Happy New Year! I hope you all had a great Christmas and the opportunity to take some days off to spend quality time with family and friends. As we begin 2014 and start preparing our list of goals for the year, I ask that you add the following to your list: Get Involved! Whether it is volunteering your technical expertise for a presentation, helping with student outreach, starting a committee, or just attending a general meeting, there are many ways to get involved. As ASCE members, we all want to advance our profession. What better way to do so than by taking part in your local chapter activities. I strongly encourage you to participate!

This year we have a full range of events planned, from our regular luncheons, to technical tours, to social events, student outreach, and much more. We will start the year by highlighting some of our local transportation projects and facilities critical in reducing traffic congestion in our area. The general meeting this month, scheduled for January 21st, will be on the much needed SR-91 widening project through Corona, followed by a tour that same week of the Inland Empire Traffic Management Center in Fontana. It is also important to note that at the end of January we will be sending three of our Board Members (John Rogers - Vice President, Michael Sampson - Secretary, Ken Cox – Newsletter Editor) to represent our Branch at the Workshop for Section and Branch Leaders (WSBL) in Phoenix. The workshop serves as a medium for exchanging ideas and information between Sections/Branches in an effort to strengthen the programs and activities offered to our membership.

...continued on page 4
Construction on the $50 million San Diego–Coronado Bay Bridge started in February 1967, and opened to traffic on August 3, 1969, during the celebration of the 200th Anniversary of the founding of San Diego. In 1970, it won the Most Beautiful Bridge Award from American Institute of Steel Construction. The Coronado Bay Bridge is an 11,179-foot-long bridge that ascends from the toll plaza in Coronado at a 4.67 percent grade curving 80 degrees toward San Diego. Clusters of submerged piles support the 30 mission-arch shaped concrete piers. The 54-inch diameter piles were driven and jetted to depths of 100 feet into the Bay's bottom. The span reaches a maximum height of 200 feet, allowing the U.S. Navy ships which operate out of the nearby Naval Station San Diego to pass underneath it. The bridge is the third largest orthogonal box in the country – the box is the center part of the bridge, between piers 18 and 21, over the main shipping channel. The five-lane bridge featured the longest box girder in the world until it was surpassed by a bridge in Chongqing, China in 2008. The center lane of the five-lane roadway is reserved as a safety median and a reversible lane to support three lanes of peak-hour traffic. There is no provision for pedestrians or cyclists.

...continued on page 4
Save the Date!
ASCE SB/R YMF will be partnering with the Cal Poly Pomona ASCE student chapter for our
FIRST ANNUAL PROFESSIONAL DEVELOPMENT WORKSHOP

The Professional Development Workshop will encompass the following:
Resume Presentation & Interactive Activity
Mock Interview Presentation & Interactive Activity
Preparation for Job Fair Presentation & Interactive Activity

When:  FRI, FEB 7, 2014
Time:  2:00-5:00PM
Where:  CAL POLY POMONA

The STUDENTS need YOU! YOU would provide students with feedback on how to enhance their resumes, their interviewing and to be better prepared for their upcoming job fair and for the real world! Remember what it was like to be a student this is a great opportunity for YOU to give back and share YOUR experiences with them!

*ASCE SB/R YMF is in need of volunteers for the above workshops and to review resumes prior to the event.

A bowling social mixer is scheduled from 6:00-8:00PM following the Professional Development Workshop.

If you are interested in volunteering or have any questions regarding the event, please email Andrea Gonzalez at andie.leticia@gmail.com by Friday, January 3, 2014.
President’s Message

...continued from page 1

February is an important month for engineers and our Branch, as it marks the month for National Engineers Week. February is the month to celebrate and promote our profession, and as in past years, we will visit high schools throughout the Inland Empire to educate students about civil engineering. Our February meeting will be the annual E-Week celebration dinner with the Inland Empire Council of Engineers and Scientists at the University of Redlands. We will continue the E-Week celebration with a joint Happy Hour with the Younger Member Forum at the Mission Inn President’s Lounge. For more details on our events, please visit the calendar section of our website or just keep an eye for our fliers. Once again, I encourage you to get involved and participate in the activities we have planned.

Sincerely,
Edwin Quinonez, P.E.
San Bernardino and Riverside Counties Branch President

The Coronado Bay Bridge

...continued from page 2

That said, one spectacular event over Coronado Bridge is the Navy-organized Bay Bridge Run / Walk held in May each year. The four-mile course starts in San Diego’s historic Gaslamp Quarter downtown, crosses Coronado Bridge, and ends at Coronado’s lovely Tidelands Park. The run is certified and sanctioned as a USAT&F road race. Walkers use a separate starting line from runners. Baby strollers, wheelchairs, and guide dogs are permitted, but no skateboards, bikes, or skates are allowed.

Coronado Bridge is also part of the route used by the San Diego County Bicycle Coalition for an annual cycling event called “Ride the Bay.” Some 2,400 participants show up each August to follow a 25-mile non-timed, non-competitive ride through the five cities surrounding the San Diego Bay. The course starts and finishes at Embarcadero Marina Park South, crossing over Coronado Bridge en route to the Bayshore Bikeway.

In addition to events hosted at the beautiful bridge, the pillars supporting the bridge on the eastern end are painted with huge murals as part of Chicano Park, the largest collection of Chicano art murals in the world. This neighborhood park and mural display were created in response to a community uprising in 1970, which protested the negative effects of the bridge and Interstate 5 on the Barrio Logan community. Local artist Salvador Torres proposed using the bridge and freeway pillars as a giant canvas for Chicano art at a time when urban wall murals were rare in the United States, and he and many other artists created the murals when permission for the park was finally granted in 1973.

The bridge’s brilliant blue color was intended to blend with the sky and sea, and its specially designed three-foot high railing enables 360-degree panoramic views. Unfortunately it is the third deadliest suicide bridge in the USA, trailing only the Golden Gate Bridge in San Francisco and the Aurora Bridge in Seattle.
ASCE YMF Membership Booth and Happy Hour

By Hector Gonzalez, PE

Hello all ASCE YMF members! On Friday October 25th, 2013, a new cycle of PE Exams were conducted at the Fairplex located in Pomona, Ca. Representatives from the Los Angeles, Orange County and San Bernardino/Riverside YMFs manned the ASCE Membership Booth and distributed ASCE information including fliers for future social event and technical tours.

This year we handed out perspiration towels to wipe away the sweat of the exam. The ASCE Membership Booth was a great success and was followed by a social happy hour event that evening.

Soon after the examinations concluded, The Happy Hour event was well under way at the Warehouse Pizza Restaurant located in La Verne, CA. Representatives from all three YMF’s attended the event to console test takers and congratulate them on a job well done. Pizza and drinks were enjoyed by test takers as well as board members as the event closed the October 2013 Cycle of the NCEES PE Exams. Best of luck to all examinees and we look forward to greeting future ASCE Members for the April 2014 Cycle.
Local Employment Opportunities

RBF Consulting, a company of Michael Baker Corporation, has an exciting opportunity for a Senior Civil Engineering Project Manager (Technical Manager III) to join our Palm Desert, CA office. This team member will be responsible to lead a team of civil engineers in the development of all technical design work associated with Public Works projects and for coordinating other design activities (e.g. utilities, traffic, structures, etc.) and resources throughout the company. To apply for this position, please log on to www.mbakercorp.com/careers select "Job Search" and reference IRC 46874 in "Keywords".

RBF Consulting, a company of Michael Baker Corporation, seeks a Civil Engineer III/Assistant Project Manager to join the Land Development team in the Palm Desert, CA office. The RBF Palm Desert Land Development team seeks a design team member for all aspects of planning, design and plan preparation for residential, commercial and mixed-use land development projects. Responsibilities to include civil design for street, sewer, water and storm drain improvement plans, hydrology and hydraulic calculations, and rough and precise grading. To apply for this position, please log on to www.mbakercorp.com/careers and reference IRC 46371 in “Keywords”.

The geotechnical committee dinner meeting was held on October 23 at Zendejas Mexican Grill in Rancho Cucamonga. The guest speaker was Dr. Martin Hudson, Chief Engineer with AMEC, who discussed the geotechnical challenges with the Silver Lake Reservoir Complex Replacement Project which is to be constructed on approximately 12 acres within the Headworks Spreading Grounds. Dr. Hudson discussed the geologic setting of the site, the geotechnical investigative technologies used, and the mitigation that was implemented to limit post-construction liquefaction at the site. Investigative techniques included rotary wash borings, sonic core, and continuous core borings along with Becker Hammer tests and SASW. Dr. Hudson also discussed the soil-structure interaction model used in the analysis and the subsequent redesign based on the analysis.

At the meeting, election of new committee officers was conducted and the new slate was voted on and approved by those attending. The 2013/2014 committee officers are:

- Robert Russell, PE, GE, United Inspection & Testing-Chairman
- Maihan Noorzay, PE, Twining, Inc.-Vice Chairman
- Montgomery Schultz, PE, GE, Petra Geotechnical-Treasurer
- Jeff Waller, PE, GE, Kleinfelder-Secretary
- Dr. William Kitch, PE, Cal. Poly Pomona-Past Chairman

A special thanks is extended to Twining, Inc. who provided sponsorship for the meeting.
Moving Forward

It is an amazing time to study civil engineering at California Baptist University. The College of Engineering at CBU is a top Christian engineering college and is growing rapidly in terms of students, facilities and the ASCE Student Chapter. As the semester comes to a close, our officers will be preparing exciting opportunities for students to arrange their future careers with employers in the upcoming 2014 Spring Semester. We will also be sending out our sponsorship packet to secure the necessary funding to participate in the upcoming Pacific South West Conference. If you are interested in supporting us in achieving these goals or looking to participate in our career fair, please contact Dr. Jong-Wha Bai at jbai@calbaptist.edu.

END OF THE YEAR BOWLING PARTY!
7:00 PM
Dec. 4th, 2013
AMF Bowling Lanes

American Society of Civil Engineers

Upcoming Events:
- End of the Year Bowling Party Dec. 4th
- Soccer Tournament with the Southern California YMF Dec. 7th
- Opening of New Officer Positions & Shadow Positions
- CBU Finals Week Dec. 9th—12th
- Christmas Break Dec. 12th—Jan 7th

Past Events:
- CBU’s Homecoming Nov. 2nd
- YMF Student Round-up Nov. 7th
- ASCE Chapter Meeting Nov. 6th & 20th

www.facebook.com/lancerasce
The Metropolitan Water District of Southern California led a group of sixteen ASCE members and students on a technical tour of one of the largest reservoirs in Southern California on September 13, 2013. Diamond Valley Lake, located in Hemet, provides Southern California with approximately 810,000 acre-feet (264,000,000,000 gallons, yes that’s in billions) of domestic water storage.
Planning efforts for the reservoir started in 1987 with construction beginning in 1995. The reservoir was constructed over an area of approximately 4,500 acres and consists of 3 dams (East, West, and Saddle). The tour began at an overlook of the West Dam where the length and height of the dam were not comprehensible until we were actually standing on it.
The West Dam is 280 feet tall and 1.9 miles long. At 280 feet, the West Dam is the tallest of the three dams, however the East Dam is slightly longer; 2.2 miles. All three of the dams are earthen and were constructed from materials harvested within the hills of the lake. Foundation excavation earthwork was in the realm of 40 million cubic yards and embankment excavation consists of approximately 110 million cubic yards of earthen material. On-site quarries and crushing plants aided in producing and sorting (“ding” versus “thunk” rocks) the materials needed for each dam. This construction effort was, and still is, considered the largest earthwork project in the United States.
From the West Dam, the tour continued to the Inlet/Outlet Tower. The I/O Tower stands 270 feet high at the point of the reservoir’s deepest depth of 250 ft and consists of a wet well, a maintenance shaft, and butterfly valves. The tower has nine levels, each with dual lines consisting of a total of eighteen butterfly valves,
84 inches in diameter each. The group traveled down three stories of the tower to see and understand the size of the 84-inch lines and butterfly valves. With much of the I/O Tower permanently submerged, the sidewalls vary from 5 feet thick at the top to 11 feet thick at the bottom. This tower was used to fill the lake which started in 1999 and was finished in 2003. Yes, it took approximately four years to fill the lake. Water was delivered into the lake at a peak rate of 1,000 cubic feet per second. The Colorado River Aqueduct and San Diego Canal were the sources when first filling the lake. Within recent years, the source of water was changed from the Colorado River Aqueduct to the California State Water Project which comes from the Sacramento Delta by way of the California Aqueduct to Lake Silverwood, then Inland Feeder. This water source change occurred due to a threat from the Quagga Mussel which is an invasive species that tends to plug up inlets and openings and has spread to the Colorado River from Europe.

The tour continued on from the I/O Tower to the Hiram W. Wadsworth Pumping Facility where the attendees were able to observe a 500 acre-foot forebay (surface area of 35 acres), 30MW generating facility, and pumping facility consisting of 12 – 6,000 horsepower pumps. The pumping facility ties directly to the I/O Tower via a 2,300-foot long, 16-foot diameter, steel lined tunnel.

The tour concluded on the east side of the lake at the Diamond Valley Lake Visitor Center where MWD has several hands-on exhibits and information regarding California’s aqueduct system.

Overall, the tour covered several civil engineering related fields; such as structural, geotechnical, construction management, and water resources. The last project of this magnitude led by MWD was the construction of the Colorado Aqueduct in the 1930’s, so having the opportunity to learn about the planning and construction of the reservoir as well as see many areas not open to the public was an amazing experience. On behalf of ASCE SB/RIV YMF, I would like to thank Metropolitan Water District for allowing us access to all the facilities and Christopher Hill, G.E. for leading an extremely informative tour.
Redneck PE Exam

1. Calculate the smallest limb diameter on a persimmon tree that will support a 10 Lb. possum.

2. Which of the following cars will rust out the quickest when placed on blocks in your front yard? A) 66 Ford Fairlane B) 69 Chevrolet Chevelle C) 64 Pontiac GTO

3. If your uncle builds a still that operates at a capacity of 20 gallons of shine per hour, how many car radiators are necessary to condense the product?

4. A pulpwood cutter has a chain saw that operates at 2700 rpm. The density of the pine trees in a plot to be harvested is 470 per acre. The plot is 2.3 acres in size. The average tree diameter is 14 inches. How many Pabst Blue Ribbons will be consumed in cutting the trees?

5. If every old refrigerator in the state vented its charge of R-12 simultaneously, what would be the decrease in the ozone layer?

6. A front porch is constructed of 2x8 pine on 24-inch centers with a field rock foundation. The span is 8 feet and the porch length is 16 feet. The porch floor is 1 inch rough sawn pine. When the porch collapses, how many hound dogs will be killed?

7. A man owns a house and 3.7 acres of land in a hollow with an average slope of 15%. The man has 5 children. Can each of the children place a mobile home on the man's land?

8. A 2-ton pulpwood truck is overloaded and proceeding down a steep grade on a secondary road at 45 mph. The brakes fail. Given the average traffic loading of secondary roads, how many people will swerve to avoid the truck before it crashes at the bottom of the mountain? For extra credit, how many of the vehicles that swerved will have mufflers and uncracked windshields?

9. A Coal Mine operates a NFPA Class 1, Division 2 Hazardous Area. The mine employs 120 miners per shift. A gas warning is issued at the beginning of 3rd shift. How many cartons of unfiltered Camels will be smoked during the shift?

10. How many generations will it take before cattle develop two legs shorter than the others because of grazing along a mountainside?
Officer’s Retreat at Malibu Creek State Park
San Bernardino-Riverside Branch YMF

By Mayra A. Cabrera, E.I.T

ASCE San Bernardino-Riverside Branch Younger Member Forum (SB/R YMF) officers recently had a three-day camping retreat in Malibu Creek State Park. This year’s board members include returning officers and new ASCE YMF members. The officer’s retreat was organized to bring the board members together, learn how to work with one another, and plan and schedule this year’s future events.

The exciting retreat began with a teamwork activity to set up the campsite. The experienced YMF campers mentored the first-time campers on the proper way to set up a tent, how to keep warm at night and discussed other useful camping tips. With the support of each other the campsite was successfully prepared. The first night, the board members had the opportunity to learn about each other’s background, personal interests, and current and future aspirations. The night ended with a round table discussion on the member’s individual goals for SB/R YMF.

The second day at Malibu Creek State Park included November’s board meeting, event planning and various bonding group activities. The members brainstormed and aided each other on deciding the best activities and dates for this upcoming year. SB/R YMF is happy to have planned an exciting year that includes K-12 civil engineering presentations, community volunteer events, employment mentoring for college students and other fun social and fund-raising activities. Once the master calendar was completed, the group set out on a hike along Malibu Creek to explore the beautiful nature in Southern California and enjoy each other’s company. The retreat ended with the officer’s assisting each other to pack the camping gear and clean the camping ground.

Overall, the camping trip was a great success. The SB/R YMF board members were able to plan their future ASCE goals. In addition, it was a great bonding experience for the board members. Thank you to all the ASCE SB/R YMF officers. This retreat would not have been possible without their teamwork.
Lamb Canyon Landfill Technical Tour
with ASCE San Bernardino-Riverside Branch and YMF

By Sarah Lunetta, P.E.

Unbeknownst to even some civil engineers is the technical undertaking of a landfill liner expansion. On Friday, November 1, 2013, the San Bernardino/Riverside Branch and the Younger Member Forum toured the landfill and the 23-acre expansion at the Lamb Canyon Landfill and got a taste of what it takes to engineer a landfill. The Riverside County Waste Management Department owns and operates this and five other landfills around Riverside County. Mr. Fouad Mina, an Engineering Project Manager for the County, led the tour. Before the group was shown the expansion project, which includes a mass excavation of approximately 1.56 million cubic yards and installation of 19,000 linear feet of drainage (approximately 3.6 miles of drains!), they were shown daily landfill operations and landfill support systems, such as the landfill gas collection system. Sitting on top of an older landfill cell, the group overlooked the landfill and got a birds eye view of the whole site.

After the introduction to landfill engineering, the group moved on to the project site, where they were able to see liner on the slopes and on the ground. On the bottom of the liner floor, the group could see gravel being pushed onto the liner floor, to create the drainage layer, a key element of the floor liner system. Unique to this project is a stability berm that will increase the capacity of the landfill by one million tons (approximately one third the additional capacity generated by this expansion). Mr. Mina did a great job explaining the landfill expansion in technical terms and the tour participants asked many great questions. Overall, the expansion was exciting to see and the County provided great insight into the engineering at landfills.
If you'd like to have your business card or company information listed in the Professional Directory, please contact the Branch Treasurer, Steven Ledbetter, at (951) 680-0440 or sledbetter@tkeengineering.com
Make a Difference Day
Volunteering with ASCE San Bernardino-Riverside YMF

By Sarah Lunetta, P.E.

One chilly Saturday morning in October, the younger member forum of the San Bernardino/Riverside ASCE Branch woke up early to meet up at the Riverside County Park, Ranch Jurupa, to clean up Riverside County Parks. Work that morning consisted of picking up litter, trimming tree branches and rogue vines on the nature paths, and removing non-native plants from the creek site.

It was a great day to spend out doors cleaning the paths and serving the community. The group was assigned to the Louis Rubidoux nature center clean-up site and to the tributary that flows to the Santa Ana River. Even with work at an early hour, the group had a great morning serving the community. We hope to see you at our next community service volunteering day!
January 2014

January 21 General Membership Meeting - State Route 91 Corridor Improvement Project.

January 24 Technical Tour - Inland Empire Transportation Management Center

February 7 Cal Poly Pomona Professional Development Workshop

Membership Information

Type of membership and Annual Dues (national)

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<th>Type</th>
<th>Annual Dues</th>
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<td>Free</td>
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<tr>
<td>Associate member:</td>
<td>$50 per year of baccalaureate degree and first year after, then incremental increases to $205 over five years.</td>
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<tr>
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National ASCE STudent Membership is now FREE! Those who have chapters or clubs still must be a member of them before joining National. Log onto https://www.asce.org/online/, fill out the short application and instantly become a member of ASCE, or call 1-800-518-ASCE (2723)

Online Membership renewal available. Go to: https://www.asce.org/renewal/inforenewal.cfm. You need your membership number. All payments must be made with a major credit card. An e-receipt is transmitted to the member upon completion of the transaction.

NEWSLETTER INFORMATION

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