations. In addition, we will discuss the key features of the upcoming Bordering Vegetated Wetlands Delineation Manual, which is currently being updated.

Speakers: Lisa Rhodes, Program Manager, Wetlands Monitoring and Assessment, Wetlands Program, MassDEP  
Scott Jackson, Extension Associate Professor, UMass Amherst; Conservation Commissioner, Town of Whately; MACC Director  
Michael McHugh, Program Chief, Conservancy Program, MassDEP  
Nancy Lin, Manager of Outreach and Training, Wetlands and Waterways Program, MassDEP

**10. Nature-Based Bioengineering for Coastal Stabilization: Recent Advances**

Coastal Engineering Structures (CES) alter a coastal landform's ability to provide sediment and can reflect wave energy leading to scour. A CES may not always be the desired method to protect a building. Biodegradable materials and methods that work to enhance natural land form stability are typically not considered a CES. Attendees will learn about a range of nonstructural techniques, as well as specific examples which have successfully weathered recent severe weather events. Some of the latest "Non-CES" techniques such as fiber roll reinforced lifts and salt marshes will be highlighted and coastal adaptation design strategies for sea level rise will be discussed.

Speakers: Seth Wilkinson, Certified Ecological Restoration Practitioner, President, Wilkinson Ecological Design, Inc.  
Gregory Berman, Coastal Processes Specialist, Woods Hole Sea Grant and Cape Cod Cooperative Extension

### **11. The Solar SMART Incentive Program: Overview of Land Use and Siting Guidelines**

The Solar SMART Incentive Program: Overview of Land Use and Siting Guidelines

The Massachusetts Renewable Energy Division (DOER) has developed policies and regulations that provide financial incentives to encourage and support cost-effective solar development throughout the Commonwealth. The regulations include performance standards and eligibility criteria relative to the siting of solar facilities based on land use and other related factors. Understanding the site selection processes and land use requirements for solar facilities is of interest to Conservation Commissions when solar facilities are proposed in jurisdictional areas and subject to review under the Wetlands Protection Act. This presentation will provide an overview of the SMART regulations.

Speakers: Michael Judge, Director, Renewable and Alternative Energy Division, Massachusetts Department of Energy Resources  
Kaitlin Kelly, Manager of Solar Programs, Massachusetts Department of Energy Resources  
Municipal speaker, TBD

Moderator: Michael Howard, PWS, CWS, Principal, Epsilon Associates, Inc.

### **12. Non-Chemical Strategies for Managing Common Invasive Species: Whole Plant Removal**

The Speakers will present whole plant removal strategies for the management of common invasive species without the use of chemicals. The presentation will start with a short section on identification of common invasive species. Techniques for the management of woody invasive species as well as problem species, including knotweed and Phragmites, will be discussed. Case studies will be used to illustrate the different techniques and strategies utilized including hydro-raking for invasive/nuisance aquatic vegetation and the need for assessment, and aftercare.

Speakers: Michael DeRosa, LSP, PWS, Principal, DeRosa Environmental  
Jim Hankin, Conservation Coordinator/Agent, Town of Hamilton

### **13. Applying Land-Use Futures Scenarios to Conservation Planning**

What will your community look like in 50 years? How will choices and land-use affect wetlands, forests, and farms, along with water quality and other natural resource values? What are the implications and options available? This workshop introduces five unique landscape scenarios that protect land-use and land cover change through 2060. Participants will learn how to use our web-based Scenario Mapping Tool to explore divergent potential future landscapes. These scenarios inform real-world decisions about: forest management, land-use planning, green and gray infrastructure investment, and conservation priority setting. The workshop will also present an example application of the tool to watershed-based planning, water quality trends analysis, and ecosystem services valuation, as applied by Mass Audubon and their partners in the Taunton River watershed. We will demonstrate the practical use of the tool to local conservation planning.

Speakers: Joshua Plisinski, GIS and Research Technician, Thompson Lab, Harvard Forest  
Ariel Maiorano, Assistant Coordinator, Shaping the Future of Your Community Program, Mass Audubon  
Hannah Robbins, Regional Conservation Communication Manager, Harvard Forest

### **14. MS4 General Permit: Intersection with Wetlands Protection Act Jurisdiction and Requirements**

This presentation will highlight the Municipal Separate Storm Sewer System (MS4) General Permit (GP) for Massachusetts, the MS4 minimum control measures, and the geographic areas that are covered by the GP. It will examine how MS4 and Wetlands Protection Act (WPA) jurisdictions overlap and how MS4 stormwater

requirements differ from the WPA Stormwater Management Standards. Speakers will also discuss the resources and contacts available to communities subject to the MS4 GP requirements and how Massachusetts Department of Environmental Protection is working on consistency for both sets of stormwater rules.

Speakers: Frederick Civian, Stormwater Coordinator, Massachusetts Department of Environmental Protection  
Alice Smith, Environmental Analyst, Massachusetts Department of Environmental Protection  
Thomas Maguire, Regional Coordinator, Wetlands Program, Massachusetts Department of Environmental Protection

#### **15. Shared Use Trails Initiative: Planning, Design, Environmental Protection**

Shared-use trails provide opportunities for environmentally friendly alternative transportation, improved safety, and exercise. The Baker – Polito Administration is promoting and funding increased planning, design, and construction of multi-use trails. This workshop will detail the cooperative efforts of the Department of Conservation and Recreation, Massachusetts Department of Transportation, and Massachusetts Department of Environmental Protection.

Speakers: Kurt Gaertner, Director of Land Policy and Planning, Executive Office of Energy and Environmental Affairs  
Lealdon Langley, Director of Wetlands and Wastewater, Massachusetts Department of Environmental Protection  
Michael Trepanier, Senior Project Manager, MassDOT

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

#### **16. Invasive Freshwater Species in Massachusetts: Diversity, Prevention, and Regulations**

Invasive aquatic plant species harm ecosystem biodiversity, degrade wildlife habitat, impede fish passage, and negatively impact water quality and recreation in water bodies and waterways. This presentation will focus on the prevention of infestation and spread, and the regulation of common invasive plants and animals in Massachusetts, under the Wetlands Protection Act and the state and federal Clean Water Acts.

Speakers: David Wong, PhD Environmental Analyst, Massachusetts Department of Environmental Protection  
Lealdon Langley, Director of Wetlands and Wastewater, Massachusetts Department of Environmental Protection

#### **17. A New Protocol for Assessing Tidal Stream Crossings**

For many years, conservation organizations, agencies and municipalities have assessed road-stream crossings to evaluate their impact on aquatic connectivity. These assessments have generally been limited to crossings on non-tidal streams. Now, the North Atlantic Aquatic Connectivity Collaborative (NAACC) has developed an assessment for tidal creeks, streams and rivers. In preparation for the 2019 field season, the Ipswich River Watershed Association will be offering training on the protocol for municipalities and organizations that would like to get involved in assessing road-stream crossings in coastal areas of Massachusetts.

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

Kaitlyn Shaw, Science and Restoration Program Manager, Ipswich River Watershed Association

### **18. Resilient Land Use and Zoning Policies**

Local bylaws, land use planning, zoning, and other land use policies are critical tools that municipalities can use to enhance resilience in the face of climate change. This session will look at some tools and best practices being used in Massachusetts and other regions across the US for resilient land use planning in the face of sea level rise, coastal flooding, inland flooding, and extreme heat. Examples of climate resilience in both an inland and coastal areas will be presented. A facilitated Q and A and audience discussion will follow.

Speakers: Anne Herbst, Senior Environmental Planner, Metropolitan Area Planning Council,  
Former Conservation Administrator, Town of Hull  
John Bolduc, Environmental Planner, City of Cambridge  
Former Conservation Director and Officer for several inland communities  
Barbara K. Landau, Counsel, Noble, Wickersham & Heart LLP  
Specializes in environmental, land use and construction law and currently serves on consulting team for several resilient zoning projects

Moderator: Sasha Shyduroff, Clean Energy and Climate Planner, Metropolitan Area Planning Council

### **19. New Massachusetts State Hazard Mitigation and Climate Adaptation Plan**

The speakers will present an overview of the process to develop the 2018 State Hazard Mitigation and Climate Adaptation Plan. Plan purpose, contents and possible application for local conservation commissions' use will be discussed. Several sources of research information will also be included for local staff to use when requiring scientific data for local planning purposes.

Speakers: Joy Duperault, State Floodplain Manager, Massachusetts Department of Conservation and Recreation  
Sarah White, State Hazard Mitigation Officer, Massachusetts Emergency Management Agency

### **20. Conserving Open Space with Chapter 61: Program Overview and Purpose**

This presentation will describe the basics of the Chapter 61 tax abatement programs, which give Massachusetts landowners an opportunity to reduce their property taxes in exchange for providing important public benefits, like clean water, wildlife habitat, wood products, rural character, and outdoor recreation. The speakers will discuss how these current use tax programs help to conserve open space, creating an incentive to maintain forested land as forest. Topics to be covered include: the requirements for enrollment in either Chapter 61, 61A, or 61B; withdrawal penalties, change of use, harvesting timber under CH 61, and the definition of a management plan.

Speakers: Chris Capone, Service Forester, Massachusetts Department of Conservation and Recreation  
Jennifer Fish, Director, Service Forestry Program, Massachusetts Department of Conservation and Recreation

### **21. Bringing Wetland Science & Conservation to the Classroom: An Educational Collaboration**

Does the general public in your community understand what you do and why? "Yes"? Congratulations! "No"? Then this workshop is for you. We will share experiences and best practices of how a general community's perception of its local commission changed from "What's a commission good for anyway?" attitude to a "Wow, this is important and interesting!" attitude. It will showcase educational programming developed by Attleboro's conservation agent in partnership with Mass Audubon to engage middle-school students in place-based science and civics education. Students participated in hands-on lessons to learn about the ecological significance of wetlands, and how conservation commissions make decisions about impacts to them. In turn, students shared their excitement and knowledge with their families and helped cultivate a much-improved relationship between the commission and the public.

Speakers: Nicholas Wyllie, Environmental Planner/Conservation Agent for the City of Attleboro  
Chris Hitchener, Education Coordinator, Oak Knoll Wildlife Sanctuary, Mass Audubon

## **22. New NPDES MS4 Permit: Maximizing Funding, Staff Capacity, Support for Municipal Stormwater Programs**

Complying with the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit, in effect as of July 1, 2018, will be a challenge for many towns and cities. Municipalities need to adapt administrative, operational, and capital programs to meet the new regulatory requirements with competing needs for their staff and funds. This presentation will provide a perspective of what municipalities, such as Framingham, Charlton, and Palmer, and regional groups, such as the Central Massachusetts Stormwater Coalition, are doing to comply with the new stormwater permit requirements.

Speakers: Kerry Reed, Senior Stormwater and Environmental Engineer, City of Framingham  
Todd Girard, Conservation Agent, Town of Charlton  
Angela Panaccione, Conservation Agent and Stormwater Coordinator, Town of Palmer

## **23. Siting Solar Arrays: Questions and Answers**

This session expands and builds upon the information provided in the earlier session titled "The Solar SMART Incentive Program: Overview of Land Use and Siting Guidelines" (Workshop 11B). An expert panel consisting of representatives from local and state agencies and other stakeholders will offer short presentations on "lessons learned" regarding the siting and review of solar projects, understanding the SMART Program, and shared experiences with other State programs including the Wetlands Protection Act. The session will include a Q&A moderated by a professional environmental consultant with experience in the review and permitting of solar projects.

Speakers: TBD  
Moderator: Michael Howard, PWS, CWS, Principal, Epsilon Associates, Inc.

### **Workshop Series D 3:00 p.m.—4:00 p.m.**

## **24. Dam Removal and Sediment Management: New Statewide Guidance; Case Study**

Sediment management is one of the most challenging aspects of any dam removal project. This talk will preview and solicit feedback on new statewide guidance intended to simplify and standardize the development of sediment management plans for dam removal projects. It will also include a detailed case study involving passive sediment release for recently completed dam removal project in North Hampton, which involved many of the same methods and risk dimensions (e.g. ecology, human health, infrastructure) described in the new statewide guidance document.

Speakers: Alex Hackman, Restoration Ecologist, Massachusetts Division of Ecological Restoration  
Matthew Taylor, P.E., Principal/Senior Vice President, GZA  
Moderator: Nick Nelson, Fluvial Geomorphologist, Regional Director, Inter-Fluve, Inc.; MACC Director

## **25. Incorporating Climate Change Resilience into Local Wetland Bylaws and Regulations**

Wetland Resource Areas are a critical component in building a municipality's resilience to the many impacts of climate change. At the same time, wetland Resource Areas can be adversely impacted by climate change. Conservation commissions across the state are realizing that they have the opportunity and responsibility to help build climate change resiliency. This workshop will help Conservation Commissions incorporate climate change resilience into their wetland bylaw/ordinance or local wetland regulations by discussing approaches and presenting sample performance standards, definitions of climate change terms, and other possible regulatory provisions using examples from several municipalities. The workshop will also discuss case studies.

Speakers: Susan Chapnick, President, Principal Scientist, New Environmental Horizons, Inc.; Arlington Conservation Commission  
Nathaniel Stevens, Esq., Senior Associate, McGregor & Legere, P.C.; Chair, Arlington Conservation Commission

#### **26. Case Study in Resiliency and Remediating a Coastal Mess: Shaffer Paper Site**

The Shaffer Paper Site, now Senator Joseph Finnegan Park at Port Norfolk, former home to industrial companies for over 100 years, was transformed into a waterfront park by the Massachusetts Department of Conservation and Recreation and its team. Its location at the mouth of the Neponset River in Dorchester posed challenges including wetlands, contaminated soil, sea level rise, and critical habitat. Seawalls were replaced by living shorelines. Wetlands were maintained, replicated, and even moved intact. Wetlands disturbance was minimized based on evaluations of site contamination. The park was designed to blend in with the coast and accommodate climate change.

Speakers: Anne Leifer, P.G., LSP, Senior Project Manager, GEI Consultants, Inc.  
Michael Howard, PWS, CWS, Principal, Epsilon Associates, Inc.

#### **27. Invasive Management in Urban Areas: Watershed Association Perspective**

Invasive species are a chronic issue in developed watersheds. Invasives cause negative impacts in aquatic and terrestrial ecosystems and can impede recreation. Together the Charles and Mystic River Watershed Associations have more than 20 years of experience working with municipalities, the state, and local community groups to reduce or eliminate invasive plants in these two urban rivers and along their banks. The two organizations engage hundreds of volunteers a year removing water chestnut, bittersweet, and phragmites. We will share our lessons learned from the front lines of invasive management and discuss emerging challenges and how conservation commissions can help.

Speakers: Julie Wood, Director of Projects, Charles River Watershed Association  
Andrew Hrycyna, Watershed Scientist, Mystic River Watershed Association

#### **28. Climate Adaptation to Protect Species & Ecosystems**

While climate adaptation utilizes many of the same conservation tools and approaches we have been using for years, it differs in that it is targeted to address specific climate-related threats. This workshop will discuss the need for local conservation efforts that focus on climate related threats to species and ecosystem. Conservation commissions and conservation organizations must be proactive about the need to protect species and ecosystems and ensure that local and regional climate adaptation plans do not focus exclusively on infrastructure, economic assets, and human health and safety.

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

#### **29. Compensatory Restoration of Wetlands and Streams: Natural Resources Damages**

Through MassDEP's Natural Resource Damages (NRD) Program, over \$76 million has been recovered to restore habitats, species, and public access to and use of natural resources in the Commonwealth damaged by oil spills or releases of hazardous substances and materials. Between 2009 and 2017, small oil spills released nearly 100,000 gallons to fresh and coastal surface waters and wetlands. A new initiative to assess the impact of these spills will provide opportunities for municipalities to restore groundwater, streams, and wetlands. Case studies will be presented featuring work with municipalities to implement restoration – either as project leads or permit issuers. For example, an NRD settlement for an oil spill to the Mystic River funded the Town of Arlington's restoration of riverbank that had eroded due to a broken concrete headwall at a stormwater outfall, including a planned community planting event in spring 2019.

Speakers: Karen I. Pelto, Coordinator, Natural Resource Damages Program, Massachusetts Department of Environmental Protection

Emily Sullivan, Environmental Planner/Conservation Agent, Town of Arlington

### **30. Wildlife Habitat Assessments: How Commissions can Evaluate and Mitigate Potential Impacts to Wildlife**

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, the application of 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, but will address some potential limited project applications. Specifically, National Grid will present transmission forestry applications for reducing impacts and mitigating the loss of habitat features. Linear transmission line corridors typically intersect and potentially create a mosaic of wildlife habitats and natural communities that provide important functions such as shelter, breeding habitat, foraging areas, and migration routes. While the benefits of well-managed ROW habitat to wildlife are increasingly acknowledged, techniques that minimize the potential for habitat loss, fragmentation, and migration barriers are important to project stakeholders.

Speakers: P. Chase Bernier, CWB, Project Manager, BSC Group, Inc.  
Jason Magoon, Senior Supervisor, Transmission Forestry, National Grid  
Josh Holden, Lead Environmental Scientist, National Grid  
Moderator: Lee Curtis, Vice President and Principal, Ecological Sciences, BSC Group, Inc.

### **Fundamentals for Conservation Commissioners**

**9:45 a.m. – 12:15 p.m.**

**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: Kathy Sferra, Conservation Administrator, Town of Stow

**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.

### **Fundamentals for Conservation Commissioners**

**1:30 p.m. - 4:00 p.m.**

**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: Representative from Nitsch Engineering

**Unit 208:** *MACC Wetlands Buffer Zone Guidebook*

Content: Current science on buffer zones; reviewing projects in buffer zones; decision making under the Wetlands Project Act Regulations; climate change and other considerations; writing wetland bylaws and ordinances, developing science and performance-based standards for buffer zones

Instructors: Gillian Davies, PWS, NHCWS, RSS, and CESSWI; Senior Ecological Scientist, BSC Group, Inc., Ingeborg Hegemann, CWS, PWS, Executive Vice President, BSC Group, Inc.