As part of its 100 Anniversary Celebration, the ASCE Inland Empire Section is pleased to present a one-day workshop on pervious pavements. The seminar will include presentations on design theory, material options and specifications, and case studies of completed projects with a focus on availability of pervious pavements, construction experience, quality control, maintenance, and lessons learned.

The seminar will include presentation on:
- Permeable pavement in the Spokane area
- Pervious concrete in Pullman
- A case study of permeable pavements in the Pacific Northwest

Presenters for the workshop include:
- Dr. Liv Haselbach, P.E., Washington State University
- Robin Kirschbaum, P.E., HDR, Inc.
- Bruce Chattin, Washington Aggregates and Concrete Association
- Art Jenkins, P.E., City of Spokane Valley
- Marcia Davis, P.E., City of Spokane
- Mark Papich, P.E., City of Spokane

This course qualifies for 6 PDH continuing education hours.
**Agenda:**

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<thead>
<tr>
<th>Morning</th>
<th>Afternoon</th>
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<tr>
<td>8:00 to 8:30 Registration and Coffee</td>
<td>12:30 to 1:45 Pervious Pavement</td>
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<td>8:30 to 8:35 Welcome and Introduction</td>
<td>- Bruce Chattin, Washington Aggregates and Concrete Assn.</td>
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<td>- Alan Gay, P.E.</td>
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<tr>
<td>8:35 to 9:55 Pervious Concrete in Pullman</td>
<td>1:45 to 2:45 Local Perspective</td>
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<td>- Dr. Liv Haselbach, P.E., WSU</td>
<td>- Art Jenkins, P.E., City of Spokane Valley</td>
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<td>9:55 to 10:10 Break &amp; refreshments</td>
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<td>10:10 to 11:30 Case Studies of Permeable Pavement Applications in the Pacific Northwest</td>
<td>2:45 to 3:00 Break &amp; refreshments</td>
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<td>- Robin Kirschbaum, P.E., HDR</td>
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<tr>
<td>11:30 to 12:30 Lunch</td>
<td>3:00 to 4:00 Permeable Pavements in Spokane-Past, Present, and Future</td>
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<td>- Marcia Davis, P.E. and Mark Papich, P.E., City of Spokane</td>
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<td>4:00 Adjourn</td>
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**Instructor Bios**

**Liv Haselbach, PhD, P.E.** received her BS from Cornell in Civil and Environmental Engineering, her MS from Berkeley in Chemical Engineering and her PhD in Environmental Engineering from the University of Connecticut. From the late 80s to the early 2000s she was the proprietor of a small consulting firm in the NY area specializing in land development. She is now an associate professor at Washington State University and the author of the GreenSource professional book ‘The Engineering Guide to LEED-New Construction: Sustainable Construction for Engineers’. Her research and teaching focus on sustainable construction and low impact development. She has authored numerous papers, and has helped develop national testing methods and specifications on pervious concrete. She is a licensed professional engineer and a LEED Accredited Professional.

**Robin Kirschbaum, P.E. LEED AP** is a civil engineer with expertise in stormwater management, hydrologic/hydraulic analysis, Low Impact Development (LID), and Green Stormwater Infrastructure (GSI) design and implementation. She leads HDR Engineering’s stormwater group for the Pacific Northwest region, where her typical projects include design and construction of municipal Capital Improvement Projects; LID retrofit planning studies; GSI for CSO control; regional stormwater management; NPDES permit support; and professional instruction on design, construction, and long-term maintenance of GSI facilities.

**Bruce Chattin** currently is the Executive Director for the WA Aggregates & Concrete Association since 1990 and also served as Promotion Director for the Association. He has been involved in the design and placement of pervious concrete since 1992 and currently serves on the NRMCA Pervious Certification Task Force, ACI 522 Pervious Concrete Committee and manages the regional NRMCA Pervious Certification Program in WA, AK and ID as well as participating in numerous pervious functions and projects throughout the Northwest.
Art Jenkins, P.E. has over 20 years of Civil Engineering experience including material transportation systems, road, bridge, stormwater design and construction, and project/program management in these realms. He has directly worked for both consultants and owners in both the private and public sectors. He has over 11 years of direct stormwater experience designing, managing, and implementing National Pollutant Discharge Elimination System (NPDES) Phase 1 and 2 permits and Underground Injection Control (UIC) requirements, programs, and projects. For the past 5 years, he has been leading a team to build the Stormwater Program out at the City of Spokane Valley, where his experience has included building sustainable stormwater projects to improve water quality, meet regulations, and improve operational efficiencies. Art is a registered Civil Engineer (WA, ID, & UT) and an APWA Certified Stormwater Manager. When he is not program/project managing or engineering, he enjoys time with his family on a little piece of acreage cutting down trees (since we can't burn the forest) and also watching four goats, nine chickens, a dog and a cat make a mess out of the place.

Marcia Davis, P.E. has over 20 years of experience as a civil engineer in both the public and private sector. While working at the City of Spokane, Marcia has focused on stormwater and utility planning as well as seeking funding for projects. As part of the Integrated Capital Projects Department, she prepares stormwater and CSO projects for implementation. Previous to working at the City, Marcia’s work includes combined sewer overflow abatement, water and sewer infrastructure as well as stormwater and road design. She is a professional engineer with licenses in Washington and California

Mark Papich, P.E., LEED AP has over 10 years of experience as a civil engineer in both the public and private sector. While working at the City of Spokane, Mark has focused on stormwater and utility projects as well as seeking funding for those projects. As part of the Integrated Capital Projects Department, he works with City utility departments to prepare projects for implementation. His private sector experience includes site development for retail and education as well as road design. Mark is a professional engineer in Washington and is a LEED Accredited Professional.
Registration

Cost: $100.00  (includes seminar, lunch and refreshment breaks)
          Full time students are entitled to a reduced enrollment fee of $20.00

Education Credit:
          0.6 CEUs (6 PDHs) for attendance of this course.

Deadline Notice:
          Space is limited to 60. To ensure participation, enroll early.
          Registration will close on April 18, 2014.

Process:
          Step 1: Fill out the registration form below and send to:
                  Alan Gay
                  USKH
                  621 West Mallon Ave., Suite 309
                  Spokane, WA 99201
                  or email form to:  agay@uskh.com
          Step 2: For payment:
                  - Include check with registration, payable to ASCE Inland Empire
                  or
                  - Use Pay Pal through www.asce-ie.org

For more Information:
          Contact: Alan Gay
                  (509) 328-5139 (telephone)
                  agay@uskh.com

Name: ____________________________________________  Send registrations to:  Alan Gay
Company: __________________________________________
Day Phone: ________________________________________
E–mail: ____________________________________________
          Enroll: _____  Attendees @ $100.00  ____________
          _____  Attendees @ $20.00  ____________
          Total enclosed: ____________
Make checks payable to:  ASCE Inland Empire
Or use Pay Pal through:  www.asce-ie.org