

# 28<sup>th</sup> Annual Water Environment School



## Join us for the 28<sup>th</sup> Annual PNCWA Water Environment School at Clackamas Community College

This event gives the registered participant the opportunity to gain a full 2.3 CEUs. Presented topics will provide supplemental occupational education, training, and technical upgrading for those employed in both the municipal and industrial arenas.

*For questions and more school information, contact:*

SCHOOL INFORMATION
<p>Naomi Sether or John Lewis Clackamas Community College 19600 S. Molalla Avenue Oregon City OR 97045 Phone: 503-657-6958 X2364 (Naomi) X2206 (John) E-Mail: <a href="mailto:naomis@clackamas.edu">naomis@clackamas.edu</a> <a href="mailto:jlewis@clackams.edu">jlewis@clackams.edu</a></p>

REGISTRATION INFORMATION
<p>Mike Stebbins City of Portland Columbia Blvd. Facility 5001 N. Columbia Blvd. Portland OR 97203 Phone: 503-823-2653 FAX: 503-823-2409 E-Mail: <a href="mailto:mikest@bes.ci.portland.or.us">mikest@bes.ci.portland.or.us</a></p>

	Pre-Registration	On-Site Registration
Full-three days:	<input type="checkbox"/> \$ 125	<input type="checkbox"/> \$ 135
Two days:	<input type="checkbox"/> \$ 105	<input type="checkbox"/> \$ 115
One day:	<input type="checkbox"/> \$ 65	<input type="checkbox"/> \$ 75
*Student (3-day)	<input type="checkbox"/> \$ No charge	<input type="checkbox"/> \$ No charge

\*Students must be currently enrolled as full-time students in a community college approved environmental program, or full-time science/engineering students in an applicable curriculum at a college or university to qualify for "No charge" registration. Call if you have questions on your status.

March 23 - 25, 2004



**Included in your registration package are  
continental breakfast, break time refreshments,  
and buffet lunch.**

## Financial Assistance - Grants-in-Aid Available

The Water Environment School Committee in conjunction with the Oregon Region of the PNCWA are again sponsoring "Grant-in-Aid" assistance to attend the 28th Annual School at CCC. Steve Desmond and George Kneese, Water Environment School committee members, will coordinate this effort. Grants will be given up to \$250 for expenses and the three-day registration fee will be waived. These grants are intended for individuals who have been unable to participate in organized training programs due to local budget constraints, travel distance to training opportunities, or other support issues.

To apply for a "Grant-in-Aid" you must make your written request to the Oregon Region PNCWA Education Selection Committee postmarked no later than Friday March 13<sup>th</sup>, 2004. Please include (on official letterhead) your treatment plant/collection system type, size, and staffing level; include your name and certification grade and a general statement of funding need. All applications will be evaluated and awards will be dependent on the number of applications that are received, the funding amount being requested, and the availability of funds for distribution this year. Mail your application to:

**Steve Desmond**  
 Department of Environmental Quality  
 811 SW Sixth Avenue  
 Portland, OR 97204-1390  
 Phone: (503)229-6824 or toll free (800) 452-4011  
 FAX: (503) 229-6037

*Good luck and we hope to see you at the School!*

## PNCWA Membership Information

The Pacific Northwest Clean Water Association (PNCWA) is one of the member associations to the Water Environment Federation (WEF). Our association promotes environmental education and issues throughout the world, yet brings needed information, assistance, and training to the local operations level. This year, you will have the opportunity to discuss the benefits of joining this most prestigious and cooperative association of wastewater professionals. For information contact John Lewis at Clackamas Community College by phone at (503) 657-6958 ext. 2206. He will mail you a WEF/PNCWA application or have one ready for you at the School.

## Lodging Information

This list provides you with a few motel choices. The college is located only 5 minutes south off I-205 (Park Place Exit #10), which makes access from this freeway quick and easy. When making your reservation, be sure to mention "Clackamas Community College Water Environment School" to ensure that you are quoted the rates listed here.

<p><b>RIVERSHORE</b>                      1900 Clackamette Drive                      Oregon City, OR 97045                      1-4 people/room with 1 or 2 beds.                      \$60*                      Local Phone:                      (503) 655-7141                      Toll Free Phone:                      1-(800) 443-7777                      *Add 11% city and county tax.                      Includes full breakfast.</p>	<p><b>SUNNYSIDE INN MOTEL</b>                      12855 S.E. 97<sup>th</sup>                      (I-205/Sunnyside Exit 14                      Clackamas, OR 97015                      1-4 people/room with 1 or 2 beds:                      \$55*                      Local Phone:                      (503) 652-1500                      Toll Free Phone:                      1-(800) 547-8400                      *Add a 7% county tax. Includes                      continental breakfast.</p>
<p><b>DAYS INN</b>                      9717 S.E. Sunnyside Road                      (I-205 at Exit #14)                      Clackamas, OR 97015                      1-4 people/room: \$59*                      Phone:(503) 654-1699                      or: 1-(800) 325-2525                      *Add a 7% county tax. Includes                      continental breakfast.</p>	<p><b>HAMPTON INN</b>                      9040 S.E. Adams                      Clackamas, OR 97015                      (I-205 @ Clackamas/Estacada Exit                      #12 from the South and Exit #12A                      from the North)                      Single/Double: \$59*                      All Reservations,                      Phone:(503) 655-7900                      * Add a 7% county tax. Includes                      continental breakfast and free                      evening reception.</p>
<p><b>OXFORD SUITES</b>                      75 82<sup>nd</sup> Drive (by Safeway Store)                      Gladstone, Oregon 97027                      (I-205 @ Gladstone Exit # 11                      1-2 people/room : \$69*                      * Add a 7% county tax                      100% Non-smoking                      Phone:(503)722-7777                      or: 1-877-558-7710                      Oxford Suites serves a complete                      breakfast and evening hors                      d'oeuvres &amp; beverages</p>	

# March 23 - 25, 2004

## 28th Annual Water Environment School Registration Form

Please complete all information below. Please **print** clearly.

### **CLACKAMAS** Mail-in Registration Form

## 2003-2004

Summer  Fall  Winter  Spring  Term

Date:

Social security #:

Name:

Home Address:

Address/phone:

History:

**all that apply:**  
Info in this section used for educational planning, maintaining records, support services. Privacy of records is protected (see Student Handbook). We appreciate your voluntary response.

Male  Female Oregon resident last 90 days?  Yes  No  
Citizen of:  I live:  In district  Out of district  Out of state  
**Ethnic data:**  Black/Non-Hispanic  White/Non-Hispanic  Using Veterans Benefits  A veteran *not* using Veterans Benefits but received Honorable Discharge from Military Service  
 Hispanic  American Indian/Alaskan Native  Asian/Pacific Islander  
**Emergency contact:** Phone: \_\_\_\_\_  
Requesting Disabled Student Services   
Disabled but not requesting Disabled Student Services

I'd like to contribute to Student Emergency Fund:  \$5  \$10  Other: \_\_\_\_\_

Last:		First:		Initial:		Date of birth (month/day/year)	
Street address				Organization/Agency:			
City:		State:		Zip:		Home phone:	
Previous name(s)				State		Year of diploma/GED	
Work phone:		Year of diploma/GED					

Program code:  
**KWSS**

<b>Course-Sec. #</b>	<b>Course name</b>	<b>Cred.</b>	<b>Time</b>	<b>M</b>	<b>T</b>	<b>W</b>	<b>Th</b>	<b>F</b>	<b>S</b>	<b>Su</b>	<b>Room</b>	<b>Start date</b>
WQT-009-01	Water Environment School	2.3 CEU	8-5			X	X	X			Comm Ctr	3/23-3/25/04

**Preregistration:**  Full Reg \$125  2 Day Reg \$105  1 Day Reg \$65  Students \$0 **Amount enclosed**  
**On-Site Registration:**  Full Reg \$135  2 Day Reg \$115  1 Day Reg \$75 **(Proof required)** \$ \_\_\_\_\_

**No Visa/Mastercard Accepted** Make checks or purchase orders payable to: **PNCWA Continuing Education Fund.**

**Please return form and fee to:**

Water Environment School  
c/o PNCWA Continuing Education Fund

Attn: Dick Parker-Resnick

Columbia Blvd. WWTP • 5001 No. Columbia Blvd., Portland, OR 97203  
FAX: 503-823-2409 • Phone: 503-823-2665

**DO NOT send registration to Clackamas Community College. One registration per person! Your pre-registration form must be received by March 15, 2004.**

Clackamas Community College's Affirmative Action Policy ensures that discrimination based on race, color, religion, sex, marital status, age, disability, and family relations does not exist in any area, curriculum activity, or operation of the college.

For Office Use Only

CEU

Fed. Tax I.D. 93-0972032

## DEQ Testing

### March 26<sup>th</sup>, 2004

(Application Deadline: February 1, 2004)

The Oregon Department of Environmental Quality will administer the certification exams in all grades (I-IV) for both wastewater treatment and wastewater collection systems on Friday, March 26<sup>th</sup>, 2004 (8:30 am - 12:30 pm) at Clackamas Community College, Pauling Center, Room P101, in Oregon City. You must apply to the DEQ by February 1, 2004 and receive approval prior to testing in March. You will need to attach to your application proof that you have met, or will meet within 4 months following the month of the exam, the education requirements for the certificate sought. Required documents include a copy of your High School Diploma or GED certificate, and for all post high school claims, copies of college or university transcripts, and certificates of continuing education (CEUs or training hours). The Water Environment School will offer the opportunity to meet a minimum of 2.0 CEUs. For applications and further information, contact the DEQ Certification Program Office, at (503) 299-5622 or toll free in Oregon 1-800-452-4011, ext. 5622.

Current application forms, certification rules, fees and exam information may also be found on the DEQ website at:  
[www.deq.state.or.us/wq/opcert/opcert.htm](http://www.deq.state.or.us/wq/opcert/opcert.htm)

### 2004 Manufacturer's Representatives Exhibit

This year's manufacturer/exhibitor display will be on Wednesday, March 24, 2004 in Randall Gymnasium. There is still time to reserve a table; please call Mark Stetzel at 503-682-1231 or e-mail: [stetzel@ci.wilsonville.or.us](mailto:stetzel@ci.wilsonville.or.us) for more information.

Please plan to visit the exhibitor's display on Wednesday!!

☞ Thank You ☜

## Water Environment School Committee

Chair: *George Kneese*  
Co-chair: *Pam Flynn-Anderson*  
Treasurer: *Pam Flynn-Anderson*  
Registration: *Dick Parker-Resnick*  
*Mike Stebbins*  
*Andrew Knight*  
*Brandy Bowers*  
*Bruce Robbins*

**Section 1 - Operations - McLoughlin Theater**

*Kay Hust, Mark Walters, Woody Woodward*

**Section 2 - Source Control - Pauling 101**

*Eric DeBerry, Ed Gilmore, Brad Rumbaugh*

**Section 3 - Collections - Gregory Forum C**

*Tom Binder, Jim Lowe*

**Section 4 - Maintenance - Barlow Hall Automotive Area**

*Buck Buckland, Tim Munro*

**Section 5 - Management and Supervision - CC 127**

*Joel Borchers, Mark Poling, Tom Stow*

**Section 6 - Wastewater Basics - Gregory Forum B**

*Monica Anderson, Steve Desmond*

**Section 7 - Biosolids Management - Pauling 102**

*Tim Killingbeck, Bob Watson*

**Section 8 - Stormwater - Gregory Forum A**

*Luke Bushman, John Nagy, Shaun Rohret*

**Section 9 - Safety - McLoughlin 206**

*Faye Lindroos*

**Section 10 - Laboratory - Pauling 164**

*Victoria Boettcher, Charles Lytle*

**Section 11 - Technology - Pauling 132**

*Steve Hanson*

**Manufacturer Display - Randall Gymnasium**

*Mark Stetzel, Gus Wettstein*

Section 1  
Operations  
McLoughlin Theater

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**Tuesday**

8:30 **Opening Ceremony - Randall Gymnasium**  
10:00 Modernizing Wastewater Plants - *John Harrison, P.E.*  
11:00 Modernizing Wastewater Plants - *continued*  
1:00 Modernizing Wastewater Plants - *continued*  
2:00 Modernizing Wastewater Plants - *continued*  
3:00 Modernizing Wastewater Plants - *continued*  
4:00 Modernizing Wastewater Plants - *continued*

**Wednesday**

8:00 Equipment Procurement Practices to Insure Project Success -  
*Mark Walter, Beaver Equipment*  
9:00 Evaluation of Clarifier Performance - *Andrew Shaw, Process  
Specialist, Black & Veatch*  
10:00 On Line Instrumentation to Improve Energy Utilization & Plant  
Optimization - *Andrew Shaw, Process Specialist, Black & Veatch*  
11:00 **Manufacturer's Display - Randall Gym**  
1:00 Energy Efficiency at WWTPs - *Bob Sprick, Operations Supervisor,  
City of Eugene*  
2:00 Power Monitoring and Optimization - *Mike Greene, P.E., Marc  
Yarlott, P.E., U.S. Filter Operating Service*  
3:00 Instrumentation Upgrades to Improve Plant Efficiency - *Stu  
Fettters, Bainbridge Associates*  
4:00 Biological Nutrient Removal - Process Control and  
Troubleshooting - *Mario Benisch, P.E., HDR*

**Thursday**

8:00 Methane Utilization - *Jeremy Holland*  
9:00 Methane Utilization - *continued*  
10:00 Methane Utilization - *continued*  
11:00 Methane Utilization - *continued*  
1:00 Methane Utilization - *continued*  
2:00 Methane Utilization - *continued*  
3:00 Methane Utilization - *continued*  
4:00 Methane Utilization - *continued*

Section 2  
Source Control  
Pauling 101

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Tuesday

- 8:30 Opening Ceremony - Randall Gymnasium
- 10:00 Hillsboro Landfill - *Kathy Caldwell, Clean Water Services*
- 11:00 Investment Casting Wastewater Process - *Cindy Overstreet, Safety/Environmental Manager*
- 1:00 Waste Minimization at Albertson's - *John Bernado, Resource Conservation Manager*
- 2:00 Managing Marine Wastewater - *Alan Sprott, Cascade General*
- 3:00 PNCWA FOG Training - *Kathy Caldwell, Clean Water Services*
- 4:00 PNCWA FOG Training - *continued*

Wednesday

- 8:00 Challenges of a Centralized Waste Treatment Facility - *Bob Anderson, Pacific Power Vac*
- 9:00 Manufacturer's Display - Randall Gym
- 10:00 Site Improvements in Tualatin - *Doug Anderson, Glacier*
- 11:00 Removal of Soluble Mercury in Dental Office Wastestreams - *Katie Lubin, Hygen I Tek*
- 1:00 BOD Discharge Controls at PDX - One Year Later - *Doug Vincent, Port of Portland*
- 2:00 Industries Perspective of IPT Permitting - *Dotty Ramey, P.E., Civil Engineering Wastewater Mgmt., City of Vancouver*
- 3:00 City of Portland's Well Inventory Project - *John Holtrop, City of Portland*
- 4:00 Industry Pretreatment Film - *Ken Kerri*

Thursday NO SESSIONS

Section 3  
Collections  
Gregory Forum C

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Tuesday

- 8:30 Opening Ceremony - Randall Gymnasium
- 10:00 Trenchless Technology Overview
- 11:00 Trenchless Technology Overview - *continued*
- 1:00 Sewer Cleaning Nozzles, Hose & Accessories
- 2:00 Pipe Pigging - *Don Lauinger*
- 3:00 Sewer Nozzle Demonstrations - *Jim Lowe, Enviroclean Equipment*
- 4:00 Sewer Nozzle Demonstrations - *continued*

Wednesday

- 8:00 Hydrogen Sulfide Damage and Control - *Kim Ashmore, City of Centralia*
- 9:00 Hydrogen Sulfide Damage and Control - *continued*
- 10:00 Confined Space & PPE - *Greg McDonald, Public Works Supply - Combined with Safety*
- 11:00 Confined Space & PPE - *continued*
- 1:00 TV Inspection System Troubleshooting and Maintenance - *Dave Vaughn, DVA and Associates, Inc.*
- 2:00 Manufacturer's Display - Randall Gym
- 3:00 Vacuum System Technology - *Brad Lowe, Enviroclean Equipment*
- 4:00 Vacuum System Technology - *continued*

Thursday

- 8:00 Traffic Safety and Flagging - *Dave White, OTTC - Combined with Safety in Gregory Forum C*
- 9:00 Traffic Safety and Flagging - *continued*
- 10:00 Traffic Safety and Flagging - *continued*
- 11:00 Traffic Safety and Flagging - *continued*
- 1:00 Television Inspection Data Acquisition Systems - *Rich Stubbs, CUES*
- 2:00 CMOM and You! - *Steve Tilson, Tilson and Associates*
- 3:00 CMOM and You! - *continued*
- 4:00 CMOM and You! - *continued*

Section 4  
Maintenance  
Barlow 110A

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Tuesday

- 8:30 Opening Ceremony - Randall Gymnasium
- 10:00 Infrared Basics - *Rusty Shwartz*
- 11:00 General Alignment Principals - *Roy Loop*
- 1:00 Alignment Methods - *Roy Loop*
- 2:00 Polymeric Repair Systems - *Glen Hanenberg*
- 3:00 Drives and Motors
- 4:00 Drives and Motors - *continued*

Wednesday

- 8:00 Compressed Air - Friend or Foe - *Jeff Yarnall*
- 9:00 Operation and Maintenance of Blowers - *Elmer Van Loo*
- 10:00 Washer Compacter Technology - The Good, The Bad, and The Ugly - *Tommy Knappich*
- 11:00 Mechanical Seals, Pump Testing Equipment and Impeller Design - *Jerry Hockert*
- 1:00 Manufacturer's Display - Randall Gym
- 2:00 Chemical Addition Pumps - *Phillip Pellitier*
- 3:00 Trends in Submersible Pump Technology - *Tommy Knappich*
- 4:00 Electric Motor Lubrication - *Curtis L. Cummins*

Thursday

- 8:00 Urethane Repair of Equipment in the Wastewater Industry - *Steve Hance*
- 9:00 Power Twist Belting and Trans-Torque Bearings - *Kim Dorsing/Dean McGee*
- 10:00 Submersible Pumps - Maintenance and Control Part 1 - *Tim Curns*
- 11:00 Submersible Pumps - Maintenance and Control Part 2 - *Tim Curns*
- 1:00 Maintenance and Operation of Electric Valve Actuators - *Jim Robbins*
- 2:00 Flow Paced Chemical Injection - *Phillip Pellitier*
- 3:00 Gas Monitoring and Maintenance Part 1 - *Ron Simmons*
- 4:00 Gas Monitoring and Maintenance Part 2 - *Ron Simmons*

Section 5  
Management & Supervision  
Community Center 127

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Tuesday

- 8:30 Opening Ceremony - Randall Gymnasium
- 10:00 Performance Evaluations - *Tom Stow, Clean Water Services*
- 11:00 New Trends in Online Analyzers - *Rob Bauer, Clean Water Services*
- 1:00 Introduction to NELAC/ORLAP and Implications for NPDES Permitting - *Dan Hickman, Oregon DEQ - Combined with Lab*
- 2:00 The ORLAP Technical Advisory Committee - *Alberta Seierstad, City of Portland Water Bureau - Combined with Lab*
- 3:00 ORLAP: The Municipal Lab Experience - *Jan Wilson, Clean Water Services; Keith Chapman, City of Salem; Angela Parrish, City of Corvallis - Combined with Lab*
- 4:00 Round Table Discussion - *Dan Hickman, Alberta Seierstad, Jan Wilson, Keith Chapman & Angela Parris - Combined with Lab*

Wednesday

- 8:00 The Roles of Managers and Supervisory in Project Management - *Jeff Crow, Crow Development Corporation*
- 9:00 The Roles of Managers and Supervisory in Project Management - *continued*
- 10:00 The Roles of Managers and Supervisory in Project Management - *continued*
- 11:00 The Roles of Managers and Supervisory in Project Management - *continued*
- 1:00 Construction Coordination - *Jim Highhouse, Clean Water Services*
- 2:00 Manufacturer's Display - Randall Gym
- 3:00 Balanced Scorecards - *Joel Greene*
- 4:00 Basic Management Principles - *Tom Arnold, Principle Engineer, City of Hillsboro*

Thursday

- 8:00 Watershed Permits - *Charles Logue, Clean Water Services*
- 9:00 Flow Reconciliation - *Randy Naef, Clean Water Services*
- 10:00 Defining the One in Five Year Storm Event - *Jon Gasik, DEQ*
- 11:00 The Plant Construction and Modification Approval - *Jon Gasik, DEQ*
- 1:00 4D Protective Rules - *Rosemary Furfey, NMFS*
- 2:00 Recruitment of Plant Operators - *Tina Powers, Clean Water Services*
- 3:00 Managers Liability - *Bert Krages*
- 4:00 No Session

Section 6  
**Wastewater Basics**  
Gregory Forum B

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**Tuesday**

- 8:30** Opening Ceremony - Randall Gymnasium
- 10:00** Preliminary Treatment - *Pat Curran, Curran - Mcleod Engineers*
- 11:00** Primary Treatment - *Pat Curran, Curran - Mcleod Engineers*
- 1:00** Operation and Maintenance of Faculative Lagoons - *Holly Ploetz*
- 2:00** Operation and Maintenance of Aerated Lagoons - *Holly Ploetz*
- 3:00** Spills and Overflows - Reporting and Compliance - *Debra Gorman, Clean Water Services*
- 4:00** Public Health - *Tobbi Harris, Washington County Health Department*

**Wednesday**

- 8:00** Natural Systems & Effluent Re-use - *John Harrison, Kennedy Jenks*
- 9:00** **Manufacturer's Display - Randall Gym**
- 10:00** Trickling Filters and RBC's - *John Harrison, Kennedy Jenks*
- 11:00** Chemical Control Systems - *Greg Brown, Pacific Services and Supply Company*
- 1:00** Basic Biosolids - *Judy Johndohl, DEQ WQ Division*
- 2:00** Permits & Compliance - *Rene Nomura, DEQ WQ Division*
- 3:00** Basic Math for WW Treatment - *Robert Sprick, City of Eugene MWWC WWTP*
- 4:00** Applied Math for WW Treatment - *Robert Sprick, City of Eugene MWWC WWTP*

**Thursday**

- 8:00** Monitoring Reports (DMRs) & System Records - *Beth Moore, DEQ WQ*
- 9:00** Basic WW Collection Systems - *John Holland, Brown and Caldwell*
- 10:00** Basic Math for WW Collection - *Paul Eckley, City of Salem*
- 11:00** Basic Math for WW Collection - *Paul Eckley, City of Salem*
- 1:00** Activated Sludge Basics - *Dale Richwine, MWH*
- 2:00** Troubleshooting Activated Sludge - *Dale Richwine, MWH*
- 3:00** Disinfection Basics - *Dale Richwine, MWH*
- 4:00** Operator Rights and Responsibilities - *Bert Krages, Attorney at Law*

Section 7  
**Biosolids Management**  
Pauling 102

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**Tuesday**

- 8:30** Opening Ceremony - Randall Gymnasium
- 10:00** Biosolids Jeopardy - *Dave Arguello, CWS, Tim Killingbeck, WES & Bob Watson, OMI-Gresham*
- 11:00** Compliance State & Federal - *Judy Johndahl, DEQ*
- 1:00** Biosolids Management Plans - *Judy Johndahl, DEQ*
- 2:00** Mapping a Site with GIS & Data Base Recordkeeping - *Carol Murdock & Tim Killingbeck, WES*
- 3:00** Site Management - *Bob Watson, OMI-Gresham*
- 4:00** Wrap Up - *Dave Arguello, Tim Killingbeck, Bob Watson, Judy Johndahl*

**Wednesday**

- 8:00** Solids Stabilization & Handling - *Matt Noeson*
- 9:00** Biosolids Sampling & Testing - *Dan Strong, Kristina Franklin & Ron Meyers, WES*
- 10:00** Nutrient Management at Application Sites - *Andy Bary, WSU*
- 11:00** Soil Testing and Interpretation - *Craig Cogger - WSU*
- 1:00** **Manufacturer's Display - Randall Gym**
- 2:00** Dealing with the Media Session #1 - *Joe Krumm, NCSO 12 & Ron Oberg, Clackamas County PRG*
- 3:00** Dealing with the Media Session #2 - *Joe Krumm, NCSO 12 & Ron Oberg, Clackamas County PRG*
- 4:00** Wrap Up & Discussion - *Matt Noeson, Dan Strong, Kristina Franklin, Ron Meyers, Andy Bary, Craig Cogger & Joe Krumm*

**Thursday**

- 8:00** Improvements to Aerobic Digestion - *Dale Richwine, Montgomery Watson*
- 9:00** Lime Stabilization - *Dale Richwine, Montgomery Watson*
- 10:00** Water Reuse Issues - *Mark Cullington, DEQ*
- 11:00** Reuse Project in Medford - *Jim Hall, City of Medford*
- 1:00** Use of Reclaimed Water - *Kent Madison, Madison Farms, Hermiston, Oregon*
- 2:00** Woodburn's Popular Project - *Frank Sinclair, City of Woodburn*
- 3:00** Wetlands and Poplar Trees - *Steffeny Eisner, City of Salem*
- 4:00** Wrap Up & Discussion - *Dale Richwine, Mark Cullington, Jim Hall, Kent Madison, Frank Sinclair, Steffeny Eisner*

Section 8  
Stormwater  
Gregory Forum A

Tuesday

- 8:30 Opening Ceremony - Randall Gymnasium
- 10:00 Implementing a Stormwater Inspection Program - *Rick Rischl, Clean Water Services*
- 11:00 Water Quality Facility Tracking & Inspection - *Michael Pronold - BES*
- 1:00 Portland Big Pipe Erosion Control - *Patti Oliver, BES*
- 2:00 Guadalajara Disaster Revisited - *Miguel Santana, BES*
- 3:00 No Session
- 4:00 No Session

Wednesday

- 8:00 Pervious Pavement - *Dave Frentress, Glacier NW*
- 9:00 Green Roof Technology - *Dave Frentress, Glacier NW*
- 10:00 Manufacturer's Display - Randall Gym
- 11:00 Commercial Erosion Control - *Skee Bernhardt*
- 1:00 Invasive Plant Removal with Goats - *Sharon Hoyt, Holley Land & Cattle Co.*
- 2:00 Willamette River 1938 - CCC
- 3:00 No Session
- 4:00 No Session

Thursday

- 8:00 Remembering the '96 Flood - *Kelly Hendryx*
- 9:00 Villebois Rain Management Systems - *Magnus Bernhardt, AEI*
- 10:00 Stormwater Operations and Maintenance - *Haig Valenzuela*
- 11:00 Wetlands & Road Construction - *Pat Carroll, McKay Sposito & Kerry Rappold, City of Wilsonville*
- 1:00 WSDOT Stormwater - *Sandy Salisbury, WSDOT*
- 2:00 Missoula Floods - *Oregon Field Guide, OPB*
- 3:00 No Session
- 4:00 No Session

Section 9  
Safety  
McLoughlin 206

Tuesday

- 8:30 Opening Ceremony - Randall Gymnasium
- 10:00 Below the Hook, Lifting Device Safety - *Art Stanley, West Coast Wire Rope & Rigging, Inc.*
- 11:00 Below the Hook, Lifting Device Safety - *continued*
- 1:00 Dig Safely - *Anita Floyd, Damage Prevention Manager, West Region, US West*
- 2:00 Dig Safely - *continued*
- 3:00 Terrorism - *Larry Thomas, Legacy Health Systems*
- 4:00 Terrorism - *continued*

Wednesday

- 8:00 Clandestine Drug Labs - *Bill Henle, Portland Fire Bureau*
- 9:00 Clandestine Drug Labs - *continued*
- 10:00 Confined Space & PPE - *Greg McDonald, Public Works Supply, Inc. – Combined with Collections in Gregory Forum C*
- 11:00 Confined Space & PPE - *continued*
- 1:00 Electrical Safety - GFCIs - *Michael Murphy, Safety Coordinator, NECA-IBEW*
- 2:00 Manufacturer's Display - Randall Gym
- 3:00 Hazard Communication Basics & Deciphering the MSDS - *Meri Reiley, City of Hillsboro Public Works*
- 4:00 Hazard Communication Basics & Deciphering the MSDS - *continued*

Thursday

- 8:00 Traffic Safety and Flagging - *Dave White, Oregon Technology Transfer Center - Combined with Collections in Gregory Forum C*
- 9:00 Traffic Safety and Flagging - *continued*
- 10:00 Traffic Safety and Flagging - *continued*
- 11:00 Traffic Safety and Flagging - *continued*
- 1:00 HazMat Awareness - *Dave Nuttall, City of Hillsboro*
- 2:00 HazMat Awareness - *continued*
- 3:00 "Trauma Nurses Talk Tough!" - *Joanne Fairchild, Legacy Emanuel Hospital Trauma Service*
- 4:00 "Trauma Nurses Talk Tough!" - *continued*

Section 10  
Laboratory  
Pauling 164

Tuesday

- 8:30 Opening Ceremony - Randall Gymnasium  
10:00 No Session  
11:00 No Session  
1:00 Introduction to NELAC/ORLAP and Implications for NPDES Permitting - *Dan Hickman, Oregon DEQ - Combined with Management & Supervision in CC127*  
2:00 The ORELAP Technical Advisory Committee - *Alberta Seierstad, City of Portland Water Bureau - Combined with Management & Supervision in CC127*  
3:00 ORELAP: The Municipal Lab Experience - *Jan Wilson, Clean Water Services; Keith Chapman, City of Salem; Angela Parrish, City of Corvallis - Combined with Management & Supervision in CC127*  
4:00 Round Table Discussion - *Dan Hickman, Alberta Seierstad, Jan Wilson, Keith Chapman & Angela Parrish - Combined with Management & Supervision in CC127*

Wednesday

- 8:00 USGS National Reconnaissance Sampling of US Streams for Emerging Contaminants: Implications of Wastewater Treatment Plants - *Joseph Rinella, USGS*  
9:00 Analytical Methods for Emerging Contaminants - *Jeff Christian, Columbia Analytical Services, Sue Dunnihoo, Analytical Resources, Marty French, Specialty Analytical & Ken Patton, North Creek Analytical*  
10:00 A New Instrumental Method for Measuring Dissolved Oxygen - *Hach, Inc.*  
11:00 **Manufacturer's Display - Randall Gym**  
1:00 ORELAP for Small Municipal Laboratories - *Keith Chapman, City of Salem & Angela Parrish, City of Corvallis*  
2:00 ORLAP for Small Municipal Laboratories - *continued*  
3:00 No Session  
4:00 No Session

Thursday No Sessions

Section 11  
Technology  
Pauling 132

Tuesday

- 8:30 Opening Ceremony - Randall Gymnasium  
10:00 WonderWare - *Larry Claussen, ISS WonderWare*  
11:00 IFIX SCADA Control of Columbia Blvd. WWTP - *Mark Madison, City of Portland, BES, Columbia Blvd. WWTP*  
1:00 PLC Basics - *Craig Rawie, CH2M*  
2:00 PLC Basics - *continued*  
3:00 IFIX SCADA Control Software - *Mark Fusick, CB Engineering*  
4:00 MPulse Maintenance Software - *Steve Brous*

Wednesday

- 8:00 In-Stream Monitoring - *Rob Peacock, PE Project Engineer, Curran-McLeod, Inc.*  
9:00 Membrane Technology - *Pat Curran, PE, Curran-McLeod, Inc.*  
10:00 **Manufacturer's Display - Randall Gym**  
11:00 City of Portland, BES Stormwater Program  
1:00 In-Stream Data Logging - *Beth Moore, DEQ*  
2:00 New Computerized DMR Form - *Gail Harradine, DEQ IT Dept.*  
3:00 Innovative Products for Stormwater Treatment - *Lewis Titus, Titus Industrial Group*  
4:00 Innovative Products for Collection Systems - *Lewis Titus, Titus Industrial Group*

Thursday

- 8:00 Metro GIS Water Quality Applications - *Mark Bosworth & Paul Couey, Geographical Information Systems, Metro*  
9:00 Go 5 Group Software - *Paul Ketchum, Water Resource Group, Metro*  
10:00 PCL Basics and Integrations of Control Strategies - *Mr. Johnston & Associates, North Coast Electric Co.*  
11:00 PCL Basics and Integration of Control Strategies - *continued*  
1:00 PCL Basics and Integration of Control Strategies - *continued*  
2:00 PCL Basics and integration of Control Strategies - *continued*  
3:00 Using GIS to Identify Natural Resources and Development Constraints - *Karen Streeter, Endangered Species Act Coordinator, Clackamas County*  
4:00 Inventorying the System and Establishing Flow Direction and the WesWorks Program - *Carol Murdock, GIS Coordinator, Clackamas County*

# Water Environment School

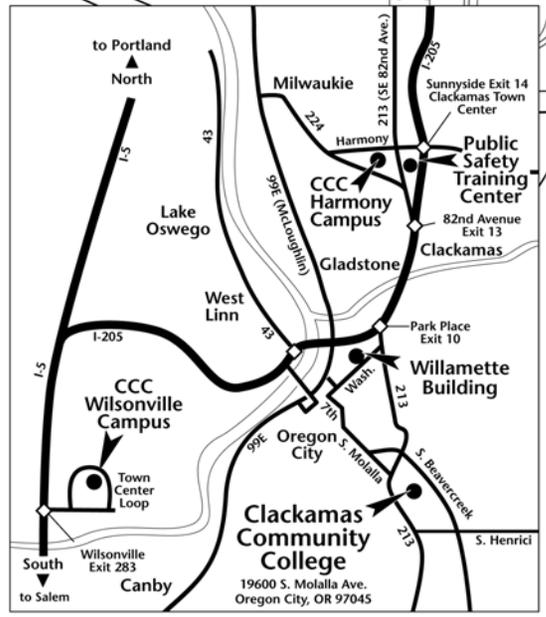
March 23-25, 2004



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Registration opens in  
Community Center  
Skylight Dining Room  
at 7 a.m. Tuesday.



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and travel 5 miles to the  
campus of CCC. Turn left  
to enter campus.