2015 Groundhog
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In this Issue:

2014 - 2015 Officers ........................................................................................................... 3
President’s Message .......................................................................................................... 4
2014 - 2015 Event Schedule .......................................................................................... 6
Spring Seminar and Short Course Update .................................................................... 7
Public Relations .............................................................................................................. 8
UW GIGSS ......................................................................................................................... 9
Local Firm Summaries ..................................................................................................... 10
Career Opportunities ....................................................................................................... 41
2014-2015 Officers

Back: Bob Metcalfe, Todd LaVielle, Tyler Stephens, and Ben Blanchette
Front: Elizabeth Lundquist, Fadzilah (Dila) Saidin, and Lynn Salvati

**PRESIDENT**
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Shannon & Wilson

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McMillen Jacobs Associates

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Hart Crowser

**TREASURER**
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President’s Message

Happy Groundhog Day and welcome to the 2015 edition of The Groundhog! The ASCE Seattle Section Geotechnical Group and Seattle Geo-Institute Chapter (SSG/SGIC) produces this publication annually to share group announcements, provide our member firms with a forum to share their achievements over the previous year, and discuss our group’s activities and goals.

Our chapter’s success is due solely to the effort put forth by our officers and volunteers, and I would be remiss not to recognize them here.

**Lynn Salvati**, our group’s President-Elect, is hard at work organizing this year’s Spring Seminar, to be held May 2nd at the University of Washington. This year’s seminar is on Geotechnical Earthquake Engineering, and should not be missed!

Our Secretary **Ben Blanchette** has been working diligently to produce this publication.

The group’s Treasurer, **Dila Saidin**, is the first face many of you see at the dinner meetings, making sure your payments accounted for, so that our finances are always in order.

Education Chair **Elizabeth Lundquist** organized our dinner meetings and is also organizing another short course to be held the day prior to the Spring Seminar.

Membership Chair **Bob Metcalfe** maintains our membership list and acts as a senior-level advisor to the board. His past experiences as President of the group help guide our decisions as we move the group forward.

Public Relations Chair **Barbara Gallagher** has been coordinating our outreach activities with the ASCE Seattle Section, PSEC, and others.

Webmaster **Todd LaVielle** has been instrumental in updating our registration process, event announcement distribution, and our website. Todd has several additional improvements he would like to make, so stay tuned.

**Erik Andersen** has volunteered his time and effort to lead a *case histories* course at UW, soliciting volunteers from professional practice to present case histories and other components of professional practice which are not covered in other course study.

**Jason Garner** planned and coordinated our winter short course, entitled *Soil-Structure Numerical Modeling in Geotechnical Practice*. The course was held January 23rd and was taught by Dr. Michael Beaty, Professor Pedro Arduino, and Hollie Ellis. Early reports indicate that the course content was informative and we consider the event to be a success.

Our group’s mission is “to advance geotechnical practice in the Puget Sound Region by providing leadership on public issues, sharing professional experience, and promoting education.” We plan our dinner meetings, short courses, spring seminar, and outreach activities with this mission in mind. Dinner meeting topics and selected speakers, short courses, and the spring seminar are intended to advance geotechnical practice locally, in some cases through shared professional experience. Our mission to
promote education occurs via our connection to the University of Washington and their Geo-Institute Graduate Student Society (GIGSS) Chapter.

With each academic year comes a new group of graduate students, and each year we reach out to the GIGSS Chapter to add the new students to our distribution list, invite them to our dinner meetings, and work to secure sponsorship from local firms so that the students can attend free of charge. The UW graduate program has grown in the last several years, with more than 20 students being added to our list this year. We’ve seen an increase in the number of students attending our meetings, and look forward to continued support of student attendance.

We are happy to report that our group has reinstituted the Case Histories graduate-level course at UW, due in large part to the volunteer effort and initiative of Erik Andersen. This course provides an opportunity for local practitioners to educate graduate students about the nuances of professional practice which are not covered in other course study. We believe that both the students and instructors benefit through this experience, and encourage all of our members to consider participating in this course.

The SSGG/SGIC and the UW GIGSS have been selected as co-hosts for the Geo-Institute’s cross-country lecture for the third year in a row. This year’s lecture will be given by Ken Stokoe. This lecture is only given in five cities annually, so it is a great honor to be selected three years running! The lecture will be held April 2nd at UW. Details and registration will be available on our website.

Our group’s primary method of financial support to the UW graduate program is the ASCE Geotechnical Group Robert D. Holtz Endowed Fellowship. Established in 2007 with an initial endowment of $50,000, this fund has grown to over $266,000 as of July 2014, through contributions from local firms and our group. Our group contributed $30,000 in 2012, $40,000 in 2013, and $20,000 in 2014. This fund currently provides about $9,000 annually for graduate student scholarship. This year Cyndi Lopez received our endowed fellowship award. Cyndi came to UW after earning her BS and MS from UC Berkeley, and is working toward her PhD under Professors Kramer and Arduino. Cyndi indicated that funding was one of the deciding factors that brought her to UW. Many thanks to all of our members for their support which has brought another talented student to UW! We are on track to make another contribution this year, and hope to continue growing the endowment to provide more annual funding to the UW program.

As evidenced by our continued support of the Endowment, our financial position remains strong. We are covering our costs with the dinner meetings, and continue to see income from our short courses and Spring Seminar. This income gives us the freedom to support the Endowment as well as other local non-profit organizations, such as the GIGSS and Engineers Without Borders.

Our group continues to grow and thrive, thanks to the dedication and support of each and every member. The officer board is always looking for volunteers to serve on committees, plan events, and get involved! I would encourage everyone reading this to consider helping us out and making your group even stronger.

Thanks for reading, and we’ll see you at the meetings!

Tyler Stephens, P.E.
President
## 2014-2015 Events Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Speaker</th>
<th>Topic</th>
<th>Venue</th>
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<tbody>
<tr>
<td>9/18/14</td>
<td>DM, joint</td>
<td>Thomas Doe</td>
<td>What's Up with Fracking?</td>
<td>Best Western, Seattle</td>
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<td>10/16/14</td>
<td>DM</td>
<td>Joseph Wartman</td>
<td>The 22 March 2014 Oso, Washington Landslide</td>
<td>Red Lion, Bellevue</td>
</tr>
<tr>
<td>11/20/14</td>
<td>DM</td>
<td>John Kvinsland</td>
<td>Block 43 - &quot;Just About Everything&quot;</td>
<td>Best Western, Seattle</td>
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<tr>
<td>12/18/14</td>
<td>DM</td>
<td>Ben Upsall &amp; Tommy Howard</td>
<td>Design of Deep Water Pontoon Mooring Anchors for the SR 520 Floating Bridge &amp; Landings Replacement Project</td>
<td>Red Lion, Bellevue</td>
</tr>
<tr>
<td>1/22/15</td>
<td>DM</td>
<td>Michael Beaty</td>
<td>Challenges of Liquefaction in Numerical Modeling</td>
<td>Red Lion, Bellevue</td>
</tr>
<tr>
<td>1/23/15</td>
<td>SC</td>
<td>Pedro Arduino, Michael Beaty &amp; Hollie Ellis</td>
<td>Soil-Structure Numerical Modeling in Geotechnical Practice</td>
<td>Best Western, Seattle</td>
</tr>
<tr>
<td>2/26/15</td>
<td>DM</td>
<td>Roman Hryciw</td>
<td>Recent Advances and Innovations in Optical Geo-Characterization</td>
<td>Best Western, Seattle</td>
</tr>
<tr>
<td>4/2/15</td>
<td>Hennes</td>
<td>Ken Stokoe</td>
<td>The Effectiveness of Shallow Ground Improvements to Inhibit Liquefaction Triggering</td>
<td>UW Campus</td>
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<td></td>
<td>Lecture, DM</td>
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<tr>
<td>4/16/15</td>
<td>DM</td>
<td>Timothy Stark &amp; Oldrich Hungr</td>
<td>Oso Landslide</td>
<td>Best Western, Seattle</td>
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<tr>
<td>5/1/15</td>
<td>SC</td>
<td>Ross Boulanger</td>
<td>Liquefaction during Earthquakes</td>
<td>Best Western, Seattle</td>
</tr>
<tr>
<td>5/2/15</td>
<td>SS</td>
<td></td>
<td>Geotechnical Earthquake Engineering</td>
<td>UW Kane Hall</td>
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**DM** Dinner Meeting  
**SC** Short Course  
**SS** Spring Seminar
2015 Spring Seminar and Short Course Update

The ASCE Seattle Section Geotechnical Group / Seattle Geo-Institute Chapter is proud to announce that our 32nd Annual Spring Seminar will be held on Saturday, May 2, 2015 on the University of Washington campus at Kane Hall. Based on feedback from our members, the topic of the seminar this year will be Geotechnical Earthquake Engineering.

We are pleased to announce our speakers will include Dr. Steven Kramer and Dr. Joseph Wartman from the University of Washington and Dr. Jonathan Stewart from UCLA. A number of regional experts will give presentations on local projects. Presentations will cover practical design and construction as well as developments in research.

In addition to the specific topic presentations, the Spring Seminar will include our annual Service Award Presentation, exhibitor displays, and hosted lunch and breaks. Seminar attendees will be eligible to receive 0.8 Continuing Education Units (CEU) or 8 Professional Development Hours (PDH). We are also planning a 1-day short course which will be held on Friday, May 1, 2015.

Our Steering and Planning Committees are helping to produce one of the most respected regional seminars in our industry, but we could still use your help. Volunteers for the Planning Committee are always welcome. Please contact Lynn Salvati at salvati@mcmjac.com if you are interested in helping out. It is a great way to get involved with the group!

Mark your calendars and make plans to attend the 32nd Annual Spring Seminar, and look to our website (www.seattlegeotech.org) by early March for more details and to register for the Spring Seminar and the Spring Short Course!

Lynn Salvati, P.E., Ph.D.
President-Elect 2014-2015
Public Relations

The chapter has continued to increase awareness of the geotechnical profession and educate the public. Chapter outreach has been through collaboration with other organizations.

Puget Sound Engineering Council (PSEC)

*Mentor Night*

The UW-Bothell campus hosted an Engineer Mentor Night last October. Approximately 100 students and 25 volunteer mentors participated including representatives from our chapter. The students may have come for the free pizza, but they lingered to engage in dialogue with the mentors who were happy to share their experiences.

*Engineers Fair*

National Engineers Week concluded in February 2014 with the annual Engineers Fair at Boeing’s Museum of Flight. The Fair provides a fun, visible way to see and hear about the various types of engineering disciplines, as well as encourage students to think about engineering as a career. The American Society of Civil Engineers (ASCE) Seattle Section sponsored a K-12 booth that was staffed by several volunteers from our chapter. We helped the kids understand basic engineering principals by building structures made from toothpicks and gumdrops and building and flying hoop airplanes. We also provided engineering handouts for activities from ASCEVille and the PBS television show ZOOM that students could work on at home.

Barbara Gallagher
Public Relations Chair
The Geo-Institute Graduate Student Society (GIGSS) is a student-run organization at the University of Washington created to provide a platform for students to gain exposure to the current state of the practice of geotechnical engineering. GIGSS hosts a seminar series at the UW featuring geo-professionals from the industry and academia. We also have hosted several social activities including barbeques and “GeoBeers” to encourage a sense of community among the students and faculty. These events are often hosted and attended by our geotechnical faculty members (Professors Pedro Arduino, Steve Kramer and Joseph Wartman).

New this year are monthly “Lunch and Learn” meetings where current Masters and PhD students have an opportunity to give a short research presentation and answer questions from their peers. Another new GIGSS event this year was the Pacific Northwest Graduate Student Symposium, which saw 48 students and six professors from OSU, UBC, WSU, and UW come together for a full day of presentations, posters, and a discussion on geotechnical graduate education.

Last Geo Congress, two UW students competed in the national Geo–Prediction competition. The team of alex grant (Graduate) and Lily Grimshaw (Undergraduate) were challenged with predicting differential settlements under an irregularly shaped structure at various times after loading. Their work earned them a spot in the finals at Geo Congress in Atlanta, but did not score in the top three overall.

Over the past year it has been our pleasure to host many wonderful seminars from the local geotechnical community. We would like to thank the following people for coming in and sharing their time and experiences: Ben Upsall (Hart Crowser), Carol Ravano and Bill Gates (Jacobs Associates), David Baska (Terracon), Martin Page (Shannon & Wilson), Kathryn Petek (Shannon & Wilson), Lindsey Flangas (GeoEngineers), Henry Haselton (Aspect), Enayat Aziz (Aziz), Bucky Tart (Golder), James Drainsfield (AMEC), Greg Wessel (Geology in the Public Interest), and Mark Koeling (Hayward Baker). In the past year we have also been able to host seminars from members of the broader geotechnical community: Faiz Makdisi (AMEC), Ben Mason (OSU), Chadi El Mohtar (UT), Brendon Bradley (Unv. Of Canterbury), and the 2014 Geo-Institute Cross Country lecturer Tom O’Rourke (Cornell). We will also be hosting the 2015 Cross Country lecturer, Ken Stokoe (UT), in April and will be sending out information about that event in the coming months.

If you are interested in giving a lecture in the coming months, please contact alex grant at agrant3@uw.edu. If you would like to have information about upcoming lectures, geo-beers and updates on GIGSS activities, you can join at: http://mailman1.u.washington.edu/mailman/listinfo/gigss-alumni.

The GIGSS officers for 2014-2015 are: alex grant (President), Mike Greenfield (Vice-President), Katie DeLaveaga (Secretary), Jordan Thomas (Treasurer), Long Chen (Webmaster), and Cyndi Lopez (National SLC representative)
Local Firm Summaries

ASCE Seattle Section Geotechnical Group would like to thank the following companies for volunteering to submit articles for the 2014 Groundhog publication. The Groundhog is published to inform group members and others of the group’s achievements, recent activities, goals, changes in the group and other significant issues in the local geotechnical community.

Each local organization represented by the group’s membership is invited to submit a brief article summarizing their organizations services and trends over the past year, plans for the coming year, changes in the organization and promotions.

The company articles are arranged within the Groundhog publication in alphabetical order.

AESI

AMEC

Aspect Consulting

CDM Smith

CH2M Hill

Condon Johnson & Associates

GeoBrugg

GeoEngineers

Geopier Northwest

Golder Associates

GRL

Hart Crowser

Hatch Mott MacDonald

Hayward Baker

Holocene Drilling

Holt Services

HWA GeoSciences

Kleinfelder

Landau Associates

Malcolm Drilling

McMillen Jacobs Associates

Robinson Noble

Shannon & Wilson

SPU

SubTerra

Terracon Consultants

URS Corporation
AESI would like to wish everyone a Happy New Year! The continuing uptick in the economy and our diversified client base resulted in a successful 2014. Schools, mixed-use development, senior housing, assisted living, healthcare and infrastructure projects kept us very busy under the leadership of President Bruce Blyton. It is no secret that the residential market in the Puget Sound area is on a steep growth curve again. This year the amount of residential projects AESI worked on ranging from individual lots to short plats to large developments was impressive.

At the Kirkland office, we welcomed Stephen Siebert, Associate Engineer, Ben Weinberg, Staff Engineer and Tyler Gilsdorf, Staff Geologist into our geotechnical group. We are proud to announce that Tony Romanick, Senior Staff Engineer was successful in obtaining his PE license in April. Our Tacoma office welcomed Jim Brisbane, Senior Associate and Jeff Wilson, Technician.

Notable AESI projects in 2014 include:

- Five buildings in downtown Seattle having deep excavations and shoring most of which were high-rise
- Several large mixed-use projects in Bothell and Tukwila
- Multiple residential subdivisions on the Eastside
- Waterfront piers in Seattle, Bremerton and the San Juan Islands
- Many new K-12 schools either in design or under construction

In addition, an AESI project in Everett garnered local, national and even international media attention when a 300,000 pound rock was encountered during excavation for the underground parking garage of a new Courtyard Marriott Hotel. The rock measured about 18 feet long by 10 feet wide! Its final resting place is still being decided.

Contact: Todd Wentworth
todd.wentworth@amecfw.com

Environment and Infrastructure

We are proud to announce our new name, Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler). We changed our name due to the merger of AMEC and Foster Wheeler at the end of 2014. The merger will further enhance our geotechnical engineering practice, which is one of the largest geotechnical consulting practices in the Americas with over 500 geotechnical engineers and engineering geologists.

Staff in our Bothell, Seattle, and Tacoma offices have focused on local clients but also collaborated with other offices to share resources and expertise. Jim Dransfield has been working with engineers from other offices to design a new road over a former landfill in Canada. Locally, his recent projects
include dam and levee assessments and other infrastructure improvements. Todd Wentworth contributed geotechnical expertise for roadway improvements, large stormwater infiltration facilities, and new school construction. Bill Lockard traveled to southeast Alaska for preliminary design of new roads. Henry Brenniman conducted slope stability assessments and stormwater infiltration investigations for several cities. Konrad Moeller has been monitoring construction for several school and commercial development projects locally. Koorus Tahghighi designed excavation and shoring systems for several high-profile contaminated soil remediation projects. Ryan Barnes has been busy in the field performing construction monitoring and assisting in design of stormwater management facilities.

We look forward to new opportunities to contribute our expertise to regional and local transportation projects, ports, levees, and municipal facilities, while continuing to collaborate with other Amec Foster Wheeler offices worldwide.

Contact: Henry Haselton

2014 saw Aspect maintaining our core focus while expanding our client and project base. Our geotechnical practice leaders – Henry Haselton, Dave McCormack, and Erik Andersen have built their careers on Pacific Northwest soils. Combining their regional geologic expertise with strong geotechnical engineering our practice has proven perfectly suited to meet the area’s current and growing needs in floodplain management, culvert rehab/replacement, ongoing slope stability and rapid urban development.

**Floodplain management.** Partnering with strong local floodplain management firms like HDR, TetraTech, McMillen Jacobs, we are working on projects including King County’s Lower Russell Road Levee Setback project on the Green River, the South Fork Snoqualmie Corridor Early Action project, Kitsap County’s Clear Creek Floodplain Restoration in Silverdale, and South Skagit Highway Floodplain Restoration.

**Culvert Replacement.** From the Hoh River to Pend Oreille County (and Kitsap, Jefferson, Chelan, and Okanogan counties between) we support structural partners - including Sargent Engineers, Shearer Design, Nicholls Kovich, Otak - in culvert rehabilitation to support fish passage, address aging infrastructure, and accommodate increased usage.

**Slope stability.** We continue to provide slope stability solutions for homeowners across the region, from Bainbridge Island to Magnolia Bluff and Lake Washington above the Burke Gilman trail. Our slope stability practice is not limited to homeowners, as we have addressed critical slope conditions for Olympic Medical Center, Northshore Utility District, and the cities of Port Angeles, Des Moines, and Renton.

**Urban Development.** From South Lake Union (new Denny Substation and transmission/distribution lines crisscrossing the city) to our Pioneer Square backyard, we are supporting infrastructure projects responding to the area’s continued growth. We are providing geotechnical construction oversight to SODO Builders for the next phase of North Lot redevelopment at 2nd and
King – (perhaps the shortest commute ever for our staff at 2nd & Jackson). Dave McCormack is providing geologic insight to the City of Seattle’s technical and legal teams to perform review and analysis of potential and observed impacts to utilities and structures resulting from construction of the Alaskan Way Viaduct and Seawall Replacement Projects. We continue to support King County and SPU on their CSO programs.

We closed 2014 with the retirement of one of Aspect’s geotechnical founders, John Peterson, who leaves us a strong west Sound legacy as we look forward to north Sound expansion with the opening of our Bellingham office in early 2015.

Contact: Ulf Gwildis
GwildisUG@cdmsmith.com

CDM Smith provides lasting, integrated solutions in water, environment, transportation, energy and facilities to public and private clients worldwide. In the Northwest, CDM Smith has offices in Bellevue, Seattle, Portland, Helena, and Libby.

A reorganization at the beginning of 2014 resulted in a close alignment between CDM Smith’s geotechnical and structural engineering technology groups, leading to a successful year providing innovative solutions for the design and construction of complex projects. In addition our strong focus on underground construction projects, we worked on numerous reservoir, dam, levee, slope stabilization, and geoenvironmental projects. Our northwest geotechnical staff made presentations at the North American Tunneling conference and the annual meeting of the Pacific Northwest Clean Water Association.

John Newby, P.E., continues to serve as a program lead and lead geotechnical practitioner for major infrastructure projects in the Western U.S., Canada, and Asia. Joe Souther, P.E., leading the geotechnical group in Bellevue, continued performing geotechnical design for the water and wastewater infrastructure of a new industrial city in Saudi Arabia. He also worked on several railroad rock and soil slope stabilization projects throughout the Western U.S. Ulf Gwildis, L.E.G., provided geotechnical design for the new design/build water treatment plant at the Joint Base Lewis McChord as well as for recreation areas at Lake Berryessa in California and led geotechnical investigations for a planned dredging operation at a St. Lawrence tributary in upstate New York. Mike Lach, P.E., continued supporting Seattle with impact evaluation and monitoring of existing utilities and structures related to the Alaskan Way Viaduct tunnel project. In addition geotechnical and civil design for local projects, he performed seismic design for the South Carolina and worked on a design/build emergency stream bank restoration project in Denver. Karen Irby-Smith, managing our geotechnical laboratory, also oversaw railroad slope stabilization work and conducted subsoil investigations at Lake Berryessa and in New York City for stormwater and sewer infrastructure. Dr. Sri Rajah, Ph.D., P.E. joined our group at the end of 2014 further strengthening our local capabilities in geotechnical and structural engineering and as a national resource on pipeline engineering. He is an active member on several technical committees of ASCE, AWWA, and ASTM related to pipeline design and continues to serve as a national pipeline committee chair and associate editor for ASCE.
We continue seeking to add geotechnical professionals to our nation-wide team working on numerous technically exciting and challenging projects throughout the U.S. and beyond.

Contact: Karen Dawson  
Karen.Dawson@CH2M.com

CH2M Hill's geotechnical engineers work on stand-alone geotechnical projects and also enjoy working closely with our structural, transportation, hydraulic, water, wastewater, and environmental engineers to solve complex multi-discipline problems. Our Puget Sound area staff can draw from the expertise of approximately 100 geotechnical engineers and tunneling experts in the USA and an additional 450 worldwide.

Interesting projects in 2014 included:

- Conceptual design for the Port of Anchorage modernization, including a non-linear seismic ground response study, pile capacity and embankment stability analyses, and preparation for pile load testing on 48-inch diameter driven piles this summer.
- Planning phase studies for rehabilitation of 12 miles of 100-year old concrete flume and six tunnels for the Yakima-Tieton Irrigation District. The existing canal is constructed on near vertical slopes of exposed basalt along the Tieton River. The existing canal must remain in service during construction. Options could include 5 miles of new reinforced concrete box culvert, 3200 feet of existing tunnel rehabilitation, 5 miles of new 96-inch pressure pipeline, and over 4000 feet of new rock tunnels.
- A river intake with gatehouse, a headrace tunnel, a fish screen facility, a power tunnel, and a below-grade powerhouse for the Sunset Fish Passage and Energy Project on the South Fork of the Skykomish River near Index, Washington.
- Site selection and conceptual design for a King County combined sewer overflow treatment plant, conveyance system, and outfall to the Duwamish River in Georgetown. In 2015 we anticipate developing the design, which is likely to include a slurry diaphragm wall shaft to house an equalization basin and intake pump station.
- Design of an organic waste processing center over peat in Vancouver BC.
- Design and construction support for approximately 2,500 LF of sheet pile wall up to 40 feet deep to provide flood protection for Tacoma's Waste Water Treatment Plant. The floodwall includes the first passively operating flood gates in Washington State.
- Exploration, ground improvement design, and construction support for 19 acres of reclaimed land to support a resort in the Dominican Republic.
- Design and interpretation of static pile load tests and development of installation criteria for American Piledriving Equipment’s high capacity grouted and ungrouted helical piles at sites in northern Manitoba, northern Alberta, and New Jersey.
- Seismic vulnerability study of Tacoma’s water supply system.
- Design of several bridges in Washington and Iowa.

We hope to support, team, or work with many of you in 2015!
Geotechnical
Environmental
Construction

HOLOCENE DRILLING
Licensed to Drill

Your Subsurface Exploration Resource.

www.holocenedrillinginc.com
Contact: Doug Watt
DWatt@condon-johnson.com

Condon-Johnson & Associates Inc. (CJA) is a diversified heavy civil engineering construction company whose core competencies include drilled shafts, micropiles, displacement piles, anchored earth retention, dewatering, grouting, and ground improvement.

In 2014, the Seattle office added the following key personnel:

- **Doug Watt** is the new District Manager for the NW District. Doug was previously the Vice President of Construction at Northwest Cascade. He brings valuable experience in the heavy civil and drilling markets to Condon-Johnson.
- **Ryan Thorne** started as a Project Manager in early November. Ryan was a Project Manager with Mowat Construction Prior to joining Condon-Johnson.
- **Andrew Erickson** is a Montana Tech graduate working as a field engineer on the Elliott Bay Seawall Project. Andy interned for CJA in 2013, and has previous drilling experience working for O’Keefe in Montana.
- **Griffin Lowe** is a UCLA civil engineering graduate who joined CJA in October of last year as a Project Engineer for a substantial drilled shaft project currently underway.

**2014 Project Highlights:**

- **Elliott Bay Sea Wall.** A critical piece of Seattle’s infrastructure, the Elliott Bay Seawall, was constructed in the 1930s and must be replaced due to seismic and deterioration concerns. The focus of Condon-Johnson’s work is the construction of over a half mile long temporary shoring wall which will allow the existing wood relieving platform to be removed and replaced with concrete.
- **OHSU Doernbecher iMRI Addition.** Condon Johnson was selected by Hoffman Construction to install the temporary shoring as well as the permanent micropiles and rock anchors required for the iMRI addition to the Doernbecher Children’s Hospital in Portland, OR.
- **Madison Centre.** At the corner of Fifth and Madison the Madison Centre will soon rise 37-stories over the sidewalks below. As a specialty shoring contractor, CJA was hired to install an 80-ft deep temporary shoring system permitting excavation for the underground parking structure.
- **S220th Street Light Rail.** CJA began the year by completing the final 8-ft and 10-ft diameter drilled shafts for Sound Transit’s South 200th Link Extension. The temporary casing for these shafts were installed using a 3.05m oscillator.

CJA is committed to serving its clients and the engineering community. During the design phase of your next project, please feel free to contact Doug Watt (DWatt@condon-johnson.com) for assistance with conceptual design, feasibility studies, and budget pricing.

If you have specific questions, you can also contact Dominic Parmantier (DParmantier@condon-johnson.com) for grouting/ground improvement or Spark Johnston (SJohnston@condon-johnson.com) for micropile/barrel vaulting.
Geobrugg is a world leader in providing hazard protections using our patented high-tensile wire mesh and net systems. Last year saw the completion of some very notable projects, including:

- Oregon DOT recently completed slope stabilization along the U.S. Route 26 on-ramp from Jefferson Street. The project required approximately 35,000 ft² of Anchored TECCO® G65/3mm over a 65-75° slope.
- In 1954, the U.S. Coast Guard built a suspension footbridge to access the Paint Bonita Lighthouse on the outer northwestern point overlooking San Francisco Bay. In the most recent renovation, Geobrugg installed a high-tensile stainless steel mesh system with tensioned rock bolts of staggered length and pattern.
- GeoFirma LLC completed a difficult earth retention project near Nashville, Tennessee for a new 13-mile long, by 20-inch diameter natural gas pipeline. GeoFirma used the Geobrugg Tecco System³ 3mm wire mesh with a tensile strength of over 1770 N/mm² as the facing for slope stability along the pipeline corridor.
- Ohio DOT completed a section of roadway on U.S. Route 60 in Zanesville, OH. The project required an installation of 3,800 square yards of TECCO System with G65/3 mm mesh.
- Nearly 3,924 yd² of Ketchum Challis Highway in Sawtooth National Forest in Custer County, Idaho received a NATINA-stained Anchored TECCO G65/3mm system.

Right from the beginning, 2015 is shaping up to be a busy and productive year for Geobrugg North America. We have projects near completion and we would welcome the opportunity to enhance your project. We are also planning our workshop and webinar schedule for the second quarter. For details regarding a workshop or webinar in your area, please contact: Tim Shevlin at 503.423.7258 or tim.shevlin@geobrugg.com

Business was brisk for GeoEngineers in 2014 and 2015 is off to a strong start. Engineering News Record (ENR) ranked GeoEngineers 197 in its annual list of the top 500 design firms in the country by revenue in 2014. This represents a significant jump from the previous year, when we were ranked 220.

2014 Project Highlights

GeoEngineers’ staff engaged in challenging and diverse projects in the Puget Sound region in 2014. Notable projects involved:

- Continuing work with the Kiewit-General-Manson design-build team on the WSDOT/SR 520 Evergreen Point Floating Bridge and Landings Design-Build Project (Seattle, WA).
• Completion of the **SR-530 Emergency Roadway Reconstruction** (Oso, WA) with Atkinson Construction and Jacobs Engineering.
• Continuing work by the Tacoma office geotechnical group on levee projects for the **City of Kent** and in support of a **Craft Brewing and Distilling Center** at the historic Tumwater Brewery site that will continue through 2015.

**Award-Winning Projects**

We are proud to have played a role in several projects that were honored with awards or received national exposure in 2014:

• ACEC awarded GeoEngineers and our project partner, KPFF Consulting Engineers, a national Grand Award for engineering excellence for the **Bill & Melinda Gates Foundation headquarters project** (Seattle, WA). The project received one of just eight grand awards out of 143 entries representing some of the largest and most complex engineering projects in the country.
• The Seattle Post of The Society of American Military Engineers (SAME) awarded its 2014 Small Business Design Excellence Gold Award to a **fish passage design** project that we partnered on for the U.S. Navy. GeoEngineers developed the civil design concept and geotechnical details for constructing a 275-foot long, 20-foot diameter tunnel to replace the failing culvert.
• **Deep Foundations** featured our **815 Pine Street Development Project** (Seattle, WA) hybrid shoring design.

**Award-Winning People**

Our geotechnical staff received public recognition and the busy year meant several new hires and promotions in GeoEngineers’ Seattle, Redmond, Bellingham and Tacoma offices during 2014:

• **King Chin** (Redmond) was promoted to Principal. Others enjoying promotions were **Aaron Hartvigsen** (Bellingham); **Daniel Ciani, Whitney Ciani, Zachary Simpson, Carla Walton, Tyler Coy, Heidi Disla, Wenbin He, Hamilton Puangnak** and **Nikolas Polzin** (Seattle/Redmond); and **Brett Larabee** and **Emily Walner** (Tacoma).
• Joining GeoEngineers were **Kyle Smith, Derek Salinas** and **Michael Gray** (Redmond); **Mark Rose** (Bellingham); and **Basel Kitmitto** and **Christopher Newton** (Tacoma).
• Associate Geotechnical Engineer **Michelle Macauley**, (Redmond) spoke at a technical seminar, hosted by the ASCE Oregon Section Geotechnical Group, on geotechnical aspects of trenchless technologies.
• Principal Geotechnical Engineer **King Chin** (Redmond) gave a presentation titled “Seismic Design of Foundation in Stratified Soft Clay and Liquefiable Soils” at the Practical Deep Foundation Design and Construction for Seismic and Lateral Loads Seminar, hosted by the Deep Foundations Institute.

To learn more about our award-winning people and projects, please visit [GeoEngineers.com](http://www.geoengineers.com).
2014 was a year of continued growth and expansion for Geopier Northwest, Inc. We were fortunate to be included on many design-build where we could offer value added ground improvement solutions for issues ranging from organic soils to undocumented and contaminated fills to liquefiable soils. Our continued growth is a direct result of geotechnical engineers thinking outside of “the box” in order to come up with innovative and cost effective solutions for their clients. A special thank you goes out to the following geotechnical firms that included us on their projects: AMEC Earth & Environmental, Associated Earth Sciences, Budinger & Associates, Earth Solutions NW, GRI, GeoDesign, GeoEngineers, GeoTest Services, Golder Associates, Hart Crowser, Kleinfelder, PSI, Robinson Noble, Ins., Shannon & Wilson, Strata, Terra Associates, Terracon, and URS.

Our growth has been driven by continued increasing awareness of seismic performance of structures and liquefaction hazard by owners. Many of our projects in 2014 included some form of liquefaction mitigation. The patented Geopier-Impact™ displacement system is perfectly suited to mitigate liquefaction hazards and provide foundation support by installing stiff Geopier® elements to depths of up to 50 ft. beneath the water table while creating no spoils and not utilizing air or water jetting during installation!

We have also seen our market offerings expand with more grouted Geopier-Impact, Geopier Armorpact, and Geopier Densipact designs and installations. The grouted Geopier-Impact offers the same benefits of rigid inclusions with the additional benefits of the displacement process and compacted lifts which help improve the surrounding soil.

We are looking forward to teaming with old and new professionals in 2014. Cheers to 2014 and we are excited about continued growth and exciting opportunities for ground improvement in 2015! If you would like to discuss potential projects or schedule a Geopier seminar please contact David Van Thiel, P.E., G.E., at dvanthiel@geopiernorthwest.com or (425)646-2995.

Contact: Andrew Walker
awalker@golder.com

Golder Associates Inc. (Golder) had a successful and productive 2014 with our Pacific Northwest geotechnical group working on exciting and challenging projects locally and worldwide.

Golder’s Redmond office continued work on Sound Transit’s East Link project, South Bellevue to Overlake Transit Center, throughout 2014 as the prime geotechnical consultant for H-J-H Final Design Partners. The project includes a sequential excavation method (SEM)-mined tunnel in downtown Bellevue and several elevated guideways, including a long-span bridge over I-405.

Golder continued to provide construction monitoring for the soil and rock cuts required to accommodate avalanche control measures associated with the proposed eastbound and westbound avalanche bridges along I-90. Conditions encountered during construction necessitated several changes
in the cut design.

Our land development group continued their work in urban and rural site development. One of Golder’s notable 2014 projects was the 929 Office Tower, which consists of two above-grade towers (21 stories and 9 stories) over a combined, variable depth parking garage in downtown Bellevue.

Golder’s Pacific Northwest staff continues to remain busy with interesting mine-related work. Our rock mechanics group is supporting Rio Tinto/Kennecott Utah Copper at their Bingham Canyon Mine, the largest pit in North America. Our scope includes geotechnical rock slope stability modeling to support ongoing life-of-mine feasibility studies as well as daily review of slope monitoring data, geotechnical hazard identification, and short-term engineering in support of the Kennecott Open Pit Operations.

Golder’s Redmond geotechnical group provides support on a variety of projects in the power and waste sectors. We are also supporting pipeline clients in the Northwest and throughout North America.

**People**

Golder is excited about the talented staff we added to our team in 2014. Golder’s Pacific Northwest rock mechanics group saw significant growth with the edition of Taghi Sherizadeh, Rock Mechanics Engineer; Tom Wythes, Associate and Senior Engineer (transferred from Golder’s Silver City office); and Steve Otto, Senior Project Rock Mechanics Engineer (transferred from Golder’s Burnaby, BC office).

We are happy to welcome Birkan Bayrak, Senior Project Geotechnical Engineer, and Rachel Hunt, Staff Geologist, to our Redmond office.

Golder looks forward to a successful 2015 and plans to continue growing our business with unique and rewarding project opportunities and enhancing our relationships with our industry colleagues. For more information on our projects and Golder job openings, visit [www.golder.com](http://www.golder.com).

**Contact: Marty Bixler**

mbixler@GRLengineers.com

Washington State Branch Office
22501 SE 267th St
Maple Valley, WA 98038
Tel: (425) 381-9690
Mr. Marty Bixler, P.E.
mbixler@GRLengineers.com

Central Office
30725 Aurora Road
Cleveland, OH 44139
Tel: (216) 831-6131
info@GRLengineers.com

GRL, Inc. has recently opened a branch office in the Seattle area. The Washington State office – GRL’s tenth - will serve the American Northwest, Alaska, and Western Canada. Marty Bixler, P.E., M.ASCE, a senior engineer formerly with the Florida office of GRL, is heading the office.

GRL specializes in analyzing and testing deep foundations, performing Dynamic Pile Monitoring, Dynamic Load Testing (supplying the APPLE system to test non driven piles by the dynamic method),
Wave Equation Analysis of Pile Driving (GRLWEAP), Evaluation of foundation integrity by Cross Hole Sonic Logging, Pulse Echo Testing (aka Pile Integrity Testing) and Thermal Integrity Profiling, Evaluation of Existing Unknown Foundations, SPT Hammer Performance (calibration) Analysis, and more. GRL also reviews foundation testing data collected by others, and offers seminars, workshops and webinars on foundation testing and analysis.

The opening of the Washington office will greatly reduce GRL’s travel time to serve the American Northwest. Marty is confident that, having reduced travel times and distances by a significant amount, he will be able to pass the savings on to his clients, while also being able to get to their job sites much faster.

Marty is a graduate of Case Western Reserve University and has been in the business of dynamic testing of foundations for close to twenty years. Two of his recent projects in Washington State are the Thermal Integrity Profiling (TIP) of shafts supporting the bridges of the additional HOV Lanes for I-5 near Tacoma and an APPLE project for Puget Sound Energy near Lacey. TIP is a recently ASTM-standardized method of investigating shaft integrity by analyzing concrete temperatures measured during the curing phase. APPLE is a massive drop weight that GRL brings to a job site to deliver a controlled impact to the top of an instrumented drilled shaft. This permits testing the shaft dynamically to obtain a load-set curve, as opposed to conducting a static load test, which generally involves a more costly, time consuming and complex setup.

Marty, along with GRL President Pat Hannigan, P.E., will be offering an educational seminar titled Quality Assurance and Testing Techniques of Drilled Foundations at the Holiday Inn Express & Suites Seattle - Sea-Tac Airport on February 20.

Contact: Doug Lindquist
Doug.Lindquist@hartcrowser.com

2014 was a landmark year for Hart Crowser as we celebrated our 40th year serving our clients. It was another year of growth with major new project work and a growing staff. We worked on high-profile projects in challenging environments throughout the Puget Sound region and worldwide. Notable projects included:

Transportation
- SR167 Puyallup River Bridge
- I-405 Bellevue to I-5 Widening and Express Toll Lanes

Development
- 5th & Columbia Tower (660 feet tall, tallest high-rise in Seattle since 1990)
- Multiple high-rise towers in Seattle. Providing geotechnical design, construction support, and peer-reviewed performance-based seismic design.
- Lincoln Square in Bellevue
- Costco Warehouse Stores in Japan and Taiwan
- Ocosta Elementary School (first “Tsunami-Proof” school for Washington Coast)
Government
- Port of Tacoma Pier 4 Reconfiguration
- Port of Seattle Terminal 5 Deepening and Crane Rail Extension

Projects recognized by the industry for their value, sustainability, and engineering excellence include:

- **SR 520 Floating Bridge Replacement** (Seattle, WA). ASCE awarded Hart Crowser a Local Outstanding Civil Engineering Achievement Award (the top award) in the geotechnical category.

- **I-5/ SR 18/ SR 161 Triangle Interchange Improvements, Federal Way, WA.** The Washington State Chapter of the APWA awarded us the Project of the Year Award in the transportation category.

- **Federal Center South, Seattle, WA.** ACEC Washington awarded Hart Crowser and Sellen Construction the National Finalist Gold Engineering Excellence Award for Structural Systems.

- **Husky Stadium Redevelopment, Seattle, WA.** ACEC Washington awarded Hart Crowser and Wright Runstad & Company the Best in State Gold Award for complexity.

We opened a new office this year in Honolulu, Hawaii to support or work with clients and projects in Hawaii and the Pacific Rim. This office supports our current on-call contract with the Hawaii Department of Land and Natural Resources for geotechnical services.

Lorne Arnold and Nicole Campbell were added to our geotechnical group in Seattle as Senior Staff Engineers. In our Portland office, Allison Pyrch joined us as a Senior Project Engineer and Rachel Pirot as a Project Engineering Geologist.

Congratulations to David Winter on being elected Chairman of the Board of ACEC Washington and Allison on being named Young Engineer of the Year by the Oregon/Southwest Washington chapter of ASCE.

2015 promises to be an exciting year as we look to expand our geotechnical group in Seattle (see advertisement). To learn more about our people and projects visit [www.hartcrowser.com](http://www.hartcrowser.com)

Hatch Mott MacDonald (HMM) continues to support major programs and projects throughout the West from our offices in Seattle, Portland and Vancouver B.C., including on-going projects for the Washington State Department of Transportation, Sound Transit and Metropolitan Vancouver. We successfully met key project milestones, and continued to provide design and construction management expertise for exciting and challenging geotechnical-oriented projects throughout the West. Significant projects by our Northwest staff for 2014 include:

**East Link:** HMM as lead design consultant for the HJH Joint Venture, submitted 100% design for the 2,500 foot long Downtown Bellevue tunnel. The tunnel will be constructed at shallow depth using a...
combination of cut and cover and SEM construction methods in glacially over consolidated soils containing groundwater, in close proximity to City Hall and other significant commercial buildings. The tunnel comprises a 1,980 foot central SEM section with cut and cover portals. Central access to the tunnel will be provided by means of a 50 foot deep access shaft and connecting adit, both also to be constructed by SEM methods.

**Regional Connector:** HMM’s Seattle office is assisting HMM Universal City (L.A.) office with the design of one subway station and one cut-and-cover portal structure for the Regional Connector Transit Corridor Project. The $1.4 billion Design-Build project will provide a 1.9-mile underground light-rail system connecting five existing Metro lines. The project includes three new subway stations and two cut-and-cover tunnels in downtown Los Angeles. 60% Design submittal will be submitted in January 2015.

**Seymour-Capilano:** for Metro Vancouver, HMM is providing planning and oversight of comprehensive geotechnical investigations of over 3000 m of rock core drilling, in situ testing comprising packer permeability and hydro-jacking, sonic drilling to 120 m through glacial overburden to evaluate alternate shaft sites, pumping test, laboratory TBM rock testing, detailed design of main launch shaft, twin TBM hard rock tunnels, raisebore shafts, steel pipe lining in shafts and tunnels, and surface pipeline. Project includes evaluation of TBM penetration estimates and a Geotechnical Baseline Report (GBR) and specifications.

**TransMountain Expansion Project, Kinder Morgan Pipeline, Vancouver, BC** On the Lower Fraser Valley and Greater Vancouver segment, including Fraser River Crossing and Burnaby Mountain Tunnel, we are providing Geotechnical management and detailed designs for 135+ tunneled and trenchless crossings as part of the 105 km TMEP alignment through the Lower Fraser Valley and Greater Vancouver. The work includes a 2.5 km Burnaby Mountain crossing and a 1.5 km Fraser River Crossing. Pipeline size ranges from 30 to 36 inches.

Contact: Mike Blanding
MWBlanding@HaywardBaker.com

Greetings and Happy New Year! Hayward Baker Inc. (HBI) is pleased to have continued its tradition again last year in earning ENR’s #1 ranking in the 2014 ENR Top 600 Specialty Contractors list-Foundation category. Other noteworthy industry awards last year include, for a second consecutive year, the ADSC-IAFD 2014 Rick Marshall Commitment to Excellence in Safety Award, and longtime Hayward Baker team member and retired Vice President Joseph Welsh was selected as the recipient of the prestigious ASCE Outstanding Projects and Leaders (OPAL) Award.

Closer to home here in the Seattle Metro region, our jet grouting work at the Elliott Bay Seawall Project kept us busy and will continue in full force into the New Year. As HBI continues to grow our group in the PNW, we welcomed Mark Rohrbach as Senior Engineer to our team last year, and we will continue to offer a wide range of specialty geotechnical design-build solutions, in particular our core ground improvement technologies of various grouting techniques (cement, jet, compaction, compensation, chemical), vibro ground improvement, wick and earthquake drains, dynamic compaction, and soil mixing in the Pacific Northwest and western Canada. For a complete look at all
that HBI offers and current HBI news from around the country, please visit our website www.haywardbaker.com.

In HBI’s Seattle branch office the following Management/Engineering personnel can be contacted for any questions/needs that arise: Adam Gerondale, Andrew Malinak, Claude Berard, Mark Koelling, Mark Rohrbach and Mike Blanding.

Contact: Andrew W. Berg
dberg@holocenedrillinginc.com

Puyallup, WA: Holocene Drilling, Inc. offers drilling, soil sampling, and monitoring well installation solutions for Geotechnical, Environmental, and Construction Applications. We operate in the Pacific Northwest providing Direct Push, Hollow-Stem Auger, Mud Rotary, Air Rotary, Rock Coring, and Construction Dewatering. Our contribution to major area projects include Sound Transit’s East Link Extension, SR99 Bored Tunnel, and Boeing’s 737 Upgrade.


In July, Platinum Sponsors, HDI, Landau Associates, GeoEngineers, Tupper-Mack-Wells, LLC, and Cascade Drilling hosted the Take a Swing against Hunger Golf Tournament benefiting Northwest Harvest. As a group, we collected over $27,000 which is enough for 123,000 meals.

HDI’s tests its rig auto-hammers regularly. During this test, sampling rods are attached to strain gauges. Impact and force measurements are taken during sampling to record hammer energy being transferred by each blow. Auto-hammers are then calibrated and certified by a Professional Engineer. Our clients use this data to formulate accurate N-values.

HDI continues work on our drilling contract in support of Boeing’s New Construction Remediation Activities in Washington and Oregon. Boeing has granted our employees a Permanent ID badge. This allows us to streamline the administration badging process for engineering firms working directly for Boeing.

Both HDI’s Environmental & Direct Push Drilling group continues to grow with the addition of new Project Managers, and a Full-Time Safety Coordinator. We have also added new track-mounted, limited access equipment for work in difficult spaces.

Our Construction Dewatering services include Vacuum Wellpoint Pump Installation, Development, Operation, and Maintenance. We work closely with area Hydrogeologists which allows us to support General Contractors and their clients with effective dewatering solutions.
HDI crews also maintain current HAZWOPER 40+8 Refreshers. Project Managers work directly with Signature Safety Consultants, who provide crews with safety oversight and training, and ensure our insurance coverage and safety programs always exceed industry standards.

We thank you for your continued patronage and trust in our abilities. We are committed to offering you superior drilling solutions. Our goal, as always is to offer you Safety, Innovation, Excellence, and Value on each drilling project we perform.

Please visit www.holocenedrillinginc.com for more information.

Contact: Dale Abernathy
DABernathy@holtservicesinc.com

Holt Services Inc. is the largest full service provider of Environmental, Geotechnical and Clean Water drilling services in the Pacific Northwest. Capabilities include, Air Knife/Vacuum for positive location of utilities, Direct Push, Auger drilling, Mud Rotary drilling, Diamond Core drilling, Sonic Core drilling, Cable Tool drilling, Pump Testing, Pump Sales and Service plus Well Rehabilitation/Repair. We have 19 Washington State licensed drillers and are licensed to drill in Montana, Idaho, Oregon and Alaska. We hired John Johnson as our full time Safety Director who performs 3 to 5 job site safety audits per week, which are available to our clients at no additional cost. John has over 40 years experience in the Industrial Health and Safety industry. His experience includes safety training for Boeing and other local industrial clients. We are committed to making safety a core value in all of our operations. This is evidenced by having no lost time accidents in 2014, which dropped our EMR rating to 0.81.

Holt Services Inc. was established in 2007 by Barbara and Randy Holt and has continuously grown each year. Terra Sonic Inc. is currently building our 3rd TSi 150 Compact Crawler Sonic Drill Rig. We expect delivery of that rig in March. Stay tuned for some more exciting news that we will be announcing in the near future. Holt Services Inc. has highly experienced Crews, the most diversified line of services and the newest fleet of equipment in the Pacific Northwest!

We are all excited about moving into our new office spaces, which are located on the same property in a newly refurbished building.

Steve Story was hired in October 2014 to help grow our footprint as Business Development Manager. Steve has over 37 years of experience in the drilling and heavy civil construction industries. He started up and managed two successful offices for his former employer, Layne Christensen Company. Steve has extensive experience with multiple drilling techniques and is currently pursuing work at the Hanford site where he has 5+ years of experience bidding and managing projects.

Our leadership team is composed of Barbara Holt - President, Dale Abernathy - Operations Manager, Dale Smith - Environmental/Geotechnical Manager, Randy Holt - Clean Water Manager, Steve Story - Business Development Manager, John Johnson - Safety Director, Stephanie Kamenzind - Contracts Administrator and Karmen Helle - Administration.
Holt Services, Inc. would like to take this opportunity to say thank you to all of our clients for their trust and loyal patronage. Without you we would not have reached our current level of success. If you have not used our services, please keep us in mind for any upcoming projects and give us a call to get a quotation.

Contacts: Dale Abernathy, Dale Smith or Steve Story at 253-604-4878
www.holtservices.inc.com

2014 was a busy and successful year for HWA GeoSciences Inc. We hired two new geologists this year, Kimberly Stilson and Bret Salazar. Both have prior experience and are highly qualified in their respective fields. Bret has considerable experience conducting subsurface explorations and performing construction monitoring and inspection and has worked in numerous countries worldwide supporting the offshore drilling industry. Kimberly previously performed environmental consulting and analyses throughout southeast and northeast United States.

HWA’s environmental group continues to stay extremely busy with numerous cleanup projects in Bothell, Everett, and Seattle. In addition, HWA provided plan and specification review, along with construction inspection services for the Calistoga Setback Levee project in Orting, Washington. This project involved reconstruction of 7,000-foot long levee comprised of approximately 230,000 cubic yards of imported embankment fill and associate structures. An HWA engineer monitored fill placement and compaction for 7 months during construction.

Our pavement group, under the direction of Bryan Hawkins, stayed busy with the Falling Weight Deflectometer (FWD), pavement coring, pavement design and construction inspection throughout the year. Significant pavement testing/design projects include SR 203 Safety Improvements and Road Reconstruction in Duvall, Washington; Fauntleroy Way SW Green Boulevard Design in Seattle, Washington; and the Hillsboro Airport in Hillsboro, Oregon. HWA continues to advocate non-destructive FWD testing for subgrade evaluation and pavement design.

HWA’s embassy work continues under the direction of Ralph Boirum. HWA won a new design-build embassy project in Ashgabat, Turkmenistan and Ralph has made several trips to the site to conduct reconnaissance and site explorations. In addition, construction on our design-build project in Nouakchott, Mauritania continues, requiring periodic trips to the site.

Donald Huling and Sandybell Ramos continue work on bridge projects including the Grand Avenue Pedestrian Bridge, Forbes Creek Bridge Seismic Retrofit, West Sammamish River Bridge, and Poplar Way Overcrossing.

Our fully accredited in-house soils laboratory continues to stay extremely busy testing soils, asphalt and concrete from both HWA projects as well as for outside clients. We performed testing on soil samples from Brazil, Hawaii, Mauritania, and Turkmenistan in addition to numerous areas around the state of Washington.
Innovative Technologies.
Rock-Solid Reputation. Proven Expertise.

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Four Locations Throughout the West

OAKLAND
(510) 636-2100
kbizzack@condon-johnson.com

LOS ANGELES
(909) 390-0268
gburrough@condon-johnson.com

SAN DIEGO
(858) 530-9165
gburrough@condon-johnson.com

NORTHWEST
(425) 988-2150
dparmantier@condon-johnson.com
Kleinfelder’s Redmond geotechnical group enjoyed a strong 2014, which kicked-off with a busy January and didn’t let up through December. Our team enjoyed working on a wide variety of local, national, and international projects. Some of the more challenging and fun projects included:

- Shoring and drilled shaft construction at Hirabayashi Place in Seattle, including three shafts that were successfully installed between the bus tunnels.
- Redevelopment of the old Lynnwood High School site, which included major site grading, and design and construction of three retaining walls, one requiring ground improvement to achieve global stability.
- Design and construction inspections for Cushman Trail in Gig Harbor, including a pedestrian boardwalk through a wetland.
- Shoring and foundation design for several mid-rise and high-rise projects in Seattle.
- Our Redmond team also continues to lead Kleinfelder’s design and construction observation efforts for a variety of Costco Wholesale projects in the Pacific Northwest and in British Columbia, Alberta, and Saskatchewan, Canada. These projects often involve deep foundations, retaining walls, surcharging, and other geo-fun.

Our local team has a great reputation within Kleinfelder and is often called upon to support projects nationwide. Jason Washburn spent a few weeks sampling on the Willamette River (ask him about anticipated summer over-water work that ended up as a November exercise in cold weather survival). Jason also continued to support our teams performing levee evaluations in California. Nikki Scalia and Steven Flowers each supported retaining wall analyses and design for the Dallas North Tollway and assisted our Pennsylvania offices on geotechnical designs for natural gas production projects.

Chad Lukkarila has been working on several large projects across the country including the Carmel River Reroute and San Clemente Dam Removal Project in California, the Boulder City Bypass Highway Alignment Project in Nevada, and the Lake Oswego Water Pipeline Project in Oregon.

We are very pleased to announce that Chad was selected as Kleinfelder’s Engineering Geology Service Line Director, responsible for strengthening a networked community of Engineering Geology practitioners across Kleinfelder. Chad will also complete his second year as Chair of the Washington Section of the Association of Environmental and Engineering Geologists (AEG) in August 2015.

We wish our fellow geoprofessionals a safe, rewarding, and prosperous 2015!
Landau Associates’ geotechnical group grew at a steady pace in order to stay on top of an increasing workload that is anticipated to continue well into 2015. Corporate accomplishments included the promotion of Calvin McCaughan, P.E. to Principal and Geotechnical Services Director, and the opening of a larger office in Olympia to accommodate our growing South Sound geotechnical practice.

In Edmonds, Landau Associates hired Carlo Evangelisti, P.E., Allison Bergseng, P.E., Sean Gertz, E.I.T., and Tony MacDonald. Evangelisti has been busy working on the Hidden Beach Drive Slide Repair for Island County and several roadway improvement projects for the City of Federal Way. Chad McMullen, P.E. is managing the geotechnical design and construction monitoring services for a wing fabrication plant and a related fuselage assembly facility. Brian Christianson, L.E.G. and Devan Brandt provided field exploration, construction monitoring, and laboratory testing for a variety of projects, including aerospace manufacturing facilities, roadway and utility improvements, and several data centers. Dave Pischer, P.E. and Kent Wiken, P.E. provided geotechnical and environmental services to the Port of Everett related to the cleanup of the Everett Shipyard site. Steve Wright, P.E. manages an on-call contract with Snohomish County which produced several projects this year, including around-the-clock monitoring of debris removal from the Oso Landslide and a bridge and culvert replacement project near Marysville, Washington.

In Tacoma, Jeffery Whitman, E.I.T. is assisting with a variety of projects managed out of the Edmonds, Tacoma, and Olympia offices. Ed Heavey, P.E. was selected to provide consulting support to Snohomish County related to the Oso Landslide. Ed is also working on the Fox Island Bridge study, a new aquarium for the Point Defiance Zoo and Aquarium, and several transportation improvement projects.

In Olympia, the geotechnical group welcomed Craig Jordan, P.E., Lance Levine, P.E., and Ben Ford, E.I.T. Jordan managed a geotechnical data acquisition project in the Skokomish River Valley for the USACE and Mason County, local transportation and school district improvements projects, and a design-build project at Puget Sound Naval Shipyard (PSNS). Levine managed geotechnical services for transportation and low-impact development projects, including roadway landslide repairs for Mason County. Ford assisted with construction observation of deep foundations, including projects at PSNS and aerospace manufacturing facilities. The Olympia office staff is working on several projects that will extend into 2015, including geotechnical services for the City of Olympia’s Morse Merryman Roundabout, Kitsap County’s Manchester Sewer Improvements, a Sound Transit maintenance facility, and various projects for the North Thurston and Tumwater School Districts.
Malcolm Drilling has been a leader and innovator in the deep foundation industry for more than 50 years. We provide geotechnical construction services including: drilled shafts, excavation support systems, micropiles, cutoff and secant pile walls, chemical grouting, jet grouting, deep soil mixing, Cutter Soil Mixing, underpinning, and dewatering. These services have been applied on complex and technically challenging projects throughout North America. Malcolm Drilling’s ever-growing Dewatering and Ground Improvement Divisions have been instrumental in keeping Malcolm the most sought-after, full service geotechnical contractor.

Based in San Francisco, California, with offices throughout the western United States, Malcolm has expanded to the eastern seaboard with an office in Miami, Florida, and is actively pursuing work throughout the US and Canada. Malcolm’s fleet of equipment has also grown from a single truck-mounted drill rig, to the most extensive fleet of state-of-the-art drilling equipment in the United States, valued at over one hundred million dollars. Our fleet includes low overhead and limited access equipment capable of passing through interior doorways, to equipment capable of excavating shafts up to 18 feet in diameter and up to 300 feet deep. Recent equipment acquisitions include two of the world’s largest casing oscillator (3.8m OD), a 3.3m OD casing oscillator, and two Bauer BG-50 top-drive drills (the world’s largest top-drive crawler drill).

Some of our notable recent projects completed or acquired include:

- **I-5: Portland Ave to Port of Tacoma** – Drilled Shafts, Ground Improvement.
- **Lincoln Square II**, Bellevue, WA – 113,000 SF Soil Nail Shoring, Wellpoint Dewatering.
- **I-90: Hyak to Snowshed** – 178 ea. 3’ to 8’ ID Drilled Shafts, Soil Nails.
- **Lower Granite Dam**, Pullman, WA – 5’ to 8’ ID Drilled Shafts, Rock Sockets, Dewatering.
- **Troy Block** - Seattle, WA - 82,000 SF shoring, 105’ piles, Preserve Historic Facade.
- **Bellevue Office Tower** – Bellevue, WA - 53,500 SF shoring, 4’ to 5’ ID Drilled Shafts to support office tower constructed immediately adjacent to and simultaneous with garage excavation.

Malcolm continues to advance geotechnical construction through active participation in ADSC, DFI, Geo Institute and ASCE. For assistance with conceptual design and budgeting, please contact Al Rasband ([arasband@malcolmdrilling.com](mailto:arasband@malcolmdrilling.com)) or John Starcevich ([jstarcevich@malcolmdrilling.com](mailto:jstarcevich@malcolmdrilling.com)), for Ground Improvement contact Rick Hanke ([rhanke@malcolmdrilling.com](mailto:rhanke@malcolmdrilling.com)). For a complete list of our services and contact details please visit our newly updated website ([www.malcolmdrilling.com](http://www.malcolmdrilling.com)).
In early December 2014, San Francisco–based engineering and consulting firm Jacobs Associates and Boise-based engineering and construction firm McMillen LLC merged to form McMillen Jacobs Associates, Inc. The merger comes as a natural progression of a relationship established while working together on the Lower Baker Dam Powerhouse project for Puget Sound Energy. Jacobs Associates and McMillen will both continue as wholly owned subsidiaries of McMillen Jacobs Associates. The combined services of the firms will include design-build under a separate construction arm, construction management, water resources, and geotechnical/underground services.

In the Seattle office, additional strategic hires were made, including Maureen Kwolek, PE to lead and support civil/hydraulics efforts; Conner Bauman, EIT, a civil/geotechnical staff engineer and Jeannine Alexander, Marketing Manager for the Pacific Northwest Region. On the Sound Transit Northgate Link Extension Light Rail project, the team celebrated their 100th progress meeting, representing four years on the project. Of the 10 contracts, four have gone to bid and six remain. The Maple Leaf Portal to University of Washington contract (N125) is currently running $100M under budget. Formed in 2013 based on the need to support our expanding growth in the railroad industry, the Railroad Services Group worked on numerous railroad siding extensions for capacity improvements for BNSF and UPRR as well as winning the Washington State Parks and Recreation’s Tunnels 46 & 47 Repairs project. Jacobs Associates’ Construction Managers Division succeeded in the pursuit of Sound Transit’s East Link Bellevue Segment Construction Management Consultant Services with HDR as prime. King County’s Ballard Siphon project was successfully completed with Jacobs Associates as Construction Manager, and final design documents were completed for the Fremont Siphon project, which went out to bid in July. 2014 concluded with two major project wins for the office: Seattle Public Utilities 3rd Avenue West Tunnel Water Main Replacement final design and the Seattle City Light Multidisciplinary Engineering Services for Power Generation projects, a multi-year task order contract.

We were honored by the ACEC for Innovative Drainage Design for the BNSF Snowshed at Glacier National Park in Montana, which was field-tested by an immense avalanche this past winter. The University Link TBM Tunnels project received a Project Achievement Award from the Pacific Northwest Chapter of CMAA. Jacobs Associates is managing partner of the NTP project design team.

Contact: Rick Powell
rpowell@robinson-noble.com

Robinson Noble enjoyed an eventful 2014. One of this year’s highlights was being awarded the 5th Annual Premier Award for Client Satisfaction, presented by PSMJ Resources, Inc. We were one of only 20 firms so recognized nationwide, with 75% of our clients rating our firm as excellent or exceptional in the areas of helpfulness, responsiveness, quality, accuracy, schedule, budget, and scope of fees.
Sonic drilling utilizes resonant sonic energy to achieve fast, clean, low-impact drilling in a wide variety of environmental, geotechnical, mineral exploration drilling and sampling applications. Sonic rigs can drill and sample many unconsolidated materials without the need for drilling fluids, achieving high productivity and superior sample quality. Sandstone, limestone, siltstone, and other coarse, competent deposits can also be drilled with the sonic method.

**Specifications & Capabilities**

- 8" – 12" Diameters up to 700 ft.
- 4", 6" and 8" Core
- HQ3 and PQ3 Diamond Core
- Maximum Power – The TSi 1500CC Compact Crawler utilizes the largest sonic oscillating head manufactured by Terra Sonic International
- Maximum Power on Smallest Footprint – Overall dimensions of 230-1/4" L X 85-3/8" H X 87" W, 7.76 psi ground pressure
- Angle Drilling from Vertical to 45° – Mast dumps to the ground when at vertical to 45°
- Packer Testing
- SPT Samples with 140 LB Auto Hammer
- Drive Ahead Discrete Water Sampling
- Outstanding Drill Site Portability – Remote control driving with speed up to 3.35 MPH (5.39 km/hr.) and 60% grade ability
- Rubber track Bobcat support vehicle
- Self Contained Decontamination system
Our Tacoma offices have moved to a new downtown location. We are now at 2105 South C Street in the historic J.E. Aubry Wagons Building, just south of the Harmon Brewery and UW-Tacoma across 21st Street. All our other contact information (phone, fax, emails, website, and blog) are unchanged. An open house is scheduled for May.

After an 18-month application and review process, Robinson Noble was awarded a GSA Contract under Schedule 899 for all of our environmental and hydrogeologic services. As a result, these services are now even more readily available to all our clients that have access to GSA contracting.

People

Robinson Noble is pleased to announce that Gary Henderson, PE has joined Robinson Noble in our Tacoma office as a Senior Principal Geotechnical Engineer. He is vastly experienced in port-related and waterfront projects and has a strong background in offshore construction and dredging methods. John Hildenbrand, our Environmental Services Division Manager, was promoted to Principal.

Robinson Noble would like to wish everyone a Happy New Year and a prosperous 2015.

Shannon & Wilson’s 60th year in business proved to be a banner year for the firm and we’d to thank our clients for helping us finish another great year. Our Seattle and national offices are sustained by our work on challenging infrastructure, transportation, development, shoreline restoration, and environmental projects.

Our staff continues work on long-term, high profile projects: City of Seattle’s Seawall Replacement, SR 520 Bridge Replacement, Sound Transit’s East Link, Yakima East-West Corridor and Cascade Mill Parkway. Notable awards in 2014 include:

- Baker River PSHA and Updated DSHA, PSE
- Coweeman River Mitigation Bank, Cowlitz County
- Salmon Creek Bridge Replacement, Thurston County
- McSorley Creek Restoration, Saltwater State Park, King County
- New Orbital Highway, Doha Qatar
- North Fork Skagit Levee Setback Feasibility Study, Skagit County
- On-Call Geotechnical Engineering Services, Snohomish County
- On-Call Surface Water Management, River and Stream Habitat, Snohomish County
- Willow Creek Daylighting/Edmonds Marsh Restoration, City of Edmonds

After the devastating Oso Landslide, Shannon & Wilson representatives joined a team assembled by Snohomish County to visit the site and brainstorm potential emergency and long-term remedial measures that could be implemented to provide a suitable and stable channel for the Stillaguamish River. The brainstorming session included Snohomish County, Federal agency experts, and other consultants.

The Stanley D. Wilson Memorial Lecture, a spring event co-hosted by Shannon & Wilson and the
University of Washington, had the largest attendance on record. Lecturer Dr. Harvey Parker, PE presented “Tunneling is Up by Leaps and Bounds – High Tech, Safe, & Sustainable”.

Shannon & Wilson’s staff are the reason for our success and several earned promotions:

**Vice President**
- Neal McCulloch
- Bob Mitchell
- Dave Cline

**Associate**
- Mike Harney

We also hired new talent:

**Geotechnical Engineers**
- Jacob Dafni
- John Schober
- Justin Cook
- Sam Sideras

**Hydraulic Engineers**
- Christopher Helland
- Eset Alemu

**Geologists**
- Stephanie Williams
- Stephen Newman

**Marketing**
- Christina Steinburg

In December, professionals from 11 offices nationwide gathered in Seattle for a training session on tunneling, trenching, and rock engineering, which focused on exchanging technical information and case histories. A second session will be held in February focusing on geology, field observation, materials testing and lab testing.

Working in the public and private sectors, Shannon & Wilson provides geotechnical, environmental, natural resources, surface/groundwater expertise for the design and construction of transportation, waterfront, military; development; infrastructure, dams/levees, and restoration projects. Shannon & Wilson’s Northwest presence includes our Seattle headquarters, plus offices in the Tri-Cities and Portland.

**Contact: Juan Carlos Ramírez**

JuanCarlos.Ramirez@seattle.gov

**Seattle Public Utilities Geotechnical Engineering**

SPU Geotechnical Engineering continues doing work at a very busy pace for various departments within the City of Seattle. The group is led by Geotechnical Engineering Supervisor, Juan Carlos Ramírez, P.E. Our staff includes Sean Caraway, P.E., Senior Geotechnical Engineer, Aaron Clark, L.G., Senior Engineering Geologist, and Hilja Welsh, Assistant Geotechnical Engineer. We are excited to have been joined by Megan Higgins, P.E. who was hired from a very competitive field to fill a vacant Senior Geotechnical Engineer position. Additionally in early 2015, our group will be looking to fill an Associate Engineering Geologist vacancy.
The SPU Geotechnical Engineering Group has continued involvement in high profile SPU projects, such as the Windermere, Genesee, Delridge and Leschi Combined Sewer Overflow (CSO) projects, the North Transfer Station, and a large slope stabilization study at the Tolt Watershed. During 2014, we also worked on various phases of a range of facility improvement projects for Seattle City Light, Seattle Parks and Recreation and Seattle Department of Transportation. We expect to continue on many of these projects, as well as take on new ones during the coming year as the City continues to improve its infrastructure.

Contact: Chris Breeds
chrissubt@aol.com

SubTerra, Inc. had a successful 2014 with tunneling, blast engineering, and geotechnical instrumentation projects throughout the US, Canada, Mexico, and Israel. We completed start-up of our new sister company in Israel, Sub T Engineers Ltd, with appointment of a new Israeli Branch Manager, Brian Ages. Brian has worked on most of the underground projects in Israel over the last 40-years including the two pumped storage projects currently under construction above the Lower Jordan River valley.

We completed blast engineering projects in Prince Rupert and Kitimat along with projects in Alaska (Ketchikan, Sitka, Skagway and Coopers Landing) and removal of the Elwha and Glines Dams removal project in Port Angeles. We remember Jerry Dilley, one of our friends in the blasting community who passed in 2014 and was the BIC for the Elwha and Glines Dam removal project – Jerry will be missed.

We continued to provide automated Geotechnical Instrumentation and AMTS support for WSDOT’s I-90 road widening project at Hyak and AMTS and tiltmeter monitoring of the SR520 floating bridge. Automatic vibration and tilt monitoring around the city center of NAPA, CA captured structural and ground response to the August 24, 2014 earthquake which occurred at 3:20 am causing damage in that City.

The Martin Hill and Boggy Creek tunnel projects located in Austin, TX completed construction during 2014 and we completed the design for a 35-ft wide, Design Build Tunnel project in Bellevue, WA that will be constructed in 2015. Tunneling and microtunneling services were also provided for a hydropower project in upstate New York and the Fremont Syphon project in Seattle.

Geotechnical services continued in support of Issaquah’s Major Design Review Team and the City of Black Diamond with over a decade of projects completed for the Issaquah Highlands and Talus Master Developments.

Finally, we continued work on two challenging new, coal mine subsidence projects in Colorado that involve evaluating impacts to roads, rail lines, alluvial creeks and 230 to 345 KV power lines that will be undermined by up to 1,500-ft wide longwall panels over the next decade. Our work on local abandoned mine projects will also continue in 2015 with new projects located east and west of the cascades.
Thanks to all our Clients! SubTerra, Inc. is a registered small business providing services directly to Owners and Contractors and as a teamed Subcontractor on Engineering Design and Construction projects. Please visit our website at www.subterra.us. Thank You.

Contact: David A. Baska
DABaska@terracon.com

Terracon’s geotechnical department in Mountlake Terrace continues to attract a desirable blend of both local and national work. The projects range from retail buildings to design-build transportation projects and the intellectual requirements range from simple to complex. Our staff of 11 engineers and three geologists may work on several projects in one day to one project for several months.

A strategic hire in 2014 was Dennis Stettler. Dennis is supervising the second phase of the Kent-Auburn Conveyance system for King County and providing expert witness services on a handful of projects. His experience managing eight years of WSDOT geotechnical contracts strengthens our public sector resume considerably.

Richard Luark attracted our office’s first Seattle hi-rise project since the start of the recession. Richard was the shoring designer for the 45-foot deep excavation at Second and Virginia in addition to the geotechnical engineer of record. His other shoring projects around Puget Sound included the Google campus in Kirkland, 3801 Stone Way in Seattle, and the Hadley Apartments on Mercer Island. Other projects for Richard included a new hanger at Naval Air Station Whidbey Island and expansion of the Wyoming State Capital building in Cheyenne.

Department Manager, Dave Baska, continues to provide geotechnical earthquake engineering services locally, nationally, and oversees. Dave generated design ground motions for the Second and Virginia hi-rise. He also evaluated soil liquefaction effects on deep foundations for an industrial client in Indiana and completed a seismic hazard analysis for the King Saud airbase in Saudi Arabia.

Jim Schmidt’s presence in the Mountlake Terrace office as Terracon’s Director of Transportation and Infrastructure meant that staff were able hone their skills in the design-building world for I-35E in Dallas, Ruskin Dam in British Columbia, and Paseo del Norte in New Mexico all from the comfort of the Mountlake Terrace office. Jim’s local work included third party review for Sound Transit’s South Link project south of SeaTac airport.

Rob Sargent, Sam Probert, and Brett O’Brien all contributed to the I-35E design-build project. Rob continued his role as Terracon’s lead engineer on the SR-520 East design-build project and will soon serve a similar role on Boulder City Bypass in Nevada.

Ryan Scheffler manages many of our retail, telecommunication, and municipal projects. His MSE wall design practice continues to grow and he will be relying more heavily on Sam, Brett, and the other staff for project management.

Tristan Anderson joined our office in 2014 and promptly supported Richard with his shoring design practice. Sergey Lukin from the University of Washington was another 2014 hire and is learning the exploration and construction observation aspects of geotechnical engineering.
The interpretation of geologic conditions by Curt Thompson, Scott Dobner, and Heather Gadwa are indispensable for our practice. They assisted on projects associated with the Oso Landslide, SR-520, and Ruskin Dam among others. Richard Shimono transferred to our San Antonio office in 2014, but not until he completed the FLAC analysis for the lateral spread project in Indiana. Lastly, Al Zeman continues to review every geotechnical report for Nordstrom from his home in Cave Creek, Arizona.

Contact: W. Martin McCabe
martin.mccabe@urs.com

URS Corporation 2014  (URS Becomes AECOM in 2015)

In 2014 URS operated in its last year with the URS name, having been purchased by AECOM, the name under which it will operate in 2015. Hidden in the union of these two firms are many legacy geotechnical consulting firms, and includes the mammoth Hong Kong office having 250 geotechnical engineers. Some highlights in 2014 were:

Infrastructure - Air Transportation:
Geotechnical support for URS Aviation Group led by Abhijit Bathe, PE were active in projects at King County International Airport, the North Satellite Terminal expansion at SeaTac, Renton Airport, and major airports in Oakland, Salt Lake City, Los Angeles and elsewhere. Key personnel - Martin McCabe, Brian Rapalee, Joshua Alcantara, and Andy Carpenter.

Industrial – Mining: Mining activity was again very strong with design and construction at Red Dog Mine in AK, safety inspections at Tundra Mine in NT and Premier Mine in BC, pre-feasibility studies and construction at a gold mine in Mexico, planning for Buckhorn Mine in WA, reclamation at Transalta Centralia Mine in WA, closure cost estimates for proposed new mine in MN, and tailings dam breach review in BC. Cecil Urlich directed the mining activities with assistance from Kris Fabian, Todd Parkington, Kranti Maturi, Tobey Clarkin, J.R. Sugalski, Dave Walker, Suren Balendra, Keith O’Connell, Ken Yang, Phil Newton, Cris Castro, Arturo Ortiz, Rod Denherder, Rik Langendoen, Mark Molinari and CB Crouse in Seattle, plus staff from BC and AK offices.

Industrial – Oil and Gas: C.B Crouse and Mark Molinari performed seismic and geologic studies for new LNG facilities in British Columbia and Cypress, and a propane/LPG terminal along the Columbia River in WA. Mark was also involved with support of a potential gas terminal in southeast Asia. URS staff facilitated new rail unloading facilities and plant upgrade work at the Shell, Tesoro, Phillips 66, BP and Kinder Morgan refineries in WA. Bonnie Witek spent time working on an oil sand project in Alberta.

Infrastructure - Transportation: Design and construction work continued on the WSDOT Design-Build project to widen I-405 in Bellevue - Lynwood, and staff provided assistance for a new bridge in Vancouver, BC. Key personnel- Markus Walbaum and Pam Craig. Sarah Kemp assisted with foundation grouting at the Borinquen Dam, a component of the Panama Canal expansion project.
Infrastructure – Water Resources and Wastewater: Upgrade design work at the Thompson Hydro Development in MN and the Swift No. 2 dam in Cowlitz County WA were the focus of 2014 for Stephen Benson. Work continued on the Upper Mill Creek Dam for the City of Kent (Rod Denherder) and on the Seattle Public Utilities upgrade of pumping facilities at the Morse Lake and Masonry Lake locations
Shallow landslide: Geobrugg barriers withstand the highest dynamic and static loads

On unstable slopes, flexible shallow landslide barriers provide protection against landslips:

- lightweight construction cuts costs
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Career Opportunities

Are you a Geotechnical Engineer? Are you ready to start the New Year with new exciting projects and challenges? Are you looking for an experienced group of award-winning engineers to work with and unlimited opportunities for professional growth? Hart Crowser may be the team for you!

We are pleased to announce immediate opportunities for both Project and Senior Staff level Geotechnical Engineers to assist with a variety of commercial and industrial development, transportation, municipal infrastructure, and port/harbor projects.

The Project level Geotechnical Engineer for our Seattle office will have an MS in Geotechnical Engineering, with at least 5 to 10 years of professional experience, and be a licensed Professional Engineer in Washington or Oregon. This individual will be responsible for providing project management, leading a team of engineers and geologists, completing geotechnical analysis and design, preparing geotechnical reports, and completing field work.

Both our Seattle and Portland-area offices have opportunities for Senior Staff level Geotechnical Engineers. The successful candidates will possess a MS in Geotechnical Engineering with 1-2 years of experience in construction monitoring, geotechnical field exploration and sample collection, interpretation of subsurface data, geotechnical engineering calculations and analyses, seismic hazard evaluations, and geotechnical report writing. Experience working with multiple site exploration methods and equipment (drill rigs, CPT, track hoes, etc.) and completing geotechnical laboratory tests is required.

Individuals in each of these roles must possess strong communications skills, including technical report writing. Responsibilities will involve field work and require one to be equally comfortable working with contractors at construction sites and participating in client presentations. The ability to lift ~50 pounds and have a current drivers’ license with good driving record is required. Experience with environmental projects and geologic engineering projects is desirable.

Hart Crowser has a strong commitment to provide an environment that fosters creative thinking and opportunities for professional development. As an employee-owned company, each individual contributes to the success of the firm. Interested candidates are encouraged to submit their confidential cover letter and resume via our Careers webpage at www.hartcrowser.com

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