

# SoCal SETAC NEWS Southern California



# Society of Environmental Toxicology and Chemistry Southern California Chapter

Volume 9, Issue 3 www.socalsetac.org October 2002

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President's Corner....

# STEVE BAY SOCAL SETAC PRESIDENT

am excited to be your SoCal SETAC President for 2001/2002. Our chapter continues to grow and prosper. We now have 122 active members, a healthy financial base, and a history of successful dinner meetings, short courses, and annual meetings. Much of this success is due to the hard work of the SoCal SETAC Officers and Board of Directors, who volunteer their time throughout the year to plan events and perform the day to day tasks necessary to keep our chapter active.

This issue of the newsletter marks a transition among the SoCal SETAC Board, as our newly elected board members and officers take over from those whose terms have expired. I wish to thank all of our outgoing board members and officers for their outstanding help this last year. Special thanks go to outgoing President Kat Prickett and past President Joe Gully, who have been instrumental in our successes this past year. Kat will assume the position of Past President and will continue to help guide our chapter, as well as plan our 2003 Annual Meeting. Joe has been a dedicated SoCAL SETAC supporter for many years though his several terms as a board member before serving as Vice President, President, and Past President. Our July Annual Meeting at UC Riverside was a great success, due to the efforts of Joe and several other board members.

I also wish to thank outgoing Treasurer Lan Wiborg for her exemplary service to our chapter. Lan has stayed on as Treasurer for several years past her initial commitment in order to help our chapter attain non-profit status and to improve our accounting procedures. Lan's goal to achieve non-profit status for our chapter will be realized this year and I am sure incoming Treasurer Arturo Keller will benefit from the solid financial foundation that Lan has given our chapter.

The current SoCal SETAC officers and board members are listed in this newsletter. In addition to officers Kat and Arturo, I wish to welcome Phil Markle as the new Vice President (and newsletter editor) and welcome back Karen Riveles (Secretary) and Chris Stransky (Webmaster). Like Lan, Karen and Chris have extended their service to our chapter well beyond their initial commitment and the stability that they have brought to these positions has helped our chapter prosper. Finally, please join me in welcoming our newly elected board members: Carlita Barton, Paul Krause, Jonathan Ball, Shelly Magier, and Dan Schlenk.

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# Membership Reminder

# It's time to renew your SoCal SETAC membership!!!

The membership term for SoCal SETAC is Jan. 1 through Dec. 31. Current member renewals made at the 2002 annual meeting will be applied to 2003 membership. Membership for new members who signed up at the 2002 SoCal SETAC Annual Meeting will expire on Dec. 31, 2002.

Please fill out a membership form (found both in this newsletter and on the website) so we can update your contact information. Send the form and your check made out to SoCal SETAC to:

Karen Riveles SoCal SETAC Secretary P.O. Box 655 Riverside, CA, 92502

If you have any questions regarding your membership status, you can email Karen at:

karenriv@aol.com

This year's SoCAL SETAC Board is an energetic bunch and we are already making plans to continue and expand the activities of our chapter. We plan to host two dinner meetings this year, with the first tentatively scheduled for early December in Santa Monica. Next year's annual meeting will be held at UC Santa Barbara, where we will offer a varied and relevant program of short courses, a plenary session focusing on current issues, and contributed papers. Additional information regarding these meetings will be provided in future issues of the newsletter and in special email announcements.

Our chapter has adopted two new goals for the coming year: to expand the educational activities of our chapter and to increase student involvement in SoCal SETAC. The Board has established a Student Outreach Committee, with the objectives of increasing university faculty and student involvement in our chapter and establishing at least one student chapter. Please contact any of the following Student Outreach Committee members if you would like to assist in this effort: Arturo Keller, Karen Riveles, Dan Schlenk, Shelly Anghera, Chris Stransky, or Paul Krause. Our educational activities will include additional short courses, including a course geared towards training secondary teachers and volunteer organizations in the use of toxicity tests for teaching, student research, and monitoring.

Please contact any board member or myself if you have suggestions for SoCAL SETAC activities or would like to assist in our activities during the next year. The success of our organization is determined by the extent of your involvement.

#### **Our Newsletter Needs a Name!**

Please help us come up with a name for our beloved newsletter by weighing in on the following suggestions or by providing some fresh new ideas!

Suggested Names:

- 1. SoCal Bytes
- 2. Bight Bytes

Please e-mail comments and ideas to: pmarkle@lacsd.org

#### MEET THE BOARD

#### Jeff Armstrong, Orange County Sanitation Districts



am a southern California native. I was born in Twenty-Nine Palms, in Yucca Valley, and moved to the City of Tustin when I was three years old and have lived in Orange County since. Though I always had an interest in marine science, baseball was and still is my passion in life. As with many young boys, my dream was to play major league baseball, preferably for the California (Anaheim) Angels. The major league scouts, however, said it would be in my best interest to consider other career plans. They said I lacked one ingredient that would keep me from being a great ballplayer...talent. As I was lamenting this to a high school friend he suggested that I join the Santa Ana Police Explorer Scouts. I asked him why since I had no interest in law enforcement to which he replied, "It's a great way to meet girls." I immediately signed up and took to it like a pig to...well, we won't go there. He was right about meeting girls. It was there that I met Dawn, my wife of 23 years. At the age of 20 I was a full-time Orange County Deputy Sheriff and transferred to the Santa Ana Police Department two years later. During my 16-year tenure with the SAPD, I worked uniformed patrol, crime scene investigation, child abuse/molest investigation. field supervisor, station supervisor, and I was a SWAT hostage negotiator.

In 1983, I received a very painful lesson in the law, specifically the law of gravity (Gravity is not just a good idea, it's the law!). I was chasing a burglar across a roof one rainy night and the roof gave way sending me to the false ceiling over the showroom floor of an electronics store. When I went through the roof, I injured my left knee resulting in two operations and six-months off work. I returned to work and re-injured my knee in 1987 while attempting to arrest a fleeing child molester.

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Two more operations and ten-months later I returned to work desk-bound for the remainder of my career. That was the kiss of death in law enforcement, so I began exploring other options.

I didn't have much college and what I did have was all police related. I decided to get back into school by taking a general interest marine biology course at the local community college and was hooked! I worked a deal with the police department to let me work the graveyard shift as the station supervisor (a desk job that would allow me to go to school during the day and do my homework as time permitted) while I retrained myself for another career. In 1993, I completed my B.S. in marine biology and M.S. in biology in 1997, both from Long Beach State. My thesis looked at environmental factors that affect the phenotypic plasticity in Capitella capitata species type I. In 1994, my advisor Don Maurer and thesis committee member Don Reish (Didn't most of us learn from Dr. Reish at some point in our careers?), introduced me to folks at O.C. Sanitation District and I was offered an internship. Like most marine biology students I day dreamed of conducting research on exotic south seas islands with bikini clad assistants, so the last place I expected to end up working was a sewage treatment plant. After a short time though, I realized there was no place I'd rather work. I was able to convince (trick?) the District that they couldn't live without me and they offered me a full-time position in the ocean monitoring program in 1997. I said good-bye to law enforcement after 18 years and set a course for a career in wastewater. From the start, my long-term academic goal was to get a doctorate in marine biology. In 1998 I said goodbye to my sanity, sleep, and sailboat and began a doctoral program in biological oceanography at City University Los Angeles. With the support of my family, friends, and employer, I completed my Ph.D. in biological oceanography in June 2001. My dissertation investigated the effects of wastewater solids loading on demersal fish populations.

You never know what incidents can have a profound affect on your life. In the late 1970's a disk jockey friend loaned me a couple of Jimmy Buffett records. I had heard Margaritaville on the radio, but hadn't given it much thought until I listened to the records. I really enjoyed his drunk Caribbean rock-n-roll sailing music and was a confirmed "parrothead" from then on. My wife and I decided to try sailing. We're now on our third sailboat, the Island Dawn out of Dana Point, and we plan to retire to a live-aboard lifestyle and cruise the world. Sailing led me to SCUBA diving. When I decided to return to college. I chose to take the marine biology class so that I would better understand what I saw while diving and that class changed the direction of my life. Some of life's turning points are clearly recognizable, while others are much more subtle, like the loan of a couple of records from a friend. Never discount any experience.

I have two daughters, Cassandra (21) and Shannon (16). Cassandra is a student at Santa Ana College with a duel major in Art and Chemistry (an obvious pairing if there ever was one), while Shannon is a junior at Orange High School majoring in boyfriends. I am involved in the local Irish-

American community and guest-lecture at Cal State Fullerton on Irish-American culture. I like to lift weights and I'm a baseball junkie. I love baseball, especially the Angels. How much you ask? Well, my wife swears that this is a true story. She said that one evening I was watching an Angels' game and she walked into the living room with nothing on and stood in front of the TV. She says that I leaned to one side to see the TV ignoring her. I don't believe a word of it, though. If she had actually done that, I'd have also told her to move out of the way! I play baseball in the Men's Adult Baseball League, a nationwide league totaling 44,000 players. I play in the Orange County 38+ (geezer) division, where I pitch and play first base, outfield, and designated hitter. I figure that I'll play until I break a hip sliding into second base.

At the OCSD, I lead the bioassessment group, which involves all biologically related areas (invertebrates, fish, and fish-tissue bioaccumulation), and sediment and effluent toxicity. I am currently finalizing a three-year sediment quality triad project conducted in the OCSD monitoring area and in the Newport Submarine Canyon and have been involved in the Huntington Beach bacterial contamination studies since 1999.

I am glad to serve on the SoCal SETAC board as a government representative. I have gained so much through my membership with SETAC, both national and regional, and enjoy giving back to the society. This is an exciting time in our chapter's history and I'm happy to play a part in the continued growth of our organization.

### 2002 SOCAL ANNUAL MEETING MEETING REVIEW

#### Contributed by Joe Gully

The SoCal SETAC 2002 Annual Meeting was held on July 12-13 at the University of California, Riverside. The meeting was attended by over 60 people who braved the heat but were rewarded with a short course on toxicity identification/reduction evaluations, a plenary session on pharmaceuticals and personal care products in the environment, followed by 20 platform and presentations. Based on my observations and feedback from attendees, the information presented was very timely and high caliber.

The "Toxicity Identification/Reduction Evaluation (TI/RE)" short course was offered on Friday, July 12th and attended by about 25 people representing all professional sectors associated with toxicity testing. This course was developed by the SETAC Whole Effluent Toxicity Expert Advisory Panels and we were fortunate enough to bring in two of the primary authors (Wayne McCulloch of EA Engineering in Maryland and Greg Smith from the Great Lakes Environmental Center in Ohio) as well as an exceptional group of local expert instructors representing the regulatory, academic, and public sectors.

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In addition to presenting TI/RE basics and some case studies, the course also challenged the students with some "real world" TI/RE data sets which often stumped folks who thought they knew their way around such data (I know I was not the only one) and really highlighted the role experience plays in successful TI/RE's. The course also served as a great opportunity for informal discussion of common problems and solutions related to TI/RE's and the students took full advantage.

On Saturday, July 13<sup>th</sup>, the day began with presentations from several SoCal SETAC officers including the SETAC North America Board Address (Dr. Debra Denton, USEPA), the President's Address (Steven Bay, SCCWRP), an appreciation of outgoing (Kat Prickett, BBL) and a welcome to incoming (Karen Riveles, UC Riverside) Board Members and Officers, and presentation of our third annual Marissa Gaumond Memorial Award of Service. The \$200 award was presented to Uplift, a non-profit group who offer tutoring to economically and socially disadvantaged children in the region, by Steven Bay in the name of Joe Gully (outgoing Past President). Marissa Gaumond was an avid volunteer with this organization and an instrumental founding member of SoCal SETAC who was taken from us much too soon after a courageous battle with a rare and aggressive cancer.

After a break, we got down to the business of the conference with a multi-faceted and insightful plenary on pharmaceuticals and personal care products in the A general overview of the compounds, concentrations, and impacts was presented by Dr. Daniel Schlenk (UC Riverside). Thomas Lieker (USGS) then described data collected from Lake Mead which indicated endocrine disruption in male carp downstream of a wastewater treatment plant discharge. This enlightening presentation was followed by a talk from James Gray (UC Berkeley) describing the fate and potential remediation of estrogenic compounds in engineered wetlands. The plenary concluded with an entertaining presentation, by Dr. Chris Daughton (USEPA, Las Vegas), further describing the presence and effects of pharmaceuticals and personal care products in the environment and how personal actions and behaviors could be modified to reduce or eliminate some of these issues. The Plenary certainly provided plenty of food for thought.

Speaking of food, after the Plenary, the attendees were served a tasty Italian buffet (nice call Karen). During the two-hour luncheon, the authors of the poster were present to discuss their work with the attendees. They were even coerced into giving an impromptu, five-minute, oral presentation of their poster (normally only required by those competing for Best Student Poster). I personally want to thank all these folks for playing along, even though many of you presented posters, specifically to avoid an oral presentation (memo to current board and officers, let's not surprise the poster presenters this way again). Congratulations to Michelle Anghera of UCLA who won the Best Student Poster Award (for the second time!) for her paper entitled "The ten-day amphipod toxicity test: Laboratory vs. field responses. Michelle received a \$200 check and every student

who presented a poster was given a free, one-year membership to SoCal SETAC.

Finally, the main platform sessions began on Saturday afternoon on topics such as contaminated sediments, endocrine disruption, groundwater monitoring, TMDL's, and TI/RE's. A total of 13 high quality, very relevant papers were presented. The Chapter is grateful to all who presented, you folks are the real meat of the meeting. Special thanks is also in order for Steve Bay (SCCWRP), Arturo Keller (UC Santa Barbara), and Chris Stransky (AMEC Earth and Environmental) for chairing the sessions.

In summary, the meeting combined educational opportunities with quality presentations in a great location. This was also the first time our Annual Meeting was held on a university campus which reduced the cost of the event to the Chapter and it's members. The efforts of our local contacts at UC Riverside, Dr. Daniel Schlenk, Karen Riveles, and Fabienne Reisen, were tremendous but payed great dividends. Thanks for your dedication to the meeting! Based upon this year's experience, I think we can look forward to having many future meeting at various Universities in Southern California. We will keep you posted on the site for the 2003 Annual Meeting and we look forward to your participation.

### 2002 SOCAL ANNUAL MEETING PLEANARY SYNOPISIS

#### Contributed by Daniel Schlenk

The plenary at this year's regional SoCal SETAC annual meeting focused upon Pharmaceuticals in the Environment. A range of speakers were invited to provide a diverse array of expertise. The first speaker was Dr. Daniel Schlenk from UC-Riverside. His presentation provided an introduction to the topic and discussed the source and fate of several classes of compounds observed in surface waters. An overview of the methods of detection and biological activity for environmental steroids was provided. Dr. Tom Leiker of the US Geological Survey spoke about his work in the Lake Mead area where he provided data demonstrating the effects of triclosan metabolites on resident fish populations. Mr. James Gray who is a student in the laboratory of Dr. David Sedlak at the University of California Berkeley described his work examining the potential of natural wetlands on the remediation of environmental estrogens in the Santa Ana River basin. His research showed concentrations of estrogens that are still capable of biological effects after passage through the wetlands. The final speaker was Christian Daughton from the USEPA laboratory in Las Vegas. Mr. Daughton is one of the leading experts on the occurrence of pharmaceutically active compounds in the environment and gave an informative summary presentation. His presentation as well as other information related to this topic can be found at (<a href="http://www.epa.gov/nerlesd1/chemistry/pharma/index.htm">http://www.epa.gov/nerlesd1/chemistry/pharma/index.htm</a>).

### BOARD MEETING MINUTES SEPTEMBER 2002

#### Contributed by Karen Riveles

n September 10, 2002, a SoCal SETAC Officer and Board of Directors meeting was held at the LA County Sanitation District in Whittier, CA. Introductions were first on the agenda. Officer and Board members present included: Kat Prickett, Steve Bay, Phil Markle, Arturo Keller, Lan Wiborg, Shelly Angheras, Paul Krause, Jeff Armstrong, Dan Schlenk, Carlita Barton, Shelly Magier, Chris Stransky, Jon Ball and Karen Riveles.

Membership is up with 122 current members; 24 are new members as of the Annual Meeting. We have been experiencing problems and delays with renewals through National (NA) SETAC. We are not receiving notification of renewals or contact information for those in SoCal SETAC who renew along with their NA membership. All members who have renewed through this mechanism are asked to contact Karen Riveles (karenriv@aol.com) to inform her so we can keep our membership records accurate and current. Our Annual Membership Renewal Drive is starting with this newsletter. With our membership cycle changing to January 2003-January 2004, members will need to renew their dues for the following year.

Lan Wiborg presented our Treasurer's Report indicating that we made a small profit on the Annual Meeting. Our travel and hotel expenses were high for the TIE and plenary speakers, but we saved considerable money by choosing the University venue. Arturo Keller is now taking over as Treasurer. Lan Wiborg has done an amazing job as Treasurer for SoCal SETAC, we appreciate all your hard work!

Our new President and Vice President, Steve Bay and Phil Markle, took part in a Regional Chapters Committee Meeting. Two main goals were discussed: to encourage undergraduate participation (student involvement) and to improve the dissemination of material (information and educational outreach). The idea of having mini-Pelston Conferences was discussed. These conferences consist of a group of international scientists meeting for a week for focus meetings on a particular topic of interest. The committee discussed the possibilities of implementing these on the local level.

SoCal SETAC will have a Regional Chapter's booth at the National SETAC Meeting in Salt Lake City in November. Please stop by and support your local chapter. We also need volunteers to work at the booth during the meeting, if you are interested, please email Karen Riveles (karenriv@aol.com). We will be having a lunchtime Regional Chapter meeting at the National SETAC meeting, everyone is welcome! Look in your program for details on day and time.

We discussed our goals and activities for 2002-2003. We have tentatively planned two dinner meetings for the year in December and March. Potential locations for these meetings

are Santa Monica and Fullerton, respectively. We have already started to plan the SoCal SETAC 2003 Annual Meeting, which will take place at UC Santa Barbara.

SoCal SETAC is interested in expanding education and outreach activities. Ideas that were suggested include: short courses, other activities with regulatory agencies, seminars at universities for students, formation of student chapters, establish contacts with professors and students at various universities to serve as a liaison with those campuses to disseminate information, newsletters, membership information, chapter announcements, flyers, bookmarks, and business cards.

#### Joining SoCal SETAC Through National SETAC?

Some problems have come to our attention as a result of joining or renewing SoCal SETAC membership through National SETAC.

If you joined or renewed your SoCal SETAC membership through National SETAC, please contact

Karen Riveles
SoCal SETAC Secretary
<a href="mailto:karenriv@aol.com">karenriv@aol.com</a>
P.O. Box 655

Riverside, CA. 92502

#### CALENDAR OF EVENTS

Contributed by Daniel Schlenk

#### **OCTOBER**

# ECOTOX 2002 - SETAC Latin America 5th Annual Meeting

5 - 9 October, Vitoria, Brazil. Ecotoxicologia e os Novos Desafios no Monitoramento Ambiental. For more information contact Ricardo Mastroti at rrm@aracruz.com.br or see <a href="http://www.ecossistemas.org.br/ecotox/">http://www.ecossistemas.org.br/ecotox/</a>

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#### **OCTOBER**

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**Environmental Fate and Exposure Assessment Course:** Use of the USEPA EPIWIN Estimation Software. 9 - 11 October 2002, Syracuse, NY, USA. Research Corporation, Syracuse, NY, USA. A 3-day practical course focusing on fundamental principles, sources of data, and estimation methods. Futher details can he found http://esc.syrres.com/training/esccourses.htm.

For further information contact Dr. Philip Howard, Syracuse Research Corporation at howardp@syrres.com; T 1-315-452-8417.

#### **Natural Waters and Water Technology**

12 - 17 October 2002, Spa. Belgium.

The development of new separation and analysis techniques has revealed the important role played by colloids in many natural water processes. This meeting will review the state of the art both of techniques for the study of colloids, and also of our understanding of colloid processes in natural waters. The conference is open to researchers world-wide, whether from industry or academia. Participation will be limited to 100. The emphasis will be on discussion about new developments. Scientific program and on-line application www.esf.org/euresco/02/lc02002

#### 5th International Symposium on Sediment Quality Assessment

6 - 18 October 2002, Chicago, IL, USA. The focus this year is on Aquatic Ecosystems and Public Health: Linking Chemical, Nutrient, Habitat and Pathogen Issues. For more information go to: www.aehms.org/SQA5 event.html

**Emerging Water Pollutants: Pharmaceutical and Personal** Care Products Workshop (see ad in this issue) 24 October 2002, UC-Riverside Extention; Phone 909-787-4105; 1-800-442-4990; register@ucx.ucr.edu; (www.UCRExtension.net)

California and the World Ocean '02 Revisiting and Revising California's Ocean Agenda 27-30 October 2002. Fess Parker's Doubletree Resort, Santa Barbara Ca. Phone CWO2002@coastalzonefoundation.org 707-987-0114. (http://resources.ca.gov/ocean/CWO\_02/).

#### **NOVEMBER**

#### **SETAC North America 23rd Annual Meeting**

16 - 20 November, Salt Lake City, Utah, USA. Achieving Global Environmental Quality: Integrating Science & Management. <a href="http://www.setac.org/">http://www.setac.org/</a>.

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16-20 November 2002

"Achieving Global Environmental Quality: Integrating Science & Management"

The role of science in establishing management objectives and environmental program strategies has never been more important that it is in today's global society. Many of the proposed sessions and special symposia will reflect this theme, and additional technical sessions will address emerging environmental issues, environmental assessment strategies and methods, and other facets of environmental chemistry and toxicology.

The meeting will start and end a day earlier than in past years — short courses and the opening Reception will be on Saturday and the meeting will end on Wednesday. This will hopefully reduce participants' costs by taking advantage of "Saturday night stay" airline fare reductions.

#### Special Symposia

Global Environmental Changes Endocrine Disruptors: Policy, Science, and Issues Public Concerns: Role of Science & Science

Environmental Chemistry in Ecological Assessments Advances in Regional & Coastal Ecological

Assessments

Biological & Chemical Terrorism Control of Invasive/Exotic Species

Check www.setac.org for information on abstract submission and meeting registration

#### **NOVEMBER**

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#### SCOPE/IUPAC International Symposium on Endocrine Active Substances.

17 - 21 November 2002, Yokohama, Japan. Web sites: CERI: <a href="http://www.cerij.or.jp/">http://www.iupac.org/</a>, SCOPE: http://www.icsu-scope.org/

#### **DECEMBER**

#### Joint SETAC Europe and ISIE meeting 10th LCA Case **Studies Symposium**

2-3 December, "Recycling, close-loop economy, secondary resources". International Society for Industrial Ecology Meeting in Europe 2002

3-4 December, "Industrial Ecology: from theory to practice". 2-4 December, Barcelona, Spain. Announcement and Call for Papers can be found at www.setac.org.

#### 1st International Fresenius Conference

5 - 6 December . Mainz near Frankfurt am Main, Germany. Food Safety and Dietary Risk Assessment. information, please contact Sabine Mummenbrauer at smummenbrauer@akademie-fresenius.de

http://www.akademie-fresenius.de/index1.html.

#### THIS SPACE FOR RENT

#### CHEAP!!!

FREE Generic Job **Announcements INEXPENSIVE** Commercial Advertisements/ Announcements are being accepted for future issues of SoCal SETAC News

Free job postings are limited to 5 lines at publication width (3.25 in., 10 point, Times New Roman font) and are subject to edit as needed to format the newsletter. Job announcements beyond the 5-line limit described or including logos can be purchased at the commercial rates. Per issue ad rates are:

Full Page: \$100 Half Page: \$75 **Ouarter Page: \$50** Eighth Page: \$35

Please send camera-ready advertisements or job listings to Philip Markle at pmarkle@lacsd.org for inclusion in the next issue of SoCal SETAC News.



## **UCR Extension**



Emerging Water Pollutants: Pharmaceutical and Personal Care Products

Thursday, October 24, 8:30 am-4:30 pm

**UCR Extension Center** 1200 University Ave., Riverside



Seminar Leader: Daniel K. Schlenk, Professor of Aquatic Ecotoxicology, UCR

Special Guest Speakers: Bruce Brownawell, Professor of Analytical Chemistry, SUNY, Stonybrook Greg Woodside, Health and Regulatory Director, Orange County Water District

Fee: \$133 (includes continental breakfast, parking and materials) Call (800) 442-4990 to enroll.







## **SoCal SETAC Officers – Fiscal Year 2002-2003**

POSITION	NAME & AFFILIATION	RESPONSIBILITIES
Past President	Kat Prickett BBL Sciences kpricket@bbl-inc.com	Advisor/Stand-in for President and Vice-President Program Committee Chair for SoCal SETAC Annual Meeting
President	Steve Bay SCCWRP steveb@sccwrp.org	National SETAC Liaison Board Agenda & Action Items
Vice-President	Philip Markle L.A. County Sanitation Districts pmarkle@lacsd.org	Newsletter Editor
Treasurer	Arturo Keller UC Santa Barbara Keller@bren.ucsb.edu	Membership Maintenance Meeting Finances & Contracts Non-Profit Application
Secretary	Karen Riveles UC Riverside karenriv@aol.com	Election Coordinator Recording board meeting minutes
Webmaster	Chris Stransky AMEC Earth and Environmental <a href="mailto:chris.stransky@amec.com">chris.stransky@amec.com</a>	Maintains and updates SoCal SETAC web site

## **SoCal SETAC Board of Directors**

Board Member (2002-2004)	Daniel Schlenk UC Riverside daniel.schlenk@ucr.edu	Board Member (2001-2003)	Jeff Armstrong Orange County Sanitation District jarmstrong@ocsd.com
Board Member (2002-2004)	Carlita Barton University of San Francisco cmatias@lacsd.org	Board Member (2001-2003)	Michelle Anghera UC Los Angeles anghera@ucla.edu
Board Member (2002-2004)	Paul Krause BBL Sciences pkrause@bbl-inc.com	Board Member (2001-2003)	Shelly Magier UC Santa Barbara smagier@bren.ucsb.edu
Board Member (2002-2004)	Jonanthan Ball City Of Los Angeles jball@san.lacity.org	Board Member (2001-2003)	Fabienne Reisen UC Riverside fabienne reisen@hotmail.com

# SOCIETY OF ENVIRONMENTAL TOXICOLOGY AND CHEMISTRY Southern California Chapter 2002-2003 APPLICATION FOR MEMBERSHIP

Please send application and payment (checks payable to Southern California SETAC) to SoCal SETAC, c/o <u>Karen Riveles</u>, P.O. Box 655, Riverside, CA. 92502. Please do not send cash.

Name			Affiliation _							
Address			City	Sta	ate	_ Zip				
Phone No.:		_ FAX No.:		E-Mail* _						
*E-Mail addres	s required to receive	e newsletter.								
Category of Er	nployer: (Please c	heck one that ap	oplies)							
	Government			Industry/Busin	ness _		Academic			
	Student			Consultant	-		Other			<del></del>
Technical Back	kground: (Please	check one that a	pplies)							
	Atmospheric Scient	ence		Engineering	_					
	Biology			Health Science	e _					
	Chemis try			Toxicology	_					
	Earth Science									
	Ecology			Other						
Class of Memb	ed: B.A./B.S.  ership for which y rship covers Januar	ou are applying	: (Please check	k only one)*				o the c	urrent me	embership
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Please check he	ere if you would pre	fer <u>not</u> to be inclu	uded in the me	mbership direct	ory					