



MASSACHUSETTS
ENVIRONMENTAL

**Massachusetts Envirothon
Fall 2018 Coach & Team Workshop
University of Massachusetts Amherst
Campus Center
RESCHEDULED for TUESDAY December 11, 2018**

AGENDA

8:00 Registration Opens Coffee and refreshments

8:40 Welcome and introduction to the day (Auditorium)

Concurrent Sessions (☀ = Current Issue presentation)

▼ Room	9:00-10:20	10:25-11:45		12:30-1:00	1:10-2:30
174-176	1. Water Overview		L U N C H *	<i>(Not your average)</i> Resource Fair in the Auditorium	1. Water Overview
168-172	2. Soils Overview	3. Soils: Participant Application of Concepts			3. Soils: Participant Application of Concepts
Auditorium	4. Tree ID	6. Mass Ag in Classroom ☀			
Meet at Registration		5. Tree Measurement			5. Tree Measurement
163c	7. Food Recovery Hierarchy ☀	8. Soil Practices ☀			9. Immigrants and Agriculture ☀
162-175		10. Climate Smart Agriculture in MA ☀			?? Wildlife panel?
165-169	11. Wild for Food ☀	12. Land, Labor, Justice ☀			13. In a Land of Plenty, Why Hunger?
Meet and Walk					14. Fight Climate Change with Sheep & Trees ☀

***Lunch Options at the UMass Campus Center**

The **New Bluewall** (all sorts of different options), The **Peoples Organic** (coffee and pastries), & **Harvest Market** (grab and go food). Or try **People's Market** or **Earth Foods** in the Student Union right next door or the food trucks outside.

If you brought your lunch you are welcome to grab a table in the Auditorium! We hope you enjoy your **45 minute lunch break**.

Thank you to our partners!

Massachusetts Envirothon wishes to thank the University of Massachusetts Amherst for the support that has made this event possible. In particular, we are grateful for the funding, time, and expertise provided

by: UMass College of Natural Sciences (CNS) (<http://www.cns.umass.edu/>)

UMass School of Earth & Sustainability (<https://www.umass.edu/ses/>), particularly

UMass Extension/Center for Agriculture, Food, and Environment (<http://ag.umass.edu/extension-outreach>)

(Not your average) Resource Fair : Lunchtime at the UMass Envirothon Workshop

Want more background to help you prepare for soil, water, wildlife, or forest tests?

Looking for ideas about how to get started on the 2019 Current Issue?

Curious to learn more about opportunities at UMass?

Ready to compete in a scavenger hunt for questions?

Come to the Campus Center Auditorium during lunch (12:00 – 1:00) for:

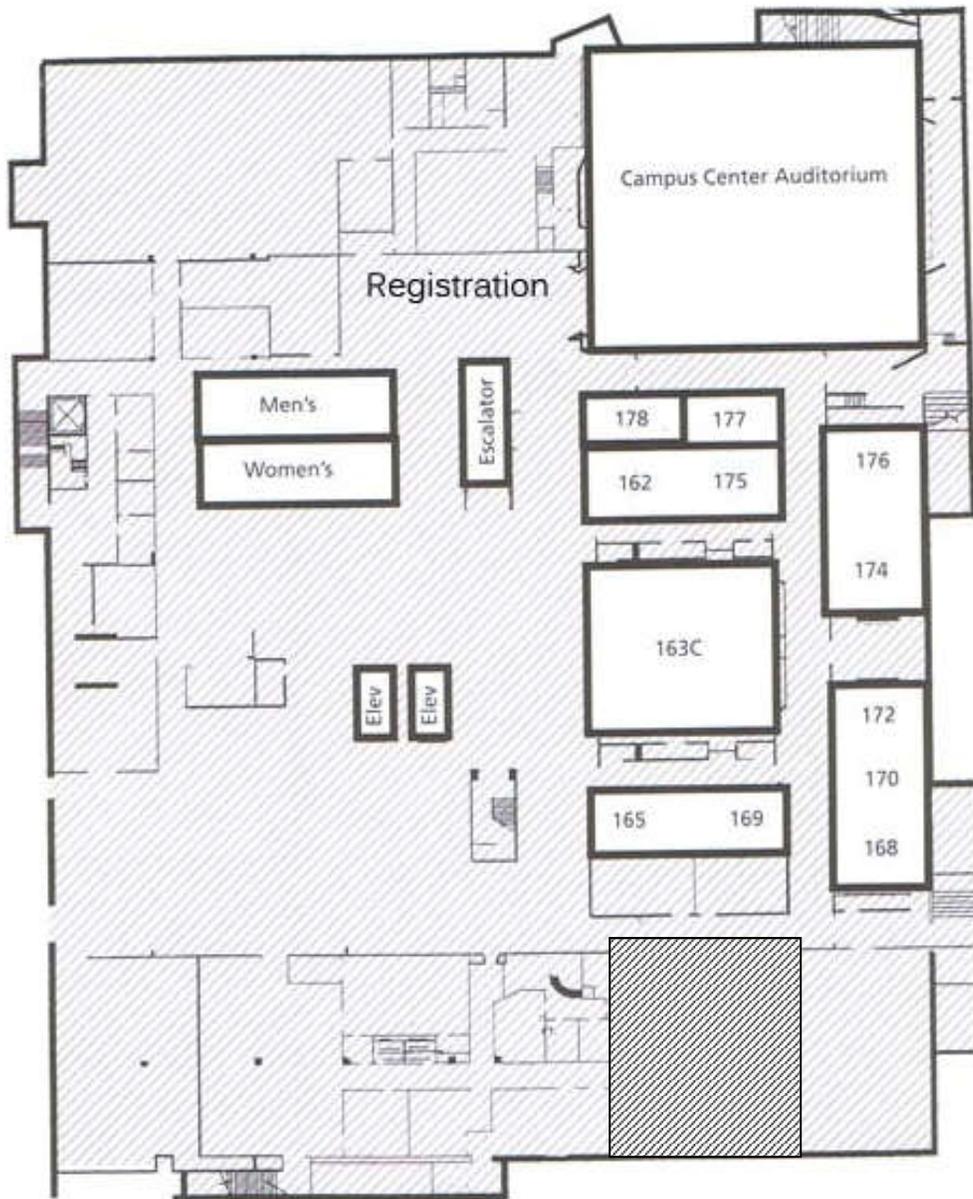
- one-on-one conversations with resource people, Envirothon teams and coaches

-a chance to win a printed copy of the 2019 Mass Envirothon Manual!

Coaches: Please stop by the Coaches Table for key information and an opportunity to provide input on Envirothon-related professional development

FINDING YOUR WAY:

CAMPUS CENTER 1st Floor



Workshop Descriptions

- 1 Water Overview Workshop** **Rm 174-176 9:00 and 1:10**
Participants in this workshop will receive an overview of water in the environment in preparation for the water eco-station at this year's Massachusetts Envirothon. Through the use of PowerPoint and discussion they will become familiar with the properties of water and water's role in nature. Also, some emphasis will be placed on wetlands, water quality and thought provoking current water pollution topics.
Kelley Freda, DCR – Water Supply Protection

- 2 Soils Overview Workshop** **Rm 168-172 9:00**
This workshop offers an understanding of how our soils came to be and why they are so variable. Presentation objective is to convey concepts of soil formation and behavior that will be applied to the Soils Hands-on Workshop and the Envirothon soils station. Group participation will be encouraged.
Al Averill, State Soil Scientist, USDA Natural Resources Conservation Service

- 3 Soils: Participant Application of Concepts** **Limit: 25 Rm 168-172 10:25 & 1:10**
Effectiveness of this workshop requires participant knowledge of concepts presented in the Soils Overview Workshop and contained in the soils section of the Envirothon manual. Participants are expected to have a basic knowledge of soil properties, formation, and morphology. Small groups will rotate through 4 stations, and complete exercises by interpreting what they see and feel. It entails identifying and describing soil characteristics including parent material, texture, color, drainage class, and horizonation. Exercises will include applying knowledge of soil characteristics to resource management issues. You will get your hands dirty.
Al Averill, State Soil Scientist, USDA Natural Resources Conservation Service

- 4 Tree Identification Workshop** **Auditorium 9:00**
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 throughout the year and see them again on the day of the Massachusetts Envirothon.
Joe Perry, Forester, Mass. Department of Conservation and Recreation

- 5 Tree Measurement Workshop** **Meet at Registration 10:25 & 1:10**
Go outside on the University of Massachusetts 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.
Joe Perry, Forester, Mass. Department of Conservation and Recreation

Current Issue Workshops

- 6 How can Massachusetts Agriculture in the Classroom help your team prepare for this year's current issue?** **Auditorium 10:25**
The mission of Agriculture in the Classroom is to "increase agricultural literacy through K-12 education." An agriculturally literate person is defined as "one who understands and can communicate the source and value of agriculture as it affects quality of life."
Massachusetts Agriculture in the Classroom can offer teams help in connecting with local farmers, farm groups and nutrition services as well as lesson plans and other resources. Mini-grants for Agriculture related projects are also available. www.aginclassroom.org
Russ Anderson and Marian Hazzard, Mass Agriculture in the Classroom Board Members
Richard LeBlanc, Massachusetts Department of Agricultural Resources
Dave Johnson, Community Harvest Project Farm Manager
Amanda Carrier Garden/Program Manager, Worcester State University Teaching Garden

- 7 The EPA Food Recovery Hierarchy – the low hanging fruit** **Rm 163c 9:00**
This workshop will examine the EPA Food Recovery Hierarchy and how producers, distributors, and consumers view, waste, and manage their excess food. We will explore various environmental issues as well as public policy initiatives, including the 2018 Farm Bill, providing participants with a food waste foundation, available research resources, and community-engaged projects that link to the Massachusetts Local Food Action Plan recommendations.
Mary Bell, Food Science Department, UMass Amherst
- 8 What Kind of Soil Practices Do We Need to Raise Abundant Healthy Food?** **Rm 163C 10:25**
The American food system is excellent at raising crops. It is not, however, so good at raising healthy foods. That takes a carbon-rich, bio-diverse soil. Why are soil carbon and microbial life so important? What practices do our farmers need to adopt to improve the quality of our food and thus the health of those who consume it?
Jack Kittredge, Editor of [The Natural Farmer](#) and Author [Soil Restoration: Can Biology Do the Job?](#), Julie Rawson, Executive Director, [Northeast Organic Farming Association/Mass. Chapter](#) and head farmer at [Many Hands Organic Farm](#) in Barre
- 9 Immigrants and Agriculture** **Rm 163c 1:10**
Have you ever tried eating chipilin? Can we bridge the farm-city divide with locally-grown, culturally-appropriate foods like this? Massachusetts is the third most densely populated state in the United States, and immigrant and new ethnic groups make up large percentages of the populations living Massachusetts cities. This workshop will share stories of successes and challenges from the experience of UMass agricultural and nutrition researchers who are working in urban markets to increase access to culturally-appropriate food for low-income residents in urban settings in Massachusetts.
Prof. Frank Mangan, Stockbridge School of Agriculture, UMass
- 10 Climate Smart Agriculture for Massachusetts** **Rm 162-175 10:25**
Soil health is critically important for food production, and can also be a means to carbon sequestration to slow climate change. How can farmers manage crops in ways that improve soil health, rather than deplete this resource? This workshop will introduce key conservation practices, including some new approaches and technologies.
Prof. Masoud Hashemi, UMass Extension/Stockbridge School of Agriculture
- 11 Going Wild for Food** **Rm 165-169 9:00**
Have you ever thought about the foods that are “growing wild” in in your backyard, neighborhood, or town? Wild foods, from plants to animals, are found not only in woods, fields, lakes, ponds, rivers, streams, estuaries or the open ocean, but also in suburban and urban communities. You can harvest these foods through fishing, hunting, or foraging. In this session, you will learn about people who enjoy these outdoor pursuits, discover how hunting and fishing contributes to fish, wildlife, and habitat conservation and explore the ethics, laws, social, and health considerations when choosing to gather nature’s bounty. Begin a list of some of the tasty wild edibles in the plant and animal world that you might discover back at school, home, and community.
Marion Larson, Chief of Information & Education, Division of Fisheries & Wildlife (MassWildlife)
- 12 Land, labor, justice: mapping our local food systems** **Rm 165-169 10:25**
Who in our communities has access to abundant and healthy food, and why? What forces drive food prices, and who has the power to change them? What are the human and environmental costs of our existing food system, and how can we change them? This session will explore the intersections between land use, climate change, environmental justice, food disparity, and working conditions in agriculture.
Liz Wills-O’Gilvie, Gardening the Community and Springfield Food Policy Council and Claire Morenon, Communications Manager, Community Involved in Sustaining Agriculture (CISA)

13 In a Land of Plenty, Why Hunger?

Rm 165-169 1:10

Hunger in the U.S. is not a result of food shortages, but is rather a social and political problem. In this workshop we will look at the face of hunger nationally and statewide, examine the effects of hunger on individuals and communities, and discuss some current efforts to combat it in Massachusetts.

Andrew Morehouse, Executive Director, The Food Bank of Western Massachusetts

14 Fighting Climate Change with Sheep and Tree Allies

Limit: 30 Meet at Reg 1:10

How can the right agricultural practices help to feed the community and fight climate change? Join this tour of the UMass Carbon Farming Initiative, a 1-acre temperate-climate silvopasture research plot started this year on the UMass Amherst campus. The goal of the project is to investigate the viability of integrating sheep pasture and chestnut production to produce food and to measure the effectiveness of the technique to sequester carbon and mitigate climate change. Participants will learn about carbon-farming, permaculture, and silvopasture techniques, examine application of permaculture design principles/ethics and deepen their understating of a key climate change mitigation strategy. The project was begun by professors Lisa DePiano and Nicole Burton and funded by the Stockbridge School of Agriculture and through a grant from the Sustainability, Innovation & Engagement Fund. Design and instalment was completed by staff and students from the Stockbridge School of Agriculture.

John Stambaugh, Sustainable Food & Farming Student, UMass Amherst