

2004 MANUFACTURER'S REPRESENTATIVES EXHIBIT

Plan to visit the
Manufacturer's
Representative Exhibit
Wednesday, March 24
in Randall Gymnasium

Match the winning number &
win a prize!

CEU Disclaimer

Clackamas Community College (CCC) awards CEUs based on classroom attendance. Submission of a CEU card with a valid name, address and social security number is required in order for CCC to insure that your CEU record will be properly created and/or updated.

CEUs are ascribed on the certificate of attendance. *Beginning this year, you have the option of taking your certificate home with you on the last day of the school. CEUs will be tallied and certificates issued at the registration desk in the Skylight Dining Room.* If you do not wish to wait for your certificate, it will be sent to you in the US mail. If you do not receive a certificate in the mail by June 15, 2004 please contact Naomi Sether at 503-657-6958 ext. 2364.

Section 1 Operations McLoughlin Theater

Tuesday

Session 1 General Session - Randall Gymnasium

Session 2 - Modernizing Wastewater Plants

Session 7 *John Harrison, P.E., Kennedy Jenks*

Processes to consider when upgrading your plant, trouble shooting activated sludge problems and more.

Wednesday

Session 8 Equipment Procurement Practices to Insure Project Success

Mark Walter, Beaver Equipment

Presentation on the operator's role in equipment selection and specification review. Will also discuss the bidding process and how it effects equipment selection.

Session 9 Evaluation of Clarifier Performance

Andrew Shaw, Process Specialist, Black & Veatch

Techniques to determine Clarifier Performance, including stare-point analysis, stress testing, and CFD.

Session 10 On Line Instrumentation to Improve Energy Utilization & Plant Optimization

Andrew Shaw, Process Specialist, Black & Veatch

Focus on D.O. Control and look at respirometric control and nutrient analyzers.

Session 11 Manufacturer's Exhibit - Randall Gym

Session 12 Energy Efficiency at WWTPs

Bob Sprick, Operations Supervisor, City of Eugene

Presentation will cover methods and results of improving energy efficiency at WWTPs.

Session 13 Power Monitoring and Optimization

Mike Greene, P.E., U.S. Filter Operating Service

Marc Yarlott, P.E., U.S. Filter Operating Service

Power monitoring and design, will discuss components and approach. D.O. monitoring and control in Aeration Basins.

Operations continued...

Session 14 Instrumentation Upgrades to Improve Plant Efficiency

Stu Fethers, Bainbridge Associates

Presentation will explain operator interface with on line D.O. meters, T.S.S. meters and clarified sludge level sensors.

Session 15 Biological Nutrient Removal - Process Control and Troubleshooting

Mario Benisch, P.E., HDR

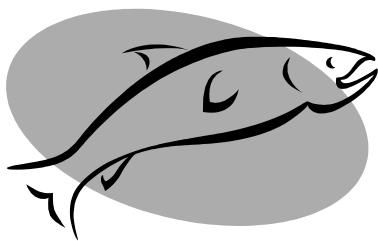
Will discuss parameters to monitor, diagnostic test and how to interpret them.

Thursday

Session 16 - Methane Utilization

Jeremy Holland

Learn about the benefits of using methane at your WWTP, discuss other plants that are already putting this to use, and learn about operational issues and how to deal with them.



**Section 2
Source Control
Pauling 101**

Tuesday

Session 1 Opening Ceremony - Randall Gymnasium

Session 2 Hillsboro Landfill

Kathy Caldwell, Clean Water Services

A review of solving Hillsboro's Landfill wastewater problem.

Session 3 Investment Casting Wastewater Process

Cindy Overstreet, Safety/Environmental Manager

An overview of Doncasters PED Manufacturing precision investment processes and wastewater treatment.

Session 4 Waste Minimization at Albertson's

John Bernardo, Resource Conservation Manager

A look at Albertson's innovative waste minimization program; from package design to fryer grease used as bio-diesel.

Session 5 Managing Marine Wastewater

Alan Sprott, Cascade General

Regulatory requirements for managing marine wastewater.

Session 6 - PNCWA FOG Training

Kathy Caldwell, Clean Water Services

Innovative ways of addressing FOG problems.

Wednesday

Session 8 Challenges of a Centralized Waste Treatment Facility

Bob Anderson, Pacific Power Vac

Lessons learned managing multiple wastestreams.

Session 9 Manufacturer's Display - Randall Gym

Session 10 Site Improvements in Tualatin

Doug Anderson, Glacier

Glacier takes proactive action in solving industrial site run-off water.

Source Control continued...

- Session 11 Removal of Mercury in Dental Office Wastestreams**
Al Dube, Solmetex
Introduction of technology for removing 99% of the soluble mercury from dental office waste water.
- Session 12 BOD Discharge Controls at PDX - One Year Later**
Richard Vincent, Port of Portland
After the storm, Portland Airport updates their innovative BOD discharge controls.
- Session 13 Industries Perspective of IPT Permitting**
Tom Boyer, Assistant City Engineer, City of Vancouver
Basic IPT overview for permitted industries, from the industry perspective.
- Session 14 City of Portland's Well Inventory Project**
John Holtrop, Environmental Specialist, BES, City of Portland
Outlines Portland goal to inventory all of the private wells in the city.
- Session 15 Industry Pretreatment Film**
Ken Kerri

Thursday NO SESSIONS



**Section 3
Collections
Gregory Forum C**

Tuesday

- Session 1 Opening Ceremony - Randall Gymnasium**
- Session 2 - Trenchless Technology Overview**
Session 3 *John Jurgens*
TT methods and applications.
- Session 4 Sewer Cleaning Nozzles, Hose & Accessories**
Dave Merz, City of West Linn
Proper selection of nozzles, hose care, specialty tools for special jobs.
- Session 5 Pipe Pigging**
Don Lauinger
The fine art of cleaning pipes with pipe pigs.
- Session 6 - Sewer Nozzle Demonstrations**
Session 7 *Jim Lowe, Enviroclean Equipment*
Hands on operation of sewer cleaning nozzles.

Wednesday

- Session 8 & Session 9 Hydrogen Sulfide Damage and Control**
Kim Ashmore, City of Centralia
Examples of damage caused by hydrogen sulfide and the repairs required.
- Session 10 & Session 11 Confined Space & PPE**
Greg McDonald, Public Works Supply - Combined with Safety
Doing it safely.
- Session 12 TV Inspection System Troubleshooting and Maintenance**
Dave Vaughn, DVA and Associates, Inc.
Common CCTV problems and repairs.

Session 13 Manufacturer's Display - Randall Gym

Session 14 Vacuum System Technology

Brad Lowe, Enviroclean Equipment

In-depth look at how vacuum trucks really work.

Thursday

Session 16 - Traffic Safety and Flagging

Session 19 *Dave White, OTTC - Combined with Safety in Gregory Forum C*

Session 20 Television Inspection Data Acquisition Systems

Rich Stubbs, CUES

Session 21 - CMOM and You!

Session 23 *Steve Tilson, Tilson and Associates*
Cleaning sewers and how CMOM may relate.



Section 4
Maintenance
Barlow 110A

Tuesday

Session 1 Opening Ceremony - Randall Gymnasium

Session 2 Infrared Basics

Rusty Shwartz

Basic consideration of infrared thermography.

Session 3 General Alignment Principles

Roy Loop

Alignment preparations.

Session 4 Alignment Methods

Roy Loop

Soft Foot Alignment

Session 5 Polymeric Repair Systems

Glen Hanenberg

Polymeric repair for concrete machinery.

Session 6 Drives and Motors

Steve Adams, US Motors Emerson Power Transmissions

Session 7 Pro-teck Seals

Mike Quindt, JM Clipper Corporation

Wednesday

Session 8 Compressed Air - Friend or Foe

Jeff Yarnall

Compressed air is a powerful energy source if used wisely.

Session 9 Operation and Maintenance of Blowers

Elmer Van Loo

Positive displacement multistage centrifugal blowers.

Session 10 Trends in Screenings Technology

Connie Boag

Session 11 Mechanical Seals, Pump Testing Equipment and Impeller Design

Jerry Hockert

Sewage pump maintenance.

Maintenance continued...

Session 12 Manufacturer's Display - Randall Gym

Session 13 Chemical Addition Pumps

Phillip Pellitier
Basic maintenance.

Session 14 Trends in Submersible Pump Technology

Connie Boag
Basic pump overhaul procedures

Session 15 Electric Motor Lubrication

Curtis L. Cummins
Good practices and Principles of electric motor greasing.

Thursday

Session 16 Urethane Repair of Equipment in the Wastewater Industry

Steve Hance
Basic repair

Session 17 Power Twist Belting and Trans-Torque Bearings

Kim Dorsing/Dean McGee
Basic maintenance

Session 18 Submersible Pumps - Maintenance and Control Part 1

Tim Curns
Preventative maintenance

Session 19 Submersible Pumps - Maintenance and Control Part 2

Tim Curns
Preventative maintenance

Session 20 Maintenance and Operation of Electric Valve Actuators

Jim Robbins
Basic maintenance

Session 21 TBA

Session 22 Gas Monitoring and Maintenance Part 1 - *Jeff Ballard*

Maintenance and calibration of gas detectors.

Session 23 Gas Monitoring and Maintenance Q & A - *Jeff Ballard*

Maintenance and calibration of gas detectors.

Section 5
Management & Supervision
Community Center CC127

Tuesday

Session 1 Opening Ceremony - Randall Gymnasium

Session 2 Performance Evaluations

Tom Stow, Clean Water Services

Session 3 New Trends in Online Analyzers

Rob Baur, Clean Water Services

Session 4 Introduction to NELAC/ORLAP and Implications for NPDES Permitting

Combined with Lab
Dan Hickman, Oregon DEQ
Informational talk on the history & present state of NELAC and ORELAP, including future direction of the state program.

Session 5 The ORLAP Technical Advisory Committee

Combined with Lab
Alberta Seierstad, City of Portland Water Bureau
OTAC mission and members; communication with labs; Ombudsman service to accredited labs and labs in the accreditation process.

Session 6 ORLAP: The Municipal Lab Experience

Combined with Lab
Jan Wilson, Clean Water Services; Keith Chapman, City of Salem; Angela Parrish, City of Corvallis
Discussion of real-life experiences implementing ORLAP in three municipal laboratories.

Session 7 Round Table Discussion

Dan Hickman, Alberta Seierstad, Jan Wilson, Keith Chapman & Angela Parris - Combined with Lab
Q & A and open discussions on the afternoon program.

Management & Supervision continued...

Wednesday

Session 8- The Roles of Managers and Supervisory in
Session 11 Project Management
Jeff Crow, Crow Development Corporation

Session 12 Construction Coordination
Jim Highhouse, Clean Water Services

Session 13 Manufacturer's Display - Randall Gym

Session 14 Balanced Scorecards
Joel Greene

Session 15 Basic Management Principles
Tom Arnold, Principal Engineer, City of Hillsboro

Thursday

Session 16 Watershed Permits
Charles Logue, Clean Water Services

Session 17 Flow Reconciliation
David McPherson and Doug Hattersley, MWH

Session 18 Defining the One in Five Year Storm Event
Jon Gasik, DEQ

Session 19 The Plant Construction and Modification
Approval
Jon Gasik, DEQ

Session 20 Introduction to ESA and the Impacts to
Wastewater Treatment
Rosemary Furfey, NMFS

Session 21 Recruitment of Plant Operators
Tina Powers, Clean Water Services

Session 22 Managers Liability
Bert Krages

Session 23 No Session

Section 6
Wastewater Basics
Gregory Forum B

Tuesday

Session 1 Opening Ceremony - Randall Gymnasium

Session 2 Preliminary Treatment
Pat Curran, Curran - Mcleod Engineers

Session 3 Primary Treatment
Pat Curran, Curran - Mcleod Engineers

Session 4 Operation and Maintenance of Faculative
Lagoons
Holly Ploetz

Session 5 Operation and Maintenance of Aerated Lagoons
Holly Ploetz

Session 6 Spills and Overflows - Reporting and Compliance
Debra Gorman, Clean Water Services

Session 7 Public Health
Tobbi Harris, Washington County Health Department

Wednesday

Session 8 Natural Systems & Effluent Re-use
John Harrison, Kennedy Jenks

Session 9 Manufacturer's Display - Randall Gym

Session 10 Trickling Filters and RBC's
John Harrison, Kennedy Jenks

Session 11 Chemical Control Systems
Greg Brown, Pacific Services and Supply Company

Session 12 Basic Biosolids
Judy Johndohl, DEQ WQ Division

Session 13 Permits & Compliance
Ranei Nomura, DEQ WQ Division

Basics continued...

Session 14 Basic Math for WW Treatment
Robert Sprick, City of Eugene MWWC WWTP

Session 15 Applied Math for WW Treatment
Robert Sprick, City of Eugene MWWC WWTP

Thursday

Session 16 Monitoring Reports (DMRs) & System Records
Beth Moore, DEQ WQ

Session 17 Basic WW Collection Systems
John Holland, Brown and Caldwell

Session 18 Basic Math for WW Collection
Paul Eckley, City of Salem

Session 19 Basic Math for WW Collection
Paul Eckley, City of Salem

Session 20 Activated Sludge Basics
Dale Richwine, MWH

Session 21 Troubleshooting Activated Sludge
Dale Richwine, MWH

Session 22 Disinfection Basics
Dale Richwine, MWH

Session 23 Operator Rights and Responsibilities
Bert Krages, Attorney at Law



Section 7
Biosolids Management
Pauling 102

Tuesday

Session 1 Opening Ceremony - Randall Gymnasium

Session 2 Biosolids Jeopardy
Dave Arguello, CWS, Tim Killingbeck, WES & Bob Watson, OMI-Gresham
Formatted after the t.v. game show with a biosolids theme.

Session 3 Compliance State & Federal
Judy Johndahl, DEQ
Summary of the 503 Division 50 Regs.

Session 4 Biosolids Management Plans
Judy Johndahl, DEQ
What a management plan should be.

Session 5 Mapping a Site with GIS & Data Base Recordkeeping
Carol Murdock & Tim Killingbeck, WES
Setting up site authorizaions with an arc view GIS program. Keeping daily and monthly records with an Access data base.

Session 6 Site Management
Bob Watson, OMI-Gresham
Getting a site permitted and follow up.

Session 7 Wrap Up
Dave Arguello, Tim Killingbeck, Bob Watson, Judy Johndahl

Wednesday

Session 8 Solids Stabilization & Handling
Matt Noeson
Stabilizing and handling prior to application.

Session 9 Biosolids Sampling & Testing
Dan Strong, Kristina Franklin & Ron Meyers, WES
Sampling and testing for site application rates.

Biosolids continued...

Session 10 Nutrient Management at Application Sites

Andy Bary, WSU

Proper nutrient management.

Session 11 Soil Testing and Interpretation

Craig Cogger - WSU

Managing soils and nutrients annually.

Session 12 Manufacturer's Display - Randall Gym

Session 13 Dealing with the Media Session #1

Joe Krumm, NCSD 12 & Ron Oberg, Clackamas County PRG

How to handle the media without them mauling you.

Session 14 Dealing with the Media Session #2

Joe Krumm, NCSD 12 & Ron Oberg, Clackamas County PRG

How to handle the media without them mauling you.

Session 15 Wrap Up & Discussion

Matt Noeson, Dan Strong, Kristina Franklin, Ron Meyers, Andy Bary, Craig Cogger & Joe Krumm

Thursday

Session 16 Improvements to Aerobic Digestion

Dale Richwine, Montgomery Watson

Options for aerobic digestion.

Session 17 Lime Stabilization

Dale Richwine, MWH

Lime addition options

Session 18 Water Reuse Issues

Mark Cullington, DEQ

Issues and requirements for reuse water.

Session 19 Reuse Project in Medford

Jim Hall, City of Medford

Wastewater reuse/existing project.

Session 20 Use of Reclaimed Water

Kent Madison, Madison Farms, Hermiston, Oregon

Using reclaimed wash and cool down waters from Lam Weston a potato processor and CoGen Electric Generation Plant

Session 21 Woodburn's Popular Project - Frank Sinclair, City of Woodburn

Using biosolids and reclaimed water on poplar trees.

Session 22 Wetlands and Poplar Trees - Steffeny Eisner, City of Salem

Salem's new wetlands and poplar trees.

Session 23 Wrap Up & Discussion

Section 8 Stormwater Gregory Forum A

Tuesday

Session 1 Opening Ceremony - Randall Gymnasium

Session 2 Implementing a Stormwater Inspection Program

Rick Rischl, Clean Water Services

Clean Water Services approach to Stormwater inspection

Session 3 Water Quality Facility Tracking & Inspection

Michael Pronold - BES

City of Portland Bureau of Environmental Services on-going facility monitoring program.

Session 4 Portland Big Pipe Erosion Control

Patti Oliver, BES

Innovation in erosion control for the Westside CSO project, including barging of excavated materials.

Session 5 Guadalajara Disaster Revisited

Miguel Santana, BES

Guadalajara sewer explosion revisited

Session 6 Cedar River Watershed

Valerie Jo Hart, NW Erosion

A case study of the environmental protective measures at the Shultz-Echo Lake Project in Ravensdale, Washington.

Session 7 No Session

Wednesday

Session 8 Pervious Pavement

Dave Frentress, Glacier NW

New technology that allows runoff to permeate through the pavement.

Session 9 Green Roof Technology

Dave Frentress, Glacier NW

Multiple "green" construction techniques that address water quality and quantity.

Session 10 Manufacturer's Display - Randall Gym

Stormwater continued...

Session 11 Partnering Storm water & Pretreatment

Randy Watson, City of Wilsonville

The City of Wilsonville's approach to Storm Water and Pretreatment coordination.

Session 12 Invasive Plant Removal with Goats

Sharon Hoyt, Holley Land & Cattle Co.

Invasive growth removal with goats to reduce impact.

Session 13 MS4 Compliance Using GIS Technology

Michael C. Stark, Michael C. Stark SW Consulting

Review and discussion of MS4 mapping and reporting requirements and how a unique partnership is developing a web-based GIS tool to assist MS4's with compliance. Collaborators include local community advocate/entrepreneur, local GIS company.

Session 14 Using Wool Catch Basin Inserts

Wes Devel, Oregon Sheppard LLC

Innovative erosion control products using wool.

Session 15 No Session

Thursday

Session 16 Remembering the '96 Flood

Kelly Hendryx

Review the impacts of the February 1996 major flood event.

Session 17 Villebois Rain Management Systems

Magnus Bernhardt, AEI

Planning for site development in the City of Wilsonville that will have 2,300 homes and commercial businesses.

Session 18 Stormwater Operations and Maintenance

Haig Valenzuela

How the City of Gresham ensured that their own city shops complied with stormwater requirements.

Session 19 Wetlands & Road Construction

Pat Carroll, McKay Sposito & Kerry Rappold, City of Wilsonville

Planning for road construction through wetlands in the City of Wilsonville.

Session 20 WSDOT Stormwater

Sandy Salisbury, WSDOT

Washington Department of Transportation stormwater program.

Session 21 Missoula Floods

Oregon Field Guide, OPB

The historic floods that created a lake from Portland to Eugene.

Session 22 Willamette River 1938 - CCC

Color footage of the pollution in the Willamette River in 1938.

Session 23 No Session

Section 9 Safety McLoughlin 206

Tuesday

Session 1 Opening Ceremony - Randall Gymnasium

Session 2- Below the Hook, Lifting Device Safety

Session 3 Art Stanley, West Coast Wire Rope & Rigging, Inc.

Learn OSHA requirements for wire rope and chain slings, synthetic slings, hardware, angels, effects of angels on slings and lifting gear inspection.

Session 4- Dig Safely

Session 5 Anita Floyd, Damage Prevention Manager, West Region, US West

What you should know before getting in too deep. A discussion of the One-Call program and field marking for utility location. Information to help you avoid personal injury, costly repairs, and civil penalties.

Session 6- Terrorism

Session 7 Larry Thomas, Legacy Health Systems

Preparation for weapons of mass destruction, before 9-11, now, future.

Wednesday

Session 8- Clandestine Drug Labs

Session 9 Bob Happel, Portland Fire Bureau

This presentation provides a description of the dangerous world of clandestine drug labs. The class examines the chemical and physical hazards as well as the actual display of equipment used in these labs. Case studies aid in presenting the real world and associated dangers of drug labs.

Session 10- Confined Space & PPE

Session 11 Combined with Collections in Gregory Forum C

Greg McDonald, Public Works Supply, Inc.

Safety Continued...

Session 12 Electrical Safety - GFCIs

Michael Murphy, Safety Coordinator, NECA-IBEW

Is your GFCI device safe? The presentation will cover electrical safety on the job and in the home. Demonstrations will show how a GFCI and the AFCI work.

Session 13 Manufacturer's Display - Randall Gym

**Session 14- Hazard Communication Basics & Deciphering
Session 15 the MSDS**

Meri Reiley, City of Hillsboro Public Works

Hazard communication is cited more often than any other OR OSHA Rule. It really is possible to develop a user-friendly program! Let's figure out how to read and understand those MSDS - the backbone of the Hazard Communication Program.

Thursday

Session 16- Traffic Safety and Flagging

Session 19 *Combined with Collections in Gregory Forum C*
Dave White, Oregon Technology Transfer Center

Session 20- HazMat Awareness

Session 21 *Dave Nuttall, City of Hillsboro*

Session 22- "Trauma Nurses Talk Tough!"

Session 23 *Joanne Fairchild, Legacy Emanuel Hospital Trauma Service*

A trauma nurse shares the very real consequences of risky driving habits and their effect on family friends, employers, and the community. Pictures are worth a thousand words...

Tuesday

Session 1 Opening Ceremony - Randall Gymnasium

Session 2 No Session

Session 3 No Session

Session 4 Introduction to NELAC/ORLAP and Implications for NPDES Permitting

Dan Hickman, Oregon DEQ - Combined with Management & Supervision in CC127

Informational talk on the history & present state of NELAC and ORELAP, including future direction of the state program.

Session 5 The ORELAP Technical Advisory Committee

Combined with Management & Supervision in CC127
Alberta Seierstad, City of Portland Water Bureau
OTAC mission and members; communication with labs; Ombudsman service to accredited labs and labs in the accreditation process.

Session 6 ORELAP: The Municipal Lab Experience

Combined with Management & Supervision in CC127
Jan Wilson, Clean Water Services; Keith Chapman, City of Salem; Angela Parrish, City of Corvallis
Discussion of real-life experiences implementing ORLAP in three municipal laboratories.

Session 7 Round Table Discussion

Combined with Management & Supervision in CC127
Dan Hickman, Alberta Seierstad, Jan Wilson, Keith Chapman & Angela Parris

Laboratory continued...

Wednesday

Session 8 USGS National Reconnaissance Sampling of US Streams for Emerging Contaminants: Implications of Wastewater Treatment Plants

Joseph Rinella, USGS

In a national study published in March 2003 in Env. Sci. & Technology, the USGS provided evidence of the widespread, low-level presence of human and veterinary drugs, hormones, insecticides, and other chemicals such as caffeine in our nation's waterways.

Session 9 Analytical Methods for Emerging Contaminants

Jeff Christian, Columbia Analytical Services, Marty French, Specialty Analytical & Ken Patton, North Creek Analytical

Representatives from four area private laboratories will lead a panel discussion on current analytical methods and what the future might hold for municipal authorities

Session 10 A New Instrumental Method for Measuring Dissolved Oxygen

Hach, Inc.

Session 11 Manufacturer's Display - Randall Gym

Session 12- ORELAP for Small Municipal Laboratories

Session 13 *Keith Chapman, City of Salem & Angela Parrish, City of Corvallis*

A new initiative for providing help for small laboratories seeking ORELAP accreditation will be discussed. Included will be a presentation of model templates designed to ease the burden of preparing the documents required for the ORELAP program. This will be an interactive session, and input from interested labs is highly desired.

Session 14 No Session

Session 15 No Session

Thursday

No Sessions

Section 11

Technology

Pauling 132

Tuesday

Session 1 Opening Ceremony - Randall Gymnasium

Session 2 WonderWare

Larry Claussen, ISS WonderWare

Overview of WonderWare.

Session 3 IFIX SCADA Control of Columbia Blvd. WWTP

Mark Mattson, City of Portland, BES, Columbia Blvd. WWTP

Live application of IFIX SCADA Software at Columbia Blvd. WWTP

Session 4- PLC Basics

Session 5 *Craig Rawie, CH2M*

Basic PLC Programming

Session 6 IFIX SCADA Control Software

Mark Fusick, CB Engineering

Session 7 MPulse Maintenance Software

Steve Brous

Wednesday

Session 8 In-Stream Monitoring

Rob Peacock, PE Project Engineer, Curran-McLeod, Inc.

Description of various monitoring protocols, data validation, analysis, etc.

Session 9 Membrane Technology

Pat Curran, PE, Curran-McLeod, Inc.

Application of membrane Technology in wastewater treatment

Session 10 Manufacturer's Display - Randall Gym

Session 11 City of Portland, BES Stormwater Program

Discussion of BES storm water program

Technology continued...

NOTES

Session 12 In-Stream Data Logging

Beth Moore, DEQ

Discussion of NPDES In-Stream Data Logging requirements.

Session 13 New Computerized DMR Form

Gail Harradine, DEQ IT Dept.

Discussion of the new computerized DMR Form

Session 14 Innovative Products for Stormwater Treatment

Lewis Titus, Titus Industrial Group

Description and discussion of innovative products for storm water treatment.

Session 15 Innovative Products for Collection Systems

Lewis Titus, Titus Industrial Group

Description and discussion of innovative products for collection systems.

Thursday

Session 16 Metro GIS Water Quality Applications

Mark Bosworth & Paul Couey, Geographical Information Systems, Metro

Description and discussion of Metro's GIS water quality applications.

Session 17 Go 5 Group Software

Paul Ketchum, Water Resource Group, Metro

Description and discussion of Metro's new Go 5 Group software.

Session 18- PCL Basics and Integrations of Control

Session 21 Strategies

Mr. Johnston & Associates, North Coast Electric Co.

Basic PLC programming and control circuits with integration into RSView SCADA software.

Session 22 Using GIS to Identify Natural Resources and Development Constraints

Karen Streeter, Endangered Species Act Coordinator, Clackamas County

Description and discussion of Clackamas County's efforts using GIS to identify natural resources and development constraints.

Session 23 Inventorying the System and Establishing Flow Direction and the WesWorks Program

Carol Murdock, GIS Coordinator, Clackamas County

What we're doing with our storm system in terms of inventorying the system and establishing flow direction and WesWorks program.