A MESSAGE FROM THE UTAH SECTION PRESIDENT

Stan Klemetson

THE VISION FOR CIVIL ENGINEERING IN UTAH

In 2006, a diverse group of Civil Engineers and other leaders from around the world gathered for a Summit on the Future of Civil Engineering. As reported in the Vision for Civil Engineering in 2025 (Vision), the issues included 1) the poor condition of the infrastructure, 2) the minimal involvement of civil engineers in the political process, 3) the need to embrace sustainability, and 4) the desire to attract the best and brightest of the profession. These four issues are still relevant today, almost a decade since the Summit. This month I will address issues one and two.

 Infrastructure Vision

At the 2015 ASCE UTAH SECTION Meeting, we were told that by 2060 the population in Utah would double. The population growth will increase the demands for energy, drinking water, clean air, safe waste disposal and transportation. The growth will mean greater infrastructure development and the need for more environmental protection. How will we handle that need? “In 2025, civil engineers will serve as master builders, environmental stewards, innovators and integrators, managers of risk and uncertainty, and leaders in shaping public policy” (Vision). Those are high expectations for our profession.

Canon 1 of the Code of Ethics published by ASCE states, “Engineers shall hold paramount the safety, health and welfare of the public and shall strive to comply with the principles of sustainable development in the performance of their professional duties.”

In 2013 the ASCE Utah Section Report Card Committee, chaired by Dr. David W. Eckhoff, P.E. and supported by a large number of volunteers, started their evaluation of the infrastructure in Utah. In 2015, the Report Card for Utah’s Infrastructure was completed. Through their efforts, ASCE is striving to achieve the 2025 Vision for Civil Engineering while satisfy the requirements of Canon 1 of the Code of Ethics.

The Report Card documents the current conditions and future requirements of Utah’s vital public infrastructure to achieve its first purpose. The second purpose is to inform elected officials and the general public of our current infrastructure’s “health” and what has to be done to address current and future challenges and risks. The latter purpose is achieved by political and community involvement of Civil Engineers in Utah, it is a call for the civil engineering community to step up to the plate and participate in political and public service.

Political Vision

Our state and local elected officials are tasked to determine the issues of importance to the citizens of the State of Utah, Industry, and Governmental Agencies, and then collect the data, evaluate the data and make informed decisions. One look at the ASCE Report Card shows how difficult that would be even if that infrastructure were their only concern. The ASCE Members in Utah could become a valuable asset to our elected officials in all stages of the law

(Continued on page 2)
PRESIDENT’S MESSAGE (CONTINUED)

(Continued from page 1)

making process. Contact your local elected officials and let them know that you are available to provide them with information to help them to write the laws and promote their passage.

ASCE has provided another valuable service – ASCE Key Contact Program. The program will provide you with an opportunity to develop a relationship with your elected officials and influence the policy process at both the state and federal levels. With a few simple keystrokes you can become a member of the Key Contact program and receive information about key policy issues that affect your community and the civil engineering profession. You can also find out who your local officials are. ASCE also provides a Legislative Fly-In to give you an opportunity to visit your legislative members in Washington, DC.

In the ASCE Utah Section, we have an opportunity to organize Government Relations Committees in our branches and section. Contact Stanley Klemetson at the section level or your Branch President at the local level for more information.

Stanley Klemetson
President, ASCE Utah Section
sklemetson@uvu.edu

MEMBERSHIP RENEWAL BY MATTHEW ROBLEZ

I want to take the time this month to go over what I think is a GREAT benefit of being a member of ASCE and a reason to maintain and renew your membership. As professional license holders in the State of Utah, we are required by law to have at least 30 hours of qualified professional education directly related to the ethics, business and technical content aimed at maintaining, improving, or expanding the skills and knowledge relevant to the licensee’s professional practice. As a member of ASCE, you can choose up to 5 webinars from the 60 on-demand webinars they have on their website. Each one is a 1-hour webinar worth 1 PDH. That’s 5 free PDHs each year from their comprehensive continuing education library – just for being a member! That means 1/3 of your units towards your requirement are FREE with the membership. If you look online, courses that offer these units are not cheap. My research indicates that the average 8 hour course is $300. That’s about $38 per unit hour. So you get about $188 of free services for your ASCE membership. Remember, continuing education is a requirement of law, this is not a choice. Take advantage of this awesome member benefit.

There are many reasons to join and renew. If you question what some of the other benefits are, I would direct you to:

http://openweb.asce.org/files/members/101-Ways-to-Benefit-from-ASCE-

Who likes free money? Who doesn’t?? If all of us can renew our membership by December 11, 2015, then our section has a chance at winning a cash prize of $1000. This $1000 can benefit the section in many ways. Plus, one should take pride in our section that we are the best and that we are at the forefront of membership. So I encourage all of you to renew. And to those of us who are supervisors or company leaders, I implore you to have all of your employees renew their memberships by 2015.

Matthew Roblez

2014/
PROJECT RISK MANAGEMENT

Civil Engineering is a fascinating field with a wide variety of disciplines and projects. As engineers, we are problem solvers and society relies on us to find solutions to make everyone’s lives easier. We find solutions to provide clean drinking water, dispose of wastewater in a safe and clean manner, develop transportation solutions for people to travel, and many other challenging problems. Each project is unique and requires a specific solution. Part of the solution is to identify project specific risks and manage them in a responsible and effective manner.

What do you think about when you hear the words “Risk Management”? Insurance, lawyers, contracts? These things are part of managing risk, but as engineers we can implement risk management strategies at a project level to reduce impacts to our budgets and schedules. Project Risk Management involves identifying project issues that can affect the schedule and/or budget, determining the level of potential impact, then developing strategies to manage the risk.

The project risk management process can help a team effectively manage budgets and schedules, and make better project decisions. Project risk management plans can be customized to your project’s size, whether it be a small intersection or a large canal project. This process involves the following five steps:

1. Identify the risks
2. Identify probability and impacts of risks
3. Perform analysis
4. Develop management strategies
5. Track risks

1-Identify Risks:

So what are risks? They are project specific circumstances or factors that can affect your schedule or budget. Risk is usually thought of as a negative impact, but a risk can have a positive impact as well. We define risks with a negative impact as a “Threat” and those with a positive impact as an “Opportunity.”

Identifying project risks is a team effort and is done during a Risk Workshop. Prior to the workshop a baseline schedule and an engineer’s estimate is prepared without any contingencies. The risk analysis will help the team determine the appropriate level of contingencies for the project. Project team members meet together in a Risk Workshop, along with any necessary technical experts, to discuss the project scope and goals, review the baseline schedule and estimate (project baseline). The team identifies risks that have the potential to affect the project baseline and document them in a risk register. The risk register is a living document and will be used throughout the project and reviewed regularly at project meetings and milestones. A Risk Workshop can last anywhere from an hour to three days, depending on the project size. Workshops for projects with a budget of less than $1,000,000 can be done in an hour or two during a project team meeting, and don’t usually require additional technical experts. Projects with a value of $100,000,000 or more need multiple days to complete the workshop. Project Managers evaluate the needs of their project and customize the workshop for their specific project.

2-Identify Probability and Impacts of Risk

The team will determine the probability that the risk will occur, and analyze how it will affect the project schedule and/or budget after identifying a project risk. Qualitative and Quantitative methods are two methods used to determine and analyze the probability and impact. The appropriate method is usually determined by the project size.

A qualitative analysis is usually used for smaller projects, and allows a project team to prioritize the risks based on their potential impact. The probability that a certain risk will occur is identified as high, medium or low. Once the probability of occurrence is identified, the impact of each risk is determined in the same manner; high, medium, or low. The probability of occurrence and impacts are mapped in a Heat Diagram (Figure 1) to help the project team prioritize the project risks.

Figure 1 – Heat Diagram

A quantitative analysis is used for larger projects and requires more detailed analysis. The probability of occurrence is identified as a percentage, and impacts are identified in dollars and months in a quantitative analysis. The level of impacts from risk is difficult to pinpoint, so the team estimates the likely range of impacts from highest to lowest, along with the most likely. The project team will use their engineering knowledge and experience to estimate the impacts in the Risk Workshop. The probability of occurrence and impacts are then documented in the risk register and used in the risk analysis in Step 3.

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### 3-Perform Analysis

The information from the quantitative analysis is used to model the project risk using a Monte Carlo analysis. A Monte Carlo analysis is a statistical analysis using a random event generator to model various risk events. The data from the analysis is used to create a Probability Distribution Curve, or S-Curve, and a Tornado Diagram. The S-Curve enables the project team to evaluate the probability that a project will be completed within budget or on schedule. Using a quantitative analysis, the project team can also compare alternatives on the same S-curve. Figure 2 is an example of how multiple alternatives can be evaluated to help a project team make better decisions. The S-curve in Figure 2 was used to evaluate three delivery methods for a project so that the team could select the method that was best for the project.

**Figure 2 – S-Curve**

Using the results from the Monte Carlo analysis, a Tornado Diagram (Figure 3) is created to prioritize the top risks to the project. The Tornado Diagram is created from a sensitivity analysis based on the contribution of each risk to the total project risk. The Tornado Diagram helps the team focus their risk mitigation efforts in the appropriate areas to provide the best value to the project budget and schedule.

**Figure 3 – Tornado Diagram**

### 4-Develop Management Strategies

Step 4 is where “the rubber hits the road” in risk management. Once a project team knows the risks associated with their project, they can develop proactive mitigation strategies. Project Managers assign each risk to team members that are best suited to develop a mitigation plan and carry it out. Team members that are assigned a risk will work to develop a risk plan to mitigate impacts. A project team not only wants to mitigate the negative impacts of Threats, they want to exploit any Opportunities to reduce cost and expedite schedule. Exploitation strategies for Opportunities should be included in the risk plan. Remember that Risk assignments and plans are documented in the risk register.

### 5-Track Risks

Risk Management is a dynamic process, and should be part of each team meeting and milestone review. Risk plans are hard to implement if the assigned team member is not held accountable to implement the plan. The risk register should be reviewed at each team meeting to evaluate the impact of each risk, and update the probability and impacts as necessary. Once a risk no longer affects a project it can be retired from the risk register. The quantification of each risk can be updated at project milestones to revise the risk model and evaluate how risk impacts have been reduced. If a project is found to have a budget surplus, a new risk model can be developed to determine how much contingency is needed to complete the project while re-programming the surplus budget to other projects.

Risk Management is a valuable process and will help a project team make better decisions. This process allows teams to:

1. Thoroughly understand the project issues
2. Prepare a Risk Plan to mitigate Threats and exploit Opportunities
3. Proactively manage the budget and schedule
4. Make informed project decisions

Northern Utah Branch Update by Jeremy Jensen

We would like to thank all those who participated in the opening social last month. The Dutch oven potatoes and BBQ sandwiches were great. It was fun to meet everyone’s families.

This month, Jim Mayer with Torrent Resources will be speaking on Thursday October 15th about meeting low impact development requirements through infiltration and engineered drywells. We will gather at the Bluebird Restaurant at noon on 19 N Main Street in Logan, UT. Lunch will be provided. The following is his presentation summary:

“As today's stormwater management regulations move toward not just preventing, but reversing the effects of hydromodification as well as promoting the recharge of our depleted groundwater aquifers, the use of Low Impact Development (LID) techniques, including deep infiltration, is growing. By using deep infiltration as part of a proper LID design, we are seeing that both of these goals are being met. This month’s presentation begins with a discussion of stormwater disposal methods, including both shallow and deep infiltration methods, and then focuses on the use of engineered drywells as a deep infiltration method. Drywells have been studied for decades and have been found to provide a reliable and maintainable mechanism for infiltrating clean stormwater into the vadose zone, where it can slowly filter down to the aquifer below. The presentation will cover drywells in detail, including history, design, construction, maintenance, study data, and performance. Torrent Resources has perfected the engineered drywell over the past 40+ years, through the installation of over 75,000 systems, more than 99% of which are still in use today.”

We are still in need of more projects for the Centennial Celebration. This can be a great source of marketing for your company. These can be any feats of civil engineering completed within the last 100 years. Please send any nominations to Jeremy Jensen at jjensen@isiwest.com.

We look forward to seeing you at our monthly meeting.

Jeremy Jensen, P.E.

Wasatch Branch Update by Craig Friant

The ASCE Wasatch Front Branch started off our fall branch meetings on September 18, 2015 at Westech Engineering. Our speaker was Blaine Leonard, UDOT ITS Program Manager and 2010 ASCE National President. Blaine presented on technology in transportation and enlightened our branch on the future of our roadways and cars. We learned about the two tracks for intelligent vehicles; the first being driverless vehicles, and the other is connected vehicles. Google seems to be leading the charge with driverless vehicles, and is making a lot of progress. Just look on the internet for driverless cars to find endless information on the topic. Many car manufacturers are investing in connected vehicles instead of driverless vehicles. Connected vehicles will be able to communicate with other connected vehicles to improve safety and reduce congestion. Our branch would like to thank Blaine for sharing his expertise with us.

Our branch held a pizza party/social at the University of Utah on Thursday October 1, 2015. The event was held in the Meldrum Engineering Building Layton Auditorium and was attended by members from our branch, the YMF, and the U of U Student Chapter. Darren Burton made a short presentation on the Parleys Canyon Trail and Sugarhouse Park Detention Pond. Blake Thomas followed Darren with a Presentation on Protecting New Developments near Floodplains and Flood Prone Areas. A special thanks to Dr. Pomeroy, Dr. Schmucker, and the U

Craig Friant, P.E.

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WASATCH FRONT BRANCH (CONTINUED)

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of U Student Chapter for helping us organize this event.

Our October meeting will be held on Friday October 23, 2015 at Westech Engineering. Our speaker will be Ashley MacMillan, P.E. from Geocomp. Her topic will be the “Instrumentation of Geosynthetic Reinforced Soil – Integrated Bridge System (GRS-IBS).” This is sure to be a very interesting presentation.

We are looking forward to seeing our members at the October meeting. Our branch is still looking for volunteers to serve on our Community Giving Committee. This is a great opportunity to network and give back to our communities. Please contact one of the Board members or email us at asce@wasatchfrontbranch.com if you are interested in serving on the committee.

CENTRAL UTAH BRANCH UPDATE BY ALEX VAZ

Alex Vaz, P.E.

We had a great turnout at our September luncheon. We thank Dr. Rollin Hotchkiss for his presentation and appreciate the BYU Civil Engineering Department’s continual commitment to ASCE. Please join us for this month’s meeting at Fox Hollow Golf Course in American Fork.

We’ll be meeting for lunch and a nice afternoon of golf. The cost is $20 and includes lunch and 9-holes of golf with a cart. Family and friends are invited. Check your email for more details.

Our friend, Marshall Shore, who has been serving as our branch secretary, has moved to Maryland to enjoy his retirement by being close to family. We appreciate Marshall’s dedication to our branch over the last couple of years. We’d like to welcome Steven Lord, who was appointed to serve as the branch secretary for the remainder of the year. Steven is a project manager for Horrocks Engineers and we appreciate his willingness to serve.

Please mark your calendar for our November 19th meeting. The meeting will be held at Cabela’s and will include a tour of Geneva’s plant at the point of the mountain.

The Utah Section of ASCE is celebrating 100 years in 2016. As part of the celebration, we are creating an eBook highlighting the best engineering projects completed in Utah over the last century. If you or your organization would like to nominate a project, please contact:

History and Heritage Committee Chair
Walter Travis
walter@mcneileng.com.

Please submit your nominations by October 10, 2015.

Lastly, you have a chance to help our section win $1,000. The three sections with the highest percentage of renewed members by December 11, 2015, will win a cash prize of $1,000! Get into the renewal race today, pay your society and section dues, and keep our section on pace to win.

As always, we thank you for your membership in ASCE and the contributions you make to our profession.
The Southern Utah Branch would like to thank the Southwest Utah Public Health Department Environmental Health Director, Robert Beers, and SCG Enterprises’ Richard Jex for an excellent workshop on Onsite Wastewater systems design and operation. The Branch held the workshop on October 1st and had twenty of our local consultants and regulators in attendance.

Onsite wastewater systems is a challenging topic for developers, regulators and consultants alike as more and more resort-style satellite communities look at addressing wastewater issues. Maintaining public health, protecting local groundwater sources and private property interests can be a difficult balance at times. We appreciate the time and detail provided by each of the presenters and for all those who were able to attend.

Later this month the Branch will be sponsoring a membership evening for members and their families as well as all those interested in joining ASCE. We have had several excellent presentations and workshops over this past year and we hope that as we expand our influence our local engineering community will see the value of membership in our local ASCE branch.

Mike Chandler

Civil Source Sponsorship

Would you like to increase your outreach and name-recognition? Did you know the Civil Source is sent to over 1400 civil engineers monthly (from September to May)?

The Civil Source is accepting sponsors who would like to extend their reach throughout the state. The Civil Source is published 9 times throughout the year (from September to May) and is sent to every person who has registered to be part of the Utah Section. Your logo and/or advertisement will be included in all 9 issues.

Sponsorship rates are as follows:

- Business card size: $60/year
- 1/4 page: $120/year
- 1/2 page: $240/year
- Full page: $480/year

Sponsorship rates may be prorated to the next year (or reduced based on the number of months remaining for the remaining year).

If you are interested, please contact either Cody Palmer (cody@mcneileng.com) or Stephanee Eastman (StephaneeE@horrocks.com).
The Young Member Forum (YMF) has many festive fall time activities approaching as the weather starts to turn. For all of you who are taking the PE exam in less than a month on October 30th happy studying and best of luck! The YMF sponsored PE Review course is in full swing and participants are getting prepped for the big day.

Everyone needs a little study break now and again, so MARK YOUR CALENDARS for the return of our Fall Chili Cook Off!! On October 16th come and join us at Sugar House Park (See our website or Facebook page for further details) for some spirited competition. We would love to have you come down and place your home cooked chili recipe to the test! For the kiddos there will also be a pumpkin painting contest. Come on down for a good time with good friends. See you there!

Highlights this month for our active and energetic members included a fun filled social at Octoberfest in Snowbird. After a rain filled cold week, the clouds parted and a beautiful sunny Saturday was the perfect backdrop to enjoy a cold brew with friends. Many of us also attended the September Wasatch Front Luncheon that had an excellent speaker with good food. It’s always a great way to network and integrate with the branch. Our student chapter outreach is in full force with a pizza party at the U, a late afternoon hike up "the living room", and an upcoming kickball game with BYU. We have several other upcoming events (Socials, Conferences, Community Service, and Outreach) that we want to make you aware of and stay in contact with you on ... Check us out on Facebook and our Website. Make sure to “like” us and even email us to get onto our event email list.

If you are a civil engineering graduate under 35 years old and would like to become more involved in the YMF, please contact us anytime at asceutahymf@gmail.com or check out our new website at http://asceutahymf.wix.com/asceutahymf. You can also keep track of our YMF activities by following our Facebook group “ASCE UTAH YMF”. We have plenty of opportunities for people to help out!
The fall is off to a great start with two upcoming presentations of interest to geoprofessionals along the Wasatch Front.

- EERI and SEAU are hosting a short presentation on the Structural and Geotechnical Reconnaissance of the April 2015 Nepal Earthquake on Thursday, October 15, 2015. The flyer for the event with details has been attached to the Civil Source.
- Salt Lake City North and Baileys Lake Quadrangles Mapping on Wednesday October 21, 2015. Please see the attached flyer for details.
- Field Review of new geologic mapping on Thursday, October 22, 2015. Please see the attached flyer for details.
- The Geo-Institute of Hawaii will be hosting a geotechnical seminar by Dr. Bengt H. Fellenius in November with additional details emerging for a full-day presentation the following day. There are certainly worse places to enjoy a conference in November than Hawaii and the seminar flyer has been attached with contact information for additional details.

We would like to ask our members to let us know topics of interest or upcoming events to share as we plan for the remainder of the year. Thanks again for your support.

It’s hard to believe that it’s already October. The weather is still warm and construction is in full swing. It’s hard to keep up with all of the activity. There are a few upcoming items that I would like to make you aware of. The EERI Utah Chapter & Structural Engineers Association of Utah (SEAU) are sponsoring an evening seminar about earthquake reconnaissance in Nepal. Click here for the event flyer (PDF, 207KB)

This seminar will feature the first-hand accounts of two individuals involved with the earthquake reconnaissance in Nepal, with a focus on the structural and geotechnical issues. Speakers will be: Dr. Judith Mitrani-Reiser from Johns Hopkins University, and Dr. Youssef Hashash from the University of Illinois

Date: Thursday, October 15, 2015
Time: 5:30 – 6:00 Refreshments,
6:00 – 8:00 Presentations and Questions
Location: Warnock Engineering Building (WEB), Room L103 at the University of Utah – 72 Central Campus Drive, Salt Lake City, Utah 84112
Cost: Free, no registration is required to attend

SEI is also planning to sponsor a webinar to be held at UVU later this year. We have requested ASCE 7-10 Snow Load Provisions. This will be just in time for winter. Hopefully it will be a great snow year and we can observe how closely the provisions match snow accumulation.. Check in the next newsletter for the date and time.
The American Society of Civil Engineering serves its members and the community. Serving on a committee is an opportunity that will benefit the section as well as those who serve. Some committees are standing committees filled each year by those elected to positions of leadership (such as the Awards and Finance Committees), but most are appointed and are added as needed. If you would be willing to lend your help by joining a committee or if you would like additional information, please contact Stan Klemetson at sklemetson@uvu.edu.

Utah Section Committees

- History and Heritage Committee – Chair: Walter Travis
- Centennial Committee – Chair: Stan Klemetson
- Nominating and Election Committee – needs a chair and members; requesting a representative from each branch
- Community Service Committee – needs a chair and members; requesting a representative from each branch
- Membership Committee – Chair: Matthew Roblez
- State and Government Relations Committee – needs a chair and committee members
- Sustainability Committee

Utah is pretty awesome and there have been some coco-nuts projects here. The ASCE Historic Civil Engineering Landmark Program recognizes historically significant local, national, and international civil engineering projects, structures, and sites. We are looking to find another amazing project in Utah that could be recognized by ASCE. Check out http://www.asce.org/landmark-program/ to see other great projects and the criteria.

Our mission statement is:

“To increase public awareness of civil engineering by publicizing landmark civil engineering projects and preserving the history and order of this section for others to use in the future.”

Utah is pretty awesome and there have been some coco-nuts projects here. The ASCE Historic Civil Engineering Landmark Program recognizes historically significant local, national, and international civil engineering projects, structures, and sites. We are looking to find another amazing project in Utah that could be recognized by ASCE. Check out http://www.asce.org/landmark-program/ to see other great projects and the criteria.

We are also looking for past section or branch officers that may have meeting minutes or other materials to archive so that we can have a complete historical record of the decisions of each branch and section for future reference and use. Imagine an ASCE where you could quickly search past meeting minutes, notes and other documents for future decision making?! Incredible!

Again, contact our Chairman – Walter C. Travis, IV (walter@mcneileng.com) if you have anything to archive or offer or even if you think of someone else who does! Thank you!
The 2015 Region 8 Assembly Fall Planning Meeting was held in Billings, Montana in September. The following are the highlights of that meeting and how we might apply the recommendations to the Utah Section.

State and Government Relations
ASCE has provided the Key Contact program to make it convenient to work with our state and national legislators and stay on top of legislation that might be of interest to us. It was recommended that all members of the Utah Section sign up for that free service.

We are looking at hiring a part-time lobbyist for the section to help stay on top of the relevant legislation and to provide contacts with the legislature. In conjunction with that effort, we are starting to plan for a “Day at the Capitol” in February 2016 to setup meetings with legislators and other government officials. It will also give us an opportunity to discuss the 2015 Report Card for Utah’s Infrastructure.

K-12 Outreach
Our youth make decisions about engineering as early as fourth grade. Kits are available to share the story of engineering with the younger children. It was recommended that our members reach out to their local schools and volunteer to make presentation or judge a science fair. Please let your Branch know if you have those contacts or need help to work with the schools.

ASCE has created a Civil Engineering Club program for high schools. So far, I am only aware of the program at Lone Peak High School in Utah County. Marshall Shore started the program at Lone Peak and found that professional engineers were very willing to come and make presentations to the students. Ask your school if they are interested.

Public Outreach
As Civil Engineers I do not think most of us tell the public about the great things that we have done, or how they will benefit from the infrastructure we have designed. We might stand back and let others take credit for what we have done or see ourselves in the news only if something goes wrong. It is time to put Civil Engineering on the positive side of the news. I would like to have my granddaughter invite me to talk to her second grade class, introduce me as her grandpa, a civil engineer, and see the envy in the eyes of her classmates. Of course, that would also mean that I should prepare something that would interest them.

To spread the news about civil engineering we could get to know our local media persons, send those press releases, and being available to them when they have questions. Each year we honor people for their contributions to the profession as a professional engineer or educator. We select outstanding projects. We have members that become Life Members or Fellows of ASCE. We give them an award. We have community service activities or a great meeting presentation. These could be a great opportunities for press releases so that the public also knows about these achievements. We can also publish the information in our newsletter, Civil Source, and distribute that newsletter to the media services.

So this year, as you think about those awards, programs and community service projects also think about what you want to tell the community.

Communications
The methods of communications are changing. In general, we have gotten away from mailed or faxed newsletters and send things electronically. Our newsletter has adjusted to the changes and the opportunities for greater communications. We have a rather static webpage that
(Continued from page 11)

has served us well, but at the Assembly, we saw a demonstration and discussed web pages that provide far more services, including shared calendars for all of our branches, institutes, YMF, and student chapters. During the 2015-2016 year, we will be considering the purchase and modification of a new Web page to be serviced by a paid webmaster. We have branches considering video recording of technical presentations and making them available through the web page to service our members that can’t spend the day coming to a remote luncheon meeting. Some members within Region 8 have been using social media sites.

Communications methods will continue to change and we will need to decide what works best for us.

Membership

Why did you become a member? Why don’t all of our civil engineering graduates? While I have been a member of ASCE since my college days because I am a civil engineer, much of my effort was spent with what was then known as the Water Pollution Control Federation. I have worked locally and nationally with several of my professional organizations, but ASCE has always been my mainstay.

It was recommended that each organization in the Section should have a membership committee. It can draw broadly on the membership of the organization because membership is part of what each of do every day. However, the following are few of the thought that we gathered at the meeting.

- Elevator speeches on membership – have several pitches and focus them to the audience.
- Increase student to member transition – YMF
- Have membership fliers and cards at each meeting
- Look at value such as the 5 free webinars, discounted insurance etc.
- Go to PE tests and offer a snack sponsored by the YMF or something of the sort
- At an event someone pays and is not a member, hand them a membership application or flier.
- Get owners of companies at branch meetings. Have them as presenters.

Good luck in your efforts. Your efforts will benefit all of those that identify themselves as a Civil Engineer.

Raise the Bar

Are we “Raising the Bar” or just “Restoring the Bar” when we talk about this ASCE initiative? The more mature civil engineers obtained their degrees when a Bachelor’s Degree in Civil Engineering was 140 to 150 credit hours. Over time, the universities and colleges were forced to reduce the credit hours towards 120 credit hours. What has been lost? The Technical Electives! What has happened during those years of declining credit hours? Technological changes and increasing complexity of engineering design! This has forced most students to consider obtaining a Master’s Degree in their area of specialization. The overall result is a narrowing of the expertise of what we use to know as Civil Engineering.

As a profession, we should be concerned. We are organizing a committee to evaluate the ASCE Raise the Bar Initiative and to determine if it is time in the State of Utah to update the Professional Registration requirements for Civil Engineers of the future to obtain the additional 30 hours of training before registration as our professional brothers and sisters have done in the other professions. To volunteer for the Raise The Bar Committee or add your comments, pro or con, to the discussion please contact me.
Bowen, Collins & Associates, Inc. is seeking a Mid-Level Wastewater/Water Engineer with a minimum of 5 years of experience in project management, planning, designing, bidding, construction, and operation of wastewater treatment facilities to join our Draper office.

The successful candidate for the Wastewater Engineer position should have the following requirements:

- Bachelor’s degree in Civil Engineering or Environmental Engineering.
- Knowledge of the wastewater industry and technology trends, including all aspects of wastewater systems from studies through construction.
- Understanding of Hydrology and treatment plant processes.
- Excellent written and verbal communication skills and be capable of working efficiently with clients, contractors, regulatory agencies, and internal staff.
- A current Utah PE License or the ability to obtain one within 6 months.

Please send resume to jobs@bowencollins.com
Be first.

The 2016 ASCE Section Renewal Race

Fast Track Our Section to Win $1,000!

The three Sections with the highest percentage of renewed members by December 11, 2015, will win a cash prize of $1,000!

Get into the Renewal Race today, pay your Society and Section dues, and keep our Section on pace to win $1,000. Your renewal supports valuable local programs and is always appreciated!

Renew your ASCE membership by December 11, 2015 – and encourage fellow Section members to do the same!

Go to www.asce.org/finishline.

For contest rules, go to www.asce.org/finishline/rules.

To pay for your office, agency, or company with a single invoice/payment, contact member@asce.org.
Field Review of New Geologic Mapping
Willard Quadrangle, Utah

led by
Adam P. McKean and W. Adolph Yonkee

A STATEMAP project supported by the Utah Geological Survey and U.S. Geological Survey

Thursday, October 22, 2015

Trip Highlights

• Geologic hazards, including, surface fault rupture, lateral spread/fault grabens, landslides, flooding, and debris flows (including the August 13, 1923 Willard flood)
• Perry Canyon to visit and discuss Neoproterozoic rocks
• Pearsons Canyon to visit and discuss Paleoproterozoic Farmington Canyon Complex, Wasatch fault zone, and alluvial fans
• Review Paleozoic and Proterozoic bedrock
• Willard thrust fault
• Lake Bonneville features
• Usefulness of new LiDAR for geologic mapping

The purpose of the review is to give the public and local government officials an opportunity to learn about new geologic research in their district, and to give geologists and others an opportunity to critique the maps before they are published.

Information

• Assemble Thursday, October 22, 2015 at 8:30 am at the Willard City Hall parking lot, 80 W. 50 S. Willard, UT 84340
• Anyone is invited – please circulate this notice among your colleagues
• There is no charge, but for planning purposes, we ask that you RSVP with the Utah Geological Survey (http://willardfieldreview.eventbrite.com)
• A few short but strenuous hikes are planned
• A high-clearance vehicle is required; we may have a few spaces in UGS vehicles within the field area (not to or from Salt Lake City)
• Please bring a sack lunch, water, boots, hat, coat, and field clothes
• If severe weather threatens, please call the UGS office (801-537-3300) on day before to see if canceled
• Participants will be asked to consolidate vehicles – please pack your essentials so you can jump in with someone else

Questions? Contact Adam McKean (801-537-3386, adammckean@utah.gov)
Field Review of New Geologic Mapping

Salt Lake City North and Baileys Lake Quadrangles, Utah

Mapped by

Adam P. McKean and Michael D. Hylland
Utah Geological Survey

A STATEMAP project supported by the Utah Geological Survey and U.S. Geological Survey

Wednesday, October 21, 2015

Trip Highlights

• New mapping of Great Salt Lake and ancient Jordan River deposits and features
• Visit and discuss the 2010 UGS Baileys Lake trench site on the Granger fault
• Geologic hazards, including the Springhill, Parkway Drive, and City Creek landslides
• Visit the exposed surface of the Warm Springs fault, discuss the location of the fault through downtown Salt Lake City, and ongoing research
• Review the Paleozoic and Tertiary bedrock of the Salt Lake salient
• Usefulness of LiDAR and structure from motion software for urban geologic mapping and geologic hazard analysis

The purpose of the review is to give the public and local government officials an opportunity to learn about new geologic research in their district, and to give geologists and others an opportunity to critique the maps before they are published.

Information

• Assemble Wednesday, October 21, 2015 at 7:30 am at the Utah Department of Natural Resources parking lot, 1594 W. North Temple, Salt Lake City, UT 84114-6100
• Anyone is invited – please circulate this notice among your colleagues
• There is no charge, but for planning purposes, we ask that you RSVP with the Utah Geological Survey (http://slvfieldreview.eventbrite.com)
• Space is limited to 50 attendees, trip maybe repeated if first day fills up
• Early morning stops will be west of the Salt Lake City International Airport; late-morning stops will focus on the North Salt Lake City area; afternoon stops will focus on the downtown Salt Lake City area
• A few short hikes are planned
• A high-clearance vehicle is suggested; we may have a few spaces in UGS vehicles
• Please bring a sack lunch, water, boots, hat, coat, and field clothes
• If severe weather threatens, please call the UGS office (801-537-3300) on day before to see if canceled
• Participants will be asked to consolidate vehicles – please pack your essentials so you can jump in with someone else

Questions? Contact Adam McKean (801-537-3386, adammckean@utah.gov)
April 2015 Nepal Earthquake
Structural and Geotechnical Reconnaissance

Date and Location

Thursday, October 15, 2015
Warnock Engineering Building (WEB), Room L103 at the University of Utah
72 Central Campus Drive, Salt Lake City, Utah 84112

5:30 – 6:00 Refreshments and Socializing
6:00 – 8:00 Presentations and Questions

The seminar is free
No registration is required to attend

This seminar will feature the first-hand accounts of two individuals involved with the earthquake reconnaissance in Nepal, with a focus on the related structural and geotechnical issues. It will address the resiliency of healthcare and other facilities along with the geotechnical, geoseismic, and soils issues related to this event.

Invited Instructors:
Judith Mitrani-Reiser, PhD. Assistant Professor, Dept. of Civil Engineering, Johns Hopkins University.
Youssef Hashash, PhD. Professor, Dept. of Civil and Environmental Engineering, University of Illinois

Dr. Mitrani-Reiser's research is focused on the performance assessment of critical infrastructure, the safety and economic impact of hazards on the built environment, the effective communication of these risks to the public, informed decision making for use in emergency management and policy making, and the interaction of humans with the built environment.

Dr. Hashash’s research focus includes deep excavations in urban areas, earthquake engineering, continuum and discrete element modeling and soil-structure interaction. He also works on geotechnical engineering applications of visualization, augmented reality, imaging and drone technologies. He has published over 80 journal articles and is co-inventor on four patents. His research group developed the software program DEEPSOIL that is used worldwide for evaluation of soil response to earthquake shaking.

Who Should Attend?
• Structural Engineers
• Geotechnical Engineers
• Geologists
• Emergency Managers
• Others interested in lessons learned from earthquakes and how they relate to Utah

Focus Topics:
• Structural Engineering
• Geotechnical Engineering
• Lessons Learned
• Resiliency
The Geo-Institute Hawaii Chapter of ASCE is pleased to announce an upcoming half-day seminar by Dr. Bengt H. Fellenius.

**Speaker:** Dr. Fellenius, Professor of Civil Engineering at the University of Ottawa from 1979 through 1998, is an internationally recognized authority in the field of soil mechanics and foundation engineering, and, in particular, in deep foundations. He has gained a wealth of practical experience during more than 50 years of work at home and overseas through a variety of assignments that encompass foundation, embankment, and soil improvement design for water and sewage treatment plants, industrial plants, as well as bridges, highway, and airport projects, and marine structures and urban area development projects; some of which he has written up in 300+ technical journal and conference papers, articles, books, and book chapters.

**Session I:** Basic principles of pile analysis of load transfer and deformation, movement, and settlement.

**Session II:** Pile group behavior and analysis including downdrag.

**Session III:** Requirements in various codes and standards for design of shallow and deep foundations.

**Date:** Wednesday, November 18, 2015

**Location:** Pagoda Floating Restaurant  
1525 Rycroft Street  
Honolulu, HI 96814

**Schedule:**
- 8:00 a.m.-8:30 a.m. Registration and Coffee Time
- 8:30 a.m.-9:30 a.m. Session I
- 9:30 a.m.-9:45 a.m. Break
- 9:45 a.m.-10:45 a.m. Session II
- 10:45 a.m.-11:00 a.m. Break
- 11:00 a.m.-12:00 p.m. Session III
- 12:00 p.m.-1:00 p.m. Lunch

**Menu:** Multi-entrée lunch buffet included

**Cost:**  
- $40.00 for students (limited number of seats, must call or email Dayna to confirm availability before sending RSVP)
- $80.00 for ASCE/Geo-Institute Hawaii Section Members
- $100.00 for Non-ASCE/Geo-Institute Hawaii Section Members

**RSVP by:** October 30, 2015
Send check payable to “ASCE Hawaii Section”  
c/o Dayna Nemoto  
Pacific Geotechnical Engineers, Inc.  
94-417 Akoki Street  
Waipahu, Hawaii 96797

You may also phone or e-mail your RSVP to Dayna:  
Phone: (808) 678-8024 Ext.808  
Email: den@pacificgeotechnical.com

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**November 18, 2015 Half-Day Geo-Institute Geotechnical Seminar Reservation Form (please mail by 10/30/2015)**

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<tr>
<th>Name</th>
<th>Section Member?</th>
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* Board of Directors

Last Updated: October 2, 2015
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Renew your ASCE membership by December 11, 2015 to help our section win a cash prize of $1,000! Go to www.asce.org/finishline.