Water School Registration  April 16-17, 2010
Mt. Hood Community College
Gresham Campus – College Center (AC1051)
26000 SE Stark St. Gresham, OR 97030

Registration due by Friday, April 9, 2010

Registration: $50
(Includes Friday and Saturday courses, class materials, expo & field trip transportation)

For more information, contact: Robert Weinman: 503-491-7496  robert.weinman@mhcc.edu

Date________________________ Term Spring 2010  MHCC ID#_________________ or Social Security#_________________ or Birth Date__________________

Name________________________ Phone________________________ Email________________________

Address_________________________ City_________________________ State_______ Zip__________

Mother’s Maiden Name_________________________ Gender: □M □F  Veteran: □Yes □No  High School Graduate: □Yes □No

People requiring accommodations due to a disability should contact the Disability Services Office at 503-491-6923 or 503-491-7670 (TDD). Please call two weeks prior to the event.

Registration Fees and Payment  $ 50 for full two day event and expo (light snacks provided, lunch not included)

Registration Options
Email:  workforce.training@mhcc.edu
Fax:  503-491-7390
Phone:  503-491-7235
Mail:  Business & Industry Workforce Training
Mt. Hood Community College
26000 SE Stark Street – AC 1162
Gresham, OR  97030

Payment Options
Method of Payment. Check one
☐ Check made payable to MHCC
☐ Bill me please

IMPORTANT!  Please select the specific sessions or field trips you plan on attending.  See the course descriptions for more information.

Friday
8 a.m.  Registration and Welcome.  Pre-registration encouraged.  Coffee and Tea provided

8:30 – 10 a.m.
☐ Groundwater: Blood of the Earth
   -Hardisty (MHCC)
☐ Introduction to Rain Gardens
   -Jones (MHCC)
☐ The Clean Water Act
   -VandenHeuvel (CRK)

10:30 a.m.-noon
☐ Wetland ID, Values & Restoration
   -Burris (OSU)
☐ Aquatic Invasive Species Impacts, Id and Prevention
   -Siemens (ORSeaG-TNC)
☐ Salmonid Biology
   -Giannico (ORSeaG-OSU)

noon-1 p.m.
☐ Hosted Expo – Water, Watershed and Sustainable Living Agencies, Opportunities and Events
   -Food and Beverage hosted by MHCC students and student clubs
   (Please check this box if you would like to reserve a table (at no cost) to share information about your organization.
   We will have our office contact you regarding additional details)

1-2:30 p.m.
☐ Watershed Processes
   -Measles(ORA)
☐ Pesticides, Home Gardens and Healthy Streams
   -Chan (OSU)
☐ Salmonid Biology Field Tour
   -Giannico (ORSeaG-OSU)

3-4:30 p.m.
☐ Riparian Area Functions and Management
   -Ahrens (OSU)
☐ M.O.V.E. Motivating and Organizing Volunteer Enthusiasm
   -moderated by Weinman (MHCC)

Saturday
9 a.m.-noon
☐ Watershed Process & Riparian Restoration Tour
   -Measles (ORA), Ahrens (OSU)
☐ Floods of the Columbia Gorge
   -Hardisty (MHCC)

1-4 p.m.
☐ An Introduction to Rain Gardens
   -Jones (MHCC)
Groundwater: Blood of the Earth!!

*Suggested companion courses – Watershed Processes, Wetland Identification*

**Friday, 8:30 – 10 a.m.**
*Daina Hardisty, Mt. Hood Community College*

Our concern over the quality of tap water has led us to start drinking huge amounts of bottled water. Approximately 50% of tap water comes from the ground. This is the drinking water source for those of us who don't drink bottled water all the time. There is no resource that is more important to life then clean water.... such that the ancient Chinese called it the "blood of the Earth". There is increasing evidence that by 2050 half of the world’s population will suffer severe water shortages. Learn more about this enormously important hidden resource and its interrelatedness within our watersheds, surface waters and differing rocks beneath these watersheds! Local groundwater units will also be discussed.

Introduction to Rain Gardens: The Classroom Basics

*Suggested companion courses – Pesticides, Home Gardens, and Healthy Streams*

**Friday, 8:30 – 10 a.m.**
*Michael Jones, Mt. Hood Community College*

Rain gardens are a wonderful way to treat the runoff from hard surfaces at homes and commercial properties. Water that would otherwise go into storm drains or streams can be redirected into the soil and groundwater through attractive gardens. Native plants can help create habitat for insects and birds. By returning rainwater and runoff directly to the soil, contaminants are filtered and treated through biogeochemical means. This workshop will introduce you to rain gardens, helping you understand the steps required to evaluate your site, then plan and construct a rain garden. We will emphasize using native vegetation and materials.

The Clean Water Act: What you need to know

**Friday, 8:30 – 10 a.m.**
*Brett VandenHeuvel, Executive Director, Columbia Riverkeeper*

After decades a severe water pollution exemplified by the Cuyahoga River catching on fire, the U.S. Congress passed the Clean Water Act (CWA). Today, the CWA is still the most powerful tool that state and federal agencies and citizens have to protect and restore our nation’s waterways. Using Oregon as a case study, this class will:

- Discuss the CWA’s goal that all water bodies must be fishable and swimmable
- Explain that states set water quality standards designed to protect important resources, such as drinking water, salmon, and human health.
- Review state-issued discharge permits that control the amount of pollution that a company can dump into a river, and discuss how citizens can reduce pollution
- Analyze what happens when polluters don’t comply with the pollution limits
- Discuss the successes and failures of the CWA – what it’s good at and what it misses (you’d be surprised – for example, there are no restrictions on new big box stores dumping polluted stormwater into salmon-bearing streams)
- Hot topics in the CWA today – pharmaceuticals and other emerging pollutants, stormwater, lack of enforcement, wetland fills.

Class will be taught by Brett VandenHeuvel, executive director of Columbia Riverkeeper. Brett is an environmental attorney with a focus on the CWA. He has taught college and community education courses on environmental law, as well as 4 years of outdoor school.
Friday, 10:30 a.m. – noon

**Wetland Identification, Values, and Restoration**  
*Suggested companion courses – Establishing Trees in Riparian Areas, Groundwater, Watershed Processes*  
**Friday, 10:30 a.m. – noon**  
*Frank Burris, OSU Sea Grant Extension*  

Wetland, like tropical forests and coral reefs, are some of the most productive ecosystems in the world. However, despite the benefits they provide, wetlands are under increasing pressure from exotic and invasive species, runoff and sedimentation, draining and filling, and both private and commercial development. This session will cover wetland characteristics and functions, ways to locate potential wetland enhancement sites, tools for creating, restoring, and enhancing wetlands, and examples of successful wetland renovations.

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**Aquatic Invasive Species: Why should you care & what you can do (Impacts, Identification, and Prevention)**  
*Suggested companion courses – Introduction to Rain Gardens, and Pesticides, Home Gardens, and Healthy Streams*  
**Friday, 10:30 a.m. – noon**  
*Tania Siemens, OSU Sea Grant Extension and The Nature Conservancy*  

Aquatic invasive species (AIS) are silently invading Oregon’s watersheds. Their impacts are wide ranging and include habitat loss, reduced water quality, and altered ecosystems. Underwater and out of view, AIS often go undetected until it is too late.

By attending this class you will:

- Understand what an aquatic invasive species is and how they are impacting our watersheds.
- Learn to identify important aquatic invaders
- Learn some simple steps that you can take to prevent their introduction and further spread.
- The class will include lecture, lab, and a short field trip (time permitting) to view invasive species in action.

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**Salmonid Biology**  
*Suggested companion courses – Salmonid Biology Field Application*  
**Friday, 10:30 a.m. – noon**  
*Guillermo Giannico, Oregon Sea Grant, OSU Extension Service*  

This course will focus on increasing your understanding of the life cycles of Oregon’s salmonids (the group name for salmon, trout, steelhead, and char). Participants will become aware of the tremendous natural variation within and between populations of a particular species, will appreciate the similarities and differences in how the various species utilize the watershed, and will become aware of the different habitat needs for various aquatic species.

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**Friday, noon – 1 p.m.**

**Water Expo**  
**Friday, noon – 1 p.m.**  
*Coordinator: Robert Weinman, MHCC. (503-491-7496 Robert.weinman@mhcc.edu)*  

A unique opportunity for you and your organization to reach Mt. Hood Community College students, Gresham/Troutdale community members and the staff/volunteers of other organizations involved in Water, Watersheds and Sustainable Living. Mt. Hood Community College student clubs will be providing tables and a light buffet for this event. Student ambassadors will also be available to assist you with the setup and monitoring of your exhibit.

Here is an opportunity for you to share news of your upcoming events, projects and volunteer opportunities.
### Understanding Watershed Processes to Improve Project Effectiveness

**Suggested companion courses – Establishing Trees in Riparian Areas, Groundwater, Wetland Identification**

**Friday, 1 – 2:30 p.m.**  
**Paul Measeles, Oregon Department of Agriculture**

Many people seek to actively improve fish habitat and water quality, stabilize streams to minimize erosion, or modify land practices adjacent to streams for a variety of reasons. Understanding stream processes, floods, and floodplains are invaluable in planning successful projects. This presentation will provide basic information to help landowners, watershed groups, and resource professionals. Topics to be covered include stream channel classifications, how and why streams meander and erode stream banks, floodplain functions, impacts of land management on rivers, floods, and floodplains, and considerations for conducting stream restoration and enhancement projects.

### Pesticides, Home Gardens and Healthy Streams

**Suggested companion courses – Introduction to Rain Gardens, and Aquatic Invasive Species**

**Friday, 1 – 2:30 p.m.**  
**Sam Chan, Oregon Sea Grant and OSU Extension**

This workshop will cover the latest findings on the implications of accumulating pesticides, fertilizers, metals and pharmaceuticals on aquatic health. Increasingly, these chemicals are detected as low level mixtures in local rivers and streams. We will learn and share ideas on practical ways home gardeners, landscapers, watershed workers and communities can help reduce unintended impacts from pesticide, fertilizer and metal run-off on aquatic resources while growing aesthetic and productive gardens and landscapes.

### Salmonid Biology Field Application

**Suggested Pre-requisites – Salmonid Biology**

**Friday, 1 – 4:00 p.m.**  
**Guillermo Giannico, Oregon Sea Grant, OSU Extension Service**

This field session will help reinforce the concepts presented during the Salmonid Biology classroom session. You will spend time in the field examining and discussing salmonid habitat needs, seasonal variations, and how various species utilize the watershed.

### Friday, 3 – 4:30 p.m.

### Riparian Areas Functions and Management

*Suggested companion courses – Watershed Processes, Groundwater, Wetland Identification*

**Friday, 3:00 – 4:30 PM**  
**Glenn R. Ahrens, OSU Extension Forester, Clatsop & Tillamook County**

This class will cover basic steps involved with successful riparian tree planting. Establishing trees in riparian areas poses significant challenges due to the complex and changing nature of the zone of transition between water and land. The goal of this class is to improve your chances of success in riparian plantings based on key steps and successful techniques learned from riparian plantings across western Oregon. Key steps to be covered include site assessment and design, plant materials, site preparation, planting practices, maintenance, and monitoring.
M.O.V.E.: Motivating and Organizing Volunteer Enthusiasm
Friday, 3 – 4:30 p.m.
Panel, moderated by Robert Weinman, Mt. Hood Community College

With content and concepts delivered by a panel of organizers from several different programs, agencies and organizations this class will provide concrete examples of community and volunteer engagement and the promotion of water related activities and events. This class will give participants tools, ideas and inspiration for engaging with their communities.

Saturday, April 17

Watershed Processes and Riparian Area Field Tour*
Suggested Pre-requisites – Watershed Processes and Establishing Trees in Riparian Areas

Saturday, 9 a.m. – noon
Paul Measeles, Oregon Department of Agriculture
Glenn R. Ahrens, OSU Extension Forester, Clatsop & Tillamook County

This Half-day tour will visit 2-3 sites to help participants learn the basic categories of stream types and classification; why and how meanders occur, how streams migrate, and the concept of a stable stream; land management factors affecting stream processes; basic functions of a floodplain and effects of channelization; and how stream processes should be assessed for designing successful stream projects.

Floods of the Columbia Gorge: Geology Field Trip of the Columbia River Gorge
Suggested Pre-requisite- Groundwater: Blood of the Earth, Watershed Processes

Saturday, 9 a.m. – noon
Daina Hardisty, Mt. Hood Community College

This interactive tour will explore evidence of cataclysmic floods of lava and water that have shaped the extreme features of the Columbia Gorge we know today. Tour will visit units of former flood deposits that supply our groundwater today.

Tour includes: The Sandy River, Chanticleer Point, Crown Point, Latourelle Falls, and Multnomah Falls.

What to wear: Sturdy boots and raingear advised.

Saturday, 1 – 4 p.m.

An introduction to Rain Gardens: A tour for inspiration and application
Suggested Pre-requisite- Introduction to Rain Gardens

Saturday, 1 – 4 p.m.
Michael Jones, Mt. Hood Community College

This 3-hour workshop will follow Friday’s introduction to rain gardens by including one or more of the following components, depending on the needs of the class. First, we’ll visit some local rain gardens to help us understand rain garden design and function, and to provide inspiration for your own needs. Bring your rain gear, camera, and notebook. A second component could be back in a classroom where we can work on ideas and designs for your own rain garden. Bring photos, a plan or map for your property and adjacent properties, and your sketch pad. A third option is to walk into the greenspace adjacent to MHCC and look at many of the native plants recommended for local rain gardens, and take a look at how nature herself makes rain gardens work. Bring your rain gear and boots, camera, sketch pad, and favorite book for identifying local native plants.