ASCE Region 8 - June 2016 Newsletter

"advance the Civil Engineering profession by serving the members of Region 8 as an extension of the Board of Direction"

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Region 8 election congratulations to 2017 ASCE President-Elect Kristina L. Swallow, P.E., ENV SP, F.ASCE of Region 8 and to our own newly elected Governors Brent M. Borchers, P.E., M.ASCE with the Arizona Section and Lawrence M. Magura, P.E., LM.ASCE, D.WRE with the Oregon Section. AND!, there is really a big thank you and congratulations to the members of Region 8, WHY - our Region members cast more votes than the other Regions of ASCE!

Now that we have finished with this election, it is time to look ahead for Governor Candidates to be installed in 2017. This next cycle will have three (3) governor vacancies and one of the governor candidates is required to be from a small section. Members, if you are interested, talk with your Section Leadership.

The ASCE Board of Direction will be meeting 8 & 9 July in San Diego. One of the larger items of business will be ASCE budget review and approval for next year. If you have any questions or comments as to what may be on the agenda, please do not hesitate to contact me.

National 2016 Student Steel Bridge at Provo Utah and Concrete Canoe at Tyler Texas competitions have been completed and Region 8 was well represented. Results may be found on ASCE's website, www.asce.org. To all of the participating Students, job well done and most of all the dedication/professionalism you showed in competition and the friendship with other competitors, outstanding!

For your information and if you want to vote some more, the National Park Service's Zion Mt. Carmel tunnel, Utah, is a Historic Civil Engineering Landmark. It has been selected as one of twenty park finalists competing for a portion of a $2 million grant to be used for preservation. Voting takes place online until July 5, 2016 at VoteYourPark.org.

Thank you for being a member of ASCE.

Dale A. Nelson, P.E., F.ASCE
Director, Region 8 ASCE

Strategic Initiative - Infrastructure

Greg Kinney, PE, M.ASCE

As engineers, we know that our projects have finite lives: we use terms like "useful life" or "design life," and run economic and service projections accordingly. Usually we assume that obsolescence or capacity considerations govern the end of an asset's life, and we assume that it will be maintained to a condition that will maximize its life. This, of course, requires budgeting for maintenance and, from time to time, reinvestment to restore assets to full service.

But at every level of government, public works budgets have not kept pace. The nation's historically high levels of infrastructure investment in the mid-20th Century, exemplified by the 40,000-mile Interstate Highway System, were followed in the 1970s and 1980s by tax cap initiatives that constrained revenue. Local and state practices such as maintenance deferral, and workarounds such as selling bonds to pay for maintenance, then gained traction. Since that time, particularly at a federal level, all forms of governmental revenue have become controversial, as have many or most forms of governmental expenditure.

The result has been a funding gap and, consequently, a growing backlog of needs related to infrastructure investment and reinvestment. And, at the same time, the population has continued to grow in many areas of the country, further assuring reductions of service levels.

The vast magnitude of public infrastructure - in which highways are perhaps the most visible example - makes this a very challenging issue. Consider that many miles of bridges and overpasses are reinforced concrete, and that many of these are 50 to 60 years old or approaching that age. Consider also that the service life of reinforced concrete structures is estimated to be a maximum of 100 years, and usually much less than that. Ohio, for instance, estimates the service life to be between 40 and 45 years; Mississippi estimates 50 years. (This short life span reflects degradation that is usually driven by chloride intrusion, which accelerates corrosion of reinforcing steel.) A very casual look at the vastness of existing investment should give all citizens great pause. But the structures are passive and they successfully carry all loads - until they fail.

Since 1998, ASCE has led the nation to an awareness of this issue through its Strategic Initiative on Infrastructure. The centerpiece of the strategic initiative has been the nationwide Report Card, produced every four years, as well as the collection of state infrastructure report cards that characterize the condition of infrastructure in each of the states.

In all five national report cards, ASCE has issued a grade of D, improving to D+ in the latest report. This modest improvement reflects progress in raising the level of concern among public officials and the electorate, and in spurring action such as the recent adoption of the FAST act. But the fundamentals remain deeply challenging. We still have a problem, and it adversely impacts the nation's economy as well as public safety. That there has been progress is a testament to the efforts of all of our members, staffers and leaders who have supported the Report Card initiative, and who continue to take the message to our public officials.

The work continues. The ASCE Alaska Section, one of several remaining with no prior report card, is currently working on issuance of its first; its goal is delivery to ASCE National this summer. For all in Alaska and throughout Region 8 who are serious about this, I would like to thank you on behalf of the Region 8 Governors.

As a final note, I would like to note that the Infrastructure is related in a vital way to the

ASCE Sustainability Initiative, because infrastructure maintenance and investment going forward must be done on an economically sustainable basis, or else we will never resolve the Infrastructure gap. In recognition of this relationship, ASCE is formulating its Grand Challenge, which in a nutshell is a challenge to greatly reduce the life cycle costs of infrastructure in such a manner as to ensure sustainability. Some of the key enablers to this may involve construction processes; some may involve information technologies; others may require new materials or uses of materials. As engineers, all of us can contribute to the pool of ideas to make this happen. If you have ideas as to how we can improve our effectiveness on the Infrastructure initiative, please feel free to contact me or any of your Governors.

More information is available from ASCE on the report is available at: infrastructurereportcard.org. The economic consequences of our current situation are also documented in the Failure to Act studies, available at http://www.asce.org/failure_to_act_economic_studies/

Inland Empire Section Update

Mark Muszynski, Ph.D, PE, M.ASCE

The Inland Empire Section had another full year, complete with six speakers during meetings, two technical seminars, our annual banquet, and other special events!
Our ASCE year began in August with our annual "picnic" and elections. This is a meeting where we treat our members to appetizers at a local craft brewery. In August 2015, we had our picnic at a local establishment on their outdoor patio while enjoying the sights and sounds of the adjacent Spokane River. At this event, the attendees elected the board members of the ASCE Inland Empire Section.

2015-2016 ASCE Inland Empire Section board (left to right): Rebecca Matlack, P.E., Past president; Andy Eliason, P.E., Director; Erik Arnson, P.E., Director; John Saywers, P.E., President-elect (front); Bill Meeks, P.E., Vice president; and Mark Muszynski, Ph.D., P.E. President.

General meetings
The Inland Empire Section held a total of six monthly general membership meetings. The meetings featured speakers presenting on topics ranging from new versions of drafting software to case studies for local projects. The general meeting events are briefly summarized below in chronological order:

Our September 2015 general meeting featured a short seminar by Mr. Chad Julius, P.E. that dealt with segmental retaining wall best practices. As part of the presentation, twelve different design topics were introduced, ranging from initial design considerations to how the top of the wall will be finished. Professional development hours (PDH) credits were available for attendees of the presentation.

Our October 2015 general meeting featured Mr. Jason Herbst speaking about the features of PacifiCAD and Autodesk Revet related to basic site work, Geo-locating, shadows, and presenting the Sun Path features within Autodesk Revit.

Our February 2016 general meeting featured Dr. Liv Haselbach, P.E. of Washington State University. Dr. Haselbach discussed the features, caveats, and most up-to-date research associated with pervious pavements. She emphasized that pervious pavements are increasingly being considered by a variety of agencies and municipalities as a best management practice and as potential low impact design elements.

The Inland Empire Section also joined with Structural Engineers Association of Washington (SEAW) for a special meeting on February 19, 2016 at the Red Lion Hotel in Spokane. This presentation featured a discussion by Mr. Jason T. Piskel, of the multi-practice law firm Piskel Yahne Kovarik, PLLC, about recent Washington State statutory changes in indemnity law, case law, and professionals' lien rights.

Our March 2016 meeting featured Mr. Scott Rivas, P.E., LEED AP. Mr. Rivas provided a nice summary on the Spokane Public Facilities District which recently completed a$50 Million 92,000 square foot Spokane Convention Center Expansion. The project had interesting elements, and challenges, associated with merging the natural beauty of the river with the new facility, along with discussion on sewer main relocation considerations, contaminated soils present on the site, erosion control, site access for city maintenance, fire department, and the general public perception of the project.

Our April 2016 meeting featured Brad Ward (USAF retired), owner of Empire Unmanned, who provided an informative overview of the development of aerial mapping using unmanned aircraft technology (drones). Empire Unmanned was the first company to earn an FAA Exemption to fly unmanned aircraft system (UAS) for agriculture.

Our May 2016 general meeting featured Darrell McCallum, P.E. of WSDOT speaking on the topic of the North South Corridor Project in Spokane. Mr. McCallum presented on the project funding and construction schedule, along with an interesting discussion of underlying contamination within an area of the proposed right-of-way that was historically used of as a railroad yard.

Technical Seminars
The ASCE Technical Seminar Committee, championed by Alan Gay, P.E., along with his group, planned another superb fall seminar, which took place on November 4, 2015 at Mukogawa Fort Wright Institute in Spokane. The seminar was called ***Alternative Project Delivery Methods for Construction*** and was attended by approximately 60 professionals who earned PDH by their attendance. Presenters included: Mike Baker, David Evans and Associates, Inc., Lars Hendron, P.E., City of Spokane, Greg Brown, OAC Services, Hunt Whaley, Assistant City Attorney, City of Spokane, Tim Welsch, Garco Construction, Inc., Ken Sorensen, JUB Engineers, Joseph Sonnen, P.E., JUB Engineers, Chris Corativo, Fairchild Airforce Base
The spring Technical Committee Seminar took place on May 25th, 2016 at Mukogawa Fort Wright Institute. The seminar was called Bioengineering for Slope Stability and was attended by approximately 40 professionals who earned PDH by attending. The presenters included: Lynn Schmidt, P.E., Washington State Department of Ecology, Greg Lahti, Washington State Department of Transportation, Walt Edelen, Spokane Conservation District, Muhammad Barik, Ph.D., Washington State University, Bob

Marshall, RLA, David Evans and Associates, Inc., Paul Frenkenberger, P.E., TenCate Geosynthetics Americas

Community service
Mr. Randy LaBeff, P.E. organized and led the Adopt-A-Highway cleanup project for the Inland Empire Section once again. The Section is responsible for a two mile stretch of Interstate 90 located west of Medical Lake, Washington. This event typically takes place twice a year (spring and late summer).

Our December general meeting and holiday party was held at David's Pizza in Spokane. A strong showing of members enjoyed pizza, conversation and reflection of the past year.

Annual Banquet
The Inland Empire Section Annual Banquet was held on January 21, 2016 at the Mirabeau Park Hotel in Spokane Valley. Two awards were presented at this event. Jim Harakas, P.E. was presented the Distinguished Career Award and the Engineer of Merit Award was presented to Randy LaBeff, P.E.

Inland Empire Section members enjoying some time catching up before dinner at the annual banquet (January 2016).

Gonzaga University civil engineering students (L-R): Jenny Hoefel, Trevor Masterson, and Jim Finnegan enjoying their time mingling at the annual banquet (January 2016).

Special Events
Giving the popularity of our previous tour of Grand Coulee Dam and the strong interest in an encore, we again a tour of the Dam. The tour was held on June 26, 2015. Our tour guide, Mr. Ivan Snavely, was a walking, talking textbook of knowledge on the history of the dam. We visited an observation point above the town where the dam and the entire town could be viewed from our location. We then visited the pump generating plant where

water is pumped from the Columbia River up to canals that flow to Banks Lake. The canals supply water to 670,000 acres of land. We then continued on to the dam itself, with the opportunity to view the dam and the generators up close. After a tour of the visitor center later in the day, several members stayed until dark for the laser light show which was displayed on the cascading water from the dam's spillway. Among those in attendance for the day was Kristina Swallow, P.E.; then Region 8 director, now recently elected ASCE President-Elect.

View of Grand Coulee Dam

2015 Grand Coulee Dam tour attendees

Although family time, personal time, work time, and time devoted to ASCE continue to all

be at a premium, the Inland Empire Section board has made a renewed effort to attend regional assemblies. In the past year, representatives of the Section traveled to Billings, Montana to the Region 8 Assembly and to Anchorage, Alaska for the Region 8 and 9 Workshop for Section and Branch Leaders. These meetings were of great value, and the Inland Empire Section is planning future trips to upcoming regional meetings to learn how we might transform our already vibrant section into an even more outstanding part of ASCE Region 8!

Concluding remarks
The Inland Empire Section is proud of the high level of energy within the Section and all that it has accomplished in the past year. We look forward to another highly productive year and we already have some exciting events planned for the 2016-2017 year!

ASCE Opportunity

The Region 8 Board of Governors is seeking a volunteer to serve as the Treasurer and Historian. The commitment of time is approximately 10 conference calls / year and two face to face meetings per year. An interest in understanding of accounting is very helpful. Please submit your expression of interest along with a one page resume of you work and ASCE involvement to: David.prusak@mwhglobal.com by August 1, 2016.

ASCE Awards

Congratulations to the following award winners from Region 8:

- Ian G. Buckle, Ph.D., M. ASCE (Nevada) - 2016 Charles Martin Duke Lifeline Earthquake Engineering Award
- Eric Daniel GaiSung Arakawa, P.E., LEED AP Bd+C, M. ASCE (Hawaii) - 2016 Edmund Friedman Young Engineer Award for Professional Achievement)