



International Erosion
Control Association

Western Chapter News

SERVING EROSION CONTROL PROFESSIONALS IN ARIZONA, CALIFORNIA, NEVADA AND HAWAII

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Preserving Lake Tahoe's Splendor

On June 8, 2010 a packed TRPA conference room of multi-disciplinary erosion control/native revegetation professionals [including a plethora of IECA members] convened at the southern end of Lake Tahoe to review the latest comprehensive research effort to keep Lake Tahoe's waters pristine. What follows is a brief overview of that day of presentations of data, interim findings, and much debate as to the road ahead:

Around 2005, agencies within the Tahoe Basin and the **California Tahoe Conservancy** had significant needs related to revegetation of sites affected by erosion control projects. These needs included consistent information about revegetation techniques, resources that increase efficiency and success, guidance parameters for technical consultants, revegetation specifications that minimize mediation during design and construction, and consensus on examples of successful projects. With the goal of meeting these needs, the Conservancy's solution was to fund a neutral third party with knowledge and experience outside the Tahoe Basin to conduct an objective assessment of existing revegetation projects, broaden the revegetation knowledge base with new perspectives and techniques, and offer the revegetation community a **Revegetation Guidance Document** to facilitate consistent revegetation results.

To realize the Conservancy's solution, an **AECOM** team led by John Zanzi and John Hunter, under contract to the Department of General Services, Real Estate Services Division, and in direct coordination with Scott Cecchi of the Conservancy, has conducted an **examination of 26 past revegetation projects** completed as part of soil erosion control/water quality improvement projects that integrate native plant and seed revegetation and/or other biotechnical treatments in the Tahoe Basin. With a focus on California projects, this study has assessed design, implementation, and performance specifications of the revegetation projects with the goal of improving revegetation success and cost effectiveness. In addition, the study



Pristine waters of Lake Tahoe are vulnerable to stormwater runoff.

has assessed the successes, lessons learned, and effectiveness of revegetation approaches related to soil erosion control projects in terms of their prescribed specifications and success criteria for post-construction monitoring.

The result of the study is a Revegetation Guidance Document for revegetation construction and monitoring, intended to serve as a practical and technical ("how-to") resource for implementing agencies and other project implementers in the Tahoe Basin. The document is also intended to add to the current state of understanding about revegetation issues in the Tahoe Basin and beyond, although it is not intended to be interpreted as a "cookbook" with "one-size-fits-all" detailed prescriptions. Nor is it intended to be a comprehensive guide to all the techniques available related to revegetation implementation.

The workshop focused on five (5) key aspects that affect revegetation for erosion control with the

See **Preserving Tahoe's Splendor**, Page 5



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President's Message

It's June 2010 and, like me, many of our members are in the full swing of construction season. While we watch in horror as our country's gulf coast suffers a catastrophic, large-scale oil disaster, Western Chapter members are working hard to reduce sediment pollution: less toxic than oil spillage but more chronic, from degrading aquatic habitats closer to home. Heavy snowmelt in the mountains of Arizona, Nevada, and California, coupled with uncharacteristically hard spring rains closer to the coast, have kept many of our members on watch for mass wasting from super-saturated conditions and fluvial erosion from swollen watercourses and flash flooding.

A number of exciting IECA and non-IECA sponsored activities are scheduled in the Southwest this Spring and Summer. In May, the Pima Association of Governments in Arizona put on a Stormwater Construction seminar, which will be followed by a Stormwater Collection Systems conference in Tucson, AZ from June 13-16. The following week of June 21-24 the 12th Annual EPA Region 6 MS4 Operators Conference will be co-hosted by the South-Central IECA Chapter in New Mexico. Similarly, Stormcon will be held from August 1-5 in San Antonio, TX this year. The South-Central Chapter is encouraging our Arizona members, in particular, to consider coming to NM or TX for these events.

Outside of Arizona, Western Chapter members have been partnering with like-minded professional associations to offer erosion and sediment control training. Western Chapter ambassador Kent Stevenson and former Board-member David Franklin convened 30 members of the Engineering Contractors Association for stormwater training in Ukiah, CA in May. The Western Chapter has been invited to again collaborate with the Urban Land Institute to provide speakers for the Future Build Conference in Los Angeles in August. Last year, Michael Alberson presented on dust control at this conference and the Western Chapter had a booth. This was good exposure for the WCIECA and they want us back.



WC-IECA President Craig Benson conducting a hands-on BMP workshop with members of the Santa Clara Valley Urban Runoff Pollution Prevention Program.



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area recently held an informal gathering at a local pub to socialize, talk shop, and set up the first of a series of technical brown bag lunch presentations with erosion control product manufacturers.

In my opinion, the timing is right for grass roots, low cost gatherings that integrate the WCIECA's collective academic talents and field experience. Many in our industry are weathering this economic slowdown by conserving resources, focusing on local priorities, and making every dollar count. The WCIECA's education and outreach approach mirrors that trend. Let us know how we can help you.

Best wishes,

Craig Benson

We Need Your E-mail Address!

The WCIECA uses email to contact members concerning Chapter news, coming events and newsletter publication. Please make sure we have your current email address, or make sure you check the web site regularly for information on Chapter events and news. You can update your contact information at www.ieca.org and we will update our Western Chapter records.

Call for Articles

Do you have a technical article, regulatory update or event announcement you'd like to share with your fellow members? Forward them to Cyndi Brinkhurst, WCIECA Administrative Assistant at westernchapter@gmail.com and we'll publish them in the next issue of *Western Chapter News*!

Errors, Corrections & Clarifications

Correction to March President's Message

Many thanks to Michael Tien, CPESC, PMI President of Clearwater Consultants for clarifying that there is not a "5-year experience" requirement nor a "continuing education" requirement to attain or maintain Qualified SWPPP Developer (QSD) or Qualified SWPPP Practitioner (QSP) status under the new Construction General Permit (CGP).

Please refer to the CGP, Section VII Training Qualification and Certification Requirements, Part B pp. 33 & 34, to see the listing of registrations, certifications and appropriate experience to qualify as a QSD or QSP. The words "appropriate experience" in the final CGP have replaced the term "5-years experience" in a previous draft. The final CGP does not define what "appropriate experience" entails.

While continuing education is not required to maintain QSD/QSP status, the CGP states, "Effective two years after the adoption of this General Permit, a QSD/QSP shall have attended a State Water Board-sponsored or approved QSD/QSP training course." Apart from the CGP, however, continuing education may be a requirement of the license, registration, or certification on the CGP list to qualify as a QSD or QSP.

These are important distinctions, and the editorial staff very much appreciates members making the effort to send us clarifications, corrections and comments on what we publish in our Newsletters. Thank you for bringing them to our attention. 🐾

First WC-IECA Member Mixer Held in San Diego

The first WC-IECA San Diego mixer was held at the Admiral Baker Club House on April 29, 2010. By the accounts of those who attended it was a fantastic opportunity to network with other Chapter members and discuss current industry issues in a relaxed and informal atmosphere. Sitting out on the terrace overlooking the wetlands adjacent to the 1st tee box for the North Course and the 18th green for the South Course, we enjoyed reasonably-priced cocktails and hors d'oeuvres as the sun set over the fairways groomed with Federal funds.

There was lively discussion regarding events, workshops and training classes that members might like the WC-IECA to sponsor in the coming months to better prepare members for success as the industry emerges from the current economic downturn. One of the major items discussed was the new General Construction Permit that takes effect on July 1st, which will have a significant impact on storm water management. Also, there was interest expressed to stage events where local consultants and/or local manufacturers of erosion control practices and/or products might demonstrate "hands on" implementation of such practices and/or products in the field.

Overall this was a great opportunity to meet people from other companies with diverse skills and experience...and a chance to promote your own business. We look forward to seeing more current Chapter members as well as past and potential new members at our next mixer tentatively scheduled for every other month. Please mark your calendars when the next date for the monthly mixer is announced. 🐾

Jane Ledford, WCIECA Director, Owner

JL Stormwater Consultants, Inc., (619) 922-6511, jane@jlstormwater.com

Peter McRae, WCIECA Director, Owner

Quattro Environmental, Inc., (619) 522-0044, pmcrae@san.rr.com

Western Chapter IECA Board Election

It is time for our annual Western Chapter Board of Directors election. Three full term (3-year) Director positions need to be filled and there are 5 nominees, so be sure to **cast your vote by July 23, 2010!**

See www.wcieca.org for details and candidate information.



TIME TO VOTE!

Professional Listings

Marvin E. Davis & Associates, Inc. focuses on the challenging issues of the Tahoe Basin and Northern Nevada/California terrain. Our professionals provide a diverse and solid background in geotechnical engineering; specialized engineering design; erosion control services; construction and forensic inspection services and materials testing; and, regulatory and compliance issues to enable project approval. Phone 775-853-9100 or visit us at www.mdageotechnical.com

JL StormWater Consultants, Inc. is a State Certified SBE/DBE/WBE/UDBE Company. www.jlstormwater.com. Jane Ledford, Principal jane@jlstormwater.com or 619.922.6511. Services include: Environmental Permit Preparation, Processing and Compliance; SWPPP Preparation and Processing; SWPPP Implementation; SWPPP Inspections; SWPPP Training including the newly adopted Construction Storm Water Permit; Construction Monitoring; Biological Resources Monitoring; Cultural Resources Monitoring; Coordination with Native American Monitors; English-Spanish Translation of Worker Education Materials.



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Al Nitta picking the winning raffle ticket at EC09 with Chapter President Craig Benson.

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'Go For Broke' Al Nitta Dies on Memorial Day 2010

One of the most persistent and beloved members of the IECA, Alfred Tsuguo Nitta, CPESC, founder of Nitta Erosion Control dies at 87 on the family ranch in Loomis, CA where he was born on March 19, 1923.

Just about everybody in IECA knew Al Nitta. There was an infectious warmth, "can do" spirit, and humor that endeared him to all. He was a man well acquainted with service to others.

Early in his life he was decorated for serving his country with valor in the 442nd Infantry Unit in Italy. A monument was later commissioned and unveiled in Roseville on December 16, 2009 to honor Al and his many brothers-in-arms from the 442nd who went by the motto "go for broke".

In 1949 he graduated from UC Davis in Pomology and he delighted in people's blank expression and explaining to people that pomology meant the study and practice of fruit production. The Placer County Soil Conservation Service, not only understood what the word meant, but gave Al Nitta a Certificate of Merit in 1966 and named him Farmer of the Year in 1967.

Always current with the changing times, Al's farming turned to land grading and later morphed into the hydroseeding/erosion control business his daughter Laura Bills, son Scott Nitta, and grandson Christian Bills run today. Al was lauded for his canny ability to modify and fabricate parts to improve the function of erosion control equipment. He added a mulch shredder box and second mixing shaft to his hydroseeders: an improvement noticed and imitated by hydroseeder manufacturers. Al wrote and presented papers on his inventions, including the Dust Dog, which injects water into straw before it is fed through the blower to eliminate dust and particulate matter from entering the atmosphere and is currently "patent pending".

The IECA awarded Al Nitta with the Environmental Achievement Award for his innovative retrofit designs and, at 85 years of age, he was named Contractor of the Year at ECO8 in Orlando, FL. Moreover, Al was appreciated for serving on the Board of Directors of the Western Chapter IECA for many years. Through ECO9 in Reno, he came to the annual conferences just to offer volunteer service. He was often appointed as the unofficial greeter, at least until the cancer inhibited his travel.

Al loved to travel with his wife Ellen but couldn't stay away long because of his many community commitments. Al served as Commander of the American Legion, was on the Board of the Chamber of Commerce, Loomis Union School Board, Loomis Fire Protection Board, Del Oro Parents Club, to name of few. Yes, Al Nitta makes the rest of us look like selfish chumps. Finally, Al Nitta was honored by the City of Loomis, not for the one big thing that elevates some, but for a myriad list of service accomplishments that defied category. He was simply recognized to be a local treasure.

The IECA will not be alone in missing Al Nitta. If you're like me and a little tear wells in your eye for the passing of one of the good ones, you can coin one of Al's often used expressions: "I'm not crying, I just have allergies". ☁

Craig Benson, WCIECA President

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goal of improving the success and cost effectiveness of revegetation in the Tahoe Basin:

- ☑ Regulatory issues relating to revegetation projects
- ☑ Soil rehabilitation and erosion control treatments
- ☑ Revegetation and erosion control treatments
- ☑ Design implementation
- ☑ Recommendations

The AECOM team had come up with draft recommendations for the June 8 workshop participants to contemplate and debate based on an assessment of 33 treatments at 26 sites located around the perimeter of the Tahoe Basin.

From the reconnaissance surveys, the following insights were shared:

- ☑ Settings and treatments were varied; several recent treatments included substantial soil rehabilitation (for example: an unbelievable \$145,000 per acre costing for total seeding expenditures!)
- ☑ Numerous challenges and changes to designs occurred during implementation (Let me guess: someone discovered a cheaper substitute procedure/product/plant species)
- ☑ There was some evidence of ongoing erosion, but no failures (nobody volunteered a failed project for the study)
- ☑ Plant cover was moderate; cover of shrubs was often small
- ☑ Cover of nitrogen-fixing plants was usually small
- ☑ Invasive plants were frequently present, especially where compost was applied
- ☑ Frequent failure of container plants
- ☑ Older sites displayed greater areas of exposed bare soil

Review of plans and specifications on all sites turned up the following observations:

- ☑ Available documentation was limited in scope
- ☑ Fertilizer (slow release) had been applied, with compost often being applied
 - a) Nitrogen inputs sometimes large
 - b) Compost associated with invasive plants (70% presence of invasive plants on composted sites) versus "no compost" sites (17% presence of invasive plants)

- ☑ Dense applications of seed, primarily grasses
- ☑ When depth of soil loosening was related to % exposed soil, it initially appeared as if "no till/shallow till" resulted in greater % exposed soil. Once age of projects was factored into the relationship, it became clear that deeper loosening of soil had little impact on variance of % exposed soil. Instead, age of projects had a greater impact; % exposed soil increased with age of projects. Not particularly encouraging for long term project success.

The survey of **9 roadside cut slopes** brought to light the following observations:

- ☑ From small soil pit excavations and "depth to refusal" testing with a penetrometer, it was clear that there were significant discontinuities of soil bulk density both between project sites, and within individual project sites.
- ☑ Nonetheless, rooting depth (mainly grasses) was comparable on most sites (4.4 – 6.6 inches at 7 of 9 sites [1 site less, 1 site more])
- ☑ Associations between bulk density/soil rehabilitation-to-total plant cover:
 - a) Total plant cover is greatest on rehabilitated sites with less dense soil;
 - b) Shrub cover is less (not more) on rehabilitated sites with less dense soil;
 - c) Herbaceous cover (mostly grasses and annuals) is greater on rehabilitated sites with less dense soil.

To conclude the day-long workshop, AECOM's John Hunter led a presentation of the draft study's "Top 10" Issues, Conclusions, and Recommendations. What those "Top 10" highlights shape up to be will have to await the publication of the keenly-awaited final version Revegetation Guidance Document. To whet your appetite, however, the data (based upon these 26 project sites only) is revealing some pretty interesting insights into:

- ☑ Whether we should continue our dependency upon planting container plants, or at least changing the protocol for such plantings;
- ☑ Whether we should continue our dependency upon irrigation and hydroponic growing mentality;
- ☑ How our current practices for maintenance might be improved;
- ☑ How best to restore the soil's Total Nitrogen reserves;
- ☑ Seeding densities, and relative densities between grass and shrub seeds;

- ☑ Recommended depths of mulch (if any band-aid applications should be used at all); phased applications?
- ☑ Is it a futile objective to try stimulating an engineer's right brain to comprehend and appreciate the critical value of topsoil? Would placing a value of "\$10.00 per pound of topsoil" register? Perhaps a "case of Corona/Bud Light per pound topsoil"?
- ☑ The ever-present threat of facilitating the incursion of invasive plants;
- ☑ The observation that soil rehabilitation treatments developed since the 1990s perform better in the short-term life of a project, particularly regarding infiltration. However they leave open the \$64 million question whether these treatments are a) free of major drawbacks; and b) result in self-sustaining vegetation.

Key question: Are these more recent treatments resulting in self-sustaining vegetation?

The final version of the Revegetation Guidance Document is due to be published sometime in July 2010. Anyone interested in obtaining an electronic copy of this document may wish to a) check the CA Tahoe Conservancy web site www.tahoe.ca.gov; or b) contact Peter McRae at pmcrae@san.rr.com after July 15, 2010.

Save the Date: November 7 - 9, 2010. It has been proposed that anyone interested in building upon the research efforts of CA Tahoe Conservancy and AECOM may wish to join the authors of the Revegetation Guidance Document for a Field Trip and 2-day workshop this coming Fall 2010 at North Tahoe Event Center, Kings Beach, CA to continue to discuss and debate the conclusions and recommendations embodied in the final document. Many of the attendees at the June 8 workshop were of the opinion that much of what was being discussed and debated had equal relevance and application to regions outside the Tahoe Basin. The format would be similar to the "challenging conventional seeding practices" format that has inspired a refreshingly frank assessment of current revegetation performance parameters familiar to those of you who attended any one of our three stand-alone Western Chapter-sponsored "Native Revegetation: What Works" technology transfer workshops during 2008 and 2009. ☁

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Proposed Vendor Discount Program

The WC-IECA Board is currently considering the idea of a Vendor Discount Program being developed by the Western Chapter whereby IECA members might gain access to products and professional services supplied by participating Chapter members at discount prices. Without endorsing the products and professional services concerned, the objective of the program is to save members money on product/professional services purchases, boost sales for participating vendors, and create yet another professional benefit to becoming a member of IECA. The lower margins/hourly rates being earned by Chapter members would conceivably be recouped by selling to a more "erosion control aware" clientele, the end product of the Chapter training workshops and conference technical sessions we all attend.

This is a work in progress being led by **Chris Marr**, Board member and chair of the Vendor Liaison Committee. The idea is to structure the program along the lines of existing successful non-profit organization-sponsored discount programs and, accordingly, the Board is interested in hearing from members who might be ready and able to help move this effort forward. Call Chris at (209) 712-2616, or via email chris6444@sbcglobal.net, or any Board member reached via our Chapter website. ☁



IECA member Roger Poff, Soil Scientist [left] speaking on Soil Rehabilitation panel at CA Tahoe Conservancy Revegetation Guidance Workshop held at Lake Tahoe, June 8, 2010. Monica Finn [Caltrans] on right.



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Upcoming Events

July 2010

July 6-23 New Board Member Elections. See www.wcieca.org for details and candidate information.

July 15, August 12, September 9, October 7, November 18, 2010 (Phoenix, AZ) *Erosion Control Refresher Course*. Register & Payment may be made online at www.azagc.org – click on the AGC Training Course icon. This course fulfills the ADOT ECC requirement for refresher training. Certificates with expiration dates will be issued at the end of class.

August 2010

August 1-5 (San Antonio, TX) *StormCon*. See www.StormCon.com for more information and to register online.

October 2010

October 13-15 (Panama) *Ibero-American Conference, Control of Sediment and Erosion: Its Impact on the Environment and Economy*. See www.congresoerosionpanama.com for registration and more details.

November 2010

November 1-3 (Rancho Mirage, CA) *CASQA conference, "Rethinking Stormwater - Creative Solutions to Complex Problems."* See www.stormwaterconference.com for registration and more details.

November 7-9 (Kings Beach, CA) Proposed *"Preserving Lake Tahoe's Splendor" Workshop* featuring Native Revegetation Practices as outlined in Revegetation Guidance Document (publication pending) spurred by 3-Year Research Study undertaken by CA Tahoe Conservancy/AECOM; Field Trip (Sunday) and 2-day workshop; details pending.

WHERE OUR 2009 SCHOLARSHIP STUDENTS ARE TODAY

Notes of Appreciation and Status Reports

Angie Quintana-Jones, Cal Poly State University, San Luis Obispo

The WCIECA scholarship helped me pay for tuition and work on my graduate research, and I am so grateful that I was chosen to receive it. My graduate research involves working with a local, small-scale farmer to reduce chemical fungicide applications, which can degrade soil quality, by using a product containing a species of soil bacteria (an actinomycetes species) antagonistic to some fungal plant pathogens in the soil. I am evaluating the efficacy of the product, not only for effectiveness at increasing yield and decreasing disease incidence, but also for economic feasibility and ease of use. My coursework this year included Advanced Erosion Control, Advanced Soil Fertility, Advanced Plant Pathology, Organic Agriculture, Research Planning, Biological Control/Pest Management, and Statistical Methods. All of these classes have been very informative, and have given me a broader knowledge base. I continue to intern for the NRCS as a Soil Conservationist, and I plan to graduate from Cal Poly with my M.S. in soil science by June 2011.

IECA Mentor: Brent Hallock, Professor, Cal Poly State University Earth and Soil Sciences Dept.

Dave Rios, University of Nevada, Reno

I completed a master's degree in environmental and natural resource science in December 2010 from the University of Nevada, Reno. My research as a graduate student focused on two important natural resource issues in the Lake Tahoe basin: Invasive plants and nonpoint source pollution.

The arrival and spread of aquatic invasive species in Lake Tahoe including plants, fish, and invertebrates raise concern over the susceptibility of terrestrial systems to invasion. My research included conducting baseline botanical surveys to document the native and introduced plant species in water quality treatment basins. This research also focused on understanding how vegetation communities change over time with respect to native and introduced species.

My research also investigated nonpoint source nutrient and sediment pollution for a small urbanized Lake Tahoe watershed. Pollutant loads were estimated using water quality monitoring data and a constant concentration water quality model. These estimates were compared with other primary stream monitoring stations within the Lake Tahoe basin. Regression analysis revealed significant relationships between watershed percent impervious area and nonpoint source pollutant loads. Our results suggest monitoring data and simple water quality models are useful tools for understanding nonpoint source pollutant loading in urban environments.

During my time as a graduate student, I was a recipient of the WCIECA University scholarship. This award was not simply a financial boost for my education, but also enabled me to interact with other IECA members. After attending an IECA-sponsored technology transfer workshop last summer, it was clear to me the IECA is an excellent organization for networking with like-minded practitioners in the erosion and sediment control field.

Since graduation I have been employed by Nichols Consulting Engineers in Stateline, Nevada. I have been involved with numerous natural resource projects including mapping a municipal storm drain system, assisting with the design of erosion and sediment control projects, and developing proposals for water quality monitoring projects.

IECA Mentor: Julie Etra, Principal, Western Botanical Services, Inc. ☁

Peter McRae, WCIECA Director

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