

Horsley Witten Group

Sustainable Environmental Solutions

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To Whom it May Concern,

On behalf of U.S. Environmental Protection Agency (EPA), the Horsley Witten Group would like to apply for 5 training credits for Oregon water and wastewater operators who attend the October 13, 2022, Earthquake Resilience Workshop for Water and Wastewater Utilities . I have attached the following information as background for training credit assignment:

- Workshop Agenda - shows 5 hours of “in your seat” training, excluding breaks and lunch
- Workshop Flyer
- Instructor Resume
- Method of Tracking within this letterhead

The free event is available for registration at:

https://us02web.zoom.us/join/zoom/register/tZMuc-ugqDgjHNRvYVM_jlZCrQyCE2aPGWxl

Due to COVID-19, all participants will be participating remotely from their home or normal place of work utilizing the Zoom virtual platform. Horsley Witten will verify participant participation through the following methods:

- The software that will be used allows participants to view and hear the presentations and provide feedback through a Q&A function and polling.
- The software will provide the facilitators with a report of who was logged into the Software and the timespent viewing the software to track attendance.
- Participants will be encouraged participate individually from their own computer, but the event facilitators will provide a sign-in sheet in situations where multiple participants are viewing the virtual event (e.g., social distancing in a utility conference room).
- The event facilitators will provide a link to an online feedback form for participants to provide their feedback after the event concludes.
- Once the attendance report is reviewed and confirms the time that the participant was logged into the software, each participant will receive a certificate as proof of participation.

Thank you for the opportunity to submit this information and please let me know if I can provide you with any other information prior to review and approval.

Natasha Rae | Project Coordinator
Horsley Witten Group, Inc.
90 Route 6A, Unit 1 | Sandwich, MA 02563
Office: 508-833-6600

Free Virtual Earthquake Resilience Workshop

For Water and Wastewater Utilities in the Cascadia Subduction Zone

Is your drinking water or wastewater utility prepared for an earthquake?

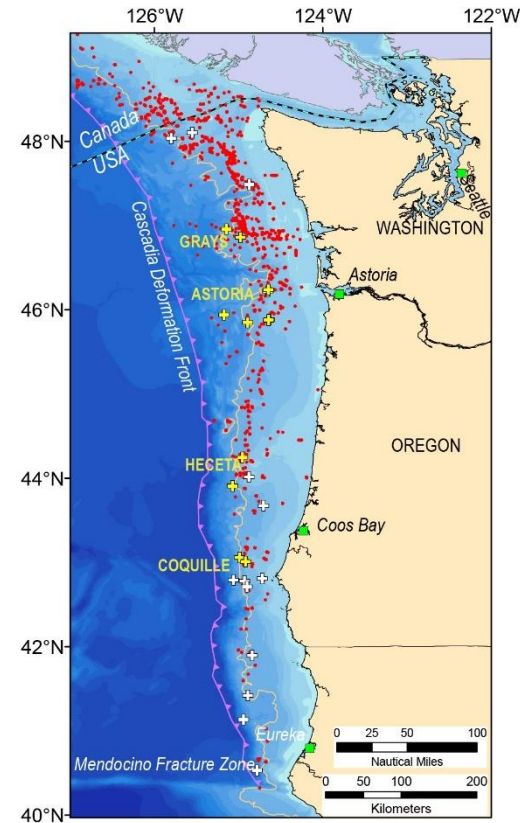
Thursday, October 13, 2022
9:00 AM – 3:30 PM Pacific

The Cascadia Subduction Zone (CSZ) stretches offshore along the Pacific coastline from Vancouver Island in Canada to Northern California. The CSZ has produced **magnitude 9.0 or greater earthquakes** in the past, and likely will in the future.

EPA is hosting a **virtual workshop** for water and wastewater utilities in Northern California, Oregon and Washington that will cover:

- Cascadia subduction zone threats
- EPA's earthquake resilience products for water and wastewater utilities
- Earthquake resilience for community lifelines
- Utility case studies in seismic evaluation, mitigation and response
- How to assess seismic risk using publicly available tools
- Water and wastewater mutual aid
- Planning and funding mitigation projects – local, state and federal
- Emergency drinking water supply planning

Training Hours: Conference organizers will apply to the states of California, Oregon and Washington for water and wastewater operators to earn training hours for participating in the workshop.



Cascadia Subduction Zone (Source: USGS)

Registration for the workshop is available at: https://us02web.zoom.us/meeting/register/tZMuc-ugqDgjHNRvYVM_jlZCrQyCE2aPGWxl

Who Should Attend?

- Water and wastewater utility representatives from across Oregon, Washington and Northern California
- Local, state and federal agencies and organizations involved in earthquake preparedness efforts

Can't make the Workshop?

You can still use EPA's [Earthquake Resilience Products](#) which include a video, guide, and interactive maps.

Questions?

All workshop related questions can be directed to:

- Jeff Fencil, EPA Headquarters (fencil.jeffrey@epa.gov, 202-564-0818)
- Will Keefer, Horsley Witten Group (EPA Contractor) (wkeefe@horsleywitten.com, 508-833-6600)



EPA Earthquake Resilience Workshop for Water and Wastewater Utilities

Event Agenda

Thursday, October 13, 2022 · 9:00 AM – 3:30 PM Pacific

Time	Item	Presenter
8:30 a.m.	Virtual Platform Check-In	Will Keefer, Horsley Witten Group (HW) – EPA contractor
9:00 a.m.	Welcome, Agenda Review and Participant Introductions	Will Keefer, HW Jeff Fencil, US EPA
9:15 a.m.	Earthquake Threats Overview	Joan Gomberg, U.S. Geological Survey Professor Chris Goldfinger, Oregon State University
9:45 a.m.	EPA Earthquake Resilience Products for Water and Wastewater Utilities	Jeff Fencil, EPA
10:00 a.m.	Earthquake Resilience and Lifeline Sectors	Yumei Wang, Portland State University
10:30 a.m.	Break	
10:45 a.m.	State Primacy Agency Resilience Requirements	Chantal Wikstrom, Oregon Health Authority TBD – Washington State Department of Health
11:00 a.m.	Water and Wastewater Utility Seismic Evaluation, Mitigation and Response Case Studies	Ryan Nelson, Portland Water Bureau Ronnie Mompellier, Portland Bureau of Environmental Services Rich Blackmun, City of Forest Grove Bill Heubach, Seattle Public Utilities
12:00 p.m.	Lunch Break	
1:00 p.m.	Conducting a Seismic Risk Assessment – Virtual Assessment Process and Lessons Learned	Ahmed Nisar, InfraTerra City of Tumwater
1:30 p.m.	Water/Wastewater Agency Response Network (WARN) Overview	Jeremiah Hunt, ORWARN WAWARN CalWARN
1:45 p.m.	Planning & Funding for Mitigation Projects – Local, State and Federal Options – FEMA, USDA, EPA FedFunds	Anne Rosinki, FEMA Region 9 Beth Crane, Regional Disaster Preparedness Organization David Flesher, USDA
2:15 p.m.	Break	
2:30 p.m.	Working Together to Provide Emergency Drinking Water	Rebecca Geisen, Regional Water Providers Consortium
2:50 p.m.	Earthquake Resilience Strategies and Best Practices	Jay Wilson, Clackamas County, OR
3:15 p.m.	Questions and Wrap-Up	Jeff Fencil, EPA Will Keefer, HW - EPA Contractor
3:30 p.m.	Adjourn	

EPA Earthquake Resilience Workshop for Water and Wastewater Utilities

Event Agenda

Thursday, October 13, 2022 · 9:00 AM – 3:30 PM Pacific

Event Time Breakdown

Time	Duration (Hrs.)	Agenda Item
8:30 a.m. - 9:00 a.m.	-	Check-In/Registration
9:00 a.m. - 10:30 a.m.	1.5	Presentations
10:30 a.m. – 10:45 a.m.	-	Break
10:45 a.m. – 12:00 p.m.	1.25	Presentations
12:00 p.m. – 1:00 p.m.	-	Lunch Break
1:00 p.m. – 2:15 p.m.	1.25	Presentations
2:15 p.m. – 2:30 p.m.	-	Break
2:30 p.m. – 3:30 p.m.	1	Presentations
3:30 pm	-	Event Adjourns
Event Total	5.00 Hours	



Will Keefer has 21 years of professional experience. His areas of expertise include training event development and facilitation, water and wastewater resilience, environmental regulatory compliance, and asset management/planning gained through roles in the United States, United Kingdom, and United Arab Emirates. Will schedules, develops, and facilitates a variety of training events across the United States for federal, state, and local clients to help jurisdictions become better prepared for and more resilient against natural and man-made incidents. In addition, he supports other projects on the topics of climate change adaptation, community-based resiliency, cybersecurity, lead in drinking water, and environmental policy.

KEY PROJECTS

U.S. Environmental Protection Agency (EPA) Support

Provides support to the EPA Water Security Division in the form of training and exercises, as well as the development of tools for the water and wastewater utilities across the United States. Training topics include natural and man-made disaster preparedness, critical infrastructure interdependencies, risk and resilience assessments, emergency response plan development, drought resilience and water loss, black sky planning, community-based water resiliency, and many other water security initiatives.

U.S. EPA Region 3 (Philadelphia, Pennsylvania) Support

Provides support specifically for EPA Region 3 staff and their assigned states and utilities. As the primacy agency for the District of Columbia, Region 3 staff have unique roles and responsibilities that are normally found at the state level. Provides assistance to the Region including emergency response training and exercises for the staff to enhance their capability to support DC Water and other states in the region.

Water and Wastewater Agency Response Network (WARN) Support

Leads the development, planning, and conducting of WARN intrastate and interstate seminars, tabletop exercises and functional exercises for the 50 WARNs across the country. Supports the annual WARN Chairpersons Meeting and develops a National WARN Progress Report.

Water Sector Incident Command System (ICS) and National Incident Management System (NIMS) Training

Develops the content and acts as an instructor for this training series that is presented across the United States. Delivers presentations and group learning activities, resulting in thousands of water and wastewater professionals receiving ICS and NIMS certifications, being more prepared to respond to incidents that could impact their utilities.

DC Water Emergency Preparedness Support

Supports DC Water in preparedness activities to include ICS training; designing and conducting tabletop, functional exercises and drills for Incident Management Team members and field staff; and facilitating events for DC Water customers and partner agencies. Lead training events including after action conferences following incidents and annual critical customer engagement sessions. Facilitate the development of actionable improvement planning items for local, state, and federal stakeholders to improve coordination in the future.

Source Water Protection Training

Plans, develops, and facilitates source water protection workshops, tabletop, and functional exercises across the country focused on preparing for releases. Leads

William Keefer

Senior Planner

wkeefer@horsleywitten.com

Areas of Expertise

Drinking Water Quality
Water Security
Environmental Permitting & Compliance
Emergency Preparedness & Response
Education, Facilitation & Training
All Hazard Exercise Development and Facilitation

Professional Registrations & Affiliations

Certified Municipal Vulnerability Preparedness Provider
FEMA Certifications:
ICS-100/200
IS-700 NIMS
IS-701 MACS
IS-702 Public Information
IS-800 NRF
Memberships:
American Water Works Association (AWWA)/New England Water Works Association (NEWWA)

Academic Background

Project Management Certification, 2009, Association for Project Management (APMP)
Master of Science, 2004
Environmental Science, American University
Bachelor of Science, 2002
Environmental Science, University of Delaware

Professional Experience

Horsley Witten Group, Inc. Planner, 2011 to Present
Atkins Global, Process Engineer, 2008 to 2010
United Water New Jersey, Compliance Specialist, 2006 to 2007
DC Water and Sewer Authority, Water Quality Specialist, 2003 to 2006



discussions and exercises designed to provide an opportunity for water suppliers to plan and discuss response capabilities with local, county, state, and federal response partners.

Cybersecurity Assessments, Technical Assistance and Workshops

Conducts confidential cybersecurity assessments for water and wastewater utilities around the country. Based on the assessment, a utility receives a customized cyber action plan and subsequent assistance that helps them to implement the plan's identified cybersecurity best practices. Involved in the development and facilitation of cybersecurity workshops and cyber incident response exercises throughout the United States.

State and Regional Level Full Scale Exercises

Plans and facilitates full scale exercises that test the capabilities of utilities to respond to resources requests by deploying personnel and equipment to a requesting member's location. Enables emergency response agencies and local, state and federal stakeholders to communicate and potentially coordinate an activated emergency operations center.

Community and County-Level Exercises

Plans and facilitates sessions designed to bring together local emergency responders to provide response training, enhance coordination and communication between all responders, improve understanding of roles and responsibilities, and allow participants to discuss steps to prepare for a future, multi-agency, "all hazards" emergency scenario.

W.K. Kellogg Foundation

Lead in Drinking Water in Schools and Homes: Led the development of a "Managing Lead in Drinking Water at Schools and Early Childhood Education Facilities" guide and fact sheets regarding how to better manage risk of lead (Pb) in drinking water in homes and apartments. Created a website with information on lead in drinking water resources for homeowners in all 50 states.

Development and Implementation of Southern Water Asset Management Program, Epsom, United Kingdom

Prioritized management schemes to deliver a prioritized scheduling of Water Supply Works investigations based on cost, benefit, and overall business value. Included response scenarios for a significant increase of bacterial failures, the monitoring of the completion of system wide disinfection compliance improvement schemes, and the delivery of a pump optimization program which identified £141,000 yearly savings for Southern Water.

Chlorination Systems Evaluation, Abu Dhabi, United Arab Emirates

Led the collection and analysis of potable water samples at strategic locations across the emirate and performed capacity and residual analysis of the chlorination systems to provide recommendations for improving water quality

Management of Environmental Regulatory Compliance Programs, Haworth, New Jersey

Coordinated with all departments of United Water New Jersey to maintain compliance with applicable laws and regulations. Submitted regulatory reports, managed the permit renewal and termination process, created a document index for permits, developed the yearly disaster response drill, directed regulatory site inspections of the Haworth Water Treatment Plant, and supervised the cleanup of spills in the watershed.

Lead in Drinking Water Mitigation, Washington, District of Columbia

Completed a research and development project which mitigated lead (Pb) problems in Washington, DC drinking water and deferred a major service line replacement program. Developed a sampling program of residential, commercial and government locations and investigated suspected drinking water contaminations and customer water quality complaints.