2011 Groundhog

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2010-2011 Officers

PRESIDENT
Michel Bouch eid, P.E.
CH2MHILL

PRESIDENT ELECT
Ghada Ellithy, P.E., PhD
US Army Corps of Engineers

SECRETARY
John Bickford, P.E.
DBM Contractors Inc

TREASURER
Farid Sariosseiri, PhD
CDM

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Bob Metcalfe, P.E., L.E.G.
GeoEngineers, Inc.

EDUCATION CHAIR
Tyler Stephens, P.E.
Shannon & Wilson

PUBLIC RELATIONS CHAIR
Mike Lach, P.E.
CDM

WEBMASTER
Minjae Park, E.I.T. (Not Pictured)
AMEC Earth & Environmental
President’s Message

Welcome to the 2011 edition of the ASCE Seattle Section Geotechnical Group (ASCE SSGG) annual publication, the Groundhog! This issue includes a summary of the 2010 – 2011 term activities and news from the local geotechnical community.

I would like to start by thanking the members of the board for their dedication and support to our group. Without their invaluable volunteer service, our organization would not be able to function and serve our geotechnical community. Our officers this year include: Ghada Ellithy (U.S. Army Corps of Engineers), President Elect; John Bickford (DBM Contractors), Secretary; Farid Sariosseiri (CDM), Treasurer; Tyler Stephens (Shannon and Wilson), Education Chair; Mike Lach (CDM), Public Relations Chair; Bob Metcalfe (GeoEngineers), Membership Chair; and Minjae Park (AMEC Earth and Environmental), Webmaster. I also would like to thank Keith Brown (In Situ Engineers) who has been supporting our Education Committee and Jake Dafni (University of Washington Graduate Student) who has been our coordinator with the UW students.

Our mission as an organization is to advance the geotechnical practice in the Puget Sound region by providing leadership on public issues, sharing professional experience, and promoting education.

This year, we were a cooperating organization in the Geo-Institute Earth Retention Conference III which was held at the Bellevue Hyatt between August 1 and 4 2010. The conference was the third in a series of conferences on earth retaining structures held at 20-year intervals, with the first two held in New York in 1970 and 1990. Our board members and other volunteers from our group supported the conference planning committee with the planning of a field demonstration and a student firm visit, and our past president, Sean Caraway, gave a brief welcome speech on behalf of the ASCE SSGG.

During the last trimester of 2010, we organized one dinner meeting per month between September and December, planned a field trip in October to the Sound Transit University of Washington Station, and participated in the Seattle DPD landslide awareness meetings in November and December. For the first trimester of 2011, we are planning one dinner meeting per month between January and March, a Short Course in conjunction with the Spring Seminar on Friday April 29th, and the 28th Annual Spring Seminar on Saturday April 30th titled Soft Ground Tunneling in Urban Environments. Please note that this year the Spring Seminar will be held at Kane Hall room 220 because the HUB is undergoing major renovation. Tentative events for 2011 include a field trip and dinner meetings between April and June. We also made some upgrades and improvements to our website http://www.seattlegeotech.org/ and added some useful information and links.

On January 5, 2011 our group signed a Memorandum of Understanding (MOU) with the Geo-Institute (G-I) of ASCE authorizing the creation of the Seattle Geo-Institute Chapter. The Geo-Institute was created by the ASCE in 1996 as a specialty membership organization focused on the geo–industry, and is one of ASCE’s eight Institutes. With this move, our group will be known as both, the ASCE Seattle Section Geotechnical Group (ASCE SSGG), and the Seattle Geo-Institute Chapter. In the future, both logos will be included on our flyers and announcements. This transition will expand the exposure and reach of our group and will support the progress of the geo-professional community through a collaborative and a mutually beneficial affiliation. If you are interested in learning more about what this transition means to our group and our members, feel free to email me your questions. I would like to take this opportunity to thank our past membership chair, Bo McFadden, for assem-
bling and presenting information to our board and taking the lead in negotiating the terms of our MOU with the G-I, and our past president, Sean Caraway, for bringing our transition to the forefront of our goals during his term.

Our group remains financially strong. Over the past 4 years, we have been taking losses at all our dinner meetings and subsidizing the losses from the revenues we make on the Spring Seminar, short courses, and the Groundhog. This term, we negotiated a new contract for our dinner meetings on the east side to break even. We sent a survey to our members to explore the idea of moving all dinner meetings to the east side; the survey results were in favor of continuing to alternate the meetings between the east and the west side, and finding a cheaper venue on the west side, rather than raising the $35 fee. We are continuing our tradition of identifying company sponsors for students, reducing the dinner fee to $15 for non-reimbursed public officials, and allowing free walk-ins for the presentation only.

This year, we are planning a $5000 matching donation to the University of Washington Chapter of Engineers Without Borders (EWB). We initiated this matching donation in 2007 and have been able to make it every year since then. We are expecting a representative of the EWB to give our group a presentation during the February or March dinner meeting on the work their chapter has been doing.

Our group’s membership which consists of our email list has exceeded 600 members. We would like to see volunteers from all the member firms supporting our group. The volunteer work within our group provides an opportunity to network and meet professionals from other organizations while serving our group. Please contact any of our officers if you are interested in being involved with the planning of our events. If you are interested in being an officer on the 2011-2012 term, please contact our president elect Ghada Ellithy.

I look forward to seeing you at the upcoming dinner meetings and the 2011 Spring Short Course and Seminar.

Michel Bouchédid, P.E.
President
## 2010—2011 Events Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Speaker(s)</th>
<th>Topic</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 Sept 10</td>
<td>DM</td>
<td>I.M. Idriss</td>
<td>Liquefaction</td>
<td>M&amp;S, Seattle</td>
</tr>
<tr>
<td>21 Oct 10</td>
<td>DM</td>
<td>Tom Badger, WSDOT</td>
<td>Highway 410 landslide</td>
<td>Red Lion, Bellevue</td>
</tr>
<tr>
<td>23 Oct 10</td>
<td>FT</td>
<td>Matt Burdick, P.E., Traylor Frontier-Kemper JV</td>
<td>ST LINK Light Rail University Station Slurry Wall Construction</td>
<td>UW Husky Stadium Site</td>
</tr>
<tr>
<td>18 Nov 10</td>
<td>DM</td>
<td>Prof. Joe Wartman, Univ. of Washington</td>
<td>New Orleans Levee Failures – A Five-Year Perspective</td>
<td>Red Lion, Bellevue</td>
</tr>
<tr>
<td>16 Dec 10</td>
<td>DM</td>
<td>Roger Woodhead, SNC Lavalin</td>
<td>Canada Line</td>
<td>Red Lion, Bellevue</td>
</tr>
<tr>
<td>27 Jan 11</td>
<td>DM</td>
<td>David Baska, Terracon, Prof. Pedro Arduino, Univ. of Washington, Tony Allen, WSDOT</td>
<td>Chile Earthquake Reconnaissance</td>
<td>Red Lion, Bellevue</td>
</tr>
<tr>
<td>24 Feb 11</td>
<td>DM</td>
<td>Tom Gurtowski, Shannon &amp; Wilson, Rob Clark, Shannon &amp; Wilson</td>
<td>West Point Treatment Facility – 20+ Years of performance monitoring of soldier pile and tieback walls</td>
<td>Red Lion, Bellevue</td>
</tr>
<tr>
<td>24 Mar 11</td>
<td>DM</td>
<td>Nason McCullough</td>
<td>Haiti Earthquake</td>
<td>TBD</td>
</tr>
<tr>
<td>29 April 11</td>
<td>SC</td>
<td>Multiple Speakers</td>
<td>Soft Ground Tunneling in Urban Environments</td>
<td>Red Lion, Bellevue</td>
</tr>
<tr>
<td>30 April 11</td>
<td>SS</td>
<td>Multiple Speakers</td>
<td>Soft Ground Tunneling in Urban Environments</td>
<td>UW- Kane Hall</td>
</tr>
</tbody>
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* Joint Meeting with ASCE / AEG
** Joint Meeting with ASCE General Section
*** Joint Meeting with Ports & Harbors
Spring Seminar Update

In recent years, major tunneling projects have been launched in the Seattle metropolitan area, the Alaskan Way Viaduct, the Brightwater Conveyance System, and the University-link tunnels being prominent examples. The ASCE Seattle Section Geotechnical Group is pleased to announce the 28th annual Spring Seminar titled **Soft Ground Tunneling in Urban Environments**. The seminar will be held on Saturday, April 30th, 2011 at the University of Washington campus at Kane Hall. We invite you to join us and learn more about this topic.

This year’s seminar will focus on soft ground tunneling and the specific challenges of an urban environment. The presentations will be given by prominent speakers from design, construction, and geotechnical firms, owners and academia. The presentations will provide a synopsis of state-of-the-art tunneling techniques and highlight several national case studies. In addition, the seminar will include award presentations, panel discussion, exhibitors display, and hosted lunch and breaks. Seminar attendees will be eligible to receive 0.8 Continuing Education Units (CEU) or 8 Professional Development Hours (PDH).

A 1-day short course about soft ground tunneling is being planned. This short course will be taught by a recognized expert in tunneling practice, and is intended for an audience of all levels of practice. The short course will be held on Friday, April 29th, 2011 at the Red Lion Inn, Bellevue. Potential topics for the short course include fundamentals of soft ground tunneling, subsurface investigations for tunneling projects, tunneling methods and techniques, principles of analysis, emerging technologies in tunneling, and codes of practice in design. Course attendees will be eligible to receive 0.7 Continuing Education Units (CEU) or 7 Professional Development Hours (PDH).

Mark your calendar for both events, and visit our website [www.seattlegeotech.org](http://www.seattlegeotech.org) by mid March, 2011 for more updates and information

Ghada Ellithy
President-Elect
Public Relations Committee Update

The City of Seattle Department of Planning and Development hosted two free landslide awareness meetings for the public in November and December 2010. The meetings included presentations by professionals and time for one-on-one interaction between city residents and City of Seattle staff and local professional organizations on best practices for managing landslide prone properties.

The Seattle G-I Chapter attended both events. Volunteers from various member firms were available to answer questions from the public and provide insight from a geotechnical engineering perspective. These events provided a fantastic opportunity to educate the public on what geotechnical engineers do, and what we can do to help mitigate the risks associated with living in a landslide-prone region.

We are currently preparing for several upcoming events, including National Engineers Week and Engineering Discovery Days at the University of Washington. If you are interested in volunteering to help with these events, please contact Mike Lach at lachma@cdm.com. In addition, if you know of any other opportunities for us to reach out and educate the community, please feel free to pass them along.

Mike Lach
Public Relations Chair
Charitable Donations

The ASCE Seattle Geotechnical Group has been fortunate to be able to donate to various charities associated with our profession each year. Previous recipients have included the Engineer’s Without Borders (UW Chapter), various University of Washington Research Programs, the Pacific Northwest Center for Geologic Mapping Studies (aka GeoMap NW), and the Robert D. Holtz Endowed Fellowship.

This year, we are again proud to be matching donations up to $5,000 to the Engineers Without Borders (EWB) University of Washington Chapter. This donation was made at their 6th Annual Dessert and Wine Fundraiser on January 31, 2011.

For those of you who are not familiar with this organization, the Engineers Without Borders at the University of Washington has been working to improve the quality of life in disadvantaged communities in rural Bolivia. They provide the communities with designs, guidance and funds for various projects while the locals assist in construction, thus creating a sense of ownership of the project by the community.

In the summer of 2010, three teams of students and mentors ventured to Bolivia; in Piriquina, Sacabamba, and Chaucari, new roofs and stoves were constructed; in Yanayo Chico, improvements were made on the potable water system; and between Yanayo Grande and Tuquiza, reinforcements were made on troubled sections of the existing road. If you are interested in more information regarding EWB UW, please go to www.ewb-usa.org or contact them directly at:

ewbuw@uw.edu
UW Engineers Without Borders
SAO Box 265 UW Box 352238
Seattle, WA 98195

We are always interested in hearing about other non-profit organizations associated with geotechnical engineering profession. If you are aware of an organization, please let one of our officers know about it.

Farid Sariosseiri
Treasurer
Distinguished Service Awards

The Membership Committee has a subcommittee which recognizes meritorious service by members whose past efforts on behalf of the Group, including outstanding leadership and guidance to the local geotechnical community, deserve recognition. The Distinguished Service Awards, established in 2007, are awarded annually at the Spring Seminar.

In 2010 the Group awarded four Distinguished Service Awards. The recipients were Bill LaPrade (Shannon & Wilson), Alan MacNab (Condon Johnson), Tom Armour (DBM Contractors, Inc.) and Pete Douglass (retired). The success of our group is attributed to the hard work of dozens of volunteers each year. However, there are individuals who return year after year and distinguish themselves as leader among the group. These individuals have shown dedication and continued service to the field of geotechnical engineering and the ASCE community. Our group owes its success to individuals like Bill, Alan, Tom, and Pete.

We are currently accepting nominations for the 2011 Distinguished Service Awards. Please send your nominations to Bob Metcalfe at rmetcalfe@geoengineers.com by March 1, 2011 and include the name and contact information of the nominee and a brief description of why this person should receive a Distinguished Service Award.

Bo McFadden with Pete Douglass and Tom Armour at the 2010 Spring Seminar. The awards for Bill Laprade and Alan MacNab were presented at the January 2010 dinner meeting.
U-220 Sound Transit Field Trip (October 2010)

In October, the geotechnical group was offered an unique opportunity to visit Sound Transit’s University Link U-220 project located in the south parking lot of the University of Washington’s Football Stadium. The field trip was hosted by Matthew Burdick PE who is a Project Engineer with Traylor-Frontier Kemper, the General Contractor for this project. Condon Johnson & Associates is the Specialty Geotechnical subcontractor who is responsible for the various temporary and permanent earth retention systems associated with this project.

Our ASCE SSGG is always looking for field trip opportunities and are interested in the projects you are working on. If you have a project or are aware of a project that may be available, please contact one of the ASCE SSGG officers.

Some project specifics:

<table>
<thead>
<tr>
<th>Item</th>
<th>Project Quantities</th>
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<tbody>
<tr>
<td>Permanent Slurry Walls</td>
<td>240,000 sf of 4-foot thick &amp; up to 165 feet deep</td>
</tr>
<tr>
<td>Temporary Shoring (Owner Designed)</td>
<td>28,400 sf of Soldier Piles &amp; Lagging, either Cantilever or with one row of tieback anchors</td>
</tr>
<tr>
<td>Temporary Shoring (Contractor Designed)</td>
<td>10,650 sf of Soldier Piles &amp; Lagging with one row of tieback anchors</td>
</tr>
<tr>
<td>Jet Grouting at North End (future TBM Break-in Zone)</td>
<td>50-foot x 100-foot jet grout block to depths varying from 50 to 100 feet below grade</td>
</tr>
</tbody>
</table>

Also, a special thanks to Ricky Wang of The Riley Group for providing these pictures.
Local Firm Summaries

ASCE Seattle Section Geotechnical Group would like to thank the following companies for volunteering to submit articles for the 2011 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.

Aardvark Packers
AEG
AMEC Earth & Environmental
Anchor QEA, LLC
Aspect Consulting
CDM
CH2MHILL
Condon-Johnson & Associates
DBM Contractors, Inc.
GeoEngineers, Inc.
Geopier Northwest, Inc.
Golder Associates, Inc.
Hart Crowser
Hayward Baker, Inc.
Holocene Drilling, Inc.

HWA Geosciences, Inc.
In-situ Engineering
Jacobs Associates
Kleinfelder
Lachel & Associates, Inc.
Landau & Associates
Malcolm Drilling Company
MWH
Northwest Cascade, Inc.
Robinson Noble (formerly Cornerstone)
Shannon & Wilson
SPU Materials Laboratory
Terracon
Washington State DOT
Aardvark Packers
By Dave Baca (dave.baca@aardvarkpackers.com)

Since 1968, the Tigre Tierra® line of inflatable packers has been used on jobsites all around the world. Chile, Mexico, the Philippines, Japan, Taiwan and of course the United States and Canada just to name a few. There are some very good reasons for their popularity. Quality manufacturing, excellent customer service and a durable product. We stand behind our packers to make certain that the customer can perform their jobs correctly the first time and not have to struggle with uncertainty or poor craftsmanship. We have a staff Mechanical Engineer, a staff PE as well as a staff PhD. to support specific design issues.

Aardvark has always been known to manufacture a packer using ingenuity and craftsmanship resulting in the product that the customer wanted in the first place. You need a pump between two packers? Not a problem. You need a larger I.D. center tube for better grout flow? Not a problem. You need them shipped in 1 or 2 days?.......Still no problem.

Aardvark has three areas to ship from. Our Sales office is based in the Seattle area, our main manufacturing center is in central California and we also have a shipping location in New Jersey. Aardvark Packers has a 24 hour Customer Service Program. We understand that “Bankers Hours” usually don’t apply to the drilling industry. Why should you have to wait for an answer. Call us any time!

If it is a grout curtain or bridge footing, Aardvark Packers has the experience to back it up. We also offer our Wireline Packer series for easy permeability testing without removal of the drill string. Aardvark manufactures custom Environmental Groundwater Monitoring Packers that can have any number of pass thru options as well as blended rubber materials to withstand harsh contaminants. We also carry a full line of Mechanical Packers that can be set for long term or short.

A few of our larger projects in 2010 include a pressure grouting job in New York, another grouting job in the Las Vegas area and some Geotechnical testing in Ontario Canada. We are currently working on a few designs with some companies who have projects with Hanford.

Contact: Dave Baca at 360-552-6662 or email us at sales@aardvarkpackers.com.

Association of Environmental and Engineering Geologists - Washington Section
By John deLaChapelle, L.G., L.E.G. (jdeLaChapelle@golder.com)
Washington Section Chair

The 2009-2011 officers for the AEG WA Section include Chair: John deLaChapelle (Golder Associates); Vice Chair: Elson (Chip) Barnett (GeoEngineers); Treasurer: Fred Becker (The Riley Group); and Paul Zehfuss (Shannon & Wilson). Field Trip Chairs include Doug Anderson (WSDOT) (2010) and Tom Badger (WSDOT) (2011). Tom Badger (WSDOT) is the Education Chair. At the national
Ken Neal (Kenneth Neal & Associates) is the Licensure Committee Chair and Julia Turney (King County) is on the Newsletter Committee. Mark Molinari (URS) is the Nominations Committee Chair.

The WA Section of AEG has monthly professional dinner meetings September through May, held in Seattle, Bellevue, or Tacoma. Dinner meeting attendance ranges from 40-60 people but is higher at meetings co-hosted with the ASCE Geotechnical Group-Seattle Chapter. We typically have 5 to 20 student members attend our dinner meetings that represent western Washington and Oregon universities including UW, CWU, WWU, PSU, and Evergreen.

Dinner meeting guest speakers in 2010-2011 include: Jim Johnson (Golder Associates), Tom Badger (WSDOT), Norm Norrish (Wyllie Norrish), Ken Neal (Kenneth Neal & Assoc), Tim Shevlin (Geobrugg), Dr. William (Bill) Haneberg (2011 AEG/GSA Jahns Distinguished Lecturer), Dave McCormack (Aspect Consulting), and Bruce Hilton (AEG President).

Students from CWU recently started an AEG student chapter and we are hoping to have students chapters started at UW and CWU in the future. Our scheduled May 2011 dinner meeting will be a student night with presentations and posters.

The annual meeting held in Charleston in September 2010 was attended by Section Chair John deLa-Chapelle. Several other WA Section members attended and made presentations.

The City of Seattle hosted their annual landslide workshops on November 20 and December 4, 2010. Bill Laprade (S&W) presented and section members David Findley (Golder Associates), Brian Beaman (Icicle Creek Engineering), Julia Turney (King County), and Moin Kadri staffed an AEG table at the workshops and provided information about landslides to the public.

The AEG WA Section has four members on the Washington State Geologists’ Licensing Board: Bill Laprade, Brian Beaman, Robert Mitchell, and Dave Norman.

The AEG WA Section and the Association for Women Geoscientists (AWG) Pacific Northwest Chapter organized a 3-day-long field trip to the North Olympic Peninsula in Washington on May 14-16, 2010. Part II of the popular Olympic Peninsula Field Trip Series is tentatively scheduled for the weekend of Sept. 9-11, 2011.

AMEC Earth & Environmental

By Steve Siebert (stephen.siebert@amec.com)

The AMEC Geotechnical Group in our Bothell office had a successful 2010 with a variety of new and ongoing local projects including K-12 schools, transportation and infrastructure projects in addition to a significant amount of international work. We look forward to another busy year in 2011.

Henry Brenniman, Pat Reed, Konrad Moeller, and Bill Lockard traveled to Canada to support our Calgary office with several oil sand projects in northern Alberta. Henry and Carlo Evangelisti also supported our Burnaby office on an assignment in Panama for a new copper mine.
Principal Jim Dransfield assisted numerous AMEC offices around the US and internationally on waterfront developments and mining projects in addition to ongoing local projects for buildings, water, wastewater, and stormwater facilities.

Steve Siebert, Todd Wentworth, and Carlo Evangelisti continued to work on a variety of projects for local municipalities, state agencies and school districts. Todd has been busy with projects involving new buildings, road improvements, and landslide repairs. He managed geotechnical construction monitoring for three schools this summer and is completing design of another school that will infiltrate stormwater via deep injection wells. He is also designing landslide repairs for Wheeler Army Airfield on the island of Oahu, Hawaii. Steve continued providing third party review for developments located in critical areas on Bainbridge Island, completed geotechnical studies for four substation projects in Oregon, fish hatchery improvement projects in Southern Washington, sewer and pump stations near Bremerton and continues to manage ongoing projects at Issaquah Highlands. Carlo worked on many challenging projects this year including the Snohomish County Aquatic Center, Rainier Beach Community Center, University Place City Hall and Bridgeport Way widening in Lakewood.

Minjae Park has been busy supporting our group on many projects both in and out of the office. Minjae worked on a variety of projects for local municipalities, state agencies and school districts. He continues to serve as webmaster for the ASCE Geotechnical Group website.

Anchor QEA, LLC
By John Laplante (jlaplante@anchorqea.com)

Anchor QEA would like to thank our clients and subcontractors for their hard work and support in another successful year. 2010 saw steady work and improvement in all aspects of the company. The geotechnical engineering group stayed consistently busy with its traditional workload and was proud to take on new tasks.

Projects included:
- Deep foundation design for infrastructure and docks at a bulk material facility
- Port and waterway dredging and capping projects
- Contaminated sediment cleanup projects
- Wharf and dock soil-structure interaction evaluations
- Confined aquatic disposal design and construction
- Remedial Investigation and Feasibility Studies on Superfund sites in several locations
- Time critical sediment removal action
- Assistance with the Gulf of Mexico oil spill response

Anchor QEA’s geotechnical engineer group consists of five PEs and two EITs mostly located in Seattle. The geotechnical group welcomed Matteo Ferrucci aboard this past year as an engineer and modeler in our Montvale, New Jersey office. Michael Whelan continues to provide support and project management of geotechnical projects throughout California and Hawaii. John Laplante and Re-
becca Desrosiers continued project management and geotechnical supervision of projects in the Pacific Northwest, Gulf of Mexico, and Canada. Jeff Warren and Wes MacDonald continue to provide support on a wide range of geotechnical projects across the nation and anticipate taking the PE exam in the upcoming year. Paul LaRosa joined fellow geotechnical engineer John Verduin as a company partner and continued to provide support and leadership on sediment dredging and capping projects on the East Coast.

Anchor QEA was proud to receive a 2010 ASCE Employer Recognition Award for support of young engineers one of 29 companies throughout the country receiving this recognition. Anchor QEA was also pleased to continue its community service this year cooperating with Water for People and Treehouse for Kids. Additionally, Anchor QEA awarded 6 scholarships to deserving students from universities across the country who are majoring in engineering, architecture, planning and management, and sciences.

In 2011 we anticipate continuing our growth as a company and as engineers, with increased project responsibility for younger staff, continuation of many of our large projects across the country, and the addition of new and challenging environmental and engineering projects. We hope to add at least one new geotechnical engineer this year as a project manager and to mentor the younger engineers with their day to day tasks.

Anchor QEA is a nationally recognized environmental and engineering consulting firm that specializes in aquatic, shoreline, and water resource projects. Our energetic and talented team of over 200 scientists, planners, and engineers from offices across the U.S. enjoys working closely with clients toward common goals on water resources, surface and ground water quality, coastal development, habitat restoration, and contaminated sediment management projects. We provide a full range of science and engineering services to the public and private sectors, including planning and strategy development, scientific investigation, engineering design, and construction management.

Please feel free to contact us at our main office in Seattle at 206-287-9130 or at any one of our other offices, and keep in touch and informed by visiting our website at www.anchroqea.com.

Aspect Consulting, LLC
By Nikola Litven (nlitven@aspectconsulting.com)

Whether it was related to ecosystem protection, remediation of contaminated sites, or low impact design, in 2010 much of Aspect’s geotechnical work had an environmental emphasis.

On projects including Kitsap County’s Southworth Drive Replacement Bridge / Curley Creek Restoration and Strawberry Creek Culvert Replacement, Jamestown S’Klallam tribe’s Washington Harbor Restoration, Mercer Island’s Sub-Basin 6 Stream Stabilization, and Seattle Public Utilities’ Thornton Creek Confluence project, our geologic and geotechnical analyses and design were conducted with an eye toward natural resources protection.

On projects involving environmental site remediation for future redevelopment, our geotechnical engineers have been working closely with our environmental staff and multidisciplinary teams at Quendall Terminals and Seattle City Light’s former Greyhound site.
Helping to further effective low impact design, Aspect worked with the Seattle Center and the project contractor to provide the optimum biofiltration soils for successful infiltration in the new Theater Commons rain garden. We are continuing to work with the City of Seattle to improve infiltration methodologies for the City and its technical partners.

In 2010, we also continued to support long-term clients such as the City of Bainbridge Island (Rockaway Beach Roadway Stabilization), Seattle Public Utilities (Madison Valley Stormwater Project), City of Port Angeles (Port Landfill Shoreline Erosion Monitoring) and Kitsap County (Bucklin Hill Road).

Extracurricular activities this year also reflected an environmental bent: a record number of Aspect staff took to an alternative form of transportation – the bicycle – and biked to work in the month of May; the annual summer family picnic incorporated a morning of trail building and cleanup in a Kitsap County park; and our holiday party was held at the sustainably built IslandWood environmental learning center.

CDM
By Joe Souther (SoutherJT@cdm.com)

Camp Dresser & McKee, Inc. (CDM), a consulting, engineering, construction, and operations firm delivering service to public and private clients worldwide, is represented in the Northwest by offices in Bellevue and Seattle, Portland, and Helena and Libby, Montana. Our Bellevue office moved to a new location at

14432 SE Eastgate Way, Suite 100, Bellevue, WA 98007.

John Newby, P.E., leading our Geotechnical Services Division in the Western United States out of the Bellevue office, evaluated the upcoming Alaskan Way Viaduct Replacement Project regarding measures needed for protection of existing infrastructure. For this tunnel project, he also provided his expertise for construction risk assessment to the City Council of Seattle. Joe Souther, P.E., leading the geotechnical group in Bellevue, delivered the geotechnical design for an expansion of Seattle’s West Point wastewater treatment plant. He also worked on mine reclamation and geo-environmental projects in several Western states.

Ulf GWildis, L.E.G., in his role of CDM’s construction services manager for the Brightwater Conveyance System project, can look back on the 2010 break-through of two tunnels at the Ballinger Way and North Creek Portal shafts. Due to TBM damage and related challenges, the remaining tunnel section was broken out into a new contract, requiring construction of a tunnel connection 300 ft underground by means of ground freezing. Mike Lach, P.E., in addition to his Brightwater tasks, worked on 3-dimensional finite difference numerical modeling for large equipment foundation loads that include a significant dynamic component. This work was done for a major industrial operation on the Arabian Peninsula.

Karen Irby-Smith, while managing our upgraded soils laboratory in the larger space of our new office, was also providing geotechnical construction oversight for new facilities at two elementary schools. Farid Sariosseiri, PhD, in addition to his Brightwater tasks, worked on an Army Corps of Engineers channel restoration project in Arizona and provided geotechnical monitoring services for an
industrial client. **Morris Wainwright** provided civil design services for two major reclamation projects at Lake Machado and Lake Owens in California.

CDM’s Geotechnical Services Division had a successful year and several papers were published on complex projects, technical subjects, and R&D efforts. The resources provided by our geotechnical professionals in fourteen states cover the whole range of geotechnical engineering. In addition, we can turn to the internationally acknowledged expertise of our affiliated colleagues in Germany in specialty fields like ground freezing design, geothermal energy concepts, and high-speed-rail infrastructure expansion.

The CH2M Hill Geotechnical Group in Seattle had a great year in 2010 under the leadership of **Joel Theodore**. Joel took over from **Don Anderson**, who had been serving as the interim lead after the departure of **King Sampaco** to the Panama Canal Expansion project.

Our project work kept us quite busy over the past year:

- We led the geotechnical work on the I-405 Renton Stage II Design-Build (D/B) Project. **Roch Player** was the task lead; **Todd Valentine** and **Kimberly Mugg** provided support. Roch has recently started working on the Tyler, Texas D/B project, where he will be the geotechnical task lead and deputy design manager.
- We supported design and construction of the WSDOT Tacoma/Pierce County HOV Project. **Karen Dawson** is the geotechnical functional manager. CH2M HILL geotechs, who also include **Don Anderson**, **Ha Pham**, and **Sean Shin**, are providing support for replacement of the I-5 Puyallup River Bridge, seven bridge widening or replacements, and numerous cut and fill walls.
- We are also working on preliminary engineering and environmental documentation for the Sound Transit East Link Light Rail Project, which will provide light rail service from the Seattle International District to Redmond. **Don Anderson** is the geotechnical manager; **Michel Bouchedid** is the geotechnical field program manager and is supported by **Sam Brancheau** and **Todd Valentine**; and **Joel Theodore** is the geotechnical design manager and is supported by **Mark Thompson**, **Michel Bouchedid**, **Ha Pham**, and **Todd Valentine**.
- We were also engaged in a variety of other projects. **Sandra McGinnis** is working on the Geology, Soils, and Seismicity section of the draft EIS for the Merced to Fresno segment of the California High Speed Rail Project, as well as the Geology and Soils section of the Final EIS for the Sound Transit East Link Project; **Kimberly Mugg** transitioned from the Renton D/B project to providing field support for our Construction Management team for Sound Transit U-Link construction; and **Jen Schaeffer** is working on the Progress Energy nuclear power plant license applications in the Southeast, as well as managing the field program for a D/B build effort on I-81 in Virginia. **Ken Green** has chiefly provided support to the Water Business Group of CH2M HILL.

Our staff was also active in various professional activities. **Michel Bouchedid** is serving as the President of the ASCE Seattle Section Geotechnical Group. **Sean Shin**, **Ha Pham**, and **Mark Thompson**
have had papers published either in the geotechnical journal or conference proceeding. Don Anderson was active in ASCE 7-10 seismic code update, the TRB GeoSeismic Foundation Committee, and planning for the 2010 9th US National and 10th Canadian Conference on Earthquake Engineering.

Condon-Johnson & Associates Inc.
By Alan Macnab (amacnab@condon-johnson.com)

Condon-Johnson & Associates Inc. (CJA) is a diversified heavy civil engineering construction company whose core competencies included Drilled Shafts, Anchored Earth Retention, and all forms of ground modification (permeation and compaction grouting, stone columns, soil mixing, jet grouting, etc.). Headquartered in Oakland, CA, CJA has four offices (Seattle, Oakland, Los Angeles, and San Diego). CJA undertakes work as both a subcontractor and as a general contractor.

The Seattle Office of CJA continued to execute a conservative strategy through the downturn in our economy. CJA completed five (5) projects this year. They were

- U -215 The I-5 Undercrossing for Sound Transit. As a general contractor, CJA prepared the way for future tunneling for link light rail from downtown to UW.
- Portsmouth Force Main II. CJA performed chemical grouting to stabilize granular soils in the tunnel alignment for Michaels Tunneling on their contract with the City of Portland.
- Snohomish CSO Reduction. CJA installed stone columns for GG Excavating on their contract with Snohomish County.
- SR 522/US2 Flyover. CJA installed Drilled Shafts for Scarsella Bros on their contract for WSDOT in Monroe, WA.
- Grapeview Loop Rd. CJA installed stone columns under a general contract with Mason County near Allyn, WA

Two major projects are currently under construction. Those are

- U-220 UW Station  CJA is installing a slurry diaphragm wall and ancillary work for the Sound Transit station in joint venture with Nicholson Construction. The is subcontract is being performed for Frontier Traylor JV.
- I-5 Portland Ave to Port of Tacoma. CJA is installing Drilled Shafts, soil nail shoring, dewatering and several ground improvement systems in a subcontract for Scarsella Bros on their contract with WSDOT.

At this writing, CJA is anticipating the start of a subcontract for Walsh Construction to install temporary shoring at Site 35W on the campus of University of Washington.

CJA has added three full time employees to its Seattle roster. Garrett Bartley has transferred to the Seattle office from our Oakland office and will perform in the capacity of Project Manager/ Superintendent. Brendan Harkins completed an internship with CJA and has joined us fulltime as a Field Engineer. Suthan Pooranampillai recently completed his graduate studies at the University of Nevada at Reno and has joined CJA as a Project Engineer. CJA is pleased to announce the appointment of Dominic Parmantier as the Vice President of Northwest Region.
CJA remains committed to service to its clients and the engineering community. For help with costing, budgeting or conceptual design, please contact Eric Dybevik (edybevik@condon-johnson.com), Leo Stapleton (lstapleton@condon-johnson.com), or Dominic Parmantier (dparmantier@condon-johnson.com) at 206.575.8248.

DBM Contractors, Inc.
By John Bickford (johnb@dbmcm.com)

2010 proved to be one of the more challenging years in recent history for DBM Contractors, Inc. Competition for specialty geotechnical work was fierce and project owner’s experienced lowered construction costs that were similar to construction pricing at the turn of the century! Since labor and material costs remained relatively consistent in 2010, lower constructions costs were realized by finding innovative solutions to construct projects and increased/better communication between contractors and the design team.

In the private sector, DBM’s Pacific Northwest Region (DBM PNW) was involved with various sized earth retention and foundation support projects. Some of our clientele included Vulcan (Amazon), Boeing, Hampton Inn, Kindred Hospital, Good Samaritan Hospital, Lowe’s and Walmart.

For public works projects, DBM PNW worked with different local, state and federal entities on a variety of geotechnical projects. Washington DOT bridge projects we were involved with included the Newaukum River, Gallup Creek, Manette, and the Simpson River.

For Sound Transit, DBM PNW was the geotechnical contractor for the earth retention and dewatering work at the U-230 Capitol Hill project. DBM was also recently awarded the geotechnical work (drilled shafts, earth retention and dewatering) associated with the D to M Street Track and Signal Project in Tacoma.

Other local public agencies DBM worked with included the University of Washington, Seattle Central Community College, City of Des Moines, various School Districts, Joint-Base Lewis McCord, and the Pike Place Market Authority.

2010 also saw DBM more successful in procuring projects outside of Washington. We were awarded two drilled shaft projects for Montana’s DOT and three drilled shaft projects for Oregon’s DOT. Our offices in San Jose and San Diego kept busy with projects at Mesa Community College (San Diego) and the Harris Reservoir (Malibu).

DBM was proud to receive two project awards in 2010. The first was from the ASCE Seattle Section for the Local Outstanding Civil Engineering Award for Excavation and Foundation Support. This was for our work at the Pike Place Market Phase 1b Renovation. Our scope of work included both temporary and permanent anchored soldier pile walls, temporary soil nail walls, temporary micropile foundation support elements and permanent micropile seismic foundation elements.
The second award was a 2010 Special Recognition for Outstanding Project Award presented by the Deep Foundation Institute (DFI) for our work at the Cosmopolitan Resort Hotel and Casino in Las Vegas. Our scope of work for this project included over 1,400 each ground improvement micropiles to strengthen soils supporting the mat foundation, and over 2,800 each temporary tieback anchors and pre-loaded internal pipe bracing supporting the diaphragm walls of the excavation support system.

DBM continues to be active in the advancement of the geotechnical construction industry through our participation in the ADSC, DFI and ASCE. Please contact John Bickford, P.E. (johnb@dbmcm.com) if you have any questions regarding our capabilities or would like our participation in budgetary pricing or constructability reviews.

GeoEngineers, Inc.
By Chris Nordfors (cnordfors@geoengineers.com)

Despite challenging market conditions, GeoEngineers had a busy 2010 and is launching the New Year with exciting projects, staff promotions and continued company growth. This past year was also a special one for GeoEngineers as we celebrated our 30th anniversary. Three of the four original staff—Jim Miller, Gary Henderson and Jon Koloski—are still actively involved in technical projects, and Jim is GeoEngineers’ Board Chairman.

It was gratifying to receive a number of technical awards for our work this year. The Society of American Military Engineers (SAME) recognized GeoEngineers and teaming partner Reid Middleton with a gold award for design excellence for Missile Assembly Building 3 at Naval Base Kitsap-Bangor. The MAB-3 project, as the building is known, enabled the Navy to increase production of its Trident II, D-5 submarine weapons system. The LEED Silver-designed facility includes concurrent vertical and horizontal assembly lines, and its curved roof minimized building heights and energy costs. In addition, the firm received a Grand Award for Engineering Excellence from the ACEC Missouri chapter for an HDD drilling project beneath a levee in coastal Louisiana.

GeoEngineers worked on a number of large projects in the Puget Sound area and across the country this year, including the former Scott Paper Mill cleanup for the Port of Anacortes and the Bellevue Braids design-build project for WSDOT. A number of other local projects including the Yesler Terrace Redevelopment Phase III and IV in Seattle and Old Town Dock and Fire Station 5 project in Tacoma are just getting underway. Other major domestic projects included the Enterprise Acadian Haynes Extension pipeline and I-49 North projects in Louisiana and the Fayetteville Express Pipeline from Arkansas to Mississippi. In addition to our U.S. projects, GeoEngineers worked on a number of projects around the world, including Canada, Vietnam, Ghana, Chile and Russia.

GeoEngineers is proud to announce the following promotions for Puget Sound geotechnical engineers in 2010: King Chin, Associate (Redmond); Dan Ciani, Engineer 1 (Redmond); Lindsay Flangas, Engineer 2 (Redmond); Aaron Hartvigsen, Staff Engineer 3 (Bellingham); Aaron Lykken, Staff Engineer 2 (Redmond); Steven He, Staff Engineer 3 (Redmond); Chris Kokesh, Engineer 1 (Redmond); Ryan Maw, Staff Engineer 2 (Redmond); and Kimball Olsen, Senior Engineer 2 (Redmond); and Morgan McArthur, Engineer 1 (Tacoma).
Geopier Northwest, Inc
By James Johnson

Geopier Northwest had another successful year in 2010 and provided Intermediate Foundation Systems on many projects in the Puget Sound area. We have worked closely with most of the geotechnical engineering firms and appreciate your support and confidence.

Geopier Northwest is involved on projects in Washington, Oregon, Idaho, Nevada, Utah and Montana. We can also assist you on projects throughout the United States.

We have continued to complete major projects in the Northwest using the conventional Geopier (drilled) and the Impact Pier and Rampact Pier technology. The Impact Pier and Rampact Piers systems are “displacement” technologies which enable the construction of highly compacted, stiff pier elements without the use of drilled holes. The approaches are well suited on sites with deep alluvial soils and high groundwater levels. Installation depths of up to 40-feet are feasible. The stiff pier elements provide foundation support and can be used to mitigate liquefaction in sands, sandy silts and silty sands. Grouted installations can also be installed in very soft clay or peat soils.

Bright spots in the market this year included healthcare, schools and education, wind energy, and transportation. School projects completed this year include the Riverview Elementary School and Centennial Middle School in Snohomish. Projects were also completed this year for a Child Development Center on the Navy Kitsap Base and for the Washington State University Global Animal Health project in Pullman.

Healthcare projects completed this past year include the Issaquah Medical Center where 35 foot long Impact Piers were used to provide foundation support and mitigate liquefaction on the soft valley site. Geopier soil reinforcement was used to support multiple wind turbine foundations on the Goshen Wind project in Idaho.

Geopier Foundation Company completed the HITEC (Highway Innovative Technology Evaluation Center) evaluation. The Geopier system is the only ground improvement system that has completed the HITEC review. Several transportation projects were completed this year in the northwest including support of several MSE walls constructed on soft soils on the SR16 and Burnham Drive project in Gig Harbor, Washington.

Geopier continues to host workshops in Scottsdale, Arizona on a quarterly basis for our geotechnical clients. Please contact us if you are interested in attending.

We look forward to our continued relationships with our geotechnical clients and an improved 2011 for all.
In May of 2010, Golder celebrated our 50th Anniversary. In the Redmond office, 2010 marked over 20 years with Golder for the following people in our geotechnical group.

Charles Lockhart, PE (34 years) has been expanding our geotechnical construction capabilities.

David Findley, LEG (31 years) enjoyed working on a powerhouse project this year.

Alan Macleod, LEG (25 years) spent the year traveling the arctic providing his expertise to clients from Alaska to northern Quebec.

Don West, LEG (24 years) made several trips to Argentina and to Mexico.

James Johnson, LEG (23 years) continues to assist clients with master plan communities.

Joseph Hachey, PE (23 years) was busy in 2010 with opportunities on large infrastructure projects.

Anthony Rice, PE (21 years) continues providing services to clients across the western US.

Andrew Walker, PE (21 years) leads the way for junior staff, while providing innovative solutions for clients on transportation, flood control, and unstable slope projects.

This past year was not just about the remembering the past and the “seniors” (old timers) in the office. Other (younger) Golder folks found exciting opportunities across the globe in 2010.

Scott Zajac, PE, Debb Ladd, PE, LG, LHg, and Josh Hanson, PE traveled to Perth, Australia to work on site investigation and design recommendations for an LNG facility. Scott Dinkelman, LEG, Ali Dennison, LG, and Jill Dekoekkoek worked on pipeline, mining, and LNG projects across Australia.

Jessica Cote, PE and Greg Curtiss, EIT, traveled to Columbia and Peru in support of port development projects.

Derek Holom, LG was part of an interdisciplinary team of Golder scientists working in Indonesia.

Katy Cottingham, PE was the onsite engineer responsible for anchors to stabilize a massive rock slide in North Carolina.

Ben Cox, EIT (the newest member of the geotechnical group) handled a local landslide remediation before heading to Calgary to work on various oil sands projects.
2010 was about more than billable hours. As part of our 50th Anniversary, the Redmond office set a goal of participating in 50 community service activities during 2010. A wide variety of events were participated in such as Relay for Life, Earth Day, school fundraising events, Girls Scout troop programs, Mountain-To-Sound relay, youth sports events, and a middle school math team. Employees collectively participated in over 65 events and gave over 550 hours of their time.

We are looking forward to new opportunities in 2011 and the next 50 years for Golder.

Hart Crowser, Inc.
By Doug Lindquist (doug.lindquist@hartcrowser.com)

The strategic and financial condition of Hart Crowser is very strong – even in the midst of these tough economic times. We are on track for double digit revenue growth this fiscal year (ending June 2011). Hart Crowser’s diverse client base and new hires have allowed us to grow in our traditional service areas as well as expand into new areas.

*Hart Crowser is one of 150 firms nationwide that made the Zweig White Hot Firm List. The list recognizes some of the fastest growing and highest performing companies in the A/E Industry. The group was honored by Zweig White at a special conference in October in Washington DC.*

We continue to be involved in a number of challenging, high-profile projects throughout the Puget Sound area and nationwide. Select project profiles are included on our website (www.hartcrowser.com). Some projects from 2010 include:

- WSDOT Geotechnical On-Call
- Port of Seattle Geotechnical On-Call
- Sound Transit South Link
- Husky Stadium Renovations
- South Lake Union Development Projects - Multiple Projects
- Children’s Hospital Seattle Campus
- King Street Station Renovation and Seismic Upgrade, Seattle
- Colman Residential Tower, Seattle
- Joint Base Lewis McCord - Multiple Projects
- Bangor Submarine Base – Multiple Projects
- Holden Mine Site Cleanup (US Forest Service)
- Roslyn Mine Reclamation (Office of Surface Mining)
- Navy Wharf and Pier Repairs, Philadelphia
- Governors Island Park and Public Space, New York

We’ve added three new geotechnical engineers to our group in 2010. **David Winter** returned to Hart Crowser as Vice President of Business Development after 10 years with other local companies following 19 years at Hart Crowser. **Ben Blanchette** joined us fresh from the University of Washington. **Nick Szot** joined us with 3 years of local experience.
2011 promises to be an exciting year. In addition to a strong backlog of other projects, we also look forward to our role as the local geotechnical engineer for the design-build team (Seattle Tunnel Partners) selected to construct the 58-foot-diameter Alaska Way Viaduct SR-99 Bored Tunnel.

Hart Crowser is an 80-person, employee-owned geotechnical engineering and environmental consulting firm headquartered in Seattle, with offices in Edmonds, Washington and Portland, Oregon. The firm specializes in geotechnical and environmental engineering, natural resources, and environmental remediation technologies.

Hayward Baker, Inc.
By Mark Koelling (makoelling@haywardbaker.com)

Hayward Baker Inc. (HBI) continues to provide a full range of specialty geotechnical construction services based out of its Seattle Area office in Tukwila. Office and yard expansion was undertaken this year with a recent move into new office space. Management/Engineering staff includes Adam Gerondale, Justin Sharman, Jon Bussiere, Mike Blanding, Frank Kalata, Mark Koelling, and Andy Anderson. Ground improvement work conducted over the past year has included all of HBI’s methods to address soft/loose soil, liquefaction mitigation, groundwater control, excavation support, and tunnel support. In addition to consistent work in the Northwest, with several large Canadian projects, we are currently performing jet grouting at a gold mine in the Nunavut Territory, near the Arctic Circle.

Holocene Drilling, Inc.
By Andrew Berg (dberg@holocenedrillinginc.com)

2010 marked the beginning of our 15th year. In December, Holocene was widely recognized by the national drilling industry publication, National Driller, who wrote about our work on the Sound Transit TBM U-220 Tunneling Project for Traylor Brothers/Frontier Kemper JV. Holocene also participated in the National Groundwater Association’s Annual Expo to review new drilling industry products & services, and to fulfill CEU requirements associated with their Water Well and Resource Protection Licenses.

Holocene was a successful bidder on Municipal and State geotechnical contracts including the City of Seattle Department of Public Utilities Materials Laboratory, the King County Department of Transportation, and the Washington General Services Administration’s Contract to provide Geotechnical Test Boring Services to WSDOT.

This year Holocene will focus on improving its fleet of equipment and services. Health & Safety remains an integral part of our daily operations and we are working with ISNetworld. ISNetworld collects vendor information, verifies that it meets internal and regulatory requirements. Five Holocene Drillers now possess Washington State DOE Water Well Licenses and two Drillers hold Oregon Resource Protection Well Licenses.
Holocene’s Construction Dewatering Well Point Jetting Drill has been busy with projects for Scarsella Bros. on the Southcenter Parkway Project and Skanska USA on the Alaskan Way Viaduct – Stage 2 Project. Holocene crews are also installing monitoring wells and recharge wells on this project. We are pleased to announce Michael Bochenski has joined our team as a DOE Licensed Water Well Driller and Dewatering Specialist. Michael brings Holocene a breadth of knowledge, industry experience, and innovative solutions to the geotechnical dewatering arena.

Jay Graham, President oversees Holocene’s Dewatering Operations and is a Technical Advisory Group (TAG) member for DOE. Clay Griffith, Vice President oversees Project Management of Holocene’s Geotechnical and Environmental projects. Donna Thrall, Project Coordinator, brings balance to Holocene. Her efforts in communicating our mission are unmatched.

Finally, we offer our sincere thanks to our clients for their confidence and trust in our abilities in making 2010 a banner year at Holocene. We wish you a very successful 2011. We also look forward offering you the same integral value, innovation, and excellence in 2011.

Holocene Drilling, Inc. was established in 1996. We offer drilling, soil sampling, and monitoring well installation services in Geotechnical, Environmental and Construction Dewatering. Holocene operates 8 rigs throughout Washington and Oregon. Please visit us at www.holocenedrillinginc.com.

HWA GeoSciences, Inc.
By Alexandra Garner (agarner@hwageo.com)

2010 was a productive year for HWA GeoSciences Inc. In February, HWA moved to new offices in Bothell. Our new digs feature a gleaming 2,400 square foot laboratory space, with parking and service area for our Falling Weight Deflectometer, and separate rooms and workstations for our primary, secondary, and advanced testing. Our laboratory capacity and capability keeps growing, with the addition of resilient modulus/cyclic triaxial testing apparatus, as well as environmental remediation treatability testing capabilities. The laboratory is accredited by the American Association of State Highway and Transportation Officials (AASHTO) R18 and holds a second accreditation from the American Association for Laboratory Accreditation (A2LA).

Alexandra Garner recently joined HWA as Marketing Manager. She holds the Certified Professional Services Marketer (CPSM) certification and has 10 years of A/E/C marketing experience. George Minassian and Bryan Hawkins, of our pavement technology group, completed several pavement evaluation and rehabilitation projects. HWA continues to advocate non-destructive falling weight deflectometer testing for pavement and subgrade evaluation. Ralph Boirum has served as HWA’s international representative again this year, and is currently managing geotechnical studies for a State Department design-build project in Santa Domingo. Sa Hong is healthy and working in between family (and golf) vacations. Lastly, our President Arnie Sugar has kept our corporate engine running smoothly while managing projects, providing technical expertise, and mentoring several junior level personnel.
The last few years has seen some huge changes for us here at Northwest Cone Exploration, Inc. We purchased Hughes InSitu Engineering, Inc. from Dr. John Hughes and got into the electronic pressure-meter testing. We also registered the trade name of In Situ Engineering which more accurately reflects the work we do. Dr. Hughes continues to be an exclusive consultant to In Situ Engineering.

We have hired an electrical engineer Joel Witthus, who helps us with software and hardware development. Joel spent several weeks earlier this year working on the Wolf Creek Dam project in Kentucky. The pressuremeter work we performed helped to delineate the modulus and hydrostatic levels. Chris Nowak, our geologist was in Chile earlier this year working on a copper/gold mine development at 15,000 feet elevation. The work was performed in a partially welded pyroclastic debris flow with some interesting results. Many of the tests would follow a frictional failure path until the strength of the welded matrix was reached whereupon it catastrophically failed with large displacements. Chris also spent time in Kazakhstan and Romania and did a lot of work on the viaduct replacement tunnel in Seattle.

Keith Brown, our Principal Engineer spent some time visiting Cambridge England this year where John Hughes invented the electronic pressuremeter. He got caught in the volcanic ash airport closures and was forced (I say again he was forced!) to spend time enjoying England in the spring! He also just had to stop in Iceland to do some brown trout fishing. Keith was in Canada doing several CPT projects and pressuremeter work at Naval Base Bangor-Kitsap in addition to his management duties.

Jake Dafni, is our geotechnical Engineer who is back at the University of Washington working on his Masters under Dr. Pedro Arduino. We have actively supported Jake and sent him to Cambridge England and also to Edmonton Canada. The work in Canada was with David Elwood who is working on his PhD at the University of Alberta in Edmonton which we helped support.

John Hughes is still with us as a consultant. He varies from full time engineer to full time grandfather. John has been back to England several times this year visiting colleagues. He gave a nice presentation and day of consulting to the US Army Corps of Engineers Nashville District in conjunction with our work on the Wolf Creek Dam.
This year marked completion of final design of the University Link light rail segment for Sound Transit and a transition into providing engineering services and geotechnical special inspections during construction for the two underground stations and 3.15 miles of twin tunnels constructed with pressurized face tunnel boring machines.

Jacobs Associates was also selected by Sound Transit this year to deliver civil engineering and architectural final design services for the North Link light rail extension. North Link consists of 3.2 miles of twin bored soft-ground tunnels, 1.1 mile of retained cut fill, and elevated guide way structures. It includes two underground transit stations (Brooklyn and Roosevelt), one elevated station (Northgate), a portal structure, and 20 cross passages.

Seattle City Light awarded final design of the Gorge 2nd Tunnel to Jacobs Associates, a 22-foot-diameter hard rock hydropower tunnel that will improve the efficiency of Gorge Powerhouse and allow it to operate at peak capacity without altering water flow to the Skagit River. Adding this parallel tunnel will improve operation of existing equipment, saving the capital costs and environmental impacts of constructing additional generation facilities.

Jacobs Associates is also helping Puget Sound Energy expand at Lower Baker Dam. To help that facility return to maximum power generation capacity and best manage the dam’s outflows and needs of fish downstream, an underground powerhouse and connecting tunnel are planned to augment the current facilities. Jacobs Associates conducted a geotechnical exploration program, authored a geotechnical baseline report, provided preliminary engineering for underground design, and is assisting the owner during design-build, which commenced in December 2010.

The firm is currently involved with a series of “rails to trails” projects that convert historic railroad tunnels to pedestrian/bicycle trails. In 2010, Jacobs Associates completed investigation of Tunnel 50 near Snoqualmie Pass to recommend construction measures to make it part of the John Wayne Pioneer Trail within Iron Horse State Park.

While these projects are exciting, a favorite due to proximity to our Seattle office is our work assisting Skanska with utility trench dewatering and shoring design to control groundwater levels during construction of the Phase 1 portion of WSDOT’s SR99 Replacement Program.

Kleinfelder, Inc.
By Marcus Byers (MByers@kleinfelder.com)

In 2011 we will celebrate our 50th Anniversary. Over the past 50 years, Kleinfelder has grown to become one of the nation’s largest employee-owned firms with 66 offices globally and a staff of nearly 2,000. Kleinfelder has been a part of the Northwest for over 20 years.

Over the last year our local staff has been a part of several interesting projects, including: Snoqualmie Falls Hydroelectric Redevelopment; Calistoga Setback Levee; I-405 Sepulveda Pass Highway widening in Los Angeles, California; I-15 Core Design Build Project in Utah County, Utah; new Costco locations in Korea and Canada; Boundary Dam Rock Fall Mitigation; and the Historic I-90 Bridge Replacement in Spokane County.
Congratulations go to Redmond employees Ian LaVielle and Hyungsuk Shin for receiving their PEs and best wishes to Kami Deputy as she transfers to our Guam office in February. Grant Knechtel joined as our new Laboratory Manager and our laboratory received an IAS accreditation to provide rock testing. Richard Luark and David Cotton presented at Earth Retention Conference in Bellevue and numerous other employees presented at conferences across the nation. Kleinfelder would like to wish everyone a happy, safe and prosperous New Year!

Lachel & Associates (Lachel) specializes in design and construction engineering services for tunneling and other heavy civil construction projects in the areas of water and wastewater infrastructure, hydroelectric power, and urban transportation systems (vehicular, rail and mass transit). Our goal is to meet the needs of clients by providing fully integrated management and technical services that are objective, thorough, and effective. Lachel has offices in Washington, Nevada, Colorado, Texas, Georgia, Pennsylvania, Virginia, and New Jersey. As a subsidiary of Schnabel Engineering, Lachel is able to access all of the technical expertise within the Schnabel organization including their broad geotechnical engineering, geostructural design and dam design capabilities. Lachel has worked seamlessly with and utilized the bench strength offered by Schnabel on many of the projects listed below.

Movers & Shakers – Our People

M. Lee Renegar has been promoted to Western Area Manager, and is overseeing operations for the Washington, Nevada and Colorado offices.

Mark Rohrbach has been promoted to Senior Engineer and acting Office Manager; and has also recently been certified as a licensed Geotechnical Engineer in the state of Oregon and licensed as a Professional Engineer (P.Eng.) in British Columbia and Ontario, Canada.

Tim Kovacs has expanded our Crosshole Sonic Logging (CSL) and Pulse Echo Testing (PET) services into British Columbia and Alberta, Canada. Tim is also expanding our practice in Pile Driving Analysis (PDA), vibration monitoring, and developing repair plans for drilled shafts throughout the greater Pacific Northwest. In addition, Tim has taken over the role of cost estimating for all of these services.

Fadzilah Saidin has recently been promoted to Project Engineer. Both she and Matt Koziol have expanded their capabilities in geostructural and tunnel engineering by participating in the University Link U230 project, the Brightwater Central Tunnel Claims Review project, and various CSL testing projects.

Project Highlights

- University Link U230, Seattle, Washington: Independent geotechnical engineering services for the deep excavations, tunnel two precast segmental lining designs for the U230 tunnel Contractor, and structural connection redesign for the Pine Street Station.
- Humpback Creek Hydroelectric, Cordova, Alaska: Tunnel engineering services including design of a temporary diversion tunnel including ground and portal support.
- Spokane Street CSL testing: 106 shafts located in Seattle, Washington.
- Port Mann CSL Testing: 75 shafts located in British Columbia, Canada.
In addition to these local projects, Lachel is working on the Blue Plains Tunnel project in Washington, DC, as part of the $2.3B DC Water CSO Long Term Control Plan project; the No Business Creek tunnel in Snellville, Georgia; and the East Bank West Bank Interceptor tunnel project in Dallas, Texas.

Landau Associates geotechnical group had a very busy year. This sector of Landau Associates pursued and successfully won numerous exciting projects that provided exciting challenges, rewarding work and company growth. January 2010 saw the key appointment of Dennis Stettler, P.E. to Director of Engineering, and the promotion of Erfan Nezami, Ph.D. to Project Engineer.

Dennis Stettler, P.E., continues his role as Director of Engineering with a mix of project, business development, and corporate activities. Over the last year he has been involved with WSDOT projects including Washington State Ferry terminal projects, SR530 landslide stabilization, and several projects related to SR520. Dennis has also been involved with several landslide repair projects for Seattle Public Utilities.

Reda Mikhail, P.E., has been busy working on several large design-build transportation projects, the WSDOT SR 520 Pontoon project, and several Washington State Ferry projects. Steve Wright, P.E. continued working on a variety of infrastructure improvement projects for WSDOT and a number of local municipalities, counties, utility districts, and ports. Work completed over the past year included managing WSDOT’s SR 522 Cathcart Road Bridge and Retaining Walls project, several airport improvement projects at Tacoma Narrows and Thun Field, and a bank stabilization project along the Snake River for Idaho Power.

Dave Pischer, P.E., has been working on a variety of site redevelopment and environmental remediation projects for ports, municipalities, and industrial clients in Washington and Oregon, including the Yesler Terrace redevelopment project in Seattle, the Mill District redevelopment project in Yakima, the Gate 3 marina renovation project at the Port of Bellingham, the stormwater treatment wetland project for the City of Arlington, the berthing area maintenance dredging project for Bellingham Cold Storage, and various other geotechnical and environmental projects.

Colin Turnbull, L.E.G., has been managing a variety of projects including the proposed Teanaway Solar Reserve project, the Seattle Public Utility WPA landslide drainage program, a clinic addition to the Walla Walla VA Medical Center, the Navy Air Station waterline distribution system upgrade, residential landslide evaluations and pro bono work.

Ed Heavey, P.E. a Principal who works out of our Tacoma office, continued to be very busy working on a variety of projects for various public sector clients including the Cities of Tacoma, Gig Harbor and Olympia, as well as Pierce County and the Port of Tacoma. Brian Bennetts, P.E., also in our Tacoma office, has been busy working on a variety of infrastructure improvement projects for local municipalities, counties, utility districts and ports. Work completed over the past year includes the City of Olympia’s Hands on Children’s Museum, the Longview Regional Water Treatment Plant, and City
of Tacoma’s Green River Filtration Facility.

Chad McMullen, P.E. worked on a number of projects this past year, including Design-Build proposals for large transportation projects, the earth section of the draft EIS for the Yesler Terrace Redevelopment Project, plus a number of smaller projects throughout the year. Erfan Nezami, Ph.D. has been busy with several waterfront projects for Washington State Ferries, including the Seattle Ferry and Port Townsend Ferry Terminal projects. Erfan has also been involved in the WSDOT SR520 Pontoon project.

Looking ahead, 2011 promises to bring new work and the opportunity to add to our talented staff. We continue to be committed to providing our clients with superior service and are excited about the future. We encourage you to contact us in our Edmonds, Tacoma, Seattle, Spokane, Tri-Cities or Portland offices and visit our website at www.landauinc.com.

Malcolm Drilling, Inc.  
By Rick Hanke (rhanke@malcolmdrilling.com)

Malcolm Drilling has for decades been an innovator and leader in the deep foundation industry. Our list of core services as it relates to geotechnical construction include drilled shafts, micropiles, excavation support systems, cutoff and secant pile walls, chemical grouting, jet grouting, deep soil mixing, Cutter Soil Mixing, underpinning, and dewatering. These combined services have been applied on numerous complex and technically challenging projects throughout North America for various applications. Similarly, Malcolm Drilling’s ever-growing Dewatering and Ground Improvement Divisions have been instrumental in keeping Malcolm as the most sought after full service geotechnical contractor.

Based in San Francisco, California, with offices throughout the western United States and Panama, Malcolm has expanded to the eastern seaboard with an office in Florida. 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 ninety 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 a Bauer BG50 top drive drill (the world’s large top drive crawler drill) and the world’s largest oscillator tailor made to Malcolm’s specifications by Leffer of Germany.

Some of our notable recent projects completed or acquired include:

- U-Link U230, Seattle, WA - JCM JV – MEGA-Jet Grouting
- Doyle Drive Viaduct, San Francisco, CA - Caltrans – Oscillator Rotator Drilled Shafts
- Brightwater Central, Kenmore, WA - VPFK JV – Dewatering & Compaction Grouting
- I-94 Mitchell Interchange, Milwaukee, WI – Lunda Constr. - Secant Pile Shoring System
- Port of Miami Tunnel Development, Miami, FL – Bouygues Civil Works – Cutter Soil Mixing, Shoring & Earth Retention
Malcolm continues to advance geotechnical construction through active participation in ADSC, DFI, and Geo Institute. For assistance with costing, budgeting or conceptual design, please contact Al Rasband (arasband@malcolmdrilling.com), specific questions regarding Ground Improvements can be directed to Rick Hanke (rhanke@malcolmdrilling.com), and for Construction Dewatering, please contact John Starcevich (jstarcevich@malcolmdrilling.com). For a complete list of our services and contact details please visit our newly updated website (www.malcolmdrilling.com).

MWH Americas, Inc.
By Joseph Clare (Joseph.B.Clare@us.mwhglobal.com)

The regional offices of MWH Americas, Inc. have been busy in 2010 and look forward to sharing a prosperous 2011 with our clients, subcontractors, and associates. In 2010, regional staff in Anchorage, Portland, and Bellevue have worked on numerous projects involving mining, hydropower, tunneling, trenchless, and heavy civil projects largely associated with water and wastewater business sectors.

Since late 2004 MWH, in joint venture with Jacobs Associates, has provided design services for the Brightwater Conveyance project for King County. In 2010 we congratulated the Central Tunnel Contractor and the West Tunnel Contractor in successful completion of the BT-2 and BT-4 tunnels and hole-through of their tunnel boring machines. Joe Clare, Mike Bruen, and William Cranston are providing support on the Brightwater project.

The Fremont Siphon Tunnel Replacement design project for King County was started in early 2010. This project is currently in the pre-design and alternative analysis phase with Joe Clare and William Cranston providing support. MWH congratulates the City of Seattle for seeing the start of construction and favorable bid results for the Madison Valley Long Term Storage Solution project. Currently, the project is in active construction mode with tunneling and storage tank construction underway. MWH is providing design and construction services with support by Mike Bruen, Joe Clare, Mark Graham, Ali Leeds, and Mario Serra.

MWH congratulates the Tulalip-Everett Joint Water Pipeline Board for completion of the design of Segment 8 pipeline and look forward to favorable bid results in early 2011. Design of Segments 1 – 7 will continue through 2011 with Jay Cooke, Greg Harris, Scott Radford, and Dan Williams providing design support and Brandt Barnes and Scott Hakes providing construction services. The nearly 8 miles of 36- and 48-inch pipelines installed in open trench and by horizontal directional drilling (HDD) will deliver 36-mgd of potable water to the Tulalip Tribes and City of Everett. MWH wishes everyone in the geotechnical community a Happy New Year and prosperous 2011.

For career opportunities please see www.mwhglobal.com and contact our local Bellevue office for teaming opportunities.

Northwest Cascade, Inc.
By Evan Newman

Northwest Cascade, Inc’s Geotechnical Division is a full service geotechnical construction contractor, specializing in earth retention, slope stabilization, grouting and design build shoring.
The year of 2010 has been one of the most difficult years in the industry’s history. There has been virtually no private work, the majority of the work NWC has been bidding is public. Through these tough economic times, NWC was still able to successfully complete a number of interesting and challenging jobs as well as keep most crews busy the entire year. In addition, NWC was able to expand geographically into Oregon and back into California.

The Northwest Cascade Geotechnical Construction division personnel have remained constant throughout the year. Spark Johnston, PE is acting as division manager, with Colby Henke as the general superintendent. Paul Rodriguez and Evan Newman act as estimators and project managers. Terry Kotas made a short appearance as general superintendent for all Oregon operations during the summer busy season, but has since returned to his sail boat and is currently en-route to the Galapagos Islands.

The following are a few notable projects completed in 2010:

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Location</th>
<th>Completion Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hwy – 80 Roseville, CA</td>
<td>Roseville, CA</td>
<td>January 2010</td>
<td>Installation of 391 EA permanent tiebacks for shoring along Highway 80. Tiebacks design loads ranged up to 170 kips.</td>
</tr>
<tr>
<td>University of Washington Molecular Building</td>
<td>Seattle, WA</td>
<td>January 2010</td>
<td>Installation of soil 9,438 sf of 4” temporary soil nail shotcrete shoring.</td>
</tr>
<tr>
<td>BART Earthquake Safety Program M Line</td>
<td>Daly City, CA</td>
<td>On-going as of December 2010</td>
<td>Installation of 195 EA micropiles with design loads up to 170 kips.</td>
</tr>
<tr>
<td>I-90 Hyak To Snowshed Vicinity Phase 1B</td>
<td>Snoqualmie Pass, WA</td>
<td>On-going as of December 2010</td>
<td>Installation of 703 EA epoxy coated soil nails, 19865 SF of permanent shotcrete facing, and ~15000 LF of rock bolts and rock dowels.</td>
</tr>
<tr>
<td>10MG Reservoir Improvements and Transfer Pump Station</td>
<td>Tigard, OR</td>
<td>November 2010</td>
<td>Installation of 7600 sf of temporary soil nail / shotcrete shoring</td>
</tr>
<tr>
<td>SR 522 City Limits to NE 180\textsuperscript{th} St</td>
<td>Bothell, WA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Completion Date: October 2010
Description: Installation of 186 EA epoxy coated soil nails, and 6200 sf of permanent shotcrete lagging.

Robinson Noble
By Angie McKeag (AngieM@cornerstonegeotechnical.com)

Robinson Noble is a geosciences consulting firm providing hydrogeologic, environmental, and geotechnical engineering services throughout Washington State and the Pacific Northwest.

In November, we celebrated our first full year as a geotechnical engineering firm after acquiring Cornerstone Geotechnical, of Woodinville, Washington in late 2009. Formerly known as Robinson, Noble & Saltbush, we unveiled our new name and logo this past year and a new website is on the way. Despite the slow economy, it’s been a busy year as we continue to integrate the three divisions in our Tacoma and Woodinville office locations.

Our Principal Engineers, Rick Powell and Chuck Couvrette, have completed many challenging geotechnical engineering projects this year, including water reservoirs and supply lines, sewer systems and pump stations, directional drilling studies for both water and sewer lines, and earthen reinforced bridge abutment projects. The acquisition has also brought a lot of new opportunities for our engineers, and we look forward to continued growth in 2011.

Congratulations to Kevin Boekholt for successfully completing his PE exam this year and becoming a licensed Professional Engineer. Kevin has been a valued employee with our firm since completing his degree at the University of Washington.

Shannon & Wilson, Inc.
By Jane Bensel (JB@shanwil.com)

Shannon & Wilson had a successful 2010 filled with challenging projects; new hires, and steady growth.

Our geotechnical and environmental staff continued work on the region’s most urgent projects: WSDOT’s Alaskan Way Viaduct and SR 520 Bridge Replacement and HOV program. We also provided geotechnical support for Amtrak’s Design-Build Project - New Cascades Maintenance Facility and Administration Building in Seattle, and geotechnical and environmental support for Interstate 405 /Interstate 5 to State Route 169 Stage I Widening in Renton/Tukwila, WA.

Other key projects include WSDOT’s SR 532 Design-Build Corridor Improvements from Camano Island to I-5, and new task orders at Howard Hanson Dam under the re-awarded Seattle/Walla Walla Corps of Engineers Geotechnical AE Services contract. Shannon & Wilson was also on the winning team for the Sound Transit North Link project, and the SDOT Mercer Corridor Project West Phase.
Shannon & Wilson’s staff are one of the main reasons for our success. This past year we welcomed the following new talent: **Geotechnical Engineer:** Carlo Lozano. **Environmental Engineers/Hydrogeologists:** Larry West, Stephen Thomas, and Mark Bryant. **Technical Assistant:** Cyndy Journey.

Shannon & Wilson and Parsons/RCI won an ASCE Local Outstanding Civil Engineering Achievement Honor Award in the geotechnical category for the Elwha River Bridge West Approach Build Back - Clallam County.

The annual Stanley D. Wilson Lecture, co-sponsored by the University of Washington’s Civil and Environmental Engineering Department was postponed until April 7, 2011. Dr. Evert Hoek will present his lecture “*Fundamentals of Slope Design*”.

Working in the public and the private sector, Shannon & Wilson provides geotechnical, environmental, and natural resources services for the design and construction of transportation, waterfront, and military facilities; buildings and structures; industrial plants, infrastructure components, and energy generators. Shannon & Wilson’s Northwest presence includes our Seattle headquarters plus offices in Richland and Portland.

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**Seattle Public Utilities Materials Laboratory**

By Sean Caraway (sean.caraway@seattle.gov)

The SPU Materials Laboratory Geotechnical Group has been involved with many City infrastructure projects in 2010. The group continues to be led by Geotechnical Engineering Supervisor, Claire Gibson, P.E., Jeff Fowler, P.E., who was promoted to Materials Laboratory Manager in 2009, is on temporary out of class assignment as Manager of the Construction Engineering Group. Our staff continues to include Juan Carlos Ramirez, P.E., Senior Geotechnical Engineer, Sean Caraway, P.E., Senior Geotechnical Engineer, Cody Nelson, L.G., Assistant Engineering Geologist, Aaron Clark, Assistant Engineering Geologist and Taryn Sass, L.G., Associate Engineering Geologist. Cody Nelson obtained her Washington professional geology license this year and Taryn Sass finished her Masters degree in Civil Engineering at the University of Washington.

Our group has worked on a variety of projects facility improvement projects for Seattle Department of Transportation, Seattle City Light and Seattle Parks and Recreation Department. In addition, the group has continued with involvement in high profile SPU projects, such as Windermere CSO, construction on the Madison Valley Drainage Long Term Solution, Maple Leaf Reservoir burying and slope monitoring on the Tolt Pipeline. 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.
The Oregon and Washington offices of the former Zipper Zeman Associates celebrated our fifth anniversary as part of Terracon this year. We are proud to report that all of our senior staff remain in key roles with the Terracon team.

We continue to emphasize hands-on, senior-level involvement in all of our projects, whether they are large wind farms and solar power projects or small stormwater infiltration ponds. Local staff members were heavily involved in projects outside of the Puget Sound Region including a solar power project in Southern California and instrumentation installation on a large port project in Alaska, and we have regularly provided staff support to our Portland, Salt Lake City, Boise, Irvine and Phoenix offices. 2010 highlights for some of our ASCE members included.

John Zipper continued in his role as Northwest Manager and managed to squeeze in work on some local projects.

Tom Jones has developed several geotechnical and environmental opportunities for our east coast offices for large projects. He also worked on several railroad projects across the Northwest as well as pavement rehabilitation projects across the western United States.

Jess Abed joined Terracon early in 2010 as Client Development Manager working with clients throughout Puget Sound as well as in a number of western states.

Jim Brisbine has actively managed a wide variety of commercial, industrial, institutional, infrastructure, and residential projects for our Bellevue office.

Jim Thompson had a busy year acting as our lead engineer on a number of projects including a design-build proposal in Oregon, a solar power plant project in California, a large pipeline replacement project in the Puget Sound Region, and a waterfront project in the Port of Los Angeles.

Tim Roberts manages our Tacoma and Bellevue offices and has been heavily involved in federal sector work including projects at combined base Lewis McCord.

Dave Baska is working in the position of Senior Consultant in recognition of his role with Terracon as our national seismic technical leader. His efforts include transportation projects in Utah, Kentucky and South Carolina, and power generation facilities in California, Arizona and Oregon. Dave travelled to Chile as part of an SEAW group.

Kris Hauck is managing our Portland office and his office continues to expand in spite of the slow economy.

Rob Ross spent 6 months in Edmonton, Alberta acting as the geotechnical lead for the Anthony Highway Drive – Stony Plain Road Interchange design-build project.

Al Zeman continues to work part time from his base in Cave Creek, Arizona.

Both our geotechnical and environments groups managed to stay more chargeable in 2010 than in 2009, and we have started 2011 with a cautiously optimistic attitude. We are hopeful that this economy will continue to turn around and maybe even gain steam.
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WSDOT Geotechnical Division
By Tony Allen (AllenT@wsdot.wa.gov)

A favorite phrase in landslide work is, “...there are landslides you fix and landslides you name.” WSDOT is completing final design for the reconstruction of the ½ mile section of SR-410 that was destroyed by the October 11th, 2009 Nile Valley Landslide. Much of the landslide remains marginally stable. The preferred alternative involves a realignment around the toe of the landslide, utilizing mostly an avoidance approach with some landslide stabilization in the western margin of the landslide. Tom Badger and Steve Lowell, of the WSDOT Geotechnical Division, have been leading the geotechnical work for this final design phase.

During the 2010 construction season the WSDOT Geotechnical Division was kept extremely busy providing construction support for the I-90 Hyak to Snowshed Vicinity Phase IB project. This Interstate highway widening project will transform this portion of I-90 from a four lane facility to a six lane facility over this portion Snoqualmie Pass. This $77 million project involves the construction of four bridges, ground improvement at one of the bridge abutments, rock cuts up to 120 feet in height requiring pre-reinforcement and post-reinforcement with post tensioned rock bolt and rock dowels, and a large soil nail wall to retain thick overburden soil deposits above the rock cuts adjacent to the snow shed. Monitoring of the rock cuts for slope movement was accomplished through a sophisticated real time monitoring system and the use of high density scanning as the cuts were brought down to grade.

During this season of construction, 58 out of 74 drilled shafts, 16 out of 22 bridge columns, and the ground improvement for the bridges, a major portion of the soil nail wall, and approximately 320,000 cubic yards of roadway excavation that required blasting next to the existing interstate was completed. The rock cuts required approximately 17,000 lineal feet of pre- and post-reinforcement, and 500 lineal feet of horizontal rock drains.

Geotechnical construction support for this project has involved WSDOT Geotechnical Division’s Engineering Geologists/Geotechnical Engineers (Steve Lowell, Tom Badger, Doug Anderson, Mike Mulhern, Marc Fish, Eric Smith, Dave Jenkins and Mark Frye), and a WSDOT’s geotechnical consultant team comprised of Norm Norrish of Wyllie and Norrish Rock Engineers Inc., Erik Mikkelson of Geometron, Jerry Dilley of Superior Blasting, and Wayne Adams of Adams Resource Consultants.
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**Holocene**

adj \hō-lə-sēn, 'hä-

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We are thrilled to have several recent wins of significant and challenging projects to add to our increasing backlog, and are pleased to announce several opportunities to grow with our Geotechnical Engineering group in Seattle.

Successful candidates for our Staff level Geotechnical Engineer will possess a MS in Geotechnical Engineering with 0-4 years of experience in construction monitoring, field exploration and sample collection, interpretation of subsurface data, engineering calculations and analyses, and report writing. Interest in environmental projects and/or experience is a plus. Individuals in this role must be equally comfortable working with contractors at construction sites and participating in client presentations. The responsibilities of this position will involve some fieldwork and travel; the ability to lift 40~50 lb and have a current driver’s license is required.

Our Project to Associate level Geotechnical Engineer will also have an MS in Geotechnical Engineering, with 5-10 years of professional experience, and be a P.E, or be P.E. eligible, (preferably WA or OR). Individuals in this mid-level role will be responsible for providing geotechnical design and construction recommendations and successful project management for a variety of commercial development, industrial development, transportation, and port/harbor projects.

We are targeting one of the Project level Geotechnical Engineers to be an individual with proven project experience in geotechnical analysis and numerical modeling techniques with FLAC or equivalent. Demonstratable experience should include numerical soil-structure interaction modeling techniques.

Strong communication, technical report writing and interpersonal skills are critical for each of these roles. Proficiency with MS Office Suite is required; experience with the LRFD design method and multiple geotechnical software programs is a plus. As a condition of employment, successful candidates must be able to provide documentation of eligibility to work in the US.

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The Groundhog is the official newsletter of the ASCE Seattle Section Geotechnical Group. It is published in late January or early February each year. Submissions for this document were solicited from members of the Seattle Section Geotechnical Group. ASCE and the Seattle Section Geotechnical Group are not responsible for statements made or opinions expressed in this document. This issue of the Groundhog was prepared and edited by Sarah Morgan, Secretary of the Seattle Section Geotech Group.

If you are interested in submitting an article or advertisement in future publications, please contact the 2010-2011 Secretary or John Bickford at johnb@dbmcm.com.