



CHILDREN'S 
CLEAN WATER FESTIVAL
Where Youth Are Making Waves!

Festival Program

March 11, 2014

University of Portland
Portland, Oregon



Participating Schools

Antonia Crater

Atkinson

Boise Eliot Humboldt

Charles F. Tigard

Candy Lane

Free Orchards

Glenfair

Hollydale

Hopkins

Jacob Wismer

Jason Lee

Lenox

Minter Bridge

North Gresham

Ockley Green

Harold Oliver

Quatama

Tualatin Valley Academy

View Acres

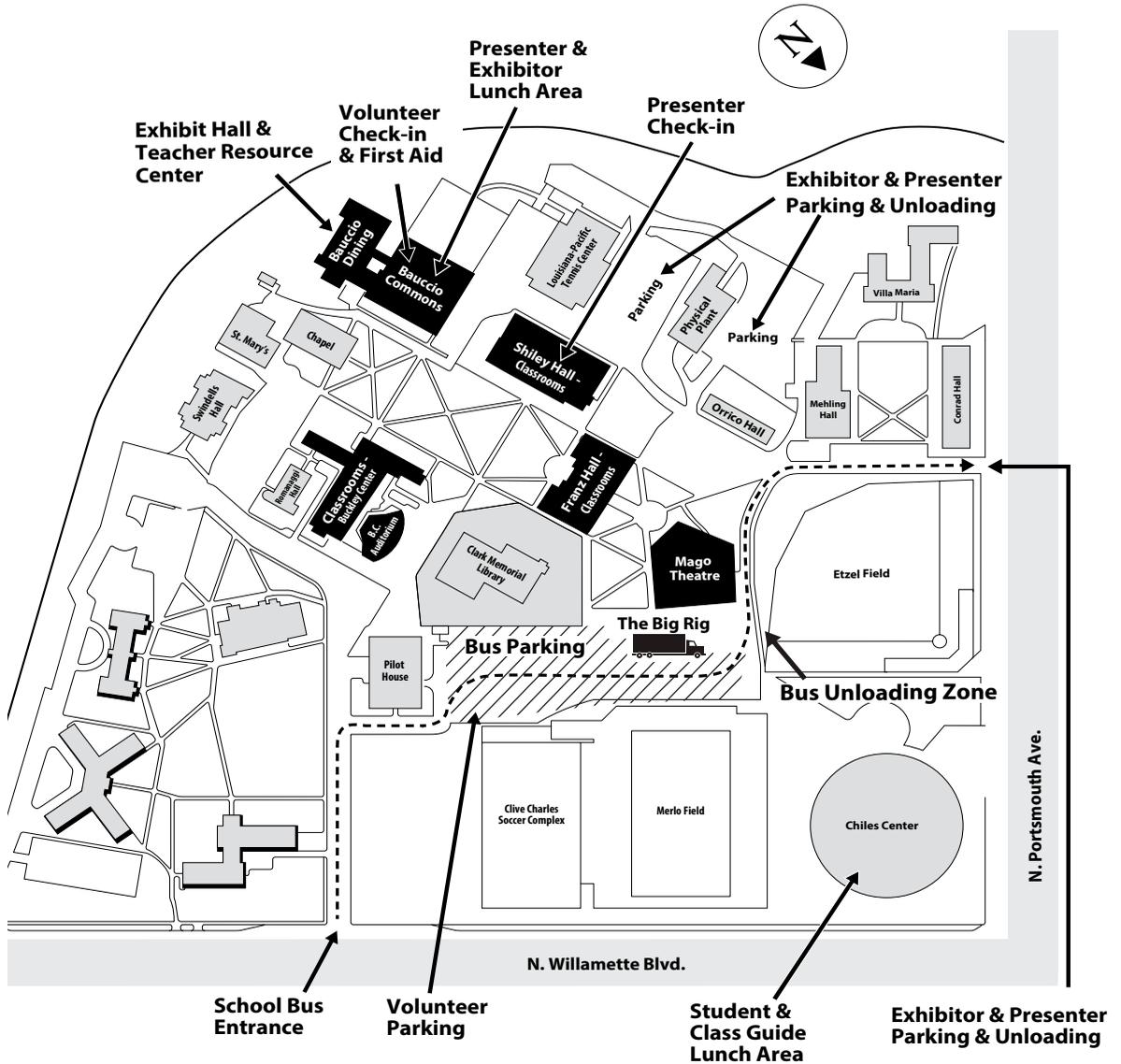
Visitation Catholic

West Gresham

Wilkes



University of Portland Campus



Clean Water Supporters

The Clean Water Festival is a community supported event, organized by a group of public, private, and non-profit organizations, all committed to water and environment education in our region.

The Children's Clean Water Festival would not be possible without the generous financial and in-kind support provided by our numerous partners.

FINANCIAL SUPPORT

- Bureau of Land Management
- City of Hillsboro
- City of Portland Water Bureau
- City of Tigard
- Clean Water Services
- Oak Lodge Sanitary District
- Regional Water Providers Consortium
- Rockwood Water People's Utility District
- Tualatin Valley Water District

IN-KIND SUPPORT

- University of Portland
- U.S. Geological Survey

Thanks to all the organizations listed on the following pages that provide great presentations in the exhibit hall and classrooms!



36 Classroom Presentations

1. ALEXIN ANALYTICAL LABORATORIES

Water Olympics

Franz Building – Room 015

Discovering some of the properties of water through games and activities.

2. APEX COMPANIES

Recharge Your Aquifer

Franz Building – Room 005

When rain reaches the ground, some of it soaks into the earth. This process “recharges” or “refills” the underground aquifers. We will experiment with different materials (rock, sand, etc.) to decide what makes the best aquifers. We will also discuss why this means that they can also become polluted.

3. CLACKAMAS COUNTY OFFICE OF SUSTAINABILITY

Recycled Paper

Franz Building – Room 217

Students will learn how paper recycling saves water, energy and trees through an interactive, hands-on lesson.

4. CITY OF GRESHAM

Amphibians of the Willamette Valley

Franz Building – Room 025

Frog and salamander identification, ecology and conservation.

5. CITY OF HILLSBORO

What’s in your Drinking Water?

Franz Building – Room 128

Understanding basic water quality issues. Why is drinking water chlorinated? What makes water “hard” or “soft”? Why do water agencies change the pH of the water before sending it to customers? What is turbidity, and how is it managed? Find out the answer to these water quality questions and bring your own questions too, as we test water samples and talk about why water providers consider “protecting public health” their #1 mission.

6. CITY OF HILLSBORO

The Incredible Journey

BC Building – Room 103

Pretend to be a water molecule, rolling the dice to move through the water cycle collecting colored beads as you go. Where will you be next? In the stream? In a glacier? In the clouds?

7. CITY OF PORTLAND BUREAU OF ENVIRONMENTAL SERVICES

Urban Rain Drop

Shiley Building – Room 101

If you are a rain drop, what route will you take after falling from the sky into the city: grey or green? Will you land on a street or a tree? Will you stay clean? What will happen to you on your way back to the ocean? Using pictures, drawing materials and your own imaginations come see us and find out!

8. CITY OF PORTLAND CLEAN RIVERS EDUCATION

Stream Bugs Tell it All

Shiley Building – Room 319

Macroinvertebrates (stream bugs) are excellent indicators of water quality. Investigate and identify live macroinvertebrates. Learn how they can tell us about the health of a stream.

9. CLACKAMAS COUNTY WATER ENVIRONMENT SERVICES

Wastewater Wonders!

Franz Building – Room 030

Explore what should and should not be flushed and what happens at a sanitary sewer treatment plant.

10. CLACKAMAS RIVER WATER

The Great Plankton Race

BC Building – Room 106

Aquatic environments are teeming with microscopic life. These tiny animal and plant-like organisms are critically important to the health of freshwater (and saltwater!) environments, because they form the base of many food chains. Called plankton (from the Greek word for wandering) they drift at the mercy of the currents. Students are challenged to design a planktonic organism that will neither float like a cork nor sink like a stone. After designing with their teammates students will test and race their plankton.

11. CLEAN WATER SERVICES

River Rangers

BC Building – Room `206

Follow the story of a water drop and learn about the amazing process of cleaning and recycling water after we use it. Discover what YOU can do to help protect water quality.

12. COLUMBIA SLOUGH WATERSHED COUNCIL

Groundwater Rocks!

Franz Building – Room 212

Students will learn about the characteristics of groundwater and aquifers using a three-dimensional groundwater model and samples of different kinds of aquifer materials. Students will also learn how different chemicals can move underground and ways to protect groundwater.

13. ECOLOGY IN CLASSROOMS & OUTDOORS

Wetland Food Web

Franz Building – Room 234

After investigating plants and animals found in NW wetlands, students will play an interactive board game about wetland food webs. Students will recognize that energy begins with the sun and progresses through the food web. They will identify plants as producers, animals as consumers and understand the role of decomposers. Activity is aligned with Common Core (NGSS) science standards.

14. LOWER COLUMBIA ESTUARY PARTNERSHIP

Big Bugs on the Brain

Franz Building – Room 210

Explore the amazing diversity of macroinvertebrates and find out why they are so important to our water quality.

15. MESD OUTDOOR SCHOOL

Make Your Own Natural Water Filter

BC Building – Room 314

Learn how riparian zones keep our rivers clean and healthy by filtering water through sand, soil, plants and rocks. Create your own filter to keep pollution out!

16. METRO

Composting: Nature's Way of Recycling

Franz Building – Room 038

A hands-on look at life in a worm bin helps students see how composting helps reduce the amount of garbage sent to landfills and how finished compost is great for gardens!

17. METRO

Bugged by Pesticides

Franz Building – Room 205

Students play a game that illustrates how chemicals we use in our gardens can affect our local rivers and streams and animals in the food chain. Students will learn about safe choices at home that reduce harmful effects on the human health and the environment.

18. NOAA NATIONAL WEATHER SERVICE

Too Much Water, Not Enough Water.

Franz Building – Room 006

We will look at what causes floods and droughts in our region and use a hands-on tool to look at the ways we deal with flooding.

19. OREGON DEQ

Watershed Bingo

BC Building – Room 310

Using the format of BINGO, current and relevant watershed concepts are presented to students for them to identify and understand.

20. OREGON DEQ LAB

The Living Stream

Franz Building – Room 026

Discover how stream macro-invertebrates are indicators of stream water quality and habitat condition. Students then hunt for live macroinvertebrates in a large shallow aquarium and examine them under microscopes.

21. OREGON GROUNDWATER ASSOCIATION (OGWA)

The Big Rig

Franz Building – Room 108

Interactive presentation with questions and games. How groundwater supplies are acquired and tapped, water well drilling, water facts and then students check out the Big Rig and Pump Truck.

22. OHA DRINKING WATER SERVICES

Where Does Your Drinking Water Come From?

Franz Building – Room 018

Students will learn where drinking water comes from, how it can become contaminated and how they can help protect it.

23. PORTLAND PUBLIC SCHOOLS

Fueling Oregon Forward: Renewable Energy Jeopardy with CUG

BC Building – Room 108

Come see how much you know about renewable energy and energy savings in Oregon through our fun hands-on trivia game. Learn new tips and ways to enact energy change at your home and school too! Presented by the Citizens Utility Board (CUB) and Portland Public Schools.

24. PORTLAND WATER BUREAU

Build a Better Water Main

Franz Building – Room 206

Student teams will work together to design and build a small scale water main that avoids conflicting utilities at the best price.

25. PORTLAND WATER BUREAU

Water is a Chemical?

BC Building – Room 307

The amazing properties of water make it the critical substance for life on Earth, but some of those properties also make it vulnerable to pollution. Students will explore basic water chemistry concepts to learn why water is so special and how we can keep it clean.

26. PORTLAND WATER BUREAU

Water Tasting

Franz Building – Room 214

Use some of the most sophisticated water testing equipment in the world – the human taste bud – to discover how water sources differ from one another.

27. TRACKERS EARTH

Water Filtration

Franz Building – Room 034

Can you tell if water is drinkable? Learn more by making your own dirty water concoction and then learn how to filter it clean! We will examine dirty and clean water under microscopes to see what lurks in even the clearest of samples.

28. TRASH FOR PEACE

Reduce, Reuse and Rethink Waste

Shiley Building – Room 123

We will use FUN, interactive, hands-on activities and games to teach students the importance of reducing, reusing, recycling and rethinking waste.

29. TUALATIN RIVER WATERSHED COUNCIL

What is a Watershed?

Franz Building – Room 223

This is a hands-on interactive presentation in which the students will assist in building a watershed model while we discuss what a watershed is and the components of a healthy watershed and the human impacts.

30. TUALATIN RIVERKEEPERS

What Can You Do for Your Watershed

BC Building – Room 110

Students will draw upon what they know about the environment and use critical thinking skills to better understand how everyday choices influence their watershed.

31. TUALATIN VALLEY WATER DISTRICT

The Wonderful World of Water

BC Building – Room 111

We will talk about where your drinking water comes from, how it is delivered to your home, how the water is treated and what types of things we test the water for.

32. TUALATIN VALLEY WATER DISTRICT

A Drop in the Bucket

Franz Building – Room 222

Students may know Earth is covered mainly by water, but they may not realize that only a small amount is available for human consumption. Learning that water is a limited resource helps students appreciate the need to use water resources wisely.

33. TUALATIN VALLEY WATER DISTRICT

Bugs in My Water? No Thank you!

BC Building – Room 112

Students will get a basic introduction to microbiology in drinking water, specifically what microorganisms water providers monitor for and how their water is made safe to drink. Students will then play an exciting round of "Microbiology Bingo" to help identify these organisms in a fun yet meaningful game.

34. US COAST GUARD AUXILIARY

Water Safety

BC Building – Room 209

Lifejackets, hypothermia, throw don't go, invasive species.

35. VEOLIA WATER

Drinking Water and Wastewater in the Great Northwest

Franz Building – Room 106

Learn the treatment process needed to deliver safe and reliable drinking water and how vital water treatment is to our neighboring communities around the Portland area. An interactive quiz will educate students about the roll clean water plays in our Northwest environment.

36. WILLAMETTE RIVERKEEPER

Watersheds Revealed

Shiley Building – Room 124

Students will enhance their understanding of watershed science by building their own model watersheds and then observing what happens when they make it rain. This experiment will illustrate how water flows from higher elevations to lower elevations and how watersheds are interconnected.

14 Exhibitors



1. CLEAN WATER SERVICES

Passport for Clean Water

Students learn about water conservation, watersheds and pollution prevention by taking a short quiz.

2. COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

Tribal Science

Students will explore the various aspects of tribal fisheries and tribal science surrounding salmon, lamprey and sturgeon.

3. FRIENDS OF OUTDOOR SCHOOL

Friends of Outdoor School

Exciting water activity!

4. FRIENDS OF TUALATIN RIVER REFUGE

Polluted Pond

Teacher chooses 2-3 children to sift through the "polluted pond" and lift out what they find. Discuss the harmful effects of the litter on wildlife (injury, choking, strangling, poisoning). How can we help wildlife when we visit ponds and other watersheds?

5. MULTNOMAH COUNTY

Watershed Model and Fish Display

Working watershed model with flowing water demonstrates how water flows across various land uses from headwater to river. The model is a talking piece for different types of water pollution and action to reduce impacts to fish and other aquatic organisms. A display of native fishes of local streams points to the resources we are trying to protect.

6. OAK LODGE SANITARY DISTRICT

Jar of Junk & Microscopic Water Buddies

Take a look at all the strange items collected from our sewers like toys, markers and money! Also get to view the different kinds of organisms active in our water systems under a microscope.

7. OREGON COAST AQUARIUM

Oregon Coast Aquarium

Explore the Oregon Coast and the world ocean with the Oregon Coast Aquarium's new Oceanscape Network web-based program. This display highlights the Network's features including how young people can use it to explore and learn both in the classroom and at home using technology as a catalyst.

8. PORTLAND PUBLIC SCHOOLS

Oregon Energy Challenge

25% renewable energy in Oregon by 2025. How will we reach that goal? Learn about different renewable energy sources including methods that capture ocean waves and tides and guess the energy source breakdown of your local utility provider!

9. PORTLAND WATER BUREAU

Think Like a Fish

This highly interactive booth is a fun way for students to learn about flow, temperature and habitat needs for salmon and steelhead in rivers.

10. REGIONAL WATER PROVIDERS CONSORTIUM

Are You a Water Conservation Hero?

Students will decorate their own water conservation hero back pack tag and learn about easy things they can do to conserve water everyday.

11. SOLVE

SOLVE

Information on SOLVE, watershed related event flyers, marine related coloring pages and a trash pick up game.

12. TRACKERS EARTH

Primitive and Modern Day Fishing and Local Waterways

Displays of bone fish hooks, fly tying, fish nets and baskets with discussion of local waterways and aquatic habitats.

13. US COAST GUARD AUXILIARY

Water and Marine Safety

Instruction on the life span of objects that litter the ocean and waterways. Personal water safety.

14. US GEOLOGICAL SURVEY

Groundwater Under Your Feet

Groundwater is withdrawn from aquifers beneath our feet for many uses. See the earth through a model that shows the movement of water among the layers of rock and earth you walk upon.

Stage Shows

The H2O Show - EarthCapades

"The H2O Show" teaches the importance and science of the Earth's most precious resource - WATER. EarthCapades' multi-talented performer, Hearty, will take you on a journey through the cycle of water, where our water comes from, and how we all can take care of it and use it wisely. "The H2O Show" is a thrilling blend of environmental education and entertainment. Juggling, magic, comedy, and audience participation will enthrall teachers and students of all ages and make learning fun!

River Heroes - Will Hornyak

Will Hornyak will be telling stories about River Heroes. The stories address issues of stormwater pollution, salmon and steelhead habitat, riparian areas and the impacts of personal actions on watershed quality.

Water Rock - Mo Phillips

Musician, Mo Phillips, facilitates an interactive performance that incorporates water and music in a toe-tapping beat. Students are invited to help create music and songs about clean water issues and Mo puts the lyrics to music of whatever genre they choose. Students are guaranteed to leave the auditorium humming an original and memorable water tune.



EarthCapades H2O Show



Located in Baccio Commons adjacent to the Exhibit Hall

Resources Available:

- Classroom Tools & Props
- Community Resources
(to assist you and your class)
- Monitoring Programs & Equipment
- Field Trip Sites (you and your class
can visit)
- Trainings on Curriculum &
Community Programs

*... And many more resources to help you
get started or continue teaching your
students about the importance of water
both in and out of the classroom.*



***TEACHERS:
Be sure to register for door
prizes for the classroom!***



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For more information visit the Clean Water Festival website at:
www.cleanwaterfestival.org