



Massachusetts Envirothon

Spring Workshop

Saturday April 7, 2018 ♦ 8:45 a.m. – 3:30 p.m. ♦ Alden, 30 Shrewsbury St. Holden, MA

Sponsored by



Morning Coffee & Refreshments provided
Bring a bag lunch

Workshop Schedule

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|---------------|---|--|
| 8:45 a.m. | Registration Sign-up for Workshops | Front Lobby |
| 9:00 - 9:10 | Welcome <i>Will Snyder, UMass Extension</i> | Hecker Auditorium |
| 9:15 - 10:25 | Simultaneous Workshops - choose one <ul style="list-style-type: none">• Field Guide Fun-damentals• Tree Identification Workshop• Water Quality• Introduction to Soils Workshop• Getting started on the Current Issue | Conference Room Lower Lobby Library Break Room Hecker Auditorium |
| 10:30 - 11:40 | Simultaneous Workshops - choose one <ul style="list-style-type: none">• Wildlife Habitat Assessment Hike• Tree Measuring Workshop• Macro-invertebrates Water workshop• Soils Hands-on (pre-req Intro to Soils)• Alden Tour | Conference Room Lower Lobby Library Break Room Main Lobby |
| 11:45 - 12:15 | Lunch | Hecker Auditorium |
| 12:15 – 12:55 | Overview of Alden <i>Stuart Cain, President, Alden</i> Introduction to the 2018 Current Issue <i>Will Snyder, UMass Extension</i> | Hecker Auditorium |
| 1:00-3:30 | Mini Envirothon | |

Teams are encouraged to split up and attend different workshop sessions. Coaches are welcome to participate in workshops, but should give first priority to team learning/questions.

Workshop Descriptions

Alden Tour

Founded in 1894 and located in Holden, MA, Alden is the oldest continuously operating hydraulic laboratory in the United States and one of the oldest in the world. From the early days of hydropower development and aviation, through World Wars I and II, and into the modern world defined by environmental needs, Alden has been a recognized leader in the field of fluid dynamics consulting. On this tour of Alden's 32 acres campus participants will get a look into how Alden's engineers, scientists, biologists, and support staff get their hands dirty solving flow problems and helping to clean the World's environment and power its infrastructure, through fish protection studies, physical modeling experiments, flow calibration, and modeling air pollution control systems.

Portion of this tour will be outdoors on the campus, please DRESS APPROPRIATELY

Stuart Cain, President, Alden

Tree Identification Workshop

Learn how to identify a variety of native Massachusetts trees. The group will go outdoors to meet a variety of trees up close. Joe will introduce you to some simple learning techniques such as the acronym called MADCAPHORSE and other techniques. You will learn how to use the tree's bark, overall shape, branching pattern, buds, leaves, acorn, nuts and even the smell of the tree as identifiers. You will be sure to recognize these trees when you apply these methods through out the year and see them again on the day of the Massachusetts Envirothon.

This workshop will be held outdoors in the woods. Please wear warm, rugged clothing and footwear.

Joe Perry, Forester, Massachusetts Department of Conservation and Recreation

Tree Measurement Workshop

Go outside on the Alden campus and try out your hand at measuring trees. The instructor will review procedures for using a variety of tree measuring tools. You will learn how to measure height, diameter and determine board foot volume. These techniques will be tested on the day of the Massachusetts Envirothon.

This workshop will be held outdoors in the woods. Please wear warm, rugged clothing and footwear.

Joe Perry, Forester, Massachusetts Department of Conservation and Recreation

Soils Workshop - Introduction to Soils

This workshop offers an understanding of how our soils came to be, why they are so variable, and how these varying characteristics affect soil behavior and land use. The concepts of soil parent material and formation, horizonation, texture class, and drainage class, will be introduced. It will consist of a presentation with group participation encouraged.

Al Averill, State Soil Scientist, USDA Natural Resources Conservation Service

Soils Workshop – Hands-on

Opportunity to apply concepts introduced in the soils workshop – Introduction to Soils. We will identify and describe soil characteristics including parent material, texture, color, drainage class and horizonation in a soil pit. Limited to 25 participants.

Prerequisite: Soils Workshop – Introduction to Soils no exceptions please.

Al Averill, State Soil Scientist, USDA Natural Resources Conservation Service

Field Guide Fun-damentals

The ability to use field guides and other applicable resources is essential for the Envirothon. In this hands-on workshop students will work in small groups as they rotate through a series of stations to answer questions based on wildlife artifacts. You will hone your identification skills during this workshop and become more familiar with the use of field guides.

Flavio Sutti, Wildlife Care Program Coordinator, Mass Audubon

Wildlife Habitat Assessment HIKE

This HIKE will focus on identifying various habitat characteristics and determining what wildlife species are likely to use the area given those features. Explore the woods adjacent to Alden Lab from a landscape perspective and down to details like forest structure, water bodies, and hopefully see some tracks! **DRESS TO BE OUTDOORS.**

Flavio Sutti, Wildlife Care Program Coordinator, Mass Audubon

Macro-invertebrate and Sampling Workshop

This workshop offers students the opportunity to conduct hands-on identification and field sampling of aquatic macro-invertebrates. Students will learn about various species of macro-invertebrates, get an understanding of which are indicators of poor and healthy aquatic systems, and get a chance to collect live organisms in the field (weather permitting). During the field portion of this workshop, students will visit a brook site and get the chance to apply their identification knowledge and field sampling skills in an aquatic field environment.

Portions of this workshop will be held outdoors, please DRESS APPROPRIATELY.

Kelley Freda, DCR – Water Supply Protection

Water Quality and Sampling Workshop

This workshop offers students the opportunity to understand important water quality parameters, what determines a healthy aquatic system, and how to collect water quality data. Students will learn about water quality parameters, various types of data collection equipment and get a chance to use digital water quality meters to measure parameters in the field (weather permitting). During the field portion of this workshop, students will visit several different aquatic habitats around Alden to collect water quality measurements and discuss what they find. **Portions of this workshop will be held outdoors, please DRESS APPROPRIATELY.**

Kelley Freda, DCR – Water Supply Protection

Getting started on your Current Issue research AND documenting your EnviroTrek

How should your team start investigating ecosystem services and green infrastructure in your watershed this year? This workshop provides some key perspectives and questions to get you launched on your research. This workshop will also introduce the EnviroTrek, a new way for your team to tell the story of your hard work and adventures in soil, water, wildlife, forest, and current issues through the year as you prepare for the May Envirothon.

Will Snyder, UMass Extension 4-H/Center for Agriculture/College of Natural Sciences

Mini-Envirothon

Curious about what to expect on competition day? Want to try out some questions to see if you're ready? Teams will visit 4 stations for 25 minutes each. Short hands-on tests will be administered and then discussed at Forest, Water, Wildlife and Soil. At the Current Issue station teams will have a chance to judge a presentation using a real score sheet, then consider what it takes to make an effective presentation.

Driving Directions

From the Boston Area/Points East:

Massachusetts Turnpike/I-90 West to I-495 North to I-290 West to I-190 North. I-190 North to Exit 2 (Holden/West Mountain Street). On exit ramp continue through first stop light to West Mountain Street. Left onto West Mountain Street; go 1.3 miles to Shrewsbury Street. Left onto Shrewsbury Street; go 0.8 miles to Alden (on right just before intersection of Route 122A).

From Southern Eastern MA:

I-95 North to Route 146 North to I-290 East to I-190 North. I-190 North to Exit 2 (Holden/West Mountain Street). On exit ramp continue through first stop light to West Mountain Street. Left onto West Mountain Street; go 1.3 miles to Shrewsbury Street. Left onto Shrewsbury Street; go 0.8 miles to Alden (on right just before intersection of Route 122A).

From Points West:

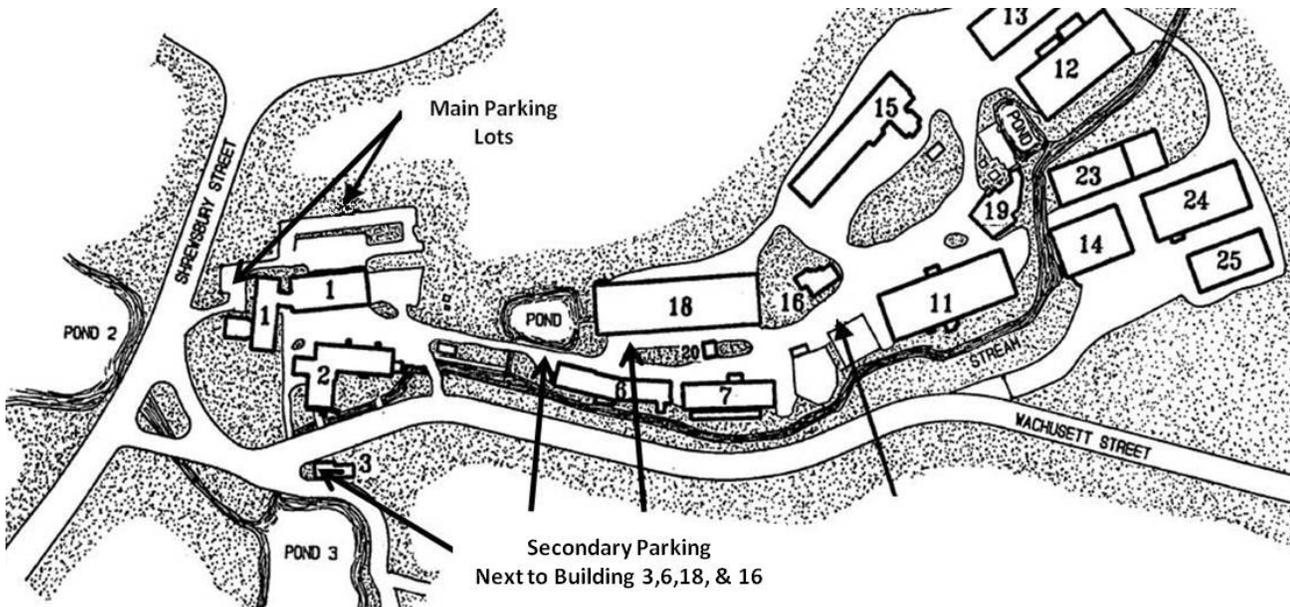
Massachusetts Turnpike/I-90 to I-290 East to I-190 North. I-190 North to Exit 2 (Holden/West Mountain Street). On exit ramp continue through first stop light to West Mountain Street. Left onto West Mountain Street; go 1.3 miles to Shrewsbury Street. Left onto Shrewsbury Street; go 0.8 miles to Alden (on right just before intersection of Route 122A).

From Points North/Route 2:

Take preferred road to I-190 South. I-190 South to Exit 3 (Holden/West Mountain Street). Right onto West Mountain Street; go 1.3 miles to Shrewsbury Street. Left onto Shrewsbury Street; go 0.8 miles to Alden (on right just before intersection of Route 122A).

Parking Information

Parking is available in the lots next to the main building off of Shrewsbury Street. Secondary parking is available around the back of the property outside several of the testing buildings, these areas are accessible off of Wachusett Street (see Map below).



Alden Buildings 1 & 2

