



International Erosion  
Control Association

# Western Chapter News

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

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## Survival Theme Hits Home For IECA Members At ECo9 Reno Conference

The EC 09 Connect to Solutions Conference theme of "Survivor Challenge" hit home for many of the attendees in this challenging economic climate. IECA provided, and the Western Chapter hosted, a well-attended Reno venue for high quality technical classes, products exposition, and strategic meetings to address the shifting market place and tighter economy. Attendees also enjoyed numerous networking and recreational opportunities throughout the conference. Many thanks to Russ Adsit, the outstanding Denver staff, the dedicated IECA Board, as well as legions of volunteers from the Western and other chapters for making EC 09 such a memorable conference.

Technical classes such as EC31 Digital Data Collection for NPDES Compliance helps our members improve the effectiveness and save time on their erosion control programs: EC33 Post-Construction, LID, and Smart Growth helps build more effective Municipal Programs which help tie in with improvements in our environment by developing effective post-construction programs.

New products were offered by long-term exhibitors such as North American Green's Sediment Stop Biodegradable Filtration System or American Excelsior's Curlex CL, which offers the benefits of proven curlex fibers at competitive pricing. New Companies such as Soil Nail Launcher Inc, Rethceif Packaging and Carolina Fibers were first time exhibitors at the expo adding new sources and ideas for these difficult economic times.

Special events such as the chapter leaders training, international reception, awards luncheon, focused committee meetings, and lively conversations in the "sediment basin" lounge area illustrated the strength, diversity, and collaborative character of the IECA. The Western Chapter figured prominently at ECo9, not only in being honored with the Rick Granard award for excellence, but in having many presenters, exhibitors, and representatives at all the committee meetings. Western Chapter member Mike Chase



The Western Chapter's most senior member Alfred Nitta, assisted by chapter V.P. Craig Benson, draws surveys for the iPod winners.

was officially installed as the new President of the IECA Board at ECo9. The Western Chapter also hosted several special events throughout the conference, including our annual members meeting and a dinner with our sister Ibero-American Chapter. Our chapter booth was also a hub of activity, including a members survey and a drawing for iPods.

Congratulations to Western Chapter members Doug Loudon, Brent Hallock, and Wendell Ho for winning the iPods!

I found that the IECA ECo9 Conference was the place where I always come to get recharged, and this year more important than ever due to the down turn economy. There was frank talk about the realities of our industry but I find this is a group that is always looking forward to the future and thinking out of the box when it comes to improving our planet's environment.



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# President's Message

We live in challenging times. Over the past year, we've seen a declining housing market, sharp increases (then decreases) in gasoline prices, and growing unemployment due to a weakening economy. Throughout our Western Chapter region I hear bleak news of a general slowdown of construction development, which has translated into declining demand across-the-board for engineering/environmental design consultants, declining demand for contractor services, declining demand for products, and so on. In the face of declining professional services and product demand, many of us have experienced seemingly never-ending monthly increases in raw material prices for manufacturing erosion control products (petroleum-based products; protein-based products etc.), the misery compounded by escalating fuel price surcharge fees (now abating somewhat) as those products ship out the door.



**Peter McRae, WCIECA President**  
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Things aren't any better in Washington and Sacramento. The federal budget deficit continues to grow, and, this year, the debate over California's annual budget was longer, more contentious, and more divisive than ever before (I can't speak for the State budget debates in Arizona, Nevada and Hawaii). The Wall Street meltdown initially played out in a twilight zone of excessively-compensated geniuses explaining why they needed taxpayers to bail out the companies they had looted, all the while receiving spa treatments at \$500,000.00 per retreat presumably organized to reward high achievers. This prompted me to re-address our policies and procedures for expending monies on behalf of Chapter members.

Be assured that the "goings on" at Western Chapter-IECA are disappointingly sparse compared to what appears to be business-as-usual on the "other Coast". We are financially sound, and managing our funds conservatively. We have yet to enter the sophisticated world of financial derivatives in an effort to maximize the return on whatever monies (of yours) that we have custody of. Yet in pursuit of our mandate to offer quality educational opportunities to our members, we plan to spend our fiscal resources on bringing you talent to answer your questions even if the volunteer organizers are "flying coach" and the training workshops and anticipated field trips being planned for this coming summer take on a decidedly "grass roots" character.

Prior to the EC09 Reno Conference we appraised you of a multitude of opportunities to volunteer segments of your time at the show in return for conference discounts, efforts that both lower the cost of staging the Reno Conference, while enabling more folks to attend. Similarly, the published registration fee for the "Native Revegetation: The Sustainable Erosion Control BMP" Training Workshop sponsored last December 9 & 10 in Woodland, CA was subsidized by the Chapter in an attempt to encourage as many interested parties as possible to attend. Early registration, which helps the Board in its volunteer efforts to host the Workshop, was also rewarded with a fee reduction.

All in all, we are doing what we can to ease your distress through these challenging economic times. If you have ideas on how we might better assist our members to get through the next 6 – 12 months financially intact, please contact us at [westernchapter@gmail.com](mailto:westernchapter@gmail.com) or (530) 272-2407 and we will see what we can arrange. Now more than ever, we need to work together.

See **President**, continued on page 3

## Photos from EC09



IECA members getting a first-hand look at erosion control Reno-style.



Reno-based consultant Julie Etra of Western Botanical Services and contractor Kym Kelley of Kelley Erosion Control Services leading a chilly but informative field tour entitled "You Take the High Road" to a large highway project near Reno.

## Order Your Western Chapter Polo Shirt Today!



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Your Board's focus continues to be centered on the implementation of the Steering Course Adjustments (outlined in the "Winter 2008" Newsletter) designed to enrich the education, networking and professional development experiences that accrue to becoming a Western Chapter-IECA member. To the extent that the Partners for Excellence Chapter awards program recognizes and rewards Chapters that excel at management, communication, member recognition, working with volunteers and strategic planning in the course of working together with IECA for the benefit of the erosion and sediment control profession, Western Chapter appears to be "on the right path". After a 1-year hiatus, we again were awarded the Rick Granard Award of Distinction.

Along with this highest honor given to a Chapter, Western Chapter was also awarded the Education/Outreach Award of Achievement, as well as an Honorable Mention for the Membership Development Award of Achievement. The good news is that most Chapters are healthy and excelling with 90% or higher completion rates of all Partners for Excellence tasks. It must be acknowledged that Western Chapter has a competitive advantage over many Chapters by sporting both a high membership, as well as members who are actively involved in education outreach. In a spirit of fairness, it has been Western Chapter members who have been responsible for 90% of the recommendations for upgrading the Partners for Excellence by leveling the scoring playing field in favor of Chapters with more modest membership numbers.

In closing, the Board continues to struggle in its efforts to divine the wishes of you, our members, with regard to what activities/training workshops to sponsor. From the member survey we conducted during the ECO9 Reno Conference we learned that you want us to be active, but that the list of desired activities was extraordinarily diverse. That diversity of interests allows us to support members with the energy to organize an activity around their particular passion, knowing that there will almost always be a segment of the Western Chapter members who will enjoy the function. Looking forward to seeing as many of you as possible at these functions this summer. ☁

# Deserving Students Wanted!

## Western Chapter Announces New Scholarship

Please let students, your alma mater, alumni association, and academic contacts know that your association, the WCIECA, is offering academic scholarships. For 2009-10 we have available two tuition-only scholarships in the amount of \$2,500 per academic year for junior, senior, or graduate school level students with a demonstrated interest in pursuing a career in the erosion and sediment control profession AND who are enrolled in a related degree-program at an accredited 4-year college or university. Since erosion and sediment control is a cross-disciplinary field, a wide variety of degree-programs will be considered, e.g., engineering, hydrology, soils, geology, forestry, environmental studies, range management, watershed, ecology, natural resources planning, etc. Students must be enrolled in institutions within the four-state area of the WCIECA, i.e., CA, AZ, NV, or HI.

Interested students may download applications from the Western Chapter IECA website [www.wcieca.org](http://www.wcieca.org) or contact Cyndi Brinkhurst at [westernchapter@gmail.com](mailto:westernchapter@gmail.com). Applicants must submit a 500-word essay, three letters of recommendation, and post-secondary academic transcripts (unofficial transcripts okay) along with the application. Applications are due between May 1 and June 1 of each year proceeding the Fall academic year to which the scholarship will be used. Awardees will be notified by July 1.

Help us get the word out about this exciting opportunity! ☁

## WCIECA Board Elections on the Horizon

Each year in July three Western Chapter Board full term (3-year) Director positions are up for election. Are you ready to be next?

The Board is seeking individuals who want to actively participate in creating a vision for the Western Chapter and working to implement that vision. Key responsibilities for the Directors are managing and administering the Chapter as a not-for-profit corporation, creating educational opportunities for the Chapter members, helping the Chapter and IECA grow, and responding to member questions and concerns. The Chapter needs everyone's support and participation to make this a viable organization; please consider running for a Director position if you can make the commitment. There are many ways you can give back to the industry, but none as valuable as helping join erosion control professionals in the pursuit of shared knowledge and experience.

If you have been an active Western Chapter member for at least one year and are interested in running for a Director position, please email your brief candidacy statement (a description of yourself and an explanation as to why you want to serve on the Western Chapter Board of Directors) to Craig Benson, Administrative Vice President at: [westernchapter@gmail.com](mailto:westernchapter@gmail.com).

Candidacy nominations must be received by Friday, JULY 3, 2009. Candidacy statements must be received by the same day if self-nominated. Your statement should be no more than 200 words. If you have any questions about serving on the Board or about your eligibility, please contact a current Director, contact information is on the WCIECA web site [www.wcieca.org](http://www.wcieca.org). ☁

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## WCIECA Board Member Profile

# Jane E. Ledford, CPSWQ

Jane is the President of JL StormWater Consultants, Inc. (a woman-owned small business). She has over 14 years of government and commercial experience managing permit applications at the State and Federal levels and preparing Storm Water Pollution Prevention Plans (SWPPPs), Post-Construction Storm Water Operation and Management Plans, Water Quality Technical Reports (WQTRs), Spill Plans, and permit application for submittal to the various resource agencies. She has worked for the U.S. Army Corps of Engineers, San Diego Regional Water Quality Control Board and Rick Engineering Company. She is trained in Wetlands Delineation from the U.S. Army Corps of Engineers and the Wetland Training Institute, and is, also, trained in air quality requirements by the San Joaquin Valley Air Pollution Control District and the South Coast Air Quality Management District. She enjoys public speaking and teaching, regularly presenting storm water related topics at the BIA of San Diego and the Associated General Contractors of America, San Diego Chapter.



**Jane E. Ledford, CPSWQ**  
WCIECA Co-Technical VP  
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Jane was born and raised in San Diego, California. She has been married to Larry for over 27 years and has a daughter, Stefanie, who is a Second Lieutenant in the US Air Force serving as a nurse at Travis AFB. Jane and her husband enjoy traveling with recent trips to Japan and Thailand. The family is involved in charity work including feeding the homeless through God's Extended Hands. She enjoys golfing and playing the clarinet with the Mt. Miguel Alumni Marching Band. Once a year she marches with the Band in the Annual Mother Goose Parade in El Cajon, California.

Jane is delighted for this opportunity to participate with the board and the organization to provide to a forum for members to receive quality training and access to the latest resources for sustainable and effective methods of preventing erosion from construction sites. ☁

### 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 Craig Benson, WCIECA Administrative Vice President at [craig@nrsrcaa.org](mailto:craig@nrsrcaa.org) and we'll publish them in the next issue of *Western Chapter News*!

### 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 forward your contact information to [westernchapter@gmail.com](mailto:westernchapter@gmail.com) and we will update our records.

## Professional Listings

**Western Botanical Services**, Julie Etra, Owner. 775-849-3223, 775-849-3303. WBS provides consulting services for design of erosion control, wetlands and riparian areas as well as botanical surveys and wetland delineations. Construction management services are also available.

## Upcoming Events

May 2009

**May 5** (Reno, NV) *Working in the River and Permitting Workshop*, Harrah's Reno, NV, 9:00 AM to 4:00 PM. Registration fees will be sponsored by the City of Reno, Granite Construction, and CH2M Hill if the registration is submitted by May 1. It will be of particular interest to engineers and others who are directing or doing work in waterways. Registration includes lunch and workshop materials, and the newly developed "Truckee River Restoration and Construction Site Permitting Handbook".  
[www.tmstormwater.com](http://www.tmstormwater.com).

**May 7, June 11** (Phoenix, AZ) *Erosion Control Coordinator (ECC) Refresher Course*, AGC, 1825 W. Adams, Phoenix, AZ 85007 (602) 252-3926. For more information see [www.azagc.net/index.php?cPath=45&osCsid=a14d52c045681c984143cb55c4811d06](http://www.azagc.net/index.php?cPath=45&osCsid=a14d52c045681c984143cb55c4811d06)

**May 11-15** (South Lake Tahoe, CA) *Intro to Process-Based Stream Restoration: Basic principles of form and process, project context, sustainable design, and the unique circumstances of the Western US*, 8:30 A.M. to 5 P.M. Inn By The Lake, 3300 Lake Tahoe Boulevard, South Lake Tahoe, CA 96150.

Instructors: Tim Abbe, PhD, PEG, PHG (ENTRIX, Seattle WA)  
Brendan Belby, MS (ENTRIX, Sacramento CA)  
Mike Rudd, PE (ENTRIX, Concord CA)  
Charley Miller, PE (ENTRIX, South Lake Tahoe CA)  
Tom Taylor (ENTRIX, Sacramento CA)  
Katie Ross-Smith, PhD. (ENTRIX)

See [nwetc.org/hyd-512\\_05-09\\_tahoe.htm](http://nwetc.org/hyd-512_05-09_tahoe.htm) for more info and to register!

See **Upcoming Events**, continued on page 9



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Panel Discussion: (left to right) Dr. Angel Menendez, Miguel Castillo, Jesus Cardozo, Craig Benson, and John McCullah.



Ibero-American Chapter President Gustavo Salerno.

# Ibero-American Chapter Conference Update

**IV Congresso Ibero-Americano de Controle de Erosão e Sedimentos (CICES)  
Belo Horizonte, Brazil, Aug 4 - 8, 2008**

## Our Ibero-American Sister-Chapter welcomes three Western Chapter members to CICES IV

The heroic efforts of conference coordinator Luiz Lucena, aided by a diligent organizing committee and bolstered by the apt participation of the Ibero-American chapter leaders, resulted in the launching of the fourth annual Ibero-American Congress for the Control of Erosion and Sediment (CICES) in Belo Horizonte, Brazil. Building upon three prior annual CICES conferences in Buenos Aires, Argentina; Lima, Peru; and Bucaramanga, Colombia, CICES IV was staged in the colonial MinasCentro building in the city of Belo Horizonte, State capital of Minas Gerais in the heart of Brazil's mining region.

The importance of erosion and sediment control, soil rehabilitation, and vegetation establishment as a vital part of environmental protection in Brazil and the rest of Latin America was made evident by the attendance of many representatives of the mining industry, as well as local watershed protection groups, consultants, academics, and students. Conference participation was dominated by Brazilians but also included attendees from many other South American countries in addition to a contingent from Angola, Africa.

In keeping with the IECA conference model, the congress started with two days of full-day training courses, followed by several days of short technical sessions, panel discussions, an author's day, and a nightly trade show. Three Western chapter members were honored to be invited to anchor the pre-conference training courses. John McCullah presented two full-day courses in English: one on Erosion Control for Unpaved Roads and the other on Streambank Restoration. IECA Director and Sister Chapter liaison Julie Etra presented a full day course in Spanish on Sustainable Native Plant Establishment, and WCIECA Vice-President Craig Benson presented a day-long course in Portuguese on Hazard Mitigation for Communities at Risk. John McCullah was one of the featured authors on the Authors Day event and the entire WCIECA delegation were also guest panelists in several forum discussions.



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Among the most well attended courses were those presented by the IA Chapter Vice-President Luiz Lucena and Dr. Terezinha Galvão on the Principles of Geotechnical and Soil Bioengineering. IA chapter President Gustavo Salerno and Dr. Angel Menendez also presented a full day course on the Evaluation of Slope Erosion Using the RUSLE Model. The conference sponsor and founder of Deflor Bioengineering, Aloiso Pereira presented an informative course on Plant Selection for Erosion Control and Degraded Areas.

Overall, the Western Chapter delegation was impressed by the degree to which successful mine reclamation in Brazil is focused on developing, and holding in place, healthy soil. This includes detailed analysis of soil texture, nutrients, organic matter, pH, toxicity, microflora, and microfauna, etc. A mine is considered reclaimed when the soil is evaluated as able to maintain vegetation in relative perpetuity.

See **Ibero-American**, continued on page 6

The level of understanding and use of soil mycorrhizae and rhizobia appears to be generally more widely practiced than in the U.S. However, in sharp contrast to the U.S., there is little value placed on developing site-specific plant associations or restoring specific habitats and the use of native plants for mine reclamation is not emphasized. Instead, the use of ornamental and agricultural cover crop plants is encouraged. This is partly because there are virtually no commercially available sources of native plant material and there is an abundance of low-cost seed for cover crop species that can be used for mine reclamation and erosion control.

Part of IECA's challenge in growing internationally is to understand the key factors that generate the need for erosion control and what technologies are being used to address the needs. This is so that we can both learn from other erosion control professionals around the world and also help provide education and resources that help meet the specific erosion control needs. In the case of Brazil, it appears that IECA has much to learn from our Ibero-American counterpart's building of edaphic (soil) conditions for vegetative success and they could benefit from the level of discernment that most Western Chapter members employ when developing plant palettes leading to the creation and restoration of targeted habitats.

A highlight of the Ibero-American conference were the interpretive booth and presentations by a local watershed group committed to the return of fish the once grossly polluted Rio das Velhas watershed by 2010. The Western Chapter delegation went to visit project proponents at the beautiful and expansive Federal University of Minas Gerais (UFMG) and saw several opportunities for partnerships on field projects through IECA's SOIL Fund.

Our participation was made possible, in part, by full or partial travel stipends provided by the IECA and the Western Chapter. This reflects both IECA's commitment to increasing our international membership and the Western Chapter's support of our Ibero-American sister chapter. As one sponsored to go by the Western Chapter, I wish to sincerely thank the membership for this opportunity. John, Julie, and I hope that we represented you well. ☁

## WCIECA 2009 Board of Directors

For complete contact information for your Western Chapter board of directors, please visit [www.wcieca.org/members.htm](http://www.wcieca.org/members.htm)

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Meeting with staff: (L to R) John McCullah, Craig Benson, Dr. Scotti Muzzi, and META 2010 staff.



Meeting with the creators of the META 2010 Program: L to R Julie Etra, Dr. Jose Carlos Carvalho, Dr. Terezinha Galvao, and Craig Benson.

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# Native Revegetation: What Works

## Workshop A Resounding Success

Feedback has indicated that the 2-day workshop held in San Diego, CA on June 19th and 20th, 2008 was “one of the most productive revegetation gatherings attendees had ever attended”. There are calls for both follow-up repeat workshops (again addressing native revegetation design challenges) up in Sacramento, CA, and in Phoenix, AZ, as well as a sequel workshop addressing the seeding design implementation challenges we face.

In addition, many participants have requested an advanced “Day 3 + 4” continuation of the San Diego Workshop, a request we have responded to by organizing the Technology Transfer Workshop scheduled for December 9 & 10 in Woodland, CA.

The caliber of key presenters was “top notch”, both as to world-ranked science and as to relevance of content to attendees’ interests. Attendees were passionate about their profession and were in San Diego looking for answers; they were not intimidated or resentful of the “performance” emphasis of the Workshop’s title or prime objective. It was encouraging to witness consultant folks traveling to San Diego from eastern Arizona and as far north as Eureka, CA in the hopes of learning new technologies that might benefit them in their particularly harsh environments.

While the Workshop was structured along conventional lines with a series of invited speakers entertaining questions from the floor both during and after their presentations, we experimented with encouraging a “debate” format to spark “inspirational interaction” between presenters and attendees alike. These interactive sessions are somewhat akin to surfing downwind in a strong sailing breeze: one is never quite sure where one is going to end up, or how long the ride will be, but it can be exhilarating from start to finish. Seemingly dysfunctional procedural practices primarily sparked our free-form sessions, but conventional under-performing native seeding practices may well come in for scrutiny and/or challenged from the floor this coming December in Woodland, CA.

A good percentage of the “spirited debate” centered on a number of operational practices that are perceived by attendees as being dysfunctional, including (a) the difficulties of ensuring that one’s seeding designs are faithfully implemented in the field; (b) native seed availability; (c) problems with “dumbing down” specifications that initially call for top quality seeding materials; (d) the unavoidable incursion of mediocrity into specifications in response to pressure to avoid sole sourcing of top quality materials; and (e) the pitfalls

inherent to standardizing seeding design specifications in the face of site-specific revegetation challenges.

Attendees appeared to appreciate the emphasis on technologies. We experimented with the concept of not inviting vendor booths, and went to great pains to not mention any products by trade name. At times I could see that certain attendees would have appreciated being given the “transitional” product information to transport them over the abyss from “technology enlightenment” to the “nuts and bolts” of specific products (“what”-“how”-“why”) that were utilized on successful seeding sites cited as examples. This transitional product information might better provide the means to attain revegetation success on similarly-challenged seeding sites. Consequently, vendor booths designed to go some way towards filling this void are being encouraged for the Woodland, CA Workshop.



Attendees enjoying lunch on the terrace at the beautiful Mission Trails Regional Park Visitor and Interpretive Center.

The Workshop basically “broke even”; on a \$6,500.00 budget, we ended up negative \$633.00. 40% of the budget was applied to reimbursing presenters for their travel expenses.

## Technology Transfer

While we heard testimony that some revegetation projects are reportedly coming in successfully, attendees were universally looking for technologies and/or seeding practices that could raise the bar on the success of their native revegetation efforts on drastically disturbed soils in harsh environments. There are those who believe much of what is currently being implemented in the field on sterile soils throughout the Western U.S.

has limited chances of being successful. Even where revegetation designs are being faithfully implemented, the effort is not addressing certain key mandatory requirements of the soil for long-term establishment of plants, native and introduced species alike. For example, the critical prerequisite for sustainable plant growth being the re-establishment of stable humus in the soil.

## ***The Influence of Compost (ROM) versus Stable Soil Humus (Organic Acids) in Soil and Plant Metabolism: How do they differ?***

- ☑ Proponents of utilizing compost, even quality compost, on their revegetation projects would do well to reevaluate and/or re-confirm the scientific underpinning for this practice. We learned that while compost definitely qualifies as “organic matter” (the collective term for all material containing carbon and comprising 0.25% to 7% by weight in soil), it is definitely not “stable soil humus”, that complex of organic compounds broken down over a 50 year-to-250 year period of time under largely anaerobic conditions. It is this stable soil humus, accounting for 35% by weight of organic

matter in the soil, that is the prime foundation building block for sustainable plant growth in the soil.

- ☑ Stable soil humus contains humic acids, fulvic acids fractions, and disassociated aggregates of humin fragments. Soils with high humus levels (still a miniscule part of the soil profile at 1% on “3% OM” soils) require very little nutrients to produce abundant plant growth; enjoy improved aeration and water penetration in heavy soils; benefit from enhanced moisture-holding capacity in light-textured soils; enjoy increased cation exchange capacity (CEC); are protected by buffering to prevent an abrupt change in soil pH; and facilitate the access by plants to nutrients such as nitrogen, phosphorus, and sulfur.
- ☑ Compost or “Recent Organic Matter” (ROM)-derived compounds (neoformation) are byproducts of a short-term humification process. In general, compost products have the lowest molecular size and aromatic condensation content. Their benefit lies in their ability to enhance soil quality over time with multiple, long-term application of minimal quantities (for practical purposes, the application of amounts of compost in excess of 1,000 lbs per acre tilled into the soil will overwhelm most soil systems) per application.

If the process of plant material breaking down takes place in an oxygenated environment (on the soil surface) then the organic residues produced by this breakdown are lost into the atmosphere as carbon dioxide. This transition process can take anywhere from 4 to 6 months, and up to several years. Where the process of plant material breaking down takes place in an anaerobic environment, however, the creation of stable soil humus over a 50-to-250 year time frame (referenced above) results.

#### ***Deployment of Photosynthetic Nitrogen-Fixing Biofertilizers: a potential revegetation and erosion control BMP?***

- ☑ The technology is here to restore soil fertility, water retention, and reduce erosion without relying on the presence of vascular plants. We learned how it is now possible to exploit photosynthetic microorganisms (cyanobacteria) to convert solar energy to stored chemical energy, and fix atmospheric nitrogen (N<sub>2</sub>) into usable ammonia (NH<sub>3</sub>). The fixed nitrogen is ultimately incorporated into proteins and nucleic acids, biopolymers essential to life.
- ☑ The approach for restoring soil fertility involves isolating cyanobacteria that are native to the disturbed area, mass-producing the microorganisms, and applying the mixed culture to the disturbed soil. This process establishes a self-perpetuating, living, green-manure that becomes active when hydrated. Once established, the restored self-sufficient microbial communities (“Biological Soil Crusts” or “BSC”) creates a substrate suitable for the survival of vascular plants.
- ☑ In the interim, however, the BSC substrate acts as an excellent soil stabilization BMP, and one that is not vulnerable to drought conditions.

#### ***Cal Poly, San Luis Obispo Research***

A series of reality-based, scientifically-researched training presentations brilliantly delivered. See PowerPoint presentations.

#### ***Ramifications of this Technology Transfer Scientific Reality***

- ☑ The driving force behind utilizing compost on revegetation projects is as much political, as it has been less-than-stellar science. However, once one realizes that the re-establishment of stable humus in the soil (as an enlightened goal for revegetation success) should not be confused with the insertion of ROM into the soil, one can understand why current compost-heavy seeding practices have struggled to perform as anything other than a “pillowing interface” between rainfall and the soil surface. Inundating our revegetation flats and slopes with compost simply overwhelms the soil ecology of these sites.
- ☑ If we are to transfer our yard-waste depositories from landfills to revegetation slopes and roadside rights-of-way (versus possibly burning it for electric generation, for example), we need to develop technologies that will minimize (if not eradicate) the counter-productive influences on soil and plant metabolism of placing substantial amounts of compost on to our seedbed soil. It may well be that by supplementing the application of multi-ton per acre loads of compost (ROM)-derived compounds with simultaneous applications of humic-rich organic acids, we can accommodate this mandate to divert yard-waste away from our landfills.
- ☑ With greatest respect, it may also be time to consider taking advantage of revegetation technologies that have been demonstrating a consistent track record of revegetation success on native seeding projects throughout the Western U.S. over the past 12 years. Alternate emerging technologies that deliver immediate soil stabilization benefits while setting the stage for successful revegetation in the future once soils are biologically rehabilitated also merit closer scrutiny. Other technologies such as the direct transfer of live topsoil might also be aggressively pursued in the interests of making the most of every scarce funding dollar available for stabilizing drastically disturbed soils via “native plant establishment, the sustainable erosion control BMP”.
- ☑ The original short-term plan was to follow up on this initial 2-day “Native Revegetation: What Works” Technology Transfer Training Workshop with a repeat performance in both Sacramento, CA, Phoenix, AZ, and either Reno or Las Vegas, NV. Thereafter, it was proposed that WC-IECA would sponsor a 2-day “sequel” training workshop dealing with the critically important and more widespread challenges of revegetation seeding implementation.

Because of what transpired at the San Diego, CA Workshop, our current priority is towards sponsoring an advanced “Day 3 + 4”

See **Native Revegetation**, continued on page 9

## Native Revegetation, cont'd from page 8

continuation of the San Diego Workshop to be scheduled December 9 & 10 in Woodland, CA. This "Day 3 + 4" Woodland Workshop is being geared towards building on what was brought to light at the June 19-20 Workshop, with the twin objectives of (a) consolidating what was learned; and (b) thrashing out a more definitive path ahead for prospective native revegetation designers.

In summary, we had a lot of fun in San Diego in June, and the Western Chapter-IECA almost broke even financially while pursuing our mandate to provide quality training opportunities to our membership and co-hosting guests. ☁

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**Peter McRae**, WCIECA Director, President

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## WCIECA Member Profile

### JR Ashcraft, CPESC-IT

In the rural town of Ukiah in Northern California, an engineer is quickly becoming a leader in the erosion control industry. JR Ashcraft of Rau and Associates Inc. is from the Western Slope of Colorado, which is everything west of the Continental Divide. JR spent ten years in the Navy, attaining the rank of E6 before moving to Ukiah, California in 1999. He then took a job with Gallo Family Vineyards in Healdsburg within their Land Development Division, while attending classes at the Santa Rosa Junior College studying civil engineering. He has coached little league baseball for the past 8 years, and does voluntary work with the homeless through his church. JR started at Rau in 2001 as a staff engineer and project manager for the firm.



**JR Ashcraft**, CPESC-IT  
Rau and Associates, Inc.  
(707) 462-6536

Rau and Associates Inc. was opened in 1978 by George Rau, the current president of the company; and is a licensed civil and geotechnical engineer. The business has 14 employees and focuses on land surveying, civil engineering, and geotechnical engineering. They complete private, commercial, and public projects that range from single family residential to multiunit subdivisions. The firm has been a member of the American Society of Civil Engineers (ASCE) for twenty plus years, with JR being a member for the past nine.

JR has been a member of the International Erosion Control Association (IECA) for four years, going to three of the past four Environmental Connections. For the past two years, he has been training for the Certified Professional Erosion and Sediment Control (CPESC), the final test for full certification is on the horizon. JR writes Storm Water Pollution Prevention Plans (SWPPP) and creates engineered plans for projects. He regularly goes out after hours to inspect sites and offers advice to local contractors so that they stay in compliance with current regulations. Here is an up and comer within the industry, stay on the look out! ☁



Amphitheater at the Mission Trails Regional Park Visitor and Interpretive Center.

## Upcoming Events continued from page 3

**May 21 - 22** (Phoenix, AZ) *Erosion Control Coordinator Training*, AGC, 1825 W. Adams, Phoenix, AZ 85007  
(602) 252-3926. To enroll, please contact (e-mail) Ms. Amanda McGennis at [amcgennis@azagc.org](mailto:amcgennis@azagc.org). Ms. Julia Manfredi, CPESC and CPSWQ will be the ECC class instructor. The ECC Courses (16-hour) for 2009 can also be found at <http://www.azagc.net/index.php?cPath=34&osCsid=9c7fdfedabde744a36b6cee31b49e69f>

## June 2009

**June 30** (Email) *New Board Member Candidate Statements are due*. Forward your candidate statement to: [westernchapter@gmail.com](mailto:westernchapter@gmail.com). Talk to Craig Benson, Western Chapter Administrative VP for more info (707) 269-2065 or [craig@nrsrcaa.org](mailto:craig@nrsrcaa.org) or contact any current Board member via our webpage [www.wcieca.org](http://www.wcieca.org)

## July 2009

**July 15-31** *New Board Member Elections*

Do you have an event that you'd like listed in Western Chapter News or at WCIECA.org? Forward the info to [westernchapter@gmail.com](mailto:westernchapter@gmail.com).

