



NEW MEXICO SECTION NEWSLETTER FALL 2015

MESSAGE FROM THE PRESIDENT

Walter Gerstle, Ph.D., P.E.



New Mexico Section ASCE members:

It has been a pleasure serving as the president of the New Mexico Section this year. It strikes me more clearly than ever that ASCE is an organization with broad appeal to civil engineers of all stripes. Although recent history has seen a splintering of the civil engineering profession into many organizations, it is increasingly important to bring all civil engineers together under the larger ASCE umbrella – I believe that all civil engineers should be active in ASCE regardless of their area of specialization.

In April UNM hosted the ASCE Regional Student Conference, at which sixteen universities from the Rocky Mountain Region competed in a variety of contests, including the steel bridge and concrete canoe competitions. Our Section helped the UNM ASCE Student Chapter to host a very successful conference. We thank the many ASCE volunteers who helped to make the meeting a success.

On behalf of New Mexico, together with ASCE representatives from 45 other states, I attended the ASCE Legislative fly-in in Washington DC in March. There, we first heard from Rep. Earl Blumenauer of Oregon, who spoke about the need to fix the Highway Trust Fund, remarking, "No nation became great building its infrastructure nine months at a time." We all then headed to Capitol Hill to visit our senators and representatives, discussing key legislative issues including the Update, Promote, and Develop America's Transportation Essentials (UPDATE) Act, surface transportation authorization, and Water Resources Reform and Development Act (WRRDA) implementation. Our lobbying efforts appear to be paying off with the recent positive vote in the US Senate to fund the Highway Trust Fund (although the House still needs to visit the issue.)

The most recent New Mexico Infrastructure Report Card, completed in 2012, may be accessed at: <http://sections.asce.org/newmexico/news.html>. This report card has had a significant impact on decision making at the state and federal levels; this was evident at the Legislative fly-in. We are planning to update this report card in the coming year, and will be requesting your help.

The Northern Branch has been active during the past year, with the able leadership of Amelia Scharrer, Jeremy Cok, and Kimberly Coleman, in hosting monthly dinner talks. The Southern Branch, under the leadership of Jared Lee, has been equally active. The Younger Member Branch, under the leadership of Justin Lyon, has hosted a variety of events.

We are planning our Annual Meeting in Las Cruces on September 23-25 in conjunction with the American Planning Association. It will be a fantastic meeting, and we count on your participation! Registration, sponsorship, and other meeting information are all available at <https://www.eventbrite.com/e/2015-apa-nm-asce-nm-joint-conference-tickets-14227389505>.

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New Mexico State University Civil Engineering News

The Daniel B. Jett Student Chapter of the American Society of Civil Engineers (ASCE) at New Mexico State University (NMSU) participated in the 44th Annual Rocky Mountain Regional Conference hosted by UNM, April 9-11, 2015. The NMSU students competed with 12 other schools from Colorado, New Mexico, South Dakota, Utah, and Wyoming in concrete canoe construction and racing, steel bridge design and construction, 'mystery design,' pre-design, technical paper, and non-technical paper competitions. The NMSU team took first place in the concrete canoe competition, second place in the steel bridge competition, and second place overall in the conference.

Because of their rankings in the regional competition, both the steel bridge and concrete canoe teams were invited to participate in the national competitions, a rather remarkable accomplishment. The 2015 National Student Steel Bridge Competition was hosted by the University of Missouri-Kansas City, Missouri, May 22-23, 2015. The NMSU team improved their building time record by about one minute and took 33rd place out of 47 finalists from the entire country. The concrete canoe team traveled for the 28th Annual ASCE National Concrete Canoe Competition (NCCC) to Clemson University, Clemson, South Carolina, June 20-22, 2015. The NMSU team took 10th place overall in the races and 14th place overall in the entire competition out of 22 national finalist teams. All students benefited tremendously from the team work, practice, and preparation required for the competitions over a period of several months, as well as from interactions with the best teams from other schools at the regional and national level.



University of New Mexico Civil Engineering News

UNM Hosts ASCE Rocky Mountain Regional Conference

By Elizabeth Lockyear (story taken from the US Army Corps of Engineers website)
Albuquerque District Public Affairs

COCHITI LAKE, N.M. — Is a concrete canoe an oxymoron or actual mode of transportation?

Civil engineering students answered the question at the 44th annual American Society of Civil Engineers (ASCE) Rocky Mountain Regional Conference, hosted by the University of New Mexico. Eleven of the 14 schools participating in the conference demonstrated to what degree they could engineer concrete to race across the water of Cochiti Lake, April 11, 2015.

Each school's team, composed of five men and five women, designed and built their canoe out of concrete in accordance with the competition rules regulating size, weight, and allowable materials. They earned points based on how well their craft performed.

Before racing could begin, the canoes had to be tested to ensure that they did indeed float. Once racing began, there were three categories of races: a 600-meter endurance race; men's and women's 200 meter sprints; and a 400 meter co-ed race. Each race was segmented, with four teams in each heat and each team racing for the best time.

All participants were required to wear life jackets for safety and many wore wetsuits as Cochiti Lake's water was a cool 59F. Some of the canoes flew across the lake, others were not so buoyant; one canoe made it to the start line where it then went under.

Another team's canoe went under just shy of the finish line. However, the team floated their canoe the remaining distance to finish the race.

New Mexico State University, South Dakota School of Mining and Technology and Utah State placed first, second and third, respectively. Members of the NMSU team were awarded with a \$9,000 scholarship.

The competition aims to provide civil engineering students an opportunity to gain hands-on, practical experience and leadership skills by working with concrete mix designs and project management.

ASCE Student Organizations have been involved in constructing and racing concrete canoes on the local and conference level since the early 1970's. The first national concrete canoe competition occurred in 1988.

Because each school takes turns hosting the event, the University of New Mexico won't host it again for another 14 years.



Dr. Eldred Harrington Scholarships

Dr. Eldred Harrington Scholarships are awarded by the New Mexico Section twice annually to civil engineering students at each of New Mexico's universities with civil engineering programs; UNM, NMSU and NM Tech. This is a way of reminding New Mexico Section members of the great impact that Dr. Harrington had on the engineering community in New Mexico. Dr. Eldred Harrington (1902-1980) was known for both his ability to tell a fascinating story and for his expertise as a civil engineer. He was a man of varied interests; a dedicated student and teacher, having earned degrees in civil engineering, chemistry, geology, and education; author of nearly 400 magazine articles and five books; and an enthusiastic motorcyclist with a preference for ex-police Harley Davidsons. As stated by former UNM president Tom L. Popejoy; "When Dr. Harrington writes of engineering, he writes with the authority both of an engineer and a scientist. When he comments on the history of New Mexico, he does so from the vantage point of a man who has traveled extensively over the state and who has closely studied its people and their culture and traditions. When he reminisces about his personal experiences, he writes with grace and humor. The satisfaction of a full and interesting life are authentically reflected."

As a student and teacher at Albuquerque High School, two of his major teaching endeavors began; The Dawn Patrol and the Envoys of Science. The Envoys were groups of well trained, self-disciplined students who visited other schools to put on demonstrations. The Dawn Patrol captured the imagination; from 1932 to 1955 Dr. Harrington proved that the 3-1/2 hours in the morning before school started could be used for encouraging students by giving them quality education in chemistry and physics. For twenty-three years his dawn class averaged twenty students per day, five days per week for a total of 432 students. There were no entrance requirements, anyone who wanted to come was welcome. Only about a dozen of the over 400 students were not graduated from college. Over seventy earned doctoral degrees and over 100 became engineers. His achievements qualify Dr. Harrington for a place of honor among the engineering profession.

The Dr. Harrington Scholarship recipients are selected by their civil engineering department faculty in recognition of high moral character, financial need, scholastic rating and sociability. In order to receive the scholarship students must select an article from Dr. Harrington's book, *An Engineer Writes about People, Places and Projects*, and then write a short summary on the article. Articles from the Fall 2015 recipients will be published in the Spring 2016 newsletter.

Elvidio Diniz, P.E. UNM Water Resources Scholarship

The Elvidio Diniz, P.E. UNM Water Resources Scholarship will be awarded by the ASCE New Mexico Section annually to a civil engineering student at UNM with a demonstrated interest in water resources. Elvidio Diniz (1946-2014) was born in Goa, India and grew up in Dar-es-Salaam, Tanzania. He came to the U.S. in 1964 to attend Catholic University in Washington, D.C. where he earned a bachelor's degree in civil engineering. He then obtained his master's degree in water resources from UNM in 1970. After working in Texas and Albuquerque as a civil engineer, Elvidio started Resource Technologies, Inc. in 1981, providing consulting engineering services specializing in hydrologic and hydraulic modeling, floodplain mapping, and erosion and sediment control studies. In addition to his contributions to the New Mexico engineering community as a practicing engineer, Elvidio also promoted civil engineering as a Diplomat of the American Academy of Water Resource Engineers, a Region 6 Governor for ASCE, an officer in the ASCE NM Section, an adjunct instructor at UNM, and a science fair judge.

To further advance the principles that Elvidio lived by, integrity, professionalism and mentorship, the Elvidio Diniz, P.E. UNM Water Resources Scholarship was established through donations from colleagues, friends and family to help foster the next generation of engineers. The scholarship will be awarded annually to a foreign-born civil engineering student at UNM with a demonstrated interest in water resources. As determined by the UNM Civil Engineering Department faculty, the student will have a demonstrated interest in water resources, be of excellent moral character, and be active in extracurricular activities related to civil engineering.

Outstanding Civil Engineering Senior Awards

Outstanding Civil Engineering Senior Awards are presented by the New Mexico Section twice annually to senior civil engineering students at each of New Mexico’s three universities with civil engineering programs; UNM, NMSU and NM Tech. Students are selected for this award by the faculty of their civil engineering department in recognition of the high degree of scholarship attained during college coursework in Civil Engineering and active involvement in their ASCE Student Chapter. The New Mexico Section presents each recipient a certificate and pays full registration fees for two New Mexico Section conferences. In accepting the award, it is hoped that recipients will retain active membership with ASCE and the New Mexico Section, and will accept the advanced grades of membership that are offered with continued growth in years and in professional experience. Outstanding Civil Engineering Senior recipients for 2014 were:

Spring 2014		Fall 2014	
UNM	Amy Garner	UNM	James Silver
NM Tech	Austin Hall	NM Tech	Bryan Morales
NMSU	Remington McDonald	NMSU	Erin Wosick

Other News

Region 6 Update

ASCE Region 6 consists of New Mexico, Oklahoma and Texas. The Board is made up of 5 Governors; one from New Mexico, one from Oklahoma, two from Texas and one appointed governor, as well as a director that serves on the National Board. The purpose of the Regions is to provide a link between the Sections and ASCE National. It also allows us to share ideas between states. The Texas Section has started a digital archive system for historical information which will be available to the New Mexico Section both to store data and view the archive. One of the more fun things that the Governors get to do is to sponsor local events. This past year we have sponsored and helped judge the Rio Grande student conference and sponsored the NM Section Fall Meeting. The Governors also helped NMSU and Texas A&M attend the National steel bridge and concrete canoe competitions.

Northern Branch Update

The Northern Branch usually holds meetings monthly so watch for notices in your email. We are always looking for speakers and tour opportunities. If you would like to speak or have an interesting meeting idea please contact Branch President, Amelia Scharrer (ascharrer@whpacific.com).

Southern Branch Update

The Southern Branch has continued to hold regular meetings, with guests including Michael Stubbs, P.E., with Stubbs Engineering presenting on Design Build process; Henry Hervol, P.E., with Advanced Process Technologies presenting on MBR Wastewater Technology; and Earl Burkholder, P.E., P.S. with Global COGO discussing the Spatial Data Infrastructure Scorecard. Meetings are held the second Wednesday of every month at St. Clair’s Winery. Most recently, the El Paso, TX ASCE Branch officers joined us at our monthly meeting to discuss the ongoing International Boundary Marker #1 relocation and future collaboration opportunities amongst the groups. A field trip to the marker site and a social with the El Paso Branch is tentatively scheduled for the end of the month.

The Southern Branch also aided the Daniel B. Jett chapter of ASCE at New Mexico State University in their effort with this year's student competitions, including reviewing regional presentations and fundraising for nationals. The Steel Bridge team competed in Kansas City, MO and finished in 33rd place out of 47 schools and the Concrete Canoe team placed 14th out of 22 schools at the completion in Clemson, SC.

For information on future Southern Branch meetings, contact Southern Branch President Jared Lee at jlee@bhinc.com.

Younger Member Group Update

The NM Section Younger Member Group helps facilitate professional growth, networking, and social interactions with other engineers under 35. The YM Group is tentatively planning the following for the upcoming 6 months:

- A technical tour in late August of a residential geothermal heating and cooling system
- A talk on the subject of Green Infrastructure through the ages with a focus on New Mexico
- Hosting a joint trivia night amongst other local professional design organizations
- A technical tour of a local river restoration project
- A social recruitment event to grow our ranks and find new officers
- Hispanic Engineers (Live Music Event)
- Environmental Sampling with local students and NMED

To stay in touch with the YM Group and for information on future activities, contact Younger Member Chair Justin Lyon at jlyon@biohabitats.com.



Interested in advertising in future ASCE NM Section Newsletters? Contact Jerry Parker at gkparker0458@gmail.com.

Interested in purchasing a copy of Dr. Eldred Harrington's book, "An Engineer Writes about People and Places and Projects"? The \$25 cost supports the Section's scholarship initiatives. Contact Jerry Parker at gkparker0458@gmail.com.

Meet Your 2014-2015 Officers



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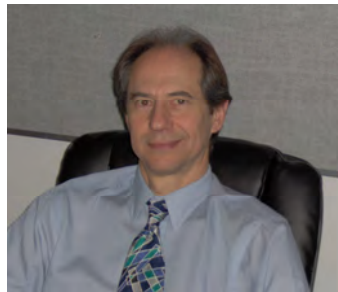
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Meghan McDonald, P.E., M.ASCE
*Geotechnical, Transportation &
Construction Chair*



Brad Weldon, Ph.D., A.M.ASCE
*Structural & Engineering Mechanics
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Jared Lee, P.E., M.ASCE
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Amelia Scharrer, P.E., M.ASCE
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Justin C. Lyon, P.E., M.ASCE
Younger Member Chair