WESTERN CHAPTER
International Erosion Control Association

Western Chapter News

Serving Erosion Control Professionals in Arizona, California, Nevada and Hawaii

Fall 2002

Once Around Lake Tahoe, July Field Tour

By Julie Etra

The Western Chapter hosted its fourth field tour for the 2001-2002 season on Friday, July 19, 2002. A full bus of 48 participants, representing the regulatory sector, designers, suppliers and contractors left the 'Y" at South Lake Tahoe for a tour of projects around the Lake. Over a decade of erosion control and restoration projects have been completed in the Basin, so only a limited number of sites were included on the ambitious tour. However, numerous projects were observed from the comfort of the bus, with various participants narrating parts of the tour. Projects addressed source control, sediment control, as well as wetland and creek restoration. Throughout the day, there was a great deal of interaction and discussion among the participants, with a fair share of controversy. Some of the more interesting projects are highlighted below.

Control of sediment carried into Lake Tahoe by streams such as Trout Creek was a theme of the July 19 Field Tour.

The tour began with observations of the Pat Lowe Memorial bike path, which included erosion (source) control and water quality improvements. Native colonizing species including sulphur buckwheat, sagebrush, and rabbitbrush, have been highly successful given the continuing disturbance from roadcast associated with snow removal.

We visited an exceptional restoration project within the City of South Lake Tahoe, the Trout Creek Stream Restoration and Wildlife Enhancement Project. It featured two miles of new creek constructed over a three-year period in the low part of the meadow valley. Plan form, channel complexity and cross-section were designed based on geomorphic principles and remnant templates. Innovative use of meadow sod, generated during grading, resulted in an immediate and "initially" well-armored system of pools and riffles. Site-collected seed and mulch were used to stabilize bare soils. The project has been acknowledged by those who know as "the best restoration project in the Tahoe Basin."

Crossing into Nevada, the group observed the Stateline Stormwater Improvement Project located behind the Horizon Casino. Prior to completion extensive parking and impervious site features produced run-off laden with inorganic matter, road oils and coarse sediments. Run-off drained to Lake Tahoe via existing man-modified drainage courses within Edgewood Golf course. Treatment included various sand/oil interceptors, two Vortechnics 16000 units, bar rack vault, oil intercepting vault, and various large diameter junction vaults. Final polishing treatment occurs through a series of three ponds in the Edgewood Golf Course.

The Cave Rock Erosion Control Project, constructed in a steep subdivision on the east shore, was estimated as yielding 367 tons of sediment per year prior to construction. The subdivision was the single largest source of sediment and associated nutrients flowing to Lake Tahoe in the Cave Rock Watershed, resulting from the many very steep cut slopes. Source treatment included retaining walls, rock placement, and revegetation. A temporary irrigation system had been installed. Revegetation also included use of locally derived compost, slow-release organic fertilizer, and pine needle mulch.

A seeding rate of 128 lbs/acre, use of pine needle wattles, and the price tag of $205,000 per acre for revegetation, were sources of some discussion. The group also discussed the likelihood of vegetation persistence following discontinuation of irrigation.

See **Tahoe**, pg. 3

Volume 6, Issue 4

In this Issue

Advertising Opportunities

Reach prospects, customers and friends throughout our 4-State region via Banner-style ads displayed both on the Web Site and in the hardcopy WCIECA Newsletter! These ads require a calendar year commitment and cost only $350.00 each for the four-issue coverage. If you don't yet have a Banner ad, our Webmaster will produce one for you for a one-time charge of $50.00. What a deal!

In addition, "Professional Listings" are also available for Contractors, Designers, Engineers, Consultants, and others who don't sell a product but instead render a professional service. They cost $150.00 annually and your listing will include an instant e-mail link.

For more information, please contact:

Peter McRae
Chairperson
Chapter Communications
pmcrae@san.rr.com

President's Message

Dear Western Chapter Members,

The July field tour, which you can read about in the feature article, was an unbounded success. Julie Etra, outgoing Chapter president, and several Tahoe area Chapter members did an outstanding job on the very educational and fun field tour. With the assistance of the event sponsors, Earthsavers, Ewing Irrigation and Horizon, the event was also financially successful for the Chapter.

At the July Board of Directors meeting the 2002/2003 Chapter officers were elected. I will be serving as President. Mike Chase was elected to a second term as Administrative Vice President and Mel Mathews was elected as Technical Vice President. David Gilpin was elected Treasurer and new Board member David Franklin was elected Secretary. The next Board of Directors meeting has been tentatively scheduled for February 25, 2003, in Las Vegas.

The Chapter is busy with plans for the upcoming 2003 International Conference that will be held in our region once again. As host chapter for the Las Vegas conference, we have been asked to assist with staffing volunteer positions. If you are attending the conference and are interested in helping, look for the volunteer signup sheet on the Western Chapter website. Assistance is needed in areas ranging from registration to session moderators.

The annual Chapter meeting will be held at the conference. Each of the committee chairs will provide a brief update on their committee's goals and tasks for the rest of the year. The Board has received a lot of creative ideas from the membership and we are looking for assistance from the members on moving these ideas forward over the next year. A sub-committee of the Board is currently reviewing the Chapter by-laws to determine if any revisions are needed. If revisions are needed the subcommittee will present the revisions for the approval of the members at the annual meeting.

On the fun side, at the conference we hope to hold a few impromptu no-host evening gatherings. Stop by the Chapter booth in the Expo Hall to find out what is planned and also to register for two raffles the Chapter is sponsoring. The first raffle, open to all conference attendees, is for a free pass to our next regional chapter conference. The second raffle, which is only open to Western Chapter members, is for a free one-year IECA professional membership. The free professional membership was awarded to the Western Chapter as part of IECA's chapter growth awards program.

Finally, I want to personally welcome the new members who joined the Chapter since June. Welcome to Jonathan Colbert, Chris Conway, Kevin Cullen, Robert Dixon, Douglas Graham, David Lyons, Dennis Machida, Ted Miljevich, Dennis Peyton, Michael Silvey, Rodney Stevenson, Sidney Strauss, and Dale Wells.

I hope to see you all at the Rio Suites in Las Vegas.

Sandy Mathews

Mike Chase presents outgoing WCIECA president Julie Etra with a certificate of appreciation.

Calendar of Events

October 24 (Dublin) - CA Bay Area Workshops *Construction Site Planning & Management for Compliance with Phase I and Phase II NPDES Requirements* - presentations from the SF-RWQCB staff, and a visit to a local active construction site. http://www.abag.ca.gov/bayarea/sfep/programs/

October 20-21 (Oakland, CA) - California Native Plant Society Conference. More info at: http://www.cnps.org/education/education.htm

October 24-27 (Kings Beach, CA) - California Society for Ecological Restoration North Tahoe Conference, *Restoration With a View: Sustaining Fragile Habitats*. More info at: http://www.sercal.org/2002_conference.htm

November 15 - California Storm Water Quality Task Force General Membership Meeting, Release of the New California Storm Water BMP Handbooks. More info at http://stormwatertaskforce.org

July 27-30, 2003 - Soil and Water Conservation Society 2003 Annual Conference, Spokane, Washington. More info at http://www.swcs.org/

February 24-28, 2003 - IECA 34th Annual Conference and Expo, Rio Suites and Convention Center, Las Vegas, NV

IECA Professional Development Courses in the Western Chapter Region, 2002:
November 19 (Los Angeles, CA) - *How to Select, Install and Inspect Construction Site Erosion and Sediment Control Best Management Practices for NPDES Storm Water Permit Compliance*;

November 20 (Los Angeles, CA) - *How to Write a Storm Water Pollution Prevention Plan* (SWPPP). More info at http://ieca.org, or contact IECA at 970 879-3010

Lake Tahoe Tour Photo Highlights

Visitor Cathy Ford, ITD-Roadside Vegetation, joined the tour from Boise, Idaho.

Mike Hogan fielding questions from tour participants at the Cave Rock Erosion Control Project in Zephyr Cove, Nevada.

Victor Insera outlined the goals of the Snow Creek Stream and Wetland restoration Project on the north shore of Lake Tahoe.

Tony Pitts discussing use of coir logs to retain sediment at the Snow Creek stream restoration project.

Tahoe, cont'd from pg. 1

The bus traveled to Incline Village, observing Spooner Summit, and SR 28, NDOT projects. The lunch stop was at the Incline Creek Stream Restoration Project. This project involved removal of a parking lot, restoration of a reach of the creek and floodplain, and the very effective treatment of irrigation run-off from the adjacent ball field. Use of fertilizers on ball fields creates water quality problems that need to be addressed elsewhere in the Tahoe Basin.

The Brockway Summit project, located on State Route 267, is one of a series Caltrans has implemented in the basin to alleviate erosion and water quality problems. Large, steep, eroding slopes, with sparse vegetation characterized the pre-project conditions. Improvements involved laying back highway cut slopes, constructing rock slope protection, paving gutters and upgrading drainage structures, and work was completed in November 1998. In spring 1999, bare or unmulched areas were treated and remulched with pine needles. In November/December 1999 the cut slopes were planted with native trees and shrubs by the California Conservation Corps. Plants received soil amendments and were mulched with pine needles but no follow up watering was provided. Caltrans will continue to monitor the vegetation, slopes and soils until 2004. Remedial measures will continue to be implemented, using information generated from experimental trials.

We next visited the Snow Creek Stream Restoration and Wildlife Enhancement Project. This project was a cooperative effort to restore a degraded meadow located on the north shore of Lake Tahoe within Tahoe Vista. The overall restoration project was designed to re-establish a naturally functioning stream and wetland ecosystem along this impacted section of Snow Creek. The project included the following major components:

- ✏ Excavation, transportation, and disposal of approximately 25,000 cubic yards of contaminated fill.
- ✏ Construction of a new pond in a portion of the area previously occupied by the fill material, and seasonal wetland depressions around the new pond.
- ✏ Construction of approximately 950 feet of new stream channels.
- ✏ Construction of a new triple box culvert structure at Highway 28.
- ✏ Vegetative clearing and sediment removal downstream of Highway 28.
- ✏ Revegetation of approximately 3.5 acres of wetland.

The revegetation effort included salvaging wetland species from the existing site prior to construction for transplanting after construction. Native seed collected on site was used along with an additional seed mix to revegetate the area. A temporary irrigation system was installed to ensure vegetation establishment.

Jennifer Malcolm of Caltrans provided a spirited narration as we made our way south along Highway 89. Jennifer described different types of retaining walls and rock slope protection used for cut slope stabilization. PVC plantings of shrubs, placed in between rocks, had limited results in part due to settling and the initial method of planting.

Our last stop was the Upper Truckee River and Wetland Restoration Project/Lower West Side Component, in South Lake Tahoe. The project site includes 208 acres and involves the restoration of a disturbed wetland at the mouth of the Upper Truckee River.

See **Tahoe**, pg. 4

Tahoe, cont'd from pg. 3

Beginning in the 1950s, the river channel and surrounding wetland were substantially altered by subdivision construction activities in the Truckee Marsh. Construction of the project began in late May 2001, with removal of 82,400 cubic yards of fill from the site, restoring 11 acres of wetlands. Topsoil provided from the Trout Creek restoration project was applied to the new wetland surface, which was seeded and planted with wetland materials. A temporary irrigation system was also installed. Upland areas will also be planted in the fall of 2002. A portion of the natural water treatment capacity lost when the original wetland was disturbed will be restored, and the potential for nutrient uptake, filtering of suspended sediment by vegetation, groundwater recharge, and microbial denitrification will be increased. In addition, restoration of the site will enhance habitat for birds and mammals.

Following the tour, we re-grouped at Kiva Beach, where our numbers swelled with Western Chapter members and their families, for a fantastic barbecue sponsored by Ewing Irrigation. Thanks very much to our other sponsors, Earth Savers, and Horizon, and thanks to all the great presenters. We all look forward to the next field trip.

Lake Tahoe Field Tour Photo Highlights

Ed Kleiner asking questions of Troy Alexander at the Hekpa Erosion Control project stop.

Troy Alexander discussing vegetation of cut slopes.

Lake Tahoe field tour participants at the Pioneer Trail erosion control project site.

Regulatory Update

The State of Arizona has submitted a request for approval of the Arizona Pollutant Discharge Elimination System (AZPDES) program pursuant to section 402(b) of the Clean Water Act (CWA or ``the Act''). With this request, the Arizona Department of Environmental Quality (ADEQ) seeks approval to administer a partial program for discharges of pollutants into waters of the United States under its jurisdiction.

The proposed AZPDES program is a partial program which conforms to the requirements of section 402(n)(3) of the CWA. ADEQ's application for program approval applies to all discharges covered by the authority of that agency. This includes most discharges of pollutants subject to the federal NPDES program (e.g., municipal wastewater and storm water point source discharges, pretreatment, industrial wastewater and storm water point source discharges, and point source discharges from federal facilities).

The ADEQ has authority to regulate discharges from industrial facilities covered by all Standard Industrial Classification (SIC) codes. The ADEQ has authority to regulate discharges of storm water associated with industrial activity and discharges of storm water from municipal separate storm sewer systems. The ADEQ has primary responsibility for implementing a Pretreatment Program. The ADEQ has authority to regulate discharges from publicly owned and privately owned treatment works and for discharges from concentrated animal feeding operations (CAFOs) within the ADEQ's jurisdiction.

ADEQ is not seeking the authority to regulate the disposal of sewage sludge (in accordance with section 405 of the Act and 40 CFR part 503). EPA will retain NPDES permitting authority and primary enforcement responsibility over the sewage sludge program. ADEQ is planning to apply for this authority in the future. ADEQ does not have, and is not seeking, the authority to regulate discharges in Indian Country (as defined in 18 U.S.C. 1151). EPA will retain NPDES permitting authority and primary enforcement responsibility in Indian Country in Arizona.

By letter of June 5, 2002, the Governor of Arizona requested NPDES partial program approval and submitted an amended program description, amended Attorney General's Statement, amended Arizona statute and rules, and an MOA.

EPA received this package of materials on June 11, 2002. EPA Region 9 determined that the approval request received on June 11, 2002, along with supplements received on July 8 and July 10 constituted a complete package under 40 CFR 123.21, and a letter of completeness was sent to the Director of ADEQ on July 11, 2002.

See **Regulatory Update**, pg. 5

Regulatory Update, cont'd from pg. 4

EPA is required to approve the submitted program within 90 days of submission of the complete information unless it does not meet the requirements of section 402(b) of the Act and EPA regulations, or EPA and ADEQ jointly agree to extend this deadline.

Upon approval of the AZPDES program, authority for all NPDES permitting activities, as well as primary responsibility for NPDES enforcement activities, within the scope of ADEQ's jurisdiction, would be transferred to the State, with some exceptions. These exceptions would be agreed to by EPA and the State under the MOA that would be signed upon program approval. The EPA would retain on a permanent basis its authority under section 402(d) of the CWA to object to AZPDES permits proposed by ADEQ, and if the objections are not resolved, to issue federal NPDES permits for those discharges. EPA would also retain on a permanent basis its authority under sections 309 and 504 of the CWA to file federal enforcement actions.

More information is available at the following websites:

http://www.epa.gov/fedrgstr/EPA-WATER/2002/August/Day-01/w19323.htm
http://www.adeq.state.az.us/environ/water/permits/federal.html

Michael Broadwater, CPESC, Vali Cooper & Associates, 909-579-0804.

Water Quality and Construction Sites

Where does the time go? Is it just me or did that summer season fly by? With all the new regulations pertaining to sampling and analyzing storm water runoff I think it's a good time to discuss construction site pollutants and the potential effects they have on water quality.

Storm water runoff as most of us know is a carrier of pollutants to water bodies. Pollutants associated with construction can contribute to this problem if allowed to contact storm water runoff.

Some of the pollutants found on construction sites include:

- ✏ Nutrients from fertilizers, pesticides, construction type chemicals and solid waste.
- ✏ Sediment from wind or water erosion. Construction activities such as clearing and grubbing and earth moving will accelerate the erosion process.
- ✏ Trace metals from galvanized metal, paint and preserved wood. These metals attach to sediments in storm water runoff.
- ✏ Herbicides, insecticides, and rodenticides used on construction sites.
- ✏ Oil, grease and fuel from construction vehicle and equipment operations.

Pollution and Sediment

Sediment from construction sites can become contaminated with toxic chemicals, the toxins can accumulate in waterways and eventually be passed up the food chain. They can accumulate to levels that may be toxic to humans.

See **Water Quality**, pg. 6

Professional Listings

Marvin E. Davis & Associates, Inc., a provider of geotechnical engineering services in the Northern NV and Tahoe, CA areas, seeks experienced engineers, registered in NV and/or CA, for design and project management of geotechnical and materials testing projects. M.S. in geotechnical engineering and at least three years experience conducting geotechnical investigations required. Please fax resume to Personnel Manager @ 775-853-9199, or E-mail to MDA12000@aol.com.

Synergy Resource Solutions, Inc., Jack D. Alexander III, President. (775) 331-5577, fax (775) 331-5579, synergy@countgrass.com. We provide vegetation, water, soil, and air monitoring; reclamation and erosion control planning, permitting, and monitoring; and NEPA document preparation. Offices in Reno, NV and Alpine, WY.

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.

Kelley Erosion Control, Claudia J. Chambers CPESC, Kym Kelley CPESC, Helen Godfrey, Reno, NV 775-322-7755 Fax 775-322-6606 email kelleyerosion@worldnet.att.net. Services: Hydroseeding, wetland mitigation, stream channel stabilization, revegetation, dust abatement, drill seeding, BMP installation, biotechnical slope stabilization, strawblowing & reclamation.

JWA Consulting Engineers, R. Mark Hoefer Vice President, P.E., CPESC. Two offices to serve your needs; Zephyr Cove, NV- (775) 588-7178 fax (775) 588-1726, jwaeast@aol.com and Pleasant Hill, CA- (925) 939-5000 fax (925) 939-5878, jwawest@aol.com

WESTERN CHAPTER
International Erosion Control Association
c/o WBS Inc.
5859 Mt. Rose Hwy
Reno, NV 89511

Water Quality, cont'd from pg. 5

Excessive sedimentation causes water quality problems and degrades the habitat of aquatic organisms and fish. Sedimentation can fill in gravel beds that are used by salmon, trout, and steelhead for breeding. This can have an accumulative effect on the food chain for years. Sediment that becomes suspended creates cloudy waters that block light transmission and interfere with plant and fish growth.

Other Pollutants

Heavy metals from batteries include cadmium, lead and zinc. The dangers of lead poisoning are well known, cadmium and zinc are associated with renal dysfunction.

Petroleum products and antifreeze are other toxins introduced into our waterways from construction activity.

Excessive nutrients lead to accelerated plant and algae growth that contribute to aquatic habitat depletion and lead to fish kills.

Final Thought

Remember that polluted runoff from a construction site can lead to serious water quality issues. Implement proper BMPs, and M & M...Monitor and Maintain those BMPs.

Mel Mathews, CPESC, Western Chapter Board Member
AEI-CASC Engineering, 949-453-1748

Sediment from construction sites can carry toxic pollutants.

These construction materials should be covered and contained to reduce contact with storm water.