

Sustainable Landscape Stewards

Course Outline – Fall 2016: Natural Aquatic Systems

Class 1 - Understanding the Lake Champlain Watershed

This first class is designed to introduce students to the program, and to provide information on Lake Champlain's natural communities, watersheds and land use changes in Vermont.

Guest Presenters: Kris Stepenuck, LCSG

Topics:

- Introductions & Course Overview
- Land Use Changes in Vermont: A Historical Perspective
- Movie: Clean Water Act: Better at 40
- Watersheds and the basics of water cycles
- Hydrology/groundwater dynamics

Class 2 - Lakes

This second class explores how land use changes impact water quality in lakes, with a special focus on Lake Champlain. The current state of Lake Champlain's water pollution will be addressed. State regulations and programs designed to protect Vermont's water quality will be discussed.

Guest Presenters: Colleen Hickey (LCBP), Michaela Stickney (VT DEC Lakes Program)

Topics:

- State of the Lake Report: 2015
- VT Shoreland Protection Act
- LakeWise Program

Class 3 - Rivers & Streams

The third class gives an overview of how rivers work, and the role they play in our state's environmental and public health. The impact of human activity and weather events on rivers will be addressed, as well as the resources available to inform and prepare us for living near rivers in a changing climate.

Guest Presenters: Rebecca Pfeiffer, VT DEC; Ashley Eaton, LCSG

Topics:

- • Stream geomorphology
- • Human impact on river dynamics
- • State river corridor maps and FEMA
 - How to access and use floodplain maps
- • Vermont Act 64 and implementation planning
- • River Flume Model Demonstration: How rivers work

Class 4: Field Day- Natural Communities and Streams in Action

This class is designed to get students into the field to see, touch and experience the concepts covered in the three previous classes and in the required readings. We will visit a conserved land parcel and natural stream corridor along the LaPlatte River in Shelburne.

Guest Presenter: Chris Boget, Lake Champlain Land Trust

Topics:

- Land Conservation as Green Stormwater Infrastructure
- Practicing responsible stewardship
- Tour of conserved land

Class 5: Wetlands - Function and Protection

This class will present an overview of the function and value of wetlands as they relate to water quality, flood control, and natural habitats. Students will learn how to identify wetland areas, and about the current regulatory efforts in place to protect and restore these areas. Students will have the opportunity to ask questions about specific properties or areas in which they work or live.

Guest Presenter: Tina Heath, District Wetland Ecologist, VT DEC

Topics:

- Wetlands Classifications
- Wetlands Monitoring and Assessment
- Wetlands Restoration in the Champlain Valley and Act 64
- Vermont Significant Wetland Inventory Maps (VSWF)