

NISQUALLY CHAPTER OF THE
ASSOCIATION OF ENVIRONMENTAL &
ENGINEERING GEOLOGISTS

The Official

AEG Nisqually Chapter Newsletter

Meeting Details

Thursday, January 16th, 2025

Location:

La Quinta Inn & Suites by
Wyndham Tacoma-Seattle
1425 E 27th St
Tacoma, WA 98421

[Google maps link](#)

6:00pm Social hour (bar
sponsored by Holt Services!)

6:45pm Buffet line opens

7:30pm Presentation

\$45 Members

\$55 Non-Members

\$10 Students & Job Seekers

RSVP Online:

www.bpt.me/6516390

Upcoming Events:

February dinner meeting:

Tuesday, February 18th, 2025
Mercato Ristorante, Olympia
Jahns Lecturer: Dr. John Kemeny

March dinner meeting:

Tuesday, March 4th, 2025
Mercato Ristorante, Olympia
Speaker: Megan Anderson, PhD.

Bernstein Bears Field Trip:

Sat., March 22nd, 2025
Amber rock hounding in the
Issaquah Alps



Joint AEG Nisqually & AEG Puget Sound meeting held in Tacoma

2017 Oroville Spillways Incident & Subsequent Reconstruction

Douglas Boyer, PE, CEG

Risk-Informed Decision Making Branch Chief
Federal Energy Regulatory Commission

Abstract

Discharges through the service spillway on February 7, 2017 damaged the concrete spillway chute for the tallest dam in the United States. Further spillway discharges and activation and scour of the auxiliary spillway days later resulted in evacuation of nearly 200,000 people downstream of the dam. A series of emergency actions were implemented to reduce risk in the short-term. Significant geologic investigations and evaluations were initiated almost immediately to inform decision-makers of possible actions and to support redesign activities. The redesign and construction of the service and emergency spillways were conducted from the spring of 2017 through the end of 2018 and required heroic efforts and innovative measures to reconstruct the spillway structures and ensure safe spillway releases during the 2017/2018 runoff season. Total construction costs exceeded \$1 billion.



This presentation will describe the significant events, evaluations, and decisions during the initial discovery and emergency response of the incident, the root cause of the incident, the geologic and engineering evaluations performed to inform the preferred spillway design alternatives, and select details of the two-year construction activities and challenges to restore the two spillways.

Biography — Douglas Boyer, PE, CEG

Doug is a civil engineer and engineering geologist with over 38 years of experience in dam engineering and dam safety. He has a B.S. in Geology and M.S. in Civil Engineering. He currently serves as the Chief of the Risk-Informed Decision Making Branch for the Federal Energy Regulatory Commission (FERC) in Portland, Oregon.

Special thanks to Holt Services, Inc. for sponsoring this event, and for sponsoring the bar!



To learn more visit: HoltServicesInc.com

Message from the Chair

Announcements:

February 18th AEG Nisqually Dinner Meeting - Jahns Lecture

We are excited to host the 2024-2025 Jahns Distinguished Lecturer: Dr. John Kemeny

Date:

Tuesday, February 18th, 2025

Time:

6:00 pm – Dinner & Social Hour

7:00 pm – Presentation

Location:

Mercato Ristorante
111 Market Street NE
Olympia, WA 98501



Dr. Kemeny has prepared a number of [presentations for us to choose from:](#)

- Innovative Monitoring & Characterization Technologies (with the help of AI) for Combatting Geologic/Hydrologic Hazards Associated with Climate Change.
- Everyday Geospatial: New Technologies & Methods that Anyone Can Afford for 3D Field Scanning, Point Cloud Processing, Rock Mass Characterization, & Slope Stability.
- Why is that Unstable-Looking Rock Slope Still Standing, & When Can We Expect It to Fail: a gentle introduction to time-dependent rock fracturing & rock bridges.
- Entrepreneurship in Applied Geology: Why your next career move could be an innovative small business startup.
- Rock Mechanics, Geomechanics, Rock Engineering: What's It All About?

Bernstein Bears field trip Sat., March 22nd, 2025

Did you know you don't have to travel to the Baltic Sea to find amber? There are amber (bernstein) deposits waiting to introduce themselves to your rock hammer in our very own Tiger Mountain State Forest. Geologist Will Gallin (GSI Environmental) will help lead an amber rock-hounding field trip to Tiger Mountain on Saturday March 22nd, 2025. Stay tuned for more information, and mark your calendars for March 22nd!



ABOUT US

As a result of our environmental, geotechnical, and clean water drilling services, communities have reliable sources of clean water, property is bought and sold, roads, bridges, and buildings are built, environmental contaminants are handled, and much more.

Safety First Culture

Holt Service employees are continually guided by our Health and Safety Director in the implementation of best safety practices. We diligently monitor, maintain and renew all required health and safety certifications. Holt Services offers comprehensive training and preventative measures. We regularly perform unannounced safety audits and encourage ongoing communication, recognizing and rewarding those efforts.

SERVICES PROVIDED

FULL SERVICE DRILLING COMPANY

- Clean Water
- Environmental
- Geotechnical
- High Resolution Site Characterization
- Injection Remediation
- Site Development
- Tank Pulls
- Excavation
- System Installation
- Utility Clearance
- AND MORE!

Four Office Locations

- Edgewood WA
- Vancouver WA
- Everett WA
- Boise ID

253.604.4878
support@holtservicesinc.com





High Resolution Site Characterization (HRSC)

High-resolution site characterization (HRSC) is an excellent approach for refining or building conceptual site models (CSMs). By providing detailed insights into the location and migration of contaminants, HRSC enables a deeper understanding of subsurface conditions. This improved clarity supports more accurate feasibility studies and the design of effective cleanup actions, streamlining the remediation process. Ultimately, this leads to a significant time savings and cost reductions, ensuring a more effective and budget friendly approach to site management and remediation.

The Right Tool for the Job!

Direct Imaging Systems

- Membrane Interface Probe (MIP)
- Optical Image Profiler (OIP)
- Hydraulic Profiling Tool (HPT)
- Electric Conductivity

Capabilities

- 3/4 Ton Transit Van
- Membrane Interface Probe with Hydraulic Profile Tool and Electric Conductivity
- Equipment set up to log to depths of 100 feet bgs
- Realtime data capture

Don't forget to ask about Injection Remediation services!

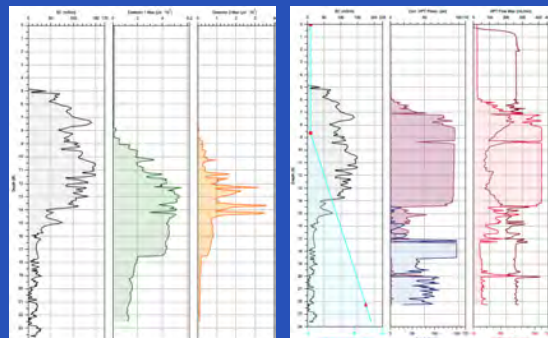
In-situ chemical injection projects by nature are complex and offer many challenges. Which is why we work with the client to understand the goals of the project and how to safely achieve those goals. Holt Services has the capability of working with various remediation materials!

Contact us:

253.604.4878

Support@Holtservicesinc.com

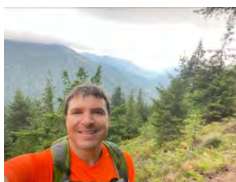
High Quality In-Situ Data



MiHPT and OiHPT probes are advanced with the use of a direct push drill rig at specific time intervals in order to gather and analyze the specific information.



Chapter Officers & Committee Chairs



Chair:

Stephen Newman

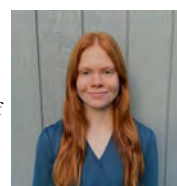
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Mud Bay Geotechnical Services



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Washington Geological Survey

National AEG webpage:

<http://aegweb.org>

The AEG Nisqually Chapter Newsletter

The Association of Engineering Geologists (AEG) contributes to its members' professional success and the public welfare by providing leadership, advocacy, and applied research in environmental and engineering geology. AEG's values are based on the belief that its members have a responsibility to assume stewardship over their fields of expertise. AEG is the acknowledged international leader in environmental and engineering geology, and is greatly respected for its stewardship of the profession.

AEG NISQUALLY CHAPTER NEWSLETTER is published monthly from September through April. Subscriptions are for members of AEG affiliated with the Nisqually Chapter or other Chapters, and other interested people. E-mail subscriptions are free.

Mailing List sign up link: <http://eepurl.com/c5gvKn>

