PRESIDENT’S MESSAGE
February 2012

Become a Role Model:
Participate in National Engineers Week

February is a very important month for members of American Society of Civil Engineers as we join our colleagues nationwide to celebrate Engineers Week, February 19th - 25th. Each year at this time the Riverside and San Bernardino Branch coordinates volunteers visiting high schools in the Inland Empire to introduce high school students to Civil Engineering. Presentations have ranged from full assemblies to all-day open houses to focused meetings with small groups selected by a school’s counseling staff.

A few years ago I had the opportunity to participate in this event. I was so eager and enthused about having the opportunity to share my passion for Civil Engineering and discuss the projects I had worked on. Few students have anything more than a vague idea of what Civil Engineers do; I was warned early on that the first question students were likely to ask was, “How much money do you make?”

A career Civil Engineer strives to improve the quality of life in his or her community. The Civil Engineer’s main function and purpose is to design, improve and build systems needed for the operation and wellbeing of a community in a safe, efficient, economical and ecologically correct manner.

Show your pride in being a Civil Engineer; this year become a role model and share your knowledge and experience with students. A role model is a person who inspires others; a person who encourages and serves as an example, demonstrating the values, attitudes, ethics and behaviors
George Washington: The First U.S. Engineer

NEW YORK - “First in war, first in peace, and first in the hearts of his countrymen,” George Washington has also been described as America’s first engineer. That his birthday, on February 22 (observed February 20), is celebrated during National Engineers Week, February 21-27, is no coincidence.

A gentleman farmer of inherited wealth and limited formal education, Washington acquired credible surveying skills early in life, but excelled as a manager, strategist, and leader. Washington directed a growing nation toward technical advancements, invention, and education. He promoted construction of roads, canals, the Capitol, docks and ports, water works, and new efforts to extract coal and ores and develop manufacturing resources.

Around the world, technology was gaining equal footing with pure science. Washington’s contemporaries included James Watt (Scottish steam-engine inventor); Joseph Priestley (British chemistry pioneer); Richard Arkwright (British cotton-spinning inventor); John Fitch (American steamboat inventor); and the Montgolfier brothers (French aeronauts).

First in Washington’s heart, it seems, was agriculture. As a young surveyor, his first sight of the Shenandoah Valley reportedly inspired the vision of an agricultural empire. As an adult, Washington settled into Mt. Vernon as a tobacco planter and experimented with the innovative agricultural techniques of crop rotation, soil fertilization, and livestock management. He had accurately predicted the valley’s fertile farming potential.

As the foremost American general, Washington promoted at least one engineering marvel ahead of its time. During the Revolutionary War, he sent David Bushnell’s hand-operated submarine into New York Harbor to sink a British warship. The Turtle’s lone operator attempted to attach a timed bomb to the British Eagle’s hull. The mission failed when the bomb floated away before exploding. The technology just wasn’t advanced enough for Washington’s vision, and submarines didn’t become a force in navies for the next 100 years.

On June 9, 1778, at Valley Forge, Pennsylvania, General George Washington issued a call for engineers and engineering education. This order is considered the genesis of a US Army Engineer School, which found its permanent home at Fort Belvoir, Virginia, where Washington had practiced surveying. As President (1789-97), Washington pushed for the passage of the first US Patent Act in 1789, and signed the first official US patent to Samuel Hopkins of Philadelphia, Pennsylvania for his process of making potash and pearl ashes. In 1794, President Washington established a Corps of Artillerists and Engineers to be educated and stationed at West Point in New York, which later become the US Military Academy at West Point.

From transportation to education, Washington’s engineering vision proved to be ahead of its time. After his death in 1799, many of the technologies he supported provided an impetus to the American Industrial Revolution. New York’s Erie Canal (1817-25) was built, and canals soon crisscrossed America east of the Mississippi. By the 1830s, the nation’s population tripled, traveling west through canals, along rivers, and across new roads and bridges. The Army Corps of Engineers began many of these projects.

By the middle of the century, the railroads become the favored mode of transportation. As a result, America had gone west and Washington’s vision was realized.

Diane Kaylor ASME Public Information 212-705-8159

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Visit us on the web at: http://www.asce-sbriv.org/
Members Spotlight

Congratulations to newly-minted Civil Engineers Brandon Reyes (RBF Consulting) and Rita Escobar (AECOM), who were recently notified that they had passed the October PE Exam.

Matt Addington, P.E., P.L.S. can add another set of letters to his name: CBO, for “Certified Building Official”, from the International Code Council. Matt considers this a very significant accomplishment, not quite as tough as the P.E. or P.L.S. exams, but a very close second.

Cynthia Gabaldon (URS Corporation) and Arlene Chun (Riverside County Flood Control) are back in circulation with both the Riverside/San Bernardino Branch and our Storm Water Committee. Cynthia is rapidly recovering from a significant illness, while Arlene and her family are enjoying the arrival of her 3-month old daughter. They have told us to expect a return of regular Storm Water Committee meetings, starting in March.

We would like to recognize members’ significant achievements in this column on a regular basis. There must have been more “Pass” notifications from the October exams, and we would like to acknowledge them. Please contact the Editor at jrogers@cleengineering.com.

Project Update:

Proposed Liberty Quarry

As expected, Granite Construction appealed the Riverside County Planning Commission’s denial of their Surface Mining Permit application for the proposed 135-acre quarry on a 414-acre site west of Interstate 15 adjacent to the San Diego County border. The project opponents, including the City of Temecula, the citizen’s group SOS-Hills, and the Pechanga tribe, asked for the appeal to be heard in the Temecula area as the Planning Commission hearings were held. However the Board decided to uphold their tradition of having all Board meetings at the County seat. The appeal will be heard at the Riverside Convention Center on January 30 and February 6, with additional dates, if necessary, to be determined after the first two hearings are concluded.

As before, stay tuned.
IECES INLAND EMPIRE COUNCIL OF ENGINEERS AND SCIENTISTS
Presents
“The Groundwater Replenishment System (GWRS)”

Mr. Mike Markus, P.E.
General Manager, Orange County Water District (OCWD)

The GWRS is the largest indirect potable reuse facility in the world. GWRS is a 70 million gallon per day advanced water purification facility that takes secondary effluent from Orange County Sanitation District, that otherwise would be wasted to the ocean, and uses microfiltration, reverse osmosis and ultraviolet light with hydrogen peroxide to produce water that is near-distilled water quality. This water is then injected in the District’s seawater barrier wells and pumped to its recharge area in Anaheim where it naturally percolates into the groundwater basin. GWRS provides a new 72,000 acre-foot per year source of water for nearly 600,000 people.

Date: Thursday, February 23, 2012
Location: University of Redlands, Casa Loma Room Center
Times:
6:00 p.m. Social
7:00 p.m. Dinner
7:30 p.m. Society Announcements
7:45 p.m. Program
8:45 p.m. Question and Answer Period
9:00 p.m. Adjournment

Directions:
From eastbound Interstate 10: Take the University Street exit and turn left onto University Street.
From westbound Interstate 10: Take the Cypress Avenue exit and turn left. Drive two blocks to University Street and turn right.
Continue north on University Street 0.8 miles to the Brockton Avenue stop sign and make a right. After one block, turn right into either the 3rd or 4th driveway to enter the parking lot (Ted Runner Stadium will be across Brockton). The Casa Loma Room is on the east side of the lot.

Advance Reservations Required

Name: __________________________ Telephone: __________________________ Number of Guests: ________
E-mail: _________________________ Name(s) of Guest(s): __________________________

Organization:
☐ AIAA  ☐ ASCE  ☐ ASME  ☐ CSPE  ☐ IEEE  ☐ SAME  ☐ APWA  ☐ Other

Meal Selection:
☐ Beef Braciola  ☐ Asiago Crusted Chicken  ☐ Mushroom and Spinach Ravioli (Vegetarian)

Total Amount Enclosed: _______ ($25 per engineer or guest; $15 per student)

Seating is limited.

Please mail reservations and mail checks (payable to IECES) for receipt on or before Feb. 18, 2011 to:
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President’s Message continued

associated with a positive role.

Yes, it is true; we are in hard economic times. Many college graduates are finding the job market very challenging. One may think that is hard to encourage any high school student to go to college, let alone choosing a career in Civil Engineering. But this is not something new! On a personal note, I remember when I was starting out to study Civil Engineering in the early 1990’s. The job market for Civil Engineers was gloomy, and I was advised to seek a different path for my future. But the love for and appreciation of the field of civil engineering that was instilled in me from my younger years by my father, a Civil Engineer, was strong. I decided to follow my heart and choose a path that I knew I would enjoy, one in which I could contribute to my community at the same time. Fortunately I graduated and never had a problem finding a job. The economy always goes up and down, but having a college degree, especially in a field that one enjoys, can only improve the chances of finding a career that is rewarding in so many different ways. The popular press has seized upon the ASCE Infrastructure Report Card, with its severe picture of future U.S. needs. Civil Engineers are in the forefront of this effort, and will be needed for years to come.

Therefore I encourage all of you to volunteer. Participate in Engineers Week and engage these eager young students. You can make a difference in the life of even one high school student who may be uncertain about his or her future. Give them the information they need to choose a challenging and rewarding career. Your personal satisfaction and intangible rewards for doing this are guaranteed!

Our local effort is being led by Branch Vice President Edwin Quinonez, P.E.. Specific information on how you can contact Edwin and participate in this effort can be found on Page 8.
ENGINEER’S BEATITUDE

Blessed be those special few who, through sheer grit and determination, gifted with three-dimensional analytical vision and superior powers of reasoning, endure grueling years of education, demeaning apprenticeship under whip-cracking supervisors, disrespectful treatment by arrogant self-important plan reviewers and shrewd calculating politicians, and an endless array of misguided clients with scant appreciation for the problems or costs involved in turning their vague concepts into recognizable reality, use endless obscure calculations and ingenious methodology – plus the necessary fudge factors - to create monumental structures, vast ribbons of highways and rails, complex networks of lifeline utilities, soaring bridges and other proud testimonials to Man’s ingenuity;

For they shall be called CIVIL ENGINEERS

Lighter Side

NEWSLETTER INFORMATION

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Identification Statement:
ASCE San Bernardino & Riverside Counties Branch Newsletter is published monthly by the
ASCE San Bernardino & Riverside Counties Branch.
Subscription rate: $45 (included in section dues).

Advertising Rates
Approximate number of mailings: 800 / mo.

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Sponsor Presentation: By Tim Avery

Grouting, Ground improvement, Structural Support, Earth Retention. These are just some of the services Hayward Baker provides. Their experience in design and construction of geotechnical construction services spans more than six decades. The Hayward Baker suite of techniques, equipment, and experience is comprehensive and is packaged to create the most effective and economical solution.

Informational Presentation:

Upcoming Regional Geotechnical Conferences

By Bill Kitch, PhD, PE, Assoc. Professor at Cal Poly Pomona

Bill Kitch will present information about the upcoming GEO-Congress in Oakland and the Queen Mary Event in Long Beach. These will be very significant events in the professional development of geotechnical engineers.

Technical Presentation:

Overview of Geophysics Used for Design of Natural Gas Pipelines and for Detection of Subsurface Voids at an Underground Gas Storage Facility

By Jeffrey R Keaton, PhD, PE, PG, D.GE, Senior Principal Engineering Geologist, AMEC

Near surface geophysical measurements are becoming more readily available to the geotechnical engineering field and are powerful tools for subsurface characterization. However, many practitioners are unfamiliar with the use of these tools. This overview of geophysics is designed to demonstrate how these tools are being used in practice today. The presentation will discuss two types of projects: design of natural gas pipelines and surveys of an underground gas storage site that had integrity failure of a gas injection/withdrawal well. Seismic methods used for natural gas pipeline projects consisted of seismic refraction surveys for evaluation of rock excavation requirements and detecting the depth to ground water in alluvial sediments, and refraction-micro tremor surveys for estimating shear-wave velocity profiles for liquefaction analyses. Electrical methods and seismic methods used for void detection at the gas storage facility consisted of electrical resistivity and shear-wave reflection surveys. Down hole compression- and shear-wave velocity profiling was performed in a bore hole to allow a translation of two-way travel time of seismic energy into depth below the ground surface for interpreting the reflection results.

Date: February 8, 2012

Time: 6:00 - 6:30 PM Registration and socializing

6:30 - 7:00 PM Dinner

6:45 – 7:00 PM Sponsor presentation

7:00 – 7:15 PM Informational presentation

7:30 – 8:30 PM Technical presentation

Location: Zendejas Mexican Grill,

8106 Milliken Avenue, Rancho Cucamonga

Cost: $30 members w/ RSVP

$35 non-members or no RSVP

$10 students

Registration and Additional Info: RSVP by February 6, 2012 to Maihan at: mnoorzay@gmail.com
VOLUNTEERS NEEDED

What: ASCE YMF 18th Annual Popsicle Stick Bridge Contest!

Where: California State University Long Beach
1250 Bellflower Boulevard
Long Beach, CA 90840

When: Friday, February 17th, 2012
8am-5pm

Cost: Mostly Free! ($8 parking if you drive)

Questions: Andrew Pham (Volunteer Coordinator):
apham@csu.fullerton.edu
Cell – 714-369-7228

Website: http://mlab-ymf.org/index.php?option=com_content&view=article&id=143&Itemid=137

Event Description:

This year MLAB and OC YMF join up once again to host ASCE’s Annual Popsicle Stick Bridge Contest. Over 200 high school students from the greater Los Angeles area and Orange County area will gather to compete in this annual event to learn about our profession and ASCE (and for a little healthy competition). This year’s event will be held on the Friday leading into National Engineers Week, February 17, 2012 and will be hosted by the California State University Long Beach Student ASCE chapter.

With one of the biggest turnouts in Popsicle Stick Bridge history we need many volunteers to help facilitate the event so that we can ensure a great day for all participants. Volunteers will assist with registration; bridge testing; judging bridges; presentation; and posters; scoring; facilitating various portions of the day; and much more. Every year students, teachers, and volunteers alike enjoy all the day has to offer. Come join in the fun!
**JOB OPPORTUNITIES**

The City of San Luis Obispo is advertising for two positions, one in Construction Inspection, the other for a P.E. to lead the City’s Construction Management and Inspection staff. Contact Barbara Lynch, Deputy Director of Public Works at 805-781-7191 or go to [www.slocity.org](http://www.slocity.org).

Gary Davis Group in Tahoe City, California, is advertising for a professional-level position in Tahoe City. Contact Cathy Wenke at [cwencke@garydavisgroup.com](mailto:cwencke@garydavisgroup.com) or call her at 530-583-9222.

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**January General Membership Meeting**

**January 18 - El Torito, Upland**

Members were privileged to meet Lt. Col. Steve Sigloch, Deputy Director of the Los Angeles District, U.S. Army Corps of Engineers (USACOE), accompanied by Mr. Ed T. Demesa, Chief of the Plan Formulation Branch, Planning Division, LA District. LCOL Sigloch gave an overview of the Los Angeles District, which includes Southern California, Arizona and part of Nevada, an area of 226,000 square miles. It includes the highest, lowest and hottest lands in the Continental US. They have three customers groups:: Civil works such as ports, harbors, and flood control facilities, Military construction, and Inter-Agency and International clients, such as FEMA, the International Boundary Commission, and Customs and Border Protection. Their budget for Fiscal Year 2012 is $910,300,000, up from $749,600,000 in 2011. About 80% of the budget is aimed at military construction; the largest share of which is at Fort Irwin in the Mojave Desert, although they have projects throughout the District. For both Military and Civilian customers, the Corps supplements the in-house capabilities of their customers; they assist by assuming responsibility when the size of a project is too large for the customer to adequately manage it in house.

The Corps has a strong emphasis on small business participation, including minority and women-owned components; their stated goal for 2012 is to spend 41% of their $910-million budget with small businesses. In response to audience questions, LCOL Sigloch urged applicants for projects moving through the regulatory process to exercise patience; USACOE is struggling with the same funding and budget issues that most local and regional agencies are experiencing. Proponents of some larger projects are actually funding their plan approval costs privately, in effect paying the Corps for the direct cost of their review to obtain priority treatment.

The Corps is strongly committed to excellent treatment of their human resources, as they recognize their employees to be their most valuable asset. Colonel R. Mark Toy, the Director of the Los Angeles District, has a strong belief that the District’s over-riding mission is to provide excellent service to their customers, whether those customers are a major military base, a Border Patrol facility, the Port of San Diego, or a private developer applying for regulatory approval.

LCOL Sigloch related his tactical background in Iraq and his good fortune in being stationed at Schofield Barracks in Hawaii. He noted that the Army has a way of keeping officers on their toes; as soon as one learns the ropes in a job, he will be sent down the road to something new. He will be leaving LA this year to report to Memphis, TN as Professor of Military Science, head of the ROTC unit at University of Memphis. (ASCE background: The Civil Engineering Department at University of Memphis played a major role in the ASCE National Conference in October 2011).
For more information, call (714) 979-5276 x130

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February

Feb. 5       Geotechnical Committee dinner meeting, Zendejas Mexican Grill, Rancho Cucamonga.

Feb. 17      Popsicle Bridge Competition for High School Teams, Long Beach State University

Feb. 19-25   National Engineers’ Week.


February 23  Inland Empire Council of Engineers and Scientists annual dinner meeting, University of Redlands, Casa Loma Center. “Orange County Groundwater Replenishment System” Mike Markus P.E. General Manager, Orange County Water District.

Membership Information

Type of Membership and Annual Dues (National)

Students:      Free
Associate Member: $50 year of baccalaureate Degree and first year after, then incremental increases to $205 over five years.
Member:        $205 annually
Affiliate:     $205 annually
Section (Branch) Dues: $45/year

1. 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 1-800-548-ASCE (2723)

2. 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.

Over the summer your ASCE San Bernardino – Riverside Branch will be contacting you for a business card advertisement in your monthly newsletter. The proceeds from the business card ads defray the costs of newsletter so that the Branch funds can be used for purposes of providing student scholarships, Engineer’s Week in February where the Branch volunteers make presentations to the local high schools to generate interest in the field of engineering, and other community programs. The cost of the newsletter advertisement is $250 for a one-year subscription of 10 issues. Included with the Business Card advertisement is a business spotlight in the monthly newsletter where one or two businesses are highlighted. If you would like to reserve your spot early for next years newsletter please contact your Treasurer for next year – Brandon Reyes 909.974.4967 and let him know which month you would like your Business Spotlight (1st in line gets first choice).
Available space

Please see contact information below to have your company's business card displayed here.

If you'd like to have your business card or company information listed in the Professional Directory, please contact:
The Branch Treasurer, Brandon Reyes at (909) 974-4967, or email at breyes@rbf.com
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