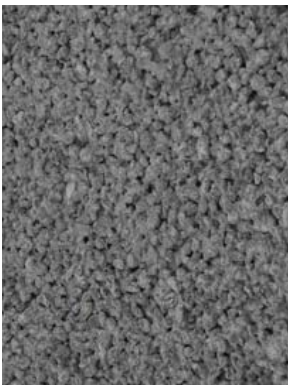




*TurfStone*



*permeable pavers*



*pervious concrete*



WHIDBEY ISLAND  
CONSERVATION DISTRICT presents:

# Low Impact Development Technical Seminar

Tuesday, April 29, 2008 – 8:00AM - 12:30PM

**This is a FREE event, but space is limited –  
RSVP early! \***

Low Impact Development (LID) is the emerging trend in stormwater management and site design which combines thoughtful site planning with best management practices (BMPs). These practices result in projects with preserved open space and native vegetation, reduced impervious surfaces, improved stormwater drainage and infiltration, and site-sensitive landscaping. LID is a useful tool for balancing development with the natural hydrology of the region. This approach helps maintain stream base flows, minimize loss of recharge to aquifers, maintain stream and wetland buffers, help address flood concerns, and reduce stormwater pollutant loads from developments. The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source.

## Who Should Attend?

Builders • Developers • Planners • Landscape designers  
Engineers • Local jurisdictions • Property owners  
Water resource professionals • Interested citizens

## Instructors:

- Christopher J. Webb, PE Civil Engineer, LEED-AP
- David McDonald, Resource Conservation Planner, City of Seattle

## Location:

Coupeville Recreation Hall, 901 NW Alexander St. Coupeville, Whidbey Island, WA  
(Additional parking is available behind the Post Office, look for Conservation District signs off Alexander St, uphill from Rec Hall).

**\* Walk-ins welcome as space allows, however RSVP for event preparations by FRIDAY, APRIL 25 is appreciated.**

**Contact Stacy Smith at the  
Whidbey Island Conservation District  
(360) 678-4708 or  
email: [stacy@whidbeycd.org](mailto:stacy@whidbeycd.org)**

Sponsored by: Whidbey Island Conservation District, Island County Public Health, Island County Marine Resources Committee, Town of Coupeville and the Department of Ecology through a WRIA 6 Watershed Planning Grant.



*green roofs*



*retain native vegetation & narrow streets*



*rain gardens*

**Low Impact Development Technical Seminar**  
**Tuesday, April 29, 2008 8:00AM - 12:30PM**  
**Coupeville Rec Hall**

**AGENDA OVERVIEW**

- 7:45 am Registration, coffee, pastries and networking  
8:10 am Welcome and introductions – **Stacy Smith**  
8:15 am A comprehensive overview of Low Impact Development  
– **Christopher J. Webb**  
*Understanding and implementing LID practices and techniques from sustainable site development to permeable paving options and rain gardens to green roofs. Learn about design, construction, maintenance and expectations.*  
10:00 am COFFEE BREAK  
10:15 am Wrap up comprehensive overview, review and discuss LID examples  
11:00 am Sound Design from the Bottom Up...The Dirt  
– **David McDonald**  
*Learn how simple site and soil construction practices can help preserve and restore stormwater functions, improve erosion control, create healthy soil, easy care landscapes that customers want, and meet state soil BMP requirements.*  
11:45 am Why LID is important for water quality and for Island County  
– **Stacy Smith**  
12:00 pm Incentives for including LID – **Brandon Sweeza, Island County Planning and Community Development**  
12:15 pm Testimonial from local contractor who incorporated LID and saved money doing it!  
12:30 pm Adjourn

**ABOUT THE INSTRUCTORS**

**Christopher J. Webb** is a licensed professional civil engineer in the States of Washington and Oregon as well as a LEED™ Accredited Professional whose passion and technical expertise is focused on providing civil engineering designs that demonstrate the highest degree of sustainability and are based on ecological principles. Chris is a frequent speaker on the technical aspects of sustainability as it is applied in civil engineering.

Chris' sustainable development project experience includes working with many local and state governments, private and public entities, utilities, and non-profit groups. As the principal of **Chris Webb and Associates**, he works as part of diverse design teams across the spectrum of project scales from the single lot to large multi-unit developments and from master planning through permitting and construction documents.

**David McDonald** is a biologist and environmental scientist, with a background in construction practices, for Seattle Public Utilities. He works with landscape, building and design professionals to develop cost-effective, healthy, and environmentally friendly landscape strategies. He is a member of the current ASLA/LEED Sustainable Sites initiative, and is a founding instructor for the Sustainable Building Advisor Certificate program, Seattle Public Utilities' Stormwater Design seminar series, and the University of Washington Engineering Professional Program's Low Impact Development course.

**Speakers/Facilitators:**

Stacy Smith, Whidbey Island Conservation District



**Whidbey Island Conservation District**  
**PO Box 490**  
**Coupeville, WA 98239**  
**360-678-4708**



Oak Harbor Walgreen's  
(Hwy 20 & Pioneer)




Bayview High School (before)



Bayview High School (after)



Coupeville High School

 WHIDBEY ISLAND CONSERVATION DISTRICT presents:

# Rain Garden Demonstration Workshop

**Tuesday, June 3, 2008 – 8:00AM - 12:30PM**  
**Coupeville Rec Hall**

**This is a FREE event, but space is limited – RSVP early! \***

You may or may not have noticed, but rain gardens are popping up all over Whidbey Island! So, what is a rain garden? A rain garden is an alternative stormwater management strategy that mimics a native forest by collecting, absorbing and filtering runoff from roofs, driveways, patios, and other areas where water can not soak in. While they come in all shapes and sizes, in general, a rain garden is a shallow depression with compost amended soils, mulch, and native plants or other plants adapted to our wet winters.

In this half-day workshop you will learn:

- 1) The functions and applications of rain gardens (and other bioretention systems).
- 2) Design, excavation and preparation methods, maintenance, and importance of soil types.
- 3) How to put the rain garden together.
- 4) What types of plants to use.

Participants will also get to observe the construction of a rain garden at the Island County Annex Building.

Curtis Hinman will be the primary instructor. Participants will also hear from the Whidbey Island Conservation District Engineer and Natural Resource Planner, and a local contractor who has applied this practice on several projects.

**Who Should Attend?**  
Builders • Developers • Planners • Landscape Designers  
Engineers • Local Jurisdictions • Property Owners • Water Resource professionals • Interested citizens • Do-it-yourselfers

**Instructor:**  
Curtis Hinman, WSU Extension Faculty in Pierce County and author of the *LID Technical Guidance Manual for Puget Sound and the Rain Garden Handbook for Western Washington Homeowners*

**Location:**  
Coupeville Recreation Hall, 901 NW Alexander St. Coupeville, Whidbey Island, WA (Additional parking is available behind the Post Office, look for Conservation District signs off Alexander St, uphill from Rec Hall).

Sponsored by: *Whidbey Island Conservation District; Island County Departments of Public Health, Planning and Community Development, Parks, and Public Works; the Town of Coupeville and the Department of Ecology through a WRIA 6 Watershed Planning Grant.*

**Clock hours or continuing education units available. Please inquire in advance.**



Harbor Station (Hwy 20 & NE 7th, Oak Harbor)

**\* Walk-ins welcome as space allows, however RSVP for event preparations by FRIDAY, MAY 30 is appreciated. Contact Stacy Smith at the Whidbey Island Conservation District (360) 678-4708 or email: [stacy@whidbeycd.org](mailto:stacy@whidbeycd.org)**

**Rain Garden Demonstration Workshop**  
**Tuesday, June 3, 2008 8:00AM - 12:30PM**  
**Coupeville Rec Hall**

**AGENDA OVERVIEW**

- 7:45 am Registration, coffee, pastries and networking
- 8:10 am Welcome, introductions, workshop schedule, and brief Low Impact Development (LID) overview – Why Rain Gardens?  
*Stacy Smith, Whidbey Island Conservation District*
- 8:30 am Bioretention Basics, Design, Construction and Costs  
*Curtis Hinman, Pierce County WSU Extension*  
*Learn about the different types, basic structures and functions and general trends in application and performance. A discussion of siting considerations, infiltration tests, locating your rain garden or bioretention cell (single family lots, right of way, commercial), various types of soil mixes, plants you can use, and overflow options.*
- 9:45 am FIELD TRIP #1 – Walk up to Island County Annex rain garden retrofit site to watch the beginning of installation. Discussion of design and site considerations of this retrofit project – *Tom Slocum, Whidbey Island Conservation District Engineer*
- 10:20 am Return to Rec Hall
- 10:30 am Water Quality Benefits, Operations and Maintenance - *Curtis Hinman*  
*Learn about the water quality benefits of bioretention systems, from the pollutants they are capable of removing to long term performance. Also discuss important considerations during construction, ideal planting windows and long-term maintenance needs.*
- 11:30 am Whidbey Island rain garden examples - *Stacy Smith*
- 11:45 am Testimonial from local contractor who incorporated bioretention
- 12:00 pm FIELD TRIP #2 – Walk back up to project site to see installation and planting progress. Discuss sources and costs of rain garden materials (plants, soils, mulch, aggregate, etc.) – *Stacy Smith*
- 12:30 pm Turn in evaluations and adjourn

**ABOUT THE INSTRUCTORS**

**Curtis Hinman** is an associate professor with Washington State University Extension and adjunct faculty with the WSU Department of Natural Resource Sciences. He directs water resource programs for WSU Extension in Pierce County to protect water quality and aquatic habitat in the Puget Sound basin. Curtis is the author of the "Low Impact Development Technical Guidance Manual for Puget Sound" and the "Rain Garden Handbook for Western Washington Homeowners." He is researching, designing and monitoring various low impact development strategies applicable in western Washington, as well as serving on advisory committees that develop regional stormwater management policy and identify funding and research needs. Curtis has a bachelor's degree in environmental policy analysis and planning (specializing in lake ecology and water resource management) from the University of California at Davis. He also holds a master's degree with a concentration in stream ecology and watershed management from Yale University.

**Tom Slocum** directs the engineering services program for San Juan, Skagit, Whidbey Island and Whatcom Conservation Districts. He has expertise in engineering, permitting, grant writing and project management related to salmon habitat restoration, water quality protection and stormwater management. He received his J.D. degree from Seattle University Law School, his M.S. in civil / environmental engineering from Northeastern University and his B.A. from Dartmouth College.

**Stacy Smith** is the Natural Resource Planner for the Whidbey Island Conservation District, she holds a BS and MS in Environmental Science, along with a BA in Spanish from the University of Idaho. She is experienced in storm water management and erosion and sediment control through developing a Best Management Practices (BMPs) Handbook for maintaining rural roads in Idaho and work as Project Manager for Clear Water Compliance Services.



**Whidbey Island Conservation District**  
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*Pervious Concrete in action*  
Photo by: Daily Commerce News & Construction Record



*Fort Nugent Park, Oak Harbor*



*Pervious Concrete Close-up*



*Pervious Concrete Installation*  
Photo by: Chris Webb



WHIDBEY ISLAND CONSERVATION DISTRICT presents:

## Pervious Concrete Demonstration Workshop

Tuesday, June 10, 2008 – 8:00AM - 12:30PM

Langley United Methodist Church

***This is a FREE event, but space is limited – RSVP early! \****

Pervious concrete is one of several options for permeable pavement surfaces, an emerging Low Impact Development (LID) technique. A permeable pavement surface allows rain water to penetrate and flow through the surface and into the subsurface drainage structure, underlying soils and eventually groundwater. In contrast, traditional paving surfaces allow the rain water to sheet flow and collect where it is then conveyed to storm-water ponds, pipes and drainage structures and directed downstream - eventually into Puget Sound and often untreated.

Pervious concrete is a concrete pavement consisting of cement, coarse aggregates, water and other specialty components to produce sufficient paste and bonding ability to glue coarse aggregates together. This creates an in-place void structure so the streets, driveways, and walkway essentially “drink” the water. Pervious concrete provides an alternative approach to stormwater management with the strength and performance of conventional concrete paving.

Andy Marks, who has extensive knowledge and experience with pervious concrete, will be the primary instructor. All your questions, reservations, and curiosities about pervious concrete will be answered! In this workshop you will learn about the specifications, subgrade requirements, applications (walkways vs. roadways), maintenance, and installation procedures for pervious concrete. Participants will see and learn about the sub surface preparation as well as how the concrete is poured, finished, cured, and protected at a demonstration site at the South Whidbey Sports Complex near Langley.

### Who Should Attend?

Concrete Contractors • Builders • Developers • Landscape Designers • Planners  
Engineers • Local Jurisdictions • Water Resource Professionals • Interested Citizens

### Instructor:

Andrew Marks, Managing Director  
of the Puget Sound Concrete Specification Council

**Clock hours or continuing  
education units available.  
Please inquire in advance.**

### Location:

Langley United Methodist Church, 3rd Street and Anthes Ave in Langley. Directions to demonstration site will be provided the morning of the workshop.

Sponsored by: *Whidbey Island Conservation District; Island County Departments of Public Health, Island County Marine Resources Committee, Langley United Methodist Church, South Whidbey Parks and Recreation, Concrete Nor'West, Krieg Concrete Products Inc, Rempel Bros Concrete, Inc, and the Department of Ecology through a WRIA 6 Watershed Planning Grant.*



*Goosefoot Foundation's Office, Bayview Corner*

**\* Walk-ins welcome as space allows, however RSVP for event preparations by FRIDAY, June 10 is appreciated. Contact Stacy Smith at the Whidbey Island Conservation District (360) 678-4708 or email: [stacy@whidbeycd.org](mailto:stacy@whidbeycd.org)**

**Pervious Concrete Demonstration Workshop**  
**Tuesday, June 10, 2008 8:30AM - 1:00PM**  
**Langley United Methodist Church**

**AGENDA OVERVIEW**

- 7:45 am Registration, coffee, pastries and networking
- 8:10 am Welcome, introductions, workshop schedule, and brief Low Impact Development (LID) overview – Why Permeable Pavements? - *Stacy Smith, Whidbey Island Conservation District*
- 8:30 am What is pervious concrete and why it works, Basics of design and installation (specifications, products, sub grade requirements) - *Andy Marks, Puget Sound Concrete Specification Council*
- 9:45 am FIELD TRIP #1 – caravan to South Whidbey Sports Complex to watch beginning of pervious concrete pour.  
Design and site considerations of pervious concrete walk ways - *Ron Young, Young Associates Project Services, LTD., Project Manager for South Whidbey Parks & Recreation*
- 10:35 Return to Langley United Methodist Church
- 10:30 Water Quality Benefits – *Andy Marks*  
*Learn about the water quality benefits pervious concrete can offer, from the stormwater management benefits to the pollutants that can be treated. -- Operations and Maintenance – Andy Marks*  
*Learn about the important considerations during design and construction, having certified installers and what maintenance is required or recommended.*
- 11:30 am Whidbey Island permeable pavement examples - *Stacy Smith*
- 11:45 pm Testimonial by the Goosefoot Foundation who used pervious concrete for their parking lot.
- 12:00 pm FIELD TRIP #2 – return to South Whidbey Sports Complex to watch beginning of pervious concrete pour.  
Local sources and costs for materials (base, mix, contractors, etc.) - *Stacy Smith*
- 12:30 pm Turn in evaluations and adjourn

**ABOUT THE INSTRUCTOR AND SPEAKERS**

**Andrew Marks** is Managing Director of the Puget Sound Concrete Specification Council (PSCSC). He is a registered professional engineer in Oregon and Washington and holds a master's degree in Civil (Water and Wastewater) Engineering. He is a current director of the Washington Chapter American Concrete Institute (ACI), and past director of the Oregon Chapter American Concrete Institute (OACI). He is a member of the Construction Specifications Institute (CSI), a member of Structural Engineers Association of Washington (SEAW) and has been a featured speaker at World of Concrete. He has been an instructor at American Institute of Architects (AIA) seminars, guest lectured at colleges and universities, including University of Washington College of Engineering, and is an ACI examiner. Previously he was a field engineer with the Portland Cement Association (PCA), and also managed ready mix and pumping operations for a major northwest concrete producer.

**Ron Young** is a principal in Young Associates Project Services, Ltd, a project management consulting firm based in Clinton, Washington. A self-proclaimed optimist, Ron has been in the construction industry for over 30 years. He attended the University of Oregon School of Architecture, was a general contractor for 10 years, and worked as an industrial-commercial project manager before founding Young Associates in 1996. Ron has managed many multi-million dollar projects, and is strong in the areas of problem solving, team-building, and project coordination.

Ron and his company were recently hired to provide project management for South Whidbey Parks and Recreation District construction projects.

**Stacy Smith** is the Natural Resource Planner for the Whidbey Island Conservation District. She earned a BS and MS in Environmental Science, along with a BA in Spanish, from the University of Idaho. She is experienced in storm water management and erosion and sediment control through developing a Best Management Practices (BMPs) Handbook for maintaining rural roads in Idaho and work as a Project Manager for Clear Water Compliance Services.



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