



SoCal SETAC NEWS



Society of Environmental Toxicology and Chemistry
Southern California Chapter

Volume 14, Issue 2

www.socalsetac.org

September 2007

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President's Corner....

KEN SCHIFF

SoCAL SETAC PRESIDENT

Greetings All!

The southern California Chapter has been very active the last quarter. We held our Annual Chapter Meeting on April 9-10 in beautiful Lake Arrowhead, CA. Punctuated with four platform sessions, two short courses, and a raging poster social, this was one of the finest Annual Meetings we've ever had. The Plenary Session on "fate and effects of nutrient related water quality" brought speakers from as far away as Arizona. Best of all, the meeting attracted nearly 300 attendees, with over 50 new members! A tip-o-the-hat goes to Past President Dan "Pacifco" Schlenk for all his hard work putting this fine meeting together.

SoCal SETAC was actively encouraging young scientists in May and June. Our Chapter members were judges at all six County Science Fairs covering Santa Barbara to San Diego. There is some amazing young talent out there and these high school students never stop surprising us with their ingenuity and hard work. Each

winner received a \$50.00 cash award, one-year student membership in the chapter, and an invitation to the student, student's family and teacher to attend and be recognized at our annual meeting. Thank you to Phil Markle for organizing this terrific outreach.

July marked the transition to our new Chapter Board and Officers. We would like to thank outgoing Board Member for their service to the Chapter: Erika deHollan, Susan Gardner, Wendy Rose, and Kathy Rose. A big welcome to our new Board Members: Christine Lee, Jenny Jay, Chris Osuch, and Dave Gibson. I would also like to welcome our two new officers; Chris Stransky (Vice President) and Kat Prickett (Secretary). We've already had our first Board meeting and exciting things are ahead for the Chapter this year. This includes items like "green think" that will be designed to put our thoughts into action, spicing up our social activities, and checking out new locales for our Dinner Meetings.

Our next Dinner meeting will be October 3rd. See you then!



Meet the Board

Dave Gibson

Senior Environmental Scientist

San Diego Regional Water Quality Control Board

"It is not what a lawyer tells me I may do; but what humanity, reason, and justice tell me I ought to do."

-Edmund Burke

"Power comes not from power everywhere, but from knowing where to put it on." -Norman Maclean, "A River Runs Through It"

"To despair of the entire situation...is another reasonable alternative. But the unsatisfactory thing about despair, in my view, is that besides being fruitless it's far less exciting than hope, however slim."

-David Quammen, "The Song of the Dodo" (1996)

I can still remember the day that I first became curious about water, streams, and the things that live in them. I was attending Mary Morrison elementary school in Groton, Connecticut. A couple of years earlier we'd moved there from California. My Dad, based on a sub at Pt. Loma was offered the chance to choose his next posting. In his own opinion, he foolishly put San Diego at the top of his list and Groton as his last choice. He got Groton and I found a deep and abiding affiliation for connection to water, bugs woods, four seasons, and science during my formative years.

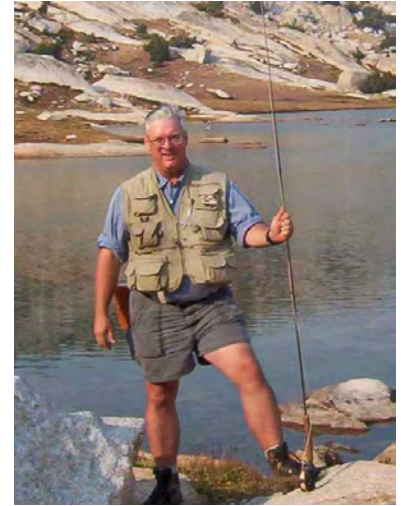
With my Dad in the Navy and my Mom a stay-at-home-Mom, we were poor- dirt poor- after moving from California. Unable to afford an apartment or a hotel, we had to live in a small tent in a dingy campground for a few months waiting for a unit to open up in Navy Housing. My Dad spent those few months in and around Rota, Spain; my Mom seriously considered divorce. It was late autumn and closing in on Thanksgiving before we lucked out and moved into a tiny, but wonderfully dry house (painted US Navy-gray) just before a huge storm big storm flooded out that campground. Great place.

Back then, it was customary and natural for kids to walk to school in all weather and in all hazards. Good character building stuff. That included the slipping through dodgy neighborhoods, braving the odd Nor'easter, and trudging through lots slushy snow in winter in leaky, second hand galoshes. To avoid the rougher neighborhoods, I preferred a path through the woods. Coming home from school one afternoon, I decided to follow one stream to its source from where it ended in a small woods pond near the school. What fun! I still vividly remember exploring tributaries, stopping often, turning over rocks and branches, and finding "neat" critters. I put some water striders I caught in my lunch box for my parents and entomophobic sister to appreciate when I got home.

Time passed. A lot of time passed. Eventually and a few miles later I found the "source" of the stream to be a storm drain and turned for home a couple of miles distant. It was dark by then. As I arrived home, I took note of the Groton police cars, MP cars, flashing lights, and a fair amount of commotion at our small gray house where a search party was being formed. I seriously considered turning back. My homecoming was loudly greeted and I was promptly grounded, really grounded. I still had to walk to and from school, but I was to be

escorted for a week or two until my Mom got tired of it. I don't remember what became of the water striders.

I was in for a real culture shock when we returned to California a couple of years later. In Connecticut, alone or with my Dad, I could readily hike and explore woods and



Dave performing a little bioassessment in Sierra streams.

streams almost at will and fish in dozens of

ponds within a short distance of our home. We spent several summer vacations camping, hiking, and fishing in Vermont, New Hampshire, and Maine. In El Cajon, on the other hand, I found that my new neighborhood was hot and dry, the skies an unpleasant brown, there were no streams or ponds nearby, and the people there spoke with an odd accent. Moreover, I rediscovered that there are two seasons in El Cajon: "Smoggy-and-Hot" and "Smoggy-and-Not-Hot." To top it off, shortly after we returned, a massive wildfire burned from the Laguna Mountains right to the edge of town in a couple of days and turned the sky red-black and the air oppressively thick. Great place.

I gradually came to appreciate southern California better and became well acquainted with the San Diego and Sweetwater rivers and found that these streams and their tributaries are all the more interesting because they exist in such an arid climate and the ecosystems they support are so well adapted to that condition.

Stumbling into college and searching around for a major, I took an Environmental Biology course that showed me there were actual careers in science that included working in my favorite places – streams. Almost all of my friends were pre-med, pre-vet, marine biology, or ecology majors. I chose entomology as my area of interest in biology. My only concern was just how do I get a job as an entomologist? Trying to find career paths, I took courses and odd jobs for Dr. Ted Cohn, Dr. Ron Monroe, and Dr. Kathy Williams. What an education:

Item: Several field biology students on a very a hot, humid summer afternoon deep in the San Luis Rey river bottom setting pan traps and sweeping trees. Our eminent Professor and employer stumbles on a cache of pornographic novels. The Learned Professor begins to read aloud and with exaggerated emphasis on various adjectives to a stunned and then hysterical audience of worshipful students.

Item: I am sitting on a sand dune at 9:00pm and it is 114°F. I've just spent the last couple of hours laying out 3 transects with little piles of oatmeal every 3 ft over 200 yards. A few weeks ago, one of my favorite professors asked if I would go on a collecting assignment for him. Finally, actual field work for money (gas and a small per diem) on an important project! I am to collect Camel Crickets, preferably males. In Death Valley. In June. I foolishly ask few questions and take the assignment and two very large bags of oatmeal. As he hands me my collecting permits and letters, he adds Lee Vining (my suggestion) and some sand dunes in Eureka Valley (his idea) to the assignment. Now, I am having second thoughts. As the sun goes down and I start walking my first transect, I realize this is not going to be easy. Before I go twenty yards, I find my neat, little piles of oatmeal are a big hit with the resident rodents. Like Hansel and Gretel I search around for my path in the dark among the dunes and rocks, but I'm not very successful. Nor am I alone. I am being pelted, attacked, and swarmed, by millions of insects drawn to my headlamp. I am breathing small gnats and getting painfully hit in the face by larger insects. By the time I reach my truck parked at the road a couple of hours later, I have not collected a single cricket, I am hot and miserable, I've drunk all my water, and a DVNM cop has shown up. He doesn't like my paperwork or my field gear. He really doesn't like the piles of rocks I placed along the shoulder to mark the start of each transect or the oatmeal bait. He doesn't like me. He makes me tear the marker piles down. By 1:00am, after re-laying dozens of oatmeal piles and walking the transects over and over, I'm still cricketless and give it up. It's still 114°F, but it feels a lot hotter. By dawn I'm leaving DVNM behind. I never return. Lee Vining is cooler and I can fish during the day, but I find no camel crickets. After two cricketless nights, I blow off the Eureka Valley assignment (more of a suggestion really), eat the leftover oatmeal, and go fishing. My Professor is deeply disappointed, but he pays my gas and per diem. He asks me for the leftover oatmeal. I feel guilty.

Fortunately, my general insect collecting skills were much better than my Camel Cricket experiences (I only find ordinary specimens, never the glamorous new species my Professor hungers for), but I find along the way that I'm really good with arthropods of the blood sucking variety. Medical Entomology and Parasitology are among my favorite subjects. Because I still loved streams, I focused my academic interest on black flies and began routinely sampling several stream sites several times per year in San Diego. I learn all the species and broaden my interest to aquatic insects in general.

Graduating from SDSU in 1989, I miraculously find work at the City of San Diego as an all-purpose lab technician specializing in insect murder (mosquito control) at a waste water reclamation facility. Regular employment in wastewater sampling and vector control enables me to amass a substantial library of books on stream ecology, aquatic entomology, hydrology, fluvial geomorphology, and taxonomy. Moreover, my busy social life gives me ample time to read them and to continue collecting bugs and exploring streams around San Diego, Orange, and Riverside counties. In retrospect, perhaps I should have bought real estate.

When the 1989 Bioassessment Guidance manual came out, I found a real outlet and a sense of purpose for my pottering about creeks and began practicing the methods at my favorite sites. I find that I have a lot more to learn and this stuff is great. In 1991, I am approached by a consultant to use the bioassessment methods on the Santa Margarita River Assessment project. It's a great job; I must have made at least \$1.50 an hour before it's all done. On a Saturday sampling run near De Luz at about 1:00pm in the afternoon, I have one of those "watershed" moments in which I realize I have to find a career that's about the protection of rivers and streams in general and using bioassessment. Killing mosquitoes and black flies and protecting public health pale in comparison to the glamour of the Clean Water Act, water quality, and this bioassessment stuff. As I drove home that night munching on my favorite field sampling snack – pork rinds- I begin to work out a strategy to find gainful and satisfying employment doing this bioassessment stuff.

Switching jobs at an opportune time a few years later, I found myself monitoring seven watersheds for municipal drinking water supply protection for the City of San Diego. Attending conferences and trainings, usually on

my own dime, I came to learn about the job of water quality assessment and protection and in particular, California's somewhat unique manner of regulation of water quality. I spend most days out in the field, usually alone, in places that I truly love, and doing something that seems worthwhile. Now and then a chemist or microbiologist asks me about my field work and expresses an interest in "going hiking" with me. I discourage this by graciously extending the expected invitation and ask that my new partner de jour carry the backpack. On the appointed day, I load the backpack with the extra YSI 6000, extra battery, a 5-cell flashlight with extra batteries, a spare set of datasonde cables, extra water, tools, manuals, and whatever else seems handy. I take my field partner de jour out to the most remote location I can get to safely and make it a 10 hour day. The poor fool. I have few requests for a repeat ride-along, but we usually enjoy ourselves nonetheless and have a better appreciation for each other's work by the end of the day.

Between 1990 and 2000, my life changes in ways I never planned on. I meet Mikel, my bride to be, in 1992 at a company picnic (she was a party crasher) and we embark on a 13 year courtship. Neither of us are the type to rush into anything. Mikel shows me the best parts of San Francisco and Hawaii and brings me level of happiness and satisfaction in life that work never does. I give her a place to get away from crazed roommates and various family members and I teach her fly fishing. In two hours, she's already better at casting than I am after years of practice. I'm happy about this. Really. So I teach her to fish in the surf; I'm still better, but not by much. She catches the fish and I tie the knots. A perfect romance. We were married in 2006 and are still fishing.

Determined to bring stream ecology and bioassessment to a larger audience, I get a few people together in 1998 to start a citizen monitoring group, the San Diego Stream Team. It is a lot more successful and fun than I imagined it would be; a lot more people want to participate that I ever planned on. One training and sampling season becomes two, and then three, and on and on. We end up with nearly 100 people on the mailing list and about 30 people on sampling teams. I taught one workshop with 80 high school students from four classes in one weekend. I found my limit as a trainer that weekend, but also that these students make the best physical habitat assessment teams since they

come without preconceptions of "good" or "bad" conditions.

In 2000, I realize that protecting one beneficial use is not what I want to do and I take my boss's advice and dive into State employment and join the San Diego Regional Water Quality Control Board. In researching the work of the water boards, I decide the one area I don't want to work in is storm water; I want to write TMDLs. Naturally, I end up in a storm water unit just as the Regional Board is starting a contentious municipal storm water permit renewal. We respond to over 1,684 comments and I begin to think I should have gotten a law degree, but we do get the permit adopted.

The last seven years have gone by extraordinarily fast. Along the way, I learned about 401 certifications, statewide monitoring programs, grants and loans, TMDLs, bureaucratic bean counting, and the science behind regulation. I share my interest and technical experience in monitoring and bioassessment in particular to a receptive and appreciative management. I also get to work with some of the very best people I have ever worked with or known.

Now, I spend most of my time enabling others to do good work and good science to protect the water quality and the places that have been special to me for some 40 years. I think about the quotes above and to bring something useful develop out of regulation, bureaucracy, and process. The challenges of the job, not the least which is keeping science forefront in the midst of bureaucracy and attorneys, are both satisfying and sometimes frustrating. I still go hiking and exploring streams, and I bring home bugs; only it is with my entomophobic wife that I share them. She tolerates my insistence on removing the spiders from the house gently by hand rather than by pesticide or rolled up magazine.

This opportunity to serve on the Board of the SoCal SETAC is a welcome breath of fresh air and it is a true honor to serve the scientists who locally do much the real work we base our regulatory craft upon. Thank you for giving me that opportunity for a while.



Student's Corner


By Christine Lee

Hi, I'm Christine, one of the new student board members and I'm really excited to be part of SoCAL SETAC team.

Students and SoCal SETAC have much to offer each other, largely due to SETAC's diverse member base. We are not only an academic group, but also a professional and public-agency group. This means that many of your long-term goals, whether it be a researcher, professor, tech manager, engineer, anything, can be nurtured and developed simply by becoming involved and meeting people at the variety of events and programs ongoing.

I am committed to finding new ways to involve students that will both be fun and beneficial to his or her budding careers. One great idea (and one of my favorites) that arose in the last meeting is coordinating a SoCAL SETAC team to participate in Earth Monitoring Day. This event would not only allow us to donate time and skills to measure environmental water quality, but also it will also allow us to bond with other like-minded colleagues and pros in the field. Awesome.

I would love to hear any thoughts on this as the board continues to discuss and plan activities and events. See you at the annual meeting.



Regulator's Corner

By Dave Gibson

Here are a few noteworthy items from some regulatory agencies that might be of interest to SETAC members:

1. The Department of Water Resources (DWR), State Water Board, and Regional Water Boards are jointly reviewing proposals for Round 2 of the Prop. 50 Integrated Regional Water Management (IRWM) Program. Twenty eight proposals are being reviewed. The applicants are requesting \$222,861,803 for projects costing a total of \$1,144,418,520. There is, however, only \$64.5 million available for IRWM groups to

implement their plans. Reviews are scheduled to be completed and referred to the State Water Board and DWR for approval by mid-October 2007. Awards will be capped at \$25 million. The next major round of funding for IRWM groups statewide will come in the next two years through Proposition 84, approved by the voters in November 2006.

2. On September 4, 2007 the State Board will consider approving the following TMDLs:

Item 9: Consideration of a Resolution approving an amendment to the Water Quality Control Plan for the San Francisco Bay Region to establish a Total Maximum Daily Load (TMDL) and implementation plan for pathogens in the Napa River Watershed. (Written comments were due on August 3, 2007 by 12:00 p.m.)

Item 10. Consideration of a Resolution approving an amendment to the Water Quality Control Plan for the San Francisco Bay Region to establish a Total Maximum Daily Load (TMDL) and implementation plan for pathogens in the Sonoma Creek Watershed.

3. On September 12, 2007, the San Diego Regional Water Board will consider adoption Orange County Municipal Storm Water NPDES Permit and the Regionwide Bacteria TMDL.

4. The next scheduled meeting of the Santa Ana Regional Water Board is September 7, 2007 (Postponed from Aug 24, 2007) in the City Council Chambers of Loma Linda at 25541 Barton Road Loma Linda, CA 92354. The Agenda will be posted at: <http://www.waterboards.ca.gov/santaana/>

5. The next scheduled meeting of the Los Angeles Regional Board is September 6, 2007. The short form Agenda will be posted as soon as it becomes available at: <http://www.waterboards.ca.gov/losangeles/html/meetings/meetings.html>

6. A major issue that the State and Regional Boards, US Army Corps of Engineers, and US EPA are dealing with right now involves the US Supreme Court decision affecting the federal wetlands jurisdiction. This decision has very broad ranging impacts on how the Clean Water Act is implemented and enforced beyond the immediate issue of dredging or filling wetlands. At the State Board and Regional Boards, this is a frequent and recurring topic of meetings and conversation as it is already or

may soon affect the wetlands protection policies and programs, certain enforcement actions for violation of NPDES permits, and the 303(d) impaired water bodies listing process.

On June 5, 2007 the EPA and the Army Corps of Engineers jointly issued a legal memorandum that provides guidance on the June 19, 2006 Supreme Court decision in the consolidated cases *Rapanos v. U.S.* and *Carabell v. U.S.* (known as the "Rapanos" decision). In its' decision, the Supreme Court clarifies how the agencies responsible for implementing the Clean Water Act are to determine which water bodies can be considered "Waters of the United States" (WUS). The memorandum was intended to provide guidance to ensure nationwide predictability, reliability, and consistency in identifying wetlands, streams and rivers subject to CWA.

The memorandum states that the agencies will assert jurisdiction over traditional navigable waters, wetlands adjacent to traditional navigable waters, and non-navigable tributaries of traditional navigable waters that are relatively permanent. The guidance states that "relatively permanent" waters do not include ephemeral tributaries which flow only in response to precipitation and intermittent streams which do not have continuous flow at least seasonally (i.e. three months). The guidance also adds that, due to the nature of their intermittent flow, the following geographic features generally are not jurisdictional WUS; swales, gullies, washes and ditches, unless any of these non-relatively permanent features have a "significant nexus" to a traditional navigable water. In determining whether a "significant nexus" exists, the Federal agencies must assess flow characteristics and functions to determine if they significantly affect the chemical, physical, and biological integrity of the downstream traditional navigable waters.

Approximately 65% of Southern California streams can be considered "non-perennial" or ephemeral. In light of the Court determination and guidance from the EPA and the Army Corps of Engineers, it is likely that a significant portion of Southern California's streams that were formerly considered and protected as WUS, will now be considered non-Federal Waters of the State, and thereby only subject to State requirements. The State Board or this Regional Board are likely to issue additional clarification reminding the public that projects are still subject to a federal jurisdictional determination, and projects that affect non-Federal Waters of the State

will still have to apply for Waste Discharge Requirements, or a waiver thereof.

The joint memorandum is scheduled for a 6-month comment period whereby comments, case studies, and experiences with the use of this guidance can be submitted. Meanwhile, U.S. Representatives James L. Oberstar, D-Minn., John Dingell, D-Mich., and Vernon Ehlers, R-Mich., have introduced House Resolution 2421, to give EPA and the Corps more authority by redefining what constitutes WUS.

(Source – San Diego Regional Water Quality Control Board Executive Officer Report for July 2007, Chiara Clemente, Senior Environmental Scientist).



Annual Meeting Review

By Jeff Armstrong
SoCal SETAC Past President

The SoCal SETAC 2007 Annual Meeting was held April 9-10, 2007 at the UCLA Conference Center in Lake Arrowhead. The meeting was a resounding success! The venue proved to be excellent for this meeting. The meeting rooms were comfortable and appropriate for the various activities. Having all meals in the onsite dining room was convenient and the food was outstanding. The onsite housing was comfortable and conveniently located within walking distance to the meeting rooms. All-in-all, this facility worked very well for this meeting.

The meeting opened with two short courses. One, Ecological Risk Assessment for Practitioners was taught by Bruce Hope from the Oregon Department of Environmental Quality in Portland and Katie Zeeman from the Carlsbad, California, office of the US Fish and Wildlife Service. The course focused on the technical aspects of ecological risk assessment, including some newer methods. The instructors discussed the use of conceptual models to better identify hypotheses that are amenable to field and laboratory testing and methods for quantifying exposure to stressors, including quantitative models, spatially and temporally explicit models, and probabilistic techniques (i.e., Monte Carlo processes). Discussion of risk characterization focused on the use of joint probability, probabilistic, and population-level methods as well as qualitative and semi-quantitative weight-of-evidence methods. The second course was

titled New and Improved methods for Collecting Freshwater Benthic Invertebrates and was taught by Scott Johnson from Aquatic Bioassay and Consulting Laboratories, inc. in Ventura, California. This course focused on the latest SWAMP (Surface Water Ambient Monitoring Program) methods for collection of freshwater invertebrates and data management. The course consisted of several hours of field demonstration followed by classroom discussion. The paucity of water in the local streams was a problem for the instructor, but he proved up to the challenge. Both courses were well attended and spawned many good questions and discussions, both during and after the course.

The plenary, Fate and Effects of Nutrients on Water Quality, was given by Mark Fenn of the US Forest Service (Riverside CA), Tom Meixner from the Department of Hydrology and Water Resources at the University of Arizona, Tucson, Michael A. Anderson from the Department of Environmental Sciences at the University of California Riverside, and Martha Satula from the Southern California Coastal Water Research Project (SCCWRP). Mark Fenn spoke on atmospheric deposition and critical loads for nitrogen saturation effects in the San Bernardino Mountains; Tom Meixner presented a talk on how catchment and in-stream processes attenuate loads to urban lakes; Michael Anderson discussed internal nutrient recycling and nutrient dynamics in southern California; and Martha Satula spoke on the importance of sediments as a source of nitrogen to upper Newport bay surface waters. All of the speakers did an excellent job making for a very interesting plenary session.

There were four platform sessions totaling 20 presentations. Session topics included Bioaccumulation, Freshwater impacts of stressors, Emerging Contaminants and Endocrine Disrupters, and Sediment TIE and Bioavailability. The poster social was well attended and featured 18 posters ranging in topics from fate and transport of metals to rapid detection of fecal indicator bacteria to the effectiveness of mercury TMDLs. This led into the evening social, which was also well attended and lasted well into the night. Discussions were lively, music loud, and the libations plentiful and cold. A good time was had by all!

At the meeting we said goodbye to two outgoing board members: Erika DeHolland (Student Representative) and Kathy Rose (Government Representative). Erika has graduated and is working for the Los Angeles County

Sanitation Districts and Kathy has moved to Sacramento to work for the State Water Resources Control Board. I would like to take this time to thank them for their service and wish them well in their future endeavors. I would like to thank our corporate sponsors: AMEC, Aquatic Bioassay and Consulting Laboratories, inc., Nautilus Environmental, Pacific EcoRisk, and Weston Solutions. Their support contributed greatly to the success of the meeting.

As we move forward towards the new year, watch for information on the 2008 annual meeting in upcoming issues of the SoCal SETAC News.



2007 SoCal SETAC Science Fair Award Winners!

By Phil Markle

Once again, SoCal SETAC provided "Special Awards" in area-county science fairs for 2007. The award is presented to the best project with an emphasis on environmental toxicology and/or environmental chemistry in county-wide science and engineering fairs in the southern California region. Each winner received a \$50.00 cash award, one-year student membership in the chapter and an invitation to attend our 2008 annual meeting. I would like to thank all of the chapter volunteers for their tremendous efforts and taking the time to make this outreach effort for the SoCal SETAC Chapter such a tremendous success for 2007. Specific chapter representatives for 2007 included Jeff Armstrong (Orange County Sanitation District, Orange County Science and Engineering Fair), Ken Schiff (SCCWRP, Orange County Science and Engineering Fair), John Rudolph (Nautilus Environmental, Greater San Diego County Science and Engineering Fair), Scott Johnson (ABC Labs, Ventura County Science Fair), Diana Young (SCCWRP, Los Angeles County Science and Engineering Fair), and Dan Schlenk (UC Riverside, Inland Empire Science and Engineering Fair). Thanks again and it is never too early to get involved in this worthwhile outreach. We invite and encourage any and all members to volunteer and/or help out with judging these fairs. Anyone wishing more information or who would like to be on the e-mail list for the 2008 science fairs should contact Phil Markle (pmarkle@lacs.org).

And now for the 2007 SoCal SETAC Award Winners!!!!

Greater San Diego County Science and Engineering Fair

Maddy Goss

7th Grade, Rhodes R. Hunker Middle School

Los Angeles County Science and Engineering Fair

Alexandra de la Torre

Bishop Montgomery High School

Sub-lethal Application Levels of Common Inorganic Fertilizers

Orange County Science and Engineering Fair

Margaret Yoo

Sophomore, Northwood High School

The Removal Of EDP/DBCP – Saving the Future form Yesterday

Ventura County Science Fair

Mikki Leyva and Audrina LeBlanc

Chemical and Bacterial Composition of Natural Water Sources

Inland Empire Science and Engineering Fair

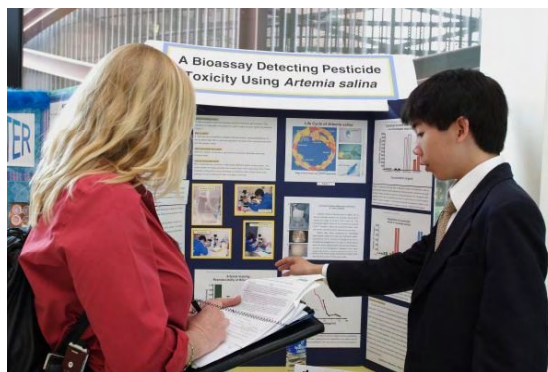
Stephen Yoshimura and Casey DeWolf-Domingo

La Quinta High School

New River, Old Problem; Examination of tributary sources to the Salton Sea contributing to eutrophic conditions and algae blooms.



Dan Schlenk visiting
Stephen Yoshimura, Casey DeWolf-
Domingo
La Quinta High School



San Diego Fair. Unidentified, but
cool title.



Calendar of Events

By Ken Schiff

SEPTEMBER 2007

- **California Stormwater Quality Association, 3rd Annual CASQA Conference**
10-12 September 2007 at Costa Mesa Hilton,
Costa Mesa, CA

OCTOBER 2007

- **Water Environment Federation 80th Annual WEFTEC Meeting.**
13-17 October April 2007 at San Diego
Convention Center, San Diego, CA

NOVEMBER 2007

- **SETAC North America 46th Annual Meeting**
11-17 November 2007 at Midwest Airline
Center, Milwaukee, WI
- **American Water Resources Association, 2007 Annual Conference**
12-15 November 2007 at Embassy Suites Hotel,
Albuquerque, NM.
- **California Aquatic Bioassessment Workgroup, 14th Annual Meeting**
28-29 November 2007 at UC Davis ARC
Ballroom, Davis, CA



Southern California SETAC



Invites You to Attend
A Dinner/Speaker Meeting Entitled

TMDL Technical Challenges and Beyond

Presented by

**Dr. Peter Kozelka and
Dr. Cindy Lin
US EPA Region IX**

**October 3, 2007
5:00 PM social hour
6:00 PM dinner**

**The Old Spaghetti Factory
110 E. Santa Fe Ave., Fullerton, CA 92832**

Name:	
<i>Company/ Institution:</i>	
<i>Address:</i>	
<i>Phone/ Fax:</i>	
<i>E-Mail:</i>	
Meal Selection (Circle One) All meals include salad, bread, dessert and soft drinks, tea, and coffee	
<p><i>Spaghetti w/ Tomato Sauce</i></p> <p><i>Chicken Parmigiana</i></p> <p><i>Fettuccini Alfredo</i></p>	

Registration Information (Circle One)		
<i>Membership Status</i>	<i>Received before 10/01</i>	<i>On Site</i>
<i>SoCal SETAC Member</i>	\$20	\$25
<i>Non-Member (Includes membership)</i>	\$30	\$35
<i>SoCal SETAC Student Member</i>	\$15	\$20
<i>Non-Member - Student (Includes student membership)</i>	\$20	\$25
Send Check or Money Order Made Out to SoCal SETAC to:		
<p>Kat Prickett</p> <p>SoCal SETAC Secretary P.O. Box 1619 San Pedro, CA 90733</p>		

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So Cal SETAC

Corporate Advertising rates, Sustaining Membership, and Annual Meeting sponsorship

PROGRAM	COST	SERVICE
Newsletter Advertisement (per issue)		
Full page	\$100	<ul style="list-style-type: none"> • Advertisement
Half page	\$75	
Quarter page	\$50	
Eighth page	\$35	
Corporate Sustaining Membership (per year)	\$300	<ul style="list-style-type: none"> • Half page advertisement in Newsletter for the year • One Professional membership • Special recognition by the Chapter
Corporate Annual Meeting Sponsorship (per year)	\$250	<ul style="list-style-type: none"> • Full page advertisement in Annual Meeting Program • Single membership • Special recognition in the Meeting Program



PACIFIC ECORISK

Pacific EcoRisk is an environmental consulting firm conducting research and testing in the fields of environmental toxicology, aquatic biology, and environmental chemistry. Our scientists are skilled in integrating their expertise in these areas to produce high-quality, cost-effective, and often innovative solutions to complex environmental problems. Our primary objective is to provide the best information available for our clients, which include POTWs, industry and agriculture, ports/marinas, US military, local, state, and federal regulatory agencies, as well as support for environmental or engineering firms.

CONSULTING SERVICES

- Petroleum impacts on aquatic systems
- Pesticide impacts on aquatic systems
- Mining/Metals impacts on aquatic systems
- Areas of Special Biological Significance (ASBS) Monitoring & testing
- Site-specific Water Quality Criteria Studies
- Agricultural Runoff (Ag Waiver) Monitoring
- Support for Ecological Risk Assessments
- Support for TMDL Development
- Expert witness testimony

AQUATIC TESTING SERVICES

- NPDES compliance testing
- Effluents/Ambient Waters/Chemical Products
- Acute and chronic toxicity testing
- Freshwater, estuarine and marine tests
- Static, static-renewal and flow-through
- *In situ* monitoring & testing
- Title 22 hazardous waste testing
- Water Effects Ratio (WER) studies

SEDIMENT TESTING SERVICES

- Testing with freshwater, estuarine and marine species
- Bioaccumulation studies with freshwater, estuarine, and marine species
- Whole sediment, sediment elutriate, sediment porewater testing
- Sediment-Water Interface Core testing
- Static, static-renewal and flow-through
- *In situ* monitoring & testing

DREDGE MATERIALS EVALUATIONS

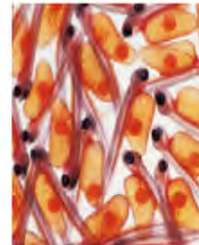
- Preparation of Sampling & Analysis Plans (SAPs)
- Client representation with regulators
- Chemical and biological evaluation of proposed dredge material
- Preparation of reports and facilitation of permits
- Tier I, Tier II, Tier III, and Tier IV evaluations

TOXICITY IDENTIFICATION/REDUCTION EVALUATIONS (TIEs, TREs)

- Phase I, Phase II, & Phase III
- Industrial and Municipal Effluents
- Ambient surface waters
- Stormwater runoff
- Whole sediment, sediment elutriate, and sediment porewater matrices
- Preparation of TRE workplans

FIELD SERVICES

- Ambient water quality monitoring
- Surface water and sediment collection
- "Clean technique" sampling
- Benthic invertebrate collection
- "Rapid" Bioassessment
- Pesticide application monitoring
- Physical/Habitat characterization



Formed in 1994, Pacific EcoRisk has rapidly established a reputation as being one of the best aquatic and sediment testing labs in the western United States. We are committed to performing only the highest quality work, and it is this philosophy that has led to our success.

For more information or to discuss your project or testing needs please call: (925) 313-8080 or visit: www.pacificecorisk.com

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fax : 760.602.9119



Nautilus Environmental
 Providing environmental toxicology services within
 a framework of integrity and good science

Expertise Qualified and experienced staff with a comprehensive understanding of environmental toxicology and chemistry

Quality A focus on quality assurance/quality control practices to ensure provision of reliable data

Innovation A demonstrated ability to develop methodology to meet site-specific needs

Integrity A science-based approach which ensures uncompromising data quality and sound conclusions

Service Meeting the needs of clients with innovative, cost-effective science


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 fax 858.587.3961

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 Suite 2
 Tacoma, Washington 98424
 253.922.4296
 fax 253.922.5814

British Columbia [Associate]
 3954 Hidden Oaks Place
 Victoria, British Columbia
 V8N 6M1
 250.480.3941
 fax 250.480.3945

● a woman-owned small business

We're proud to announce the
 formation of Nautilus Environmental,
 formerly the toxicology division of
 AMEC Earth & Environmental



CONSIDINE & CONSIDINE
 CERTIFIED PUBLIC ACCOUNTANTS

BACKGROUND

Considine & Considine was founded in 1946, and is proud to be San Diego's largest local accounting firm.

MISSION STATEMENT

As a full-service accounting, tax, and consulting organization, Considine & Considine strive to provide personal, quality service to businesses, individuals, and professional practices in a manner that is responsive, solution driven, and yet cost effective.

CORE COMPETENCIES

- ◆ Traditional Monthly, Quarterly, and Annual Financial Statements
- ◆ Tax Planning
- ◆ Tax Returns
 - Corporations
 - Individuals
 - Partnerships
 - Sole Proprietorships
 - LLC's
 - Non-Profits
- ◆ Management Consulting Services
- ◆ Reviews and Audits
- ◆ Personal Financial Planning
- ◆ Retirement Plan Administration
- ◆ Estate and Trust Planning and Administration
- ◆ IRS Representation

CLIENTELE

- ◆ Entrepreneurial Businesses
- ◆ Restaurants/Hotels
- ◆ Real Estate
- ◆ Construction
- ◆ Physicians
- ◆ Attorneys

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Position	Name & Affiliation	Responsibilities
Past President	Jeff Armstrong Orange County Sanitation District jarmstrong@ocsd.com	Advisor/Stand-in for President and Vice-President Program Committee Chair for SoCal SETAC Annual Meeting
President	Ken Schiff Southern California Coastal Water Research kens@sccwrp.org	SETAC North America Liaison Board Agenda & Action Items
Vice-President	Chris Stransky Nautilus Environmental chris@nautilusenvironmental.com	Newsletter Editor
Treasurer	Carlita Barton L.A. County Sanitation Districts cbarton@lacsds.org	Maintain Chapter Finances/Non-profit status Meeting Finances & Contracts
Secretary	Kat Prickett Port of Los Angeles kprickett@portla.org	Membership Maintenance Recording board meeting minutes Election Coordinator
Webmaster	Open	Maintains and updates SoCal SETAC web site
Outreach Coordinator	Phil Markle L.A. County Sanitation Districts pmarkle@lacsds.org	Coordinates outreach efforts with SETAC NA

SoCal SETAC Board of Directors

Board Member (2006-2008)	Kevin Kelley Calif. State University Long Beach kmkelley@csulb.edu	Board Member (2007-2009)	Dave Gibson San Diego RWQCB DGibson@waterboards.ca.gov
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