

## Vegetated Stormwater Facilities workshop

### Date/Time:

#### ***Virtual Lecture (10 Hours)***

Wednesday, December 8, 2021 (4 Hours)

- 8:00 am – 11:00 am (morning session)
- 11:00 am – 11:30 am (break)
- 11:30 am – 12:30 pm (afternoon session)

Thursday, December 9, 2021 (6 Hours)

- 8:00 am – 11:30 am (morning session)
- 11:30 am – 1 pm (break)
- 1:00 pm – 3:30 pm (afternoon session)

### 2021 Curriculum (online)

#### **Tracking Attendance for virtual session:**

- Check attendance during each Zoom session.
- Students complete a quiz at the end of each online session to demonstrate learning comprehension throughout the entire session.

#### **Understanding the System - 3 hrs**

- Purpose of stormwater facilities
  - Regulations to address nonpoint source pollution
  - Role of government bodies, landscapers and the public
- Overview of facility types & components

- Grey vs vegetated
- Swales, raingardens, detention ponds
- Soils (engineered vs native)
- Terminology
- How they function (biologic & mechanistic)
  - Design elements
  - Line of sight
  - Conveyance issues
  - Role of aesthetics
- Understanding agency inspections
  - Who does them & why
  - What are they looking for
- Maintenance overview
  - Why is maintenance important
  - Primary goals
- Planning for the future
  - Protect your investment and keep your customer in compliance
  - Aim for low maintenance
  - Maintenance vs. rehabbing

#### **Site Management - 1 hr**

- Owner responsibilities
  - Regulations pertinent to site management
  - Record-keeping
  - Maintenance agreements
- Overview of SWPCP
  - What is it & who needs one
  - Managing site beyond the vegetated facility
  - BMPs
- Inspections
  - Preparing for an inspection
  - Common problems found during inspections
  - Communication tips for the inspector
- Landscaper/customer communication
  - Understanding site requirements
  - Talking points

#### **Maintenance - 6 hrs**

- Regulations
- Site Considerations
  - Site Evaluations
  - Safety concerns
  - Managing erosion
  - Sediment Issues, removal & disposal

- Removing debris
- Keeping plants healthy
- Design Considerations
- Managing the structures
  - Structural Checks & Fixes
- Standing Water Issues
  - balance between holding water & drainage
- Calendar of activities
- Identification & Characteristics of Common Plants
- Identification & Control of Common Weeds
- Record Keeping
  - Maintenance Agreements
  - Maintenance Logs
  - Reporting

## 2021 Curriculum (in person)

### On-Site Evaluation & Practice - 3 hrs

- Identify structural components of facilities
- Observe water flow patterns
- Practice doing inspections & reporting
  - Inspect variety of facilities (well to poorly maintained)
  - Inspection forms
  - Grading system
  - Enforcement action
  - Guidelines for customer interaction
- Evaluation of maintenance needs
  - Evaluate variety of facilities (well to poorly maintained)
  - Fill out maintenance log
  - Determine how to approach maintenance for variety of facilities
  - Visit potential rehab site & plan how to approach it
  - Guidelines for customer interaction
- ID key evergreen plants & their health

**Instructors:** Todd Blossom, Gail Shaloum and Rob Livingston

**Instructor Bio:**

**Gail Shaloum**

Gail Shaloum, Technical Services Coordinator for Clackamas Water Environment Services, manages projects including: stormwater education, low impact development design, the RiverHealth Stewardship grant program, and the Watershed Health Education Program. Prior to joining WES in 2011, she worked for Metro, educating developers on low impact development stormwater practices. She is a natural resources scientist and landscape architect with over 30 years of experience working in stormwater management, stream restoration, wetland mitigation, NEPA compliance, and low impact development practices—in both the public and private sectors. She is a graduate of Rutgers University and Oregon Graduate Institute.

### **Todd Blossom**

Todd Blossom has owned and operated *Blossom*, a full-service landscaping company, since 1999. He is certified in permaculture design and seeks to promote ecological solutions through his work of integrating food, native plants and stormwater management into the landscape. His experience with swales and raingardens is extensive, having worked closely with the City of Portland's stormwater management program for over 10 years. This involvement includes both installations and maintenance of facilities through the city's private residence retrofit program, and the Green Street, public right of way program.

Todd also has a particular interest in connecting people with place and has found an opportunity to do this through the landscape and outdoor environment. He is actively engaged in local community organizations including: Ecotrust, Audubon Society, Alberta Main Street, and the East Multnomah Soil & Water Conservation District.

His commitment to lecturing and teaching on subjects related to sustainable landscaping, permaculture and stormwater management, is directly related to his desire to better serve the community and the people who live there. As part of that commitment, he has also taken steps to build a sustainable model for training his team to connect with the community where they work. And, he is actively looking to build partnerships, and to enhance the diversity of their workforce, while creating job opportunities.

### **Rob Livingston**

Rob Livingston, Technical Services Specialist in the Watershed Protection division at Clackamas Water Environment Services, is a graduate of the Water & Environmental Technology program at Clackamas Community College. For the past 23 years, he has done Stormwater Source Control work for Clackamas County, the City of McMinnville, and the City of Milwaukie. His responsibilities include conducting inspections of stormwater facilities.