



SOCIETY OF AMERICAN MILITARY ENGINEERS SACRAMENTO POST NEWSLETTER

www.samesacramento.org

Volume 4 Issue 1

Summer 2013

Upcoming Events:

25 July 2013

General meeting/Joint
Federal Project Site Visit

22 August 2013

General meeting at Beale
AFB, including site tour

7-10 October 2013

Major Proj. Conf. at
McClellan Conv. Center

**To be notified by email of
upcoming SAME events
and announcements,
please send a request to
[info@
samesacramento.org](mailto:info@samesacramento.org)**

In this Issue:

SAME Scholarships	1
JETC	3
Runway Construction Presentation	4
SAME Events at CSUS	5
N. Nevada Field Ch.	6
2013 Major Projects Conference	7
PNW Regional Conf.	9
Design & Construction of Mega Project	10
Col Leady Award	13
Membership Report	14

Editor:

Nathan Rockwood, PE SE
Mead & Hunt, Inc.
SAME Sacramento Post
Director

Contributing Editors:

Steven Herrera, PE
HDR, Inc.
SAME Sacramento Post
1st Vice-President

Publisher:

Becki Brunelli
AMEC E&I, Inc.

SAME Sacramento Post Awards Record Level Scholarships

*By Guy Graening, Brown and Caldwell, SAME Board of Directors and
Chair of the Scholarship Committee*

On May 16, 2013 at a special evening dinner ceremony, the Sacramento Post of the Society of American Military Engineers (SAME) awarded 32 scholarships totaling \$45,000 to local high school, community college, and college students from the area or attending schools in the Sacramento Region. SAME scholarships are awarded annually to students who are studying engineering or related technical disciplines, including computer science, environmental studies, architecture, math, or the physical sciences. Individual scholarships vary from \$1,000 to \$4,000 for college students and from \$1,000 to \$2,000 for high school students.

The 15 high school awardees and the schools they are graduating from are: Melaina Brink (Union HS); Lloyd Chen (Laguna Creek HS); Megan Dickson (Bella Vista HS); Ryan Dutra (Bella Vista HS); Shelby Ganzert (El Dorado HS); Cheyanne Harris (Pleasant Grove HS); Katy Ho (Sheldon HS); Corinna Jacobs (Oak Ridge HS); Jennifer Morgan (Vista del Lago HS); Tyler Myers (South Lake Tahoe HS); Wes Okuhara (McClatchy HS); Austin Rossi (Colfax HS); David Ta (McClatchy HS); Ellen Tiedemann (El Dorado HS); and Ashlyn Wanlas (Vanden HS).



COL. Leady with a recipient



High School Award Recipients

This year's 17 college awardees and the schools they are attending are: Joseph Beckett (Folsom Lake College); Roger Blum

(Continued on page 2)

Sacramento Record Level Scholarships (cont.)

(Continued from page 1)

(UCLA); Amanda Chen (Princeton); Gabriel Ehrlich (Stanford); Benjamin Estacio (Georgia Tech); Troy Hart (Sac State); Joshua Jetter (Missouri University); Edward Lesnick (USC); Julia Lund (UCLA); John Mullins (Folsom Lake College); Lucas Petit (Folsom Lake College); Steven Pham (UCLA); Andrew Renwick (UC Davis); Michael Signorotti (UC Berkeley); Emily Trujillo (Cal Poly); Trent Vonich (US Air Force Academy); and Moosa Zaidi (Stanford).

This outstanding group of applicants represented a rich diversity in backgrounds, geography, accomplishments, contributions to their communities, and educational pursuits. SAME scholarships are competitive and are based on the following criteria: academic performance; ref-



Community College Award Recipients

erences; academic/professional goals; extracurricular and volunteer activities; community service activities; previous or active military service or ROTC membership, if any; a statement of why the applicant should be considered for the



College Award Recipients

award; and other comments or justification to assist in the selection process, such as special challenges the applicant has had to overcome or school or community awards.

The Sacramento Post Scholarship program has grown tremendously in recent years, increasing the total cash value of all scholarships in 8 of the last 10 years. This notable contribution to the development of young engineers and scientists has resulted in widespread recognition for the organization as well as a solid influx of young members. In just the last 6 years alone, the Sacramento Post has awarded \$227,000 in scholarships to 154 deserving area students. Current plans are for a similar robust Post scholarship program in 2014.

The 2013 Post Scholarship Committee consists of Dave Bieber, GEOCON; Dave Zuber, Brown and Caldwell; Guy Graening, Brown and Caldwell (chair); Wendy Linck, Antea Group; Carl Lang, USACE (ret.), and Steve Crane, ITSI.



Join the 'SAME Southwest Region Group' on LinkedIn to get the latest updates on SAME as well as connect with other SAME members in your area. The Southwest Region includes eight Posts and associated Field and Student Chapters throughout California and Nevada.

Young Member's Experience at JETC

By Colby Ann Conrad, Joint Federal Project Sacramento District US Army Corps of Engineers SPK Office

The 2013 SAME Joint Engineering Training Conference (JETC) was the first national conference I have attended and I enjoyed learning more about how SAME serves for its communities. I first attended the Committee Meeting for Outreach & Mentoring Programs. I received a wealth of information on the efforts SAME Chapters are putting into the Young Member Council, the College Outreach Committee, the Engineering & Construction Camps, and insight into the SAME Fellow nomination process. That evening was the Mentoring Event and Ice Breaker. Both were great places to watch others reconnect, network, and just relax. I even ran into people I knew from deployment and childhood.

The following day began with a keynote speaker, Mr. Ira Winkler, CISSP, President, Internet Security Advisors Group. Mr. Winkler was entertaining



Mike Conrad accepting the SAME Sacramento Post Streamers at JETC



and informative of just how easy it can be for people to retrieve information from your business' network and/or database. The afternoon session held several different educational workshop options. I chose to attend the Improving Project Delivery through Effective Teams and Lean Concepts Workshop because these techniques are being considered at the project where I work. I was appreciative that the speakers were able to provide a base of knowledge to help me understand what Lean

Concepts are.

On my last day at the JETC, I had the privilege of hearing LTG (ret) Van Antwerp speak on Leadership and Mentoring for Military Engineers. He is a great motivator and public speaker. Listening to LTG Van Antwerp was a great high note to end my JETC experience.

Before I finish, I must admit that I had the most fun collecting the "swag" from each vendor's booth. How can anyone pass up a new pen, flashlight, bag, stress ball, USB port, etc.? I definitely left San Diego with a heavier suit case than I came with. I would like to share my gratitude to the SAME Sacramento Chapter for sponsoring me and giving me a chance to attend the Joint Engineering Training Conference. I can't wait to go next year.

Runway Construction Presentation at Travis AFB

By 1LT Luke Johanson, ASAF, SAME Travis AFB Representative

At least once a year, the Sacramento Post tries to hold General Meetings at both Travis Air Force Base and Beale Air Force Base. Travis Air Force Base hosted the meeting on April 25th. Approximately fifty attendees listened to 1st Lt Ryan Hill, the 60th Civil Engineer Squadron Pavements Engineer, give a presentation on the recently completed runway construction project at Travis. During his presentation, he discussed the history of the airfield, an overview of the project, some highlights of the construction effort, and the newly constructed Landing Zone.

Over the years, the airfield has received several small fixes and repairs to the various pavement features, which has in turn created a “patchwork quilt” of concrete and hot mix asphalt, as shown in the picture below. Prior to the start of the runway repair project, there were 174 different pavement features. After the completion of the project, there were only 16 pavement features, resulting in a much more manageable and sustainable piece of infrastructure.



The massive runway overhaul project called for the reconstruction of the runway, new airfield lighting, correcting airfield drainage issues, and the construction of a new landing zone. The project completion allows for triple runway operations as opposed to single operations. In total, the project cost \$68 million. It is very rare that a runway repair project of this size and magnitude

is completed. The project was awarded to Baldi Brothers, Inc and CH2MHill completed the design. Both NAVFAC and the Air Force were responsible for different elements of the project management on the government side.



This was the first large scale concrete runway construction project completed by Baldi Brothers. They employed two on-site batch plants, which produced over 75,000 cubic yards of concrete. One of the more impressive construction highlights was when they placed 5,000 cubic yards in one day. The Landing Zone was placed in 45' wide lanes over a period of just four short days. Another notable highlight of the project was their ability to recycle previously demolished pavement. They were able to recycle approximately 140,000 tons of concrete. This effort not only helped to save taxpayer dollars, it also helped aid the preservation of the environment, as well.

The purpose of the landing zone is to provide realistic training for combat landings. It will also enable aircrews to train locally rather than to fly to Washington, saving an estimated \$7.3 million per year in fuel costs. In just 2.5 years, the \$68 million project will have paid for itself. Other military installations also will use the landing zone for training.

CSUS SAME Student Chapter Recent Events

By Albert Dutra, President

The California State University, Sacramento (CSUS) SAME Student Chapter held two events in the month of April. The first being the Schilling Robotics manufacturing plant tour in Davis, CA, and the second being the Evening with Professionals (EWP) held on the Sac State campus.



Jason Gutierrez, the Vice-President of the club, scheduled and coordinated the Schilling tour, having a total of 15 CSUS engineering students in attendance. He gave them an introduction to SAME, since the majority of them had never heard of SAME, and the benefits of joining the organization. Once at the manufacturing plant, Senior Mechanical Engineer gave a brief presentation about Schilling in their conference room where he talked about some of the engineering challenges they face. They then split into two groups, each with an engineer guide, and walked through the manufacturing facility. Fortunately, they were in the middle of functional tests of one of their top-of-the-line hydraulic robotic arms. They also had three remotely operated underwater vehicles (ROVs) in various stages of construction and the guides were very informative. Overall, there was lots of positive feedback from those on the tour as well as interest in other SAME events.

The EWP turned out to be a success despite the slow beginning. As with previous EWPs, COL (ret.) Mike Conrad recruited the PEs, who volunteered their time and gave advice to the students in attendance. A special thank you goes out to

Jaqueline Steiner, who stayed after the conclusion of the event to speak with several of the engineering students about herself and the journey she's taken to be where she is in her career.

We would like to thank the following Professional Engineers who attended the event:

- ◆ Civil (Environmental): **Garrett Weiss** (*Cal EPA*), **Doug Christensen** (*URS*)
- ◆ Civil (Geotechnical): **Jeremy Zorne**, **Steve Sanders**, **Thomas Smith**
- ◆ Civil (Water Resources): **Chris Ferrari** (*Wood Rodgers*)
- ◆ Civil (USACE): **Jaqueline Steiner**, **Kristina Mullins**
- ◆ Mechanical (Thermal and Fluid Systems): **Hugh Graciano** (*URS*)
- ◆ Electrical (Electrical Design): **Long Hoang** (*Stantec*)

The student chapter has been active for the last year and a half at Sac State. A few students have showed interest in becoming student chapter officers for the upcoming academic year, but none have been officially selected. Each current officer plans to keep in touch with the club to ensure its continuation on campus and within the community.

SAME Northern Nevada Field Chapter

By Ken Greene, CH2M HILL, President SAME Northern Nevada Field Chapter

Established during Fall 2012, the SAME Northern Nevada Field Chapter is hosted/sponsored by the SAME Sacramento Post. Membership is a relatively uniform mix of public- and private-sector professionals, including uniformed representatives from the NV ANG/ARNG and NAS Fallon and includes both individual and sustaining company/agency members.

The Chapter holds bi-monthly Board meetings, with General meetings occurring on alternating months. General meeting speakers/topics to-date have included COL Leady, SAME Sacramento Post Past President, Ms. Katy Simon, ICMA (Washoe County Manager), Ms. Vida Wright, P.E., F.SAME (SAME - Past, Present and Future) and Mr. Rob Schleef, SOC Marketing Manager, HWAD. During March 2013, the Chapter coordinated a field tour with CDR Jeff Dryden and Mr. Zip Upham of NAS Fallon (see photo following). The tour represented a great opportunity for members and tour attendees to hear about NAS Fallon's mission, its impact on the Northern Nevada economy and national security importance.

The Chapter is advancing student membership through UNR's Engineering Department and continues to develop upcoming General Meeting speakers/topics and tours; potentially including UNR's Seismological Lab, ARkStorm@Tahoe project/USGS Pacific Region, Nevada Army/Air Guard facilities, US Ordnance, and others. The Chapter is also coordinating a local Wounded Warrior Project fundraising event with a local business that should prove to be a blast – stay

tuned for more information. Contact Ken Greene/Chapter President or Curt Chapman/Chapter Vice President with questions, comments or how you can help.



SAME Northern Nevada Chapter members and tour attendees at Naval Air Station (NAS) Fallon Air Power Park static display; March 7, 2013

Officer Members: Ken Greene, CH2M HILL, President, ken.greene@ch2m.com;
Curt Chapman, Vice-President, curt.chapman@stantec.com;
Josh Fortmann, Kleinfelder, Treasurer, jfortmann@kleinfelder.com;
Lisa Huffman, AMEC, Secretary, lisa.huffman@amec.com,

Directors: Mark Gookin, AMEC, Membership, mark.gookin@amec.com;
Curt Chapman, Stantec, Leadership/Mentoring, curt.chapman@stantec.com;
VACANT, Programs;
Brian Janes, Atkins, Emergency Preparedness, brian.janes@atkinsglobal.com;
Brian Wacker, Wood Rodgers, Special Recognitions, bwacker@WoodRodgers.com.

Registration is Open for the 2013 Major Projects Conference!

By David O. Cook, PE, PMP, Cook Consulting, President SAME Sacramento Post

The SAME Sacramento Post conference committee has substantially completed the planning, and the 2013 Major Project Conference is now open for registrations. This is the biggest event of the year for the SAME Sacramento Post and is expected to draw 400 attendees. All who are stakeholders in the major projects and programs that are benefitting the greater Sacramento Region and beyond including design professionals, construction specialists, academia, members of the military, government professionals and officials, and members of the public should plan on attending.

Speakers

Many policy makers and program leaders have shown support for the conference by agreeing to commit their time and speak at the conference. Speakers expected to participate 2013 conference include:

- ◆ *Dr. Gerald Meral, Deputy Secretary, CA Natural Resources Agency*
- ◆ *Mr. Malcolm Dougherty, Director, California Department of Transportation*
- ◆ *Mr. Mark Cowin, Director, CA Department of Water Resources*
- ◆ *Mr. Tim Quinn, Executive Director, Association of California Water Agencies*
- ◆ *Mr. David Murrillo, Director Pacific Region, US Bureau of Reclamation*



DWR Director Cowin agrees to speak at 2013 Major Projects Conference

- ◆ *Mr. Dan Richard, Chair, California High Speed Rail Authority*
- ◆ *Dr. Jeffrey Michael, Director of the Business Forecasting Center, University of the Pacific*
- ◆ *Mr. Joseph F. Calcara, South Pacific Division, USACE. (Invited)*

Other confirmed and invited speakers include members of USACE, USBR, Department of Veterans Affairs, US Navy, Sacramento Regional Transit, FEMA, CA Dept Water Resources and industry speakers.

All speakers are subject to schedule conflicts and restrictions. Travel restrictions are affecting conference planning. Speaker updates will be posted as available.

Business Opportunities Forum

If you attend the SAME Sacramento Post Sustaining Members Forum you will want to attend this conference. SAME will present an all day discussion on business opportunities on the last day of the conference. Only conference attendees are invited to the business opportunities forum. Speakers expected for the business opportunities forum include:

- ◆ *COL Mike Farrell, Sacramento District Commander, USACE*
- ◆ *COL Kim Colloton, Los Angeles District Commander, USACE*
- ◆ *LTC John Baker, San Francisco District Commander, USACE*

(Continued on page 8)

2013 Major Projects Conference (cont.)

(Continued from page 7)

- ◆ *Mr. Brent Felker, Program Director, California High-Speed Rail Authority*
- ◆ *Brig. General Vince Saroni, Air Force Civil Engineer Center*
- ◆ *CAPT Medved, Marine Corps Installations (MCI) West, NAVFAC*
- ◆ *Mr. Kevin Maxson, Chief, Engineering and Facilities Management, VISN 21, Department of Veterans Affairs*
- ◆ *COL Steve Beuthe, Director, Facilities and Engineering, California Army National Guard*
- ◆ *Mr. Gordon Enas, California Department of Water Resources*

Other agencies have been invited and this list will be updated. Again, speakers are subject to schedule conflicts and restrictions.

Sponsorships and Exhibitors

Substantial opportunities are available for sponsorship of SAME and to showcase your company. Exhibit space, the plenary speakers, lunch, and breaks will all be located in the main conference room. Sponsorship opportunities include:

- ◆ *Platinum Sponsor (extra large exhibit space and generous benefits)*
- ◆ *Gold Sponsor (large central exhibit space and benefits)*
- ◆ *Silver Sponsor (exhibit space and benefits)*
- ◆ *Exhibitor (exhibit space)*
- ◆ *Bronze Sponsor (benefits, limited to small businesses)*
- ◆ *Generals House (unique opportunity)*

- ◆ *Aerospace Museum (unique opportunity)*

Please review the additional information on sponsorships on the SAME Sacramento Post web site and make your selection. The number of sponsorships available is strictly limited.

Conference Location and Facilities Description

The SAME Sacramento Post 2013 California Major Projects Conference will take place at the McClellan Conference Center at 5411 Luce Ave, Sacramento (McClellan), CA. The hotel for the conference is the Lion's Gate Hotel, nearby, at 3410 Westover Street. The hotel affords a beautiful Private Club atmosphere. Amenities for those using the hotel include Family and Specialty Suites, an Olympic sized pool, gorgeous grounds, private jogging trail, and a private chapel. The facilities are located approximately 10 miles northeast of downtown Sacra-



Lion's Gate Hotel will be after hours "headquarters" for conference attendees.

mento.

SAME Sacramento Post has arranged for a conference special rate of \$84/night (single bed). To book your room at this rate, please

(Continued on page 9)

2013 Major Projects Conference (cont.)

(Continued from page 8)

contact the hotel directly at 866-258-5651 and select Option 1 for Reservations and Option 1 again for groups. Indicate to the reservation specialist that your Group is Society of American Military Engineers and you access code is SAME. The hotel will provide free van service to and from the Sacramento Airport and conference events.

Networking and Social Events

Attendees and only attendees are invited to two evening events. Start-off the conference with a social evening at the former General's House! Perfect for locals and for those staying at the hotel. Tuesday night will be "A Night at the Aerospace Museum".

Share your knowledge and insights of the aeronautical exhibits with business associates.

Something for Everyone

Conference planning is ongoing and there will be something for everyone. For example participation of students and field chapters is being planned. Whether your needs are training/PDH units, partnering with other agencies, or exposure for your company, it all will be available at the 2013 Major Projects Conference.

For questions please contact the conference chair Mr. David O. Cook, PE, PMP, (530) 558-5697, cook931@me.com.



The 2013 Major Projects Conference has expanded theme and a new venue compared to the 2011 Conference (shown).

Save the Date for the PNW Regional Conference



Mark your calendars for the Pacific Northwest SAME Regional Conference. "Exploring New Horizons" is the theme for this SAME Pacific Northwest (PNW) Regional Conference. Our PNW sister Posts are well into the development stages for their SAME Regional Conference. The conference is scheduled for November 3rd – 6th, 2014 at the DoubleTree Hotel in Portland, Oregon. The Sacramento Post website will provide a link to this conference once additional information is available.

The Military Engineer July August 2013 - Design and Construction of a Mega-Project

By Maj. Rob Dion Jr., P.E., PMP, MSAME, USA

A phased design-bid-build approach to deliver a new auxiliary spillway outside Sacramento enables USACE to regain in-house proficiency in dam construction while saving the project time and money.

Having endured five major flood events in the past 65 years, few, if any metropolitan areas in the nation face as high a flood risk as Sacramento, Calif. A major project underway just outside the city aspires to reduce that risk significantly. While its last flood event occurred in 1997, Sacramento is believed to be past due for the next one. Over the last 20 years, numerous studies have helped develop solutions to reduce the danger for California's capital, including multiple recommendations to modify Folsom Dam.

One of these recommendations was authorized by Congress through the Water Resources Development Act of 1999 and the Energy and Water Development Appropriations Act of 2006.

Located approximately 25-mi northeast of downtown Sacramento, the Joint Federal Project (JFP) auxiliary spillway is a joint effort between

the U.S. Army Corps of Engineers (USACE) and the U.S. Department of the Interior, Bureau of Reclamation (Reclamation). USACE's objective through JFP is flood risk reduction to the Sacramento area; Reclamation's objective is to safely pass the Probable Maximum Flood at Folsom Dam, which previous flood events have shown

needs additional release capacity. A joint construction project of this scale is the first of its kind—and it allows the government to complete such a monumental project faster and cheaper than if done separately.

The primary benefit from JFP, identified as one of USACE's initial Mega-Projects in January 2012, will be new spillway gates located 50-ft lower than the main dam's gates. This will allow water in the reservoir to be re-

leased earlier during a flood event. That, in turn, will enable operators to lower the water elevation in the reservoir if a flood event is coming, and create extra storage capacity to contain significant in-flows. The additional gates also allow dam operators to release more water during a flood event. The combined potential release ca-



A rendering of the completed auxiliary spillway shows the spillway gates located below the main Folsom Dam. By the gates being built approximately 50-ft lower than the dam, water can now be released earlier if a known flood event is coming.

IMAGE COURTESY USACE
SACRAMENTO DISTRICT

(Continued on page 11)

Design and Construction of a Mega-Project (cont.)

(Continued from page 10)

capacity of Folsom Dam will increase from 557,000-ft³/sec to 870,000-ft³/sec, ensuring the dam can pass the Probable Maximum Flood.

Phased Design-Bid-Build

The auxiliary spillway is being constructed in five phases. This differs from traditional design-bid-build, where the design is completed before work on the project

starts. By sequencing the project into different phases, the team can complete individual phases and the project as quickly as possible, helping to reduce Sacramento's risk of flooding. JFP five phases are: 1) initial spillway excavation; 2) final spillway excavation; 3) construction of control structure with six submerged tainter gates; 4) excavation of a 1,100-ft long approach channel and construction of a 3,000-ft-long concrete-lined spillway chute and stilling basin; and 5) site restoration and overall commissioning. In total, the project will excavate more than 3.8-million-yd³ of material and place 250,000-yd³ of concrete.

The first two phases were designed and com-

pleted by Reclamation. The remaining three phases are being designed by USACE, with contributions from Reclamation. Looking at the timeline for the design and construction of Phases 3 and 4, the benefits of beginning construction before the overall design is complete can be seen. Phase 3 design of the control structure was completed and awarded in September 2010. Construction on this phase began in January 2011 and is scheduled to finish in March 2015.



The six bays that will guide water through the control structure of Folsom Dam's new auxiliary spillway are shown under construction in spring 2013. The control structure, essentially a second dam, will work with the main dam to release water from the reservoir during large storms.

U.S. ARMY PHOTO BY CAPT. MICHAEL MEYER

As construction started on Phase 3, the design team was at work on Phase 4. Design on Phase 4 was completed in December 2012, and the contract was awarded in May 2013, with a scheduled completion date of May 2017. More than two years were saved by sequencing the design and construction into multiple phases.

Utilizing In-House Design

USACE and Reclamation decided early that the design for the auxiliary spillway would be done in-house. Industry trends have moved more towards a design-build approach with construction projects; however, the spillway was the perfect type of project to regain proficiency within USACE in dam construction.

(Continued on page 12)

Design and Construction of a Mega-Project (cont.)

(Continued from page 11)

The last concrete gravity dam designed by USACE Sacramento District was the main Folsom Dam, which was completed in May 1956.

Completing the design in-house allows USACE employees to gain valuable design experience on a major civil works project. The district sought out experts from across the agency to ensure the project was designed to the highest standards. Sacramento District used staff from 16 USACE districts in the design and review of the project. This allowed other districts to benefit from the project and increase dam design competency all around. The architect-engineer community also was involved to address specialized technical topics and provide additional resource capacity to meet the design schedule.

In January 2012, Sacramento District started the process to create a new project-based organization within the district and led by a GS-15 who manages the project and is empowered to make quick decisions. The new organization has both engineering and construction staff reporting directly to the JFP Director. This solution was the direct result of a typical matrix organization structure on a large project where a project manager, typically a GS-13, is in charge of the overall project team and leads the engineering and construction teams, which are also led by GS-13s. The problem with this arrangement is the project managers have a lot of responsibility but limited control of the different sections. Bringing in a GS-15 and aligning all employees working directly on the project under this position dramatically improved communication and decision-making.

The location where USACE employees worked also changed. Mobile office trailers were placed at the construction site. Most of the engineering, construction and project management staff are now co-located on-site with the contractor. This significantly reduces the time it takes to review submittals and allows meetings to take place in person, helping facilitate open and timely dialogue.

Innovative Solutions

The approach channel walls that connect to the control structure are located between a major four-lane road on one side and the Left Wing Dam of the Folsom Dam on the other. This constrained environment made the design of the approach channel walls challenging. Typically, a counterfort or mass concrete wall would be designed to meet the requirements of the project. However, with the approach channel walls being 100-ft-tall, the walls would have required a base of approximately 65-ft in order to meet all of the design loads. The amount of additional excavation required to build these walls was not available on site without a significant increase in construction time and cost. Instead, the design team opted to use post-tensioned rock anchors to stabilize the approach channel walls. This decision required approval from HQ USACE, which the district received, ultimately saving the project both time and cost.

To help secure the approach channel walls, approximately 90 anchors of 3-in diameter will be used. These anchors will have a minimum bonded length of 15-ft into the rock and will be encapsulated by a corrugated sheathing and

(Continued on page 13)

Design and Construction of a Mega-Project (cont.)

(Continued from page 12)

3,000-lbs/in² grout. All anchors will be extended to the concrete surface and post-tensioned. Extending the anchors to the surface will allow for future lift-off tests in order to ensure the proper tension is maintained throughout the life of the project.

Looking Ahead

The auxiliary spillway is scheduled to be complete by October 2017—just 10 years after the Phase 1 construction contract was awarded. All

of the major design work is complete and the district's attention can now focus on the construction phases.

In summer 2013, two major construction contracts will be occurring on the same job site. USACE Sacramento District's new JFP organization is fully functional, and ready and able to handle this challenge and any others that may yet arise.

Maj. Rob Dion Jr., P.E., PMP, M.SAME, USA, is Deputy Chief, JFP Engineer Office, USACE Sacramento District; robert.dion@us.army.mil.



SAME Southwest Region and Sacramento Post leaders (from left to right) Sharol Moore, Vida Wright, Mike O'Hagan, Dave Cook, COL Bill Leady, Margie Namba, and Steven Herrera present COL Leady with an award for his support and service to the Sacramento Post at USACE Sacramento's Change Of Command Ceremony on 10 July 2013 in Sacramento, CA. The Post also presented COL Leady with a certificate of appreciation from SAME National HQ in thanks for his service as Post President for 2010-2012.

Sacramento Post April 2013 Membership Report

By Jon Revolinsky, Membership Chair

Membership was stable with a shift from individual to company memberships with the totals shown below. Waiting for the new official baseline will come from National.

Sacramento Post membership roster as of July 3, 2013 was as follows:

Individual Members: 202 (increase of 2)

Public Sector Individual Members: 93

Company and Agency Representatives: 479
(increase of 11)

Public Agency Representatives: 14

Total Members: 681 (increase of 13)

Total Public Sector Membership: 107

Student Members: 73

Sustaining Companies and Agencies

The post as of July 2013 with a drop of 1 to 113 sustaining companies and agencies.

Representative Members (REP)

We currently have 479 REP members relative to the baseline for the year of 464.

Individual Members

The individual membership has a baseline of 213. Total individual membership now stands at 202, up 2 from last month.

Membership Streamer

January starts a new baseline, which is a total of 691 total members and we are at 681, an increase of 13 for the month. Encouraging sustaining member firms to fill the total 5 slots that each firm has to bring overall numbers back to 691 by December 2013.

Student and Faculty Members

We have 73 student members and 3 faculty members in the database.

See next page for the current list of sustaining member firms.

The Sacramento Post appreciates the support from all our Individual Members and Sustaining Member Firms!

Sacramento Post Presents Our Sustaining Member Firms

The current list of sustaining member firms is:

AECOM	Genterra Consultants, Inc.	Robert Heinen Consulting Engineers
AHTNA Engineering Services, LLC	Geocon, Inc.	Rolf Jensen & Associates
Ahtna Government Services Corp.	GeoEngineers, Inc.	RORE, Inc.
Alta Vista Solutions, Inc	GHD, Inc	SAGE Engineers, Inc.
AMEC	Granite Construction Company	Schweitzer Engineering Labs
Andregg Geomatics	Hammel, Green, and Abrahamson, Inc.	Science Applications International Corp.
ARCADIS/Malcolm Pirnie	Hatch Mott MacDonald	Shannon & Wilson Inc.
Atkins	HDR	Site Work Solutions, Inc.
Battelle	HNTB	Spectrum Services Group, Inc.
Bay West, Inc.	Howe Electrical Construction, Inc.	Stanley Consultants Inc.
Black & Veatch Special Projects Corp.	HydroGeoLogic Inc.	Stantec, Inc.
Blackburn Consulting	ICF International	Suulutaq, Inc.
Blaine Tech Services, Inc.	ITSI Gilbane	Swinerton Builders Government
Brown and Caldwell	J. M. Waller Associates, Inc. (new this month)	Taber Consultants
Burleson Consulting Inc.	Jacobs	Tepa, LLC
Burns & McDonnell	JF Jones Company	TerranearPMC, LLC
CA. Department of Water Resources (new this month)	Kennedy/Jenks Consultants	Terraphase Engineering, Inc.
Cabrera Services, Inc.	Kiewit	Tetra Tech, Inc.
Cardno ENTRIX	Kleinfelder	The Dutra Group
Cardno TBE	Magnetar US, Inc.	The Louis Berger Group, Inc.
CDM Smith	Magnus Pacific Corporation	The Shaw Group, Inc.
CH2MHILL	Marsh Creek LLC	The Stahl Companies, Inc.
City Light and Power, Inc	Martin Brothers Construction	The Westmark Group
Collins Engineers Inc.	Mead & Hunt, Inc.	Towill, Inc.
Dewberry	MGE Engineering, Inc.	Tri-Technic, Inc.
DI Aggregate Management, LLC	Michael Baker Corporation	Trihydro Corporation
ECC	Miyamoto International	Turn-Key Construction Services, Inc.
ECORP Consulting Inc.	MWH	URS Corporation
Element Engineering	Nichols Consulting Engineers	Versar
EM-Assist	Ninyo & Moore	Vista Environmental Consulting, Inc.
Engineering/Remediation Resources Group (ERRG)	Nordic Industries Inc.	WEST Consultants, Inc.
Envirocon, Inc.	Northgate Environmental Management, Inc.	Westervelt Ecological Services
Environmental Resources Management (ERM)	Pacific States Environmental Contractors, Inc.	Weston Solutions, Inc.
ESA	Parsons	Whitney-Stone, Inc.
FMJ Marketing	Parsons Brinckerhoff	Wildlands
Forsgren Associates, Inc.	PHA, Inc. Design-Build	Woodward Drilling Company, Inc.
Fugro Consultants Inc.	PIKA International	Woolpert, Inc.
Gannett Fleming Inc.	Psomas	Yerba Buena Engineering & Construction Inc.
	Quest GeoSystems Management, Inc.	
	Ramsey North, Inc	

For any questions or comments about the newsletter, please call Nathan Rockwood at 916-971-3961 or email at nathan.rockwood@meadhunt.com



SOCIETY OF AMERICAN MILITARY ENGINEERS