SoCal SETAC News

Society of Environmental Toxicology and Chemistry
Southern California Chapter

Volume 25 Number 1 WINTER 2018

FEATURE ARTICLE

Regulatory Update: California's Sediment Quality Objectives

Wendy Rose Hovel (Anchor QEA, LLC) and Shelly Anghera (Latitude Environmental)

In October 2017, the State Water Resources Control Board (SWRCB) released their proposed Amendments to the Water Quality Control Plan for Enclosed Bays and Estuaries of California: Sediment Quality Provisions (Plan) (Beegan and Faick 2017[1]). The original Plan, adopted in 2008, described sediment quality objectives (SQOs) to protect benthic communities and human health (in association with consumption of contaminated seafood) along with implementation guidance for assessing benthic community health. The updated Plan includes implementation guidance for assessing human health for consumers of seafood, guidance on program specific implementation for both Aquatic Life – Benthic Community Protection and Human Health SQOs, and an indication of a potential exception to proposed implementation provisions. The SWRCB held a public hearing on December 5, 2017, at which time they received input on the proposed amendments.

Getting the Lingo Down!

- Aquatic Life – Benthic Community Protection SQO → SQO Direct Effects → Aquatic Life – Benthic Community SQO and the Assessment Framework based on multiple lines of evidence (***for simplicity, use Benthic Community SQO***)
- Human Health SQO → SQO Indirect Effects → Human Health SQO and Human Health Assessment Framework (***for simplicity, use HHSQO***)
- The SQOs adopted in 2008 were also titled "Part 1" of the Enclosed Bays and Estuaries Plan because, at the time, other water quality objectives (e.g. for mercury) were anticipated as Parts 2, 3, and so on. The SWRCB is no longer using the term Part 1 for SQOs.

Read more to learn all about:

- Summary of major updates to the Plan
- Review of the new HHSQO assessment process
- What was said at the public hearing
- The big scoop on what's to come: interview with Chris Beegan, Lead Author of the Plan

[1]*Beegan, C. and K. Faick, 2017. (Proposed) Amendments to the Water Quality Control Plan for Enclosed Bays and Estuaries of California: Sediment Quality Provisions. October 2017.*

President's Corner

Keith Maruya, SCCWRP

The fall of each year brings us the North America SETAC meeting, an annual pilgrimage of our brethren in academia, government and industry. I have attended the N/A meeting since I was a grad student in the early 1990s, missing maybe 3 out of the 25 events or so during that span. Without a doubt, this once a year gathering is the one work-related event I burn into my calendar. If I lend any value as a communicator, this column should let you all know why I put a such a high premium on attending.

Last November, we gathered in Minneapolis for 5 days of workshops, presentations, meetings, socializing and soaking up the metropolitan

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FEATURE ARTICLE (continued)

Summary of Proposed Changes to the Plan

Major proposed updates in the Plan include descriptions of:

- HHSQO methods and procedures used to evaluate the potential for sediment contaminants to accumulate within seafood to unacceptable levels for human seafood consumption within a site.
- Requirements for application of the assessment framework to demonstrate exceedances of receiving water quality limits for the protection of aquatic life (benthic community). The proposed requirements rely upon magnitude and spatial extent of impacts instead of evaluating the frequency of exceedances using the exact binomial test to assess the sediment condition.
- Requirements on the use of the assessment tools to evaluate site-specific exceedances of receiving water quality limits for the protection of human sportfish consumers.
- Requirements providing direction on how to delineate site boundaries, conduct sediment and fish tissue monitoring, and analyze data.
- Requirements on how to apply assessment results to support Section 303(d) listings for both benthic community (aquatic life) and human health impairments.
- Sediment management options and guidelines for the protection of aquatic life and human health through the consumption of seafood.
- An exception to described implementation provisions as stated in Section 3.A.1.b. of the Plan "the objective …do(es) not apply to dischargers that discharge to receiving waters for which a total maximum daily load (TMDL) has been established to address for the bioaccumulation of organochlorine pesticide or polychlorinated biphenyls from sediment into sportfish tissue within enclosed bays and estuaries unless the applicable Regional Water Board approves the application of such provisions."

The Human Health SQO Assessment Process:

The proposed HHSQO assessment process involves a tiered site assessment process for evaluating sediment quality as it relates to human consumers of locally caught seafood. Tier I is a screening level assessment of existing site data (fish tissue and/or sediment chemistry) to determine if further evaluation is needed. Tier II uses some site-specific information within a bioaccumulation model to determine the degree of linkage between sediment and fish tissue at the site, which is integrated with a measure of chemical exposure to provide an overall site assessment category. Tier III is a more site-specific assessment process, which may be most applicable to complex sites with challenging site conditions. Regardless of the tier, the assessment involves integration of: 1) chemical exposure, which is measured by evaluating contaminant concentrations in sportfish to determine if concentrations are associated with unacceptable chemical exposure to human consumers; and 2) site sediment linkage, defined by the contribution of sediment contamination from the site to seafood contamination levels within the site. The site chemical exposure and sediment linkage levels are categorized and evaluated using a decision matrix to determine if the HHSQO is attained. The technical guidance on the HHSQO was developed by the Southern California Coastal Water Research Project and is available at: https://www.waterboards.ca.gov/water_issues/programs/bptcp/docs/sqo_human_health_framework.pdf.

The Public Hearing

The SWRCB held a public hearing on December 5, 2017, at which time the presentation panel provided generally favorable support for the proposed changes. The SWRCB and attendees discussed the new language provided in Section 3.A.1.b. (as cited above) pertaining to the use of SQOs in waterbodies with already established TMDLs. The SWRCB clarified during this discussion that each Regional Board has the option to use the SQOs, but that they are not required for waterbodies with established TMDLs. The SWRCB is currently reviewing and addressing relevant public comments on the proposed amendments.

Fish collection for analysis of tissue contaminants – Spotted Sand Bass, San Diego Bay

FEATURE ARTICLE (continued)

What's to Come: An Interview with Chris Beegan (Author of the Proposed Amendments)

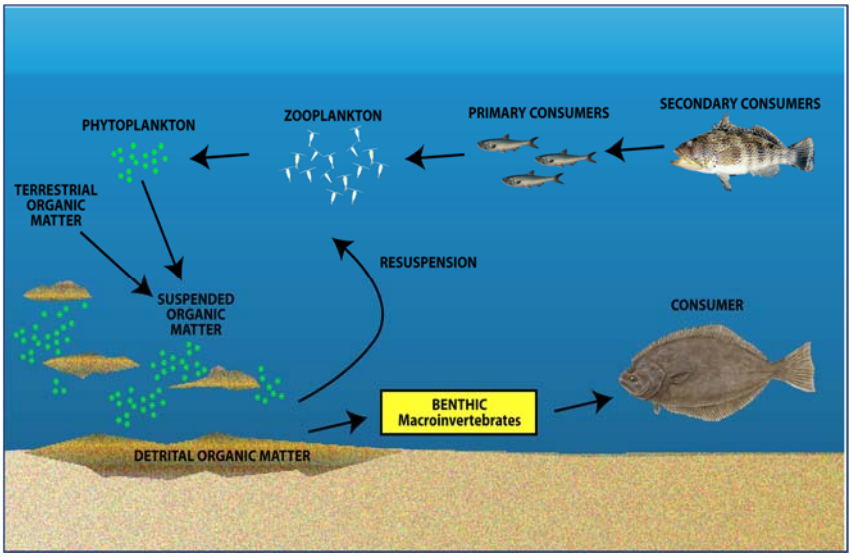
We interviewed Chris Beegan, an engineering geologist at the SWRCB and primary author of the Plan and proposed amendments, to obtain more information on what's to come regarding SQOs. Here's what we found out:

- We asked when the adoption hearing was expected, and Chris said summer of 2018.
- When asked what a common application of the SQOs might be, Chris indicated that ideally SQOs could be used for 303(d) listings, assessment within existing and future TMDLs at the discretion of the Regional Boards, assistance in informing any sort of site cleanup effort, and assessment of the impacts to sediment quality from wastewater and stormwater discharges.
- We asked Chris if additional revisions to the sediment quality provisions section of the water quality control plan were expected. Chris said there are no plans at this time. However, he identified several efforts that could fill existing gaps in the plan, such as:
  - Development of benthic community indices for estuarine or transitional waters. The SWRCB has supported the development of indices for freshwaters and marine waters, so filling this gap makes sense and some existing tools such as the M AMBI provide a good start.
  - Development of a prescriptive assessment framework to support the SQO for the protection of wildlife and resident finfish.
  - Expansion of the stressor identification toolbox to include methods to identify causes of impairment to the benthic community.
  - Improvement of taxonomic resolution and update of the nomenclature used in the existing benthic community tools to reflect current best practices.
- At some point in the near future, the sediment quality provisions in the Plan will be merged and incorporated into the Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE) along with other recently adopted and anticipated amendments (e.g., bacteria, toxicity, and mercury).

The big question is: what's next for Chris now that SQO work is nearly done? Chris said he would refocus most of his time on ongoing projects associated with the SWRCB's Strategy to Optimize Resource Management of Stormwater. He will continue to provide support for implementation of SQOs and will be involved in training Regional Board staff and stakeholders if the proposed amendments are adopted by the SWRCB.

Call for Volunteers to Represent SoCal SETAC at a Science Fair

SoCal SETAC has been invited to assist in judging TK-8th grade students at WISH Charter Elementary School's 2018 Science Fair in Westchester. Your participation would be extremely valuable to their students and it's always exciting for students to meet members of the community and leaders in the field of science (that's YOU!). Judging will occur on Friday, April 20 and takes about 2-3 hours. Hot breakfast will be provided. Contact Denise Li (denise.li@lacity.org) if you are interested!



Aquatic Food Web – Pathways of Contaminant Transfer from the Sediments to Wildlife and Ultimately Human Consumers of Fish

PRESIDENT'S CORNER (continued)

culture of the upper Midwest. As I did in 2016, I made a point to attend the opening ceremony, not always a high priority for me in years past. In 2016, I had a vested interest as my colleague and friend Nancy Denslow was honored with the SETAC Founders Award. Of course, I was curious to see that if, in her hour-long acceptance speech, Nancy would mention our collaboration on linking bioanalytical responses with effects on fish development and reproduction (she did). So Nancy is now an even better colleague/friend.

In Minny, my interests were doubled as our own Dan Schlenk was elevated to SETAC Fellow status, and Tom Parkerton of Exxon-Mobil received the Founders award. Tom and I have history as co-organizers of a SETAC workshop on passive sampling for contaminated sediments back in 2011, an idea spawned as we chatted at the N/A meeting in Portland a few years earlier. Thinking our efforts to standardize passive sampling would be among the efforts Tom would highlight in his speech, I was perplexed when he thanked a few folks and walked off stage after showing only a half a dozen slides. At dinner with Tom later, I had to ask why the abbreviated speech? "They (the organizers) gave me 10 minutes max", was Tom's reply. Ten minutes of fame for a 30-year distinguished career - my how short our attention spans have become!

Before dining with Tom, his colleague Aaron Redman and my former student Abbey Joyce, who is finishing her postdoc at the EPA Narragansett lab, a lively bunch of SoCalers met up at The Local, a downtown pub with a quirky, bowling alley configuration. It was great to see some older (not old) faces like former Chapter President and LA Kings nut Michele Castro, and meeting new folks, like Michele's husband (also a hockey dude), and some WET-testing experts from Pacific EcoRisk, a Chapter sponsor. The latter chat led to a session idea on the controversies of WET testing at a future SoCal meeting. Thanks to Alvina Mehinto for organizing, and for all of you who came out to represent our Chapter.

Amongst the backslapping, I was able to attend a few talks and posters that I had circled, including the very last talk of the session honoring the contributions of the EPA ORD Duluth lab. Presented by Dan Villenueve, I was inspired hearing just how far we've come in our understanding of the toxicological pathways of endocrine active chemicals.

Another noteworthy session on "integrated tools" featured several investigators, like Lee Ferguson, Susan Glassmeyer and Ed Kolodziej who are at the forefront of effects directed analysis, non-targeted mass spectrometry and in silico prediction of toxicity. Such fields of study did not exist when I was starting out but are worth keeping an eye on. Meeting and collaborating with folks like Ed, Lee and Bryan Brooks at Baylor resulted in the recent addition of Bowen Du to our SCCWRP Chemistry team.

As the days of giving too many talks are now well in my past, I enjoyed relaxing a bit and giving back to the Society by judging student talks and posters, and of course, representing SoCal at the all-Chapter meeting.

As I try to do in each new city I visit, I reserved a bit of time to wander about Minneapolis. With temps hovering well below what we ever see here at home, I made it to 2 local parks – one with funky sculptures and one with a waterfall. Albeit mildly interesting/scenic, the lasting impression these abbreviated junkets gave me was losing my voice the night before my presentation. It was, uh, that cold (and damp)!

Please stay tuned for our Spring dinner meeting announcement, and *don't miss our Call-for-Abstracts for the Chapter Annual meeting to be held in April 12-13 at LMU*, courtesy of our Past-President Rachel Adams. We have great events in the works so I hope to see you at our next function, if not sooner!

Eat more beef,
Keith

MEET THE BOARD

Alvine Mehinto, Southern California Coastal Water Research Project Authority (SCCWRP)

Alvine Mehento, SoCal SETAC Board Member, Public Sector, visiting Zabriskie Point in Death Valley

Hello! I am Alvine, your new Board Member representing the public sector. I am a Molecular Toxicologist at SCCWRP, specializing in the development of novel molecular/cellular tools to screen for contaminants and assess their impact on the health of aquatic organisms.

I grew up in France in a town in the northwest of Paris. From a young age, I developed a keen interest for nature, especially marine mammals. Watching the wildlife documentaries from Jacques Cousteau and David Attenborough inspired me to become a marine scientist. So, I decided to go to England to learn English and pursue a marine biology degree at the University of Portsmouth. My undergraduate research on the effects of fish-farm effluents on the physiology of salmon smolts, further sparked an interest in environmental pollution and ecotoxicology. I went on to do a PhD at the University of Exeter (also in England) to study the biodegradability and ecotoxicity of the pharmaceutical diclofenac. After a short break working as a camp instructor with middle school children in France, I moved to the United States and conducted my postdoctoral research at the University of Florida in Dr. Nancy Denslow's laboratory. I also spent time as a visiting postdoc at the University of California, Berkeley. My postdoctoral research focused on gene expression profiling for predictive toxicology, and development and application of microarrays for non-model fish species to evaluate the effects of environmental pollutants in US watersheds.

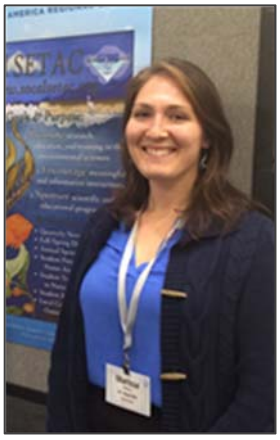
Since joining SCCWRP in 2013, I have been working on the development and validation of bioanalytical assays and gene expression profiling techniques. These methodologies could improve our ability to detect emerging chemicals and predict their long-term effects on aquatic organisms. I have had the opportunity to work in close partnership with academics as well as municipal and state agencies, to facilitate the use of these novel tools in environmental monitoring programs. I look forward to sharing my experiences with SoCal SETAC members and develop new partnerships.

In my spare time, I enjoy hiking, snorkeling, and dancing especially Bachata and Afro/Caribbean dances. But my favorite hobby is travelling abroad to visit historical sites and nature reserves. I also like to volunteer, and I am looking to join an organization with an environmental/animal focus. If you have any suggestions, I would like to hear from you.

STUDENT CORNER

Marissa Giroux, UC Riverside

Marissa Giroux, a PhD candidate in Dr. Schlenk's aquatic eco-toxicology lab at the University of California, Riverside recently chatted with Student Board Member Scott Coffin after the SETAC National Conference in Minneapolis about her research, life goals, and involvement in SETAC.



Scott: Please describe your research.

Marissa: I am interested in the effects of multiple stressors on anadromous fish. Specifically, I am interested in how climate change can affect the toxicity of pyrethroid pesticides in coastal areas. I am currently exposing multiple life stages of juvenile Chinook salmon to a range of temperatures and to bifenthin, a pyrethroid pesticide. I measure gene expression, hormone levels, and behaviors as endpoints to evaluate how these stressors impact the whole fish.

Scott: What are the impacts of this research?

Marissa: This research can be used in risk assessments for pyrethroids pesticides in California waterways. Salmon and trout populations in Northern California are declining, so my research helps to provide information for maintaining sustainable populations with the onset of climate change.

Scott: What inspired your interest?

Marissa: My interest in toxicology first started at the University of Maine when I was taking a class that covered topics about marine toxins. Eventually, this interest grew into how human activity can impact marine systems, and this led to an internship in an aquatic toxicology lab at the EPA. My background in marine and environmental sciences sparked my interest in aquatic systems impacted by climate change stressors, and my experience with the EPA inspired my interests in environmental contaminants.

Scott: What are your plans for your future?

Marissa: After I graduate from UCR, I plan to continue to expand my research skill set by doing a postdoc in marine/aquatic ecotoxicology. I enjoy my research with fish and investigating how chemical stressors can impact entire populations through molecular mechanisms. Ultimately, I want to stay in academia and pursue a position as a professor in order to both teach and conduct research.

Scott: What were some of your most memorable moments at the conference?

Marissa: The annual North America SETAC meeting is always a fun conference, and I enjoy chatting with people at the poster sessions. I like seeing the interesting emerging research, finding camaraderie with graduate students with similar research interests, and sharing ideas with other researchers. I also attended the student events at SETAC, such as the mentor-mentee lunch and the student noontime seminar. I appreciate the effort from SETAC to provide platforms for graduate students to connect and have the opportunity to speak with many mentors from different career paths. This is incredibly valuable for us young scientists early on in our careers. Of course, I also gave my first oral presentation at an annual NA SETAC meeting, so that was memorable for me!

Website Update and Reminder

Violet Renick

Greetings SoCal SETAC!

Just a reminder here again that SoCal SETAC has a new website. While it continues to be a work in progress, we are very excited about the possibilities that the new website will bring for our community. Please check it out and learn more about our SoCal SETAC family.

Features of the new website include:

- A blog for members to share accomplishments, news, and regulatory updates
- Photo gallery of previous SoCal SETAC events
- Easy payment/registration for dinner and annual meetings

In order to make this website as awesome and useful as possible, please consider contributing:

- Photos of yourself or colleagues at SoCal SETAC events (like national!)
- News of scientific/professional accomplishments, publications, regulatory updates
- Links to jobs for the job board
- Anything else that might be relevant

And last but not least, stay tuned for future upgrades including:

- An up-to-date calendar of events
- A social media stream including Facebook and/or Instagram posts

If you have any requests or suggestions for improvement, please contact Violet at violetrenick@gmail.com. Thank you and happy clicking!

https://www.socal-setac.org/

Southern California SETAC
Spring 2018 Dinner Meeting

Environmental Implications of Nanotechnology

Arturo Keller, Ph.D.
University of California Santa Barbara

Thursday March 8, 2018
6:30 pm to 8:30 pm

Truxton's American Bistro, Westchester
8611 Truxton Avenue
Los Angeles, CA 90045

6:30 pm Dinner and 7:30 pm Speaker

SoCal SETAC Spring 2018 Dinner Meeting Registration

		MEMBERSHIP STATUS	RATES (select one)	
Name			By 02/23/18	After 02/23/18
Affiliation				
Address		Current Member	$25	$35
		New or Renewing Member includes $20 one-year membership fee	$45	$55
		Current Student Member	$15	$20
Phone		New or Renewing Student Member includes $10 one-year membership fee	$25	$30
Email				

DINNER:
Three course buffet and non-alcoholic beverages will be served. **Alcohol will be available for individual purchase.**

If you have a special dietary request or food allergies please email
mistymercier@physislabs.com

REGISTRATION:

- Online[1]: www.socal-setac.org under Meetings
- On-Site: bring this form along with cash/check/card
- Mail: send this form with a check or money order payable to *SoCal SETAC*
  c/o Misty Mercier
  SoCal SETAC Secretary
  Physis Environmental Labs
  1904 E. Wright Circle
  Anaheim, CA 92806

[1]first ten online registrants will receive a drink ticket redeemable for a free beverage

PLEASE POST PLEASE POST PLEASE POST

Southern California SETAC
Spring 2018 Dinner Meeting

Environmental Implications of Nanotechnology

Arturo Keller, Ph.D.
School of Environmental Science and Management
3420 Bren Hall
University of California
Santa Barbara, CA 93106
arturokeller@ucsb.edu

With more and more products making use of nanotechnology to enhance their performance, a key question is what may be some of the implications for the environment. New research in this area by many groups around the world indicates that there are significant differences in the impacts one can expect from different nanomaterials, depending on their properties, the mode of use and level of emissions, the environmental media into which they are released, their mobility in the environment, their ultimate fate, and their intrinsic toxicity. The behavior of three major classes of nanomaterials, namely metals, metal oxides and carbon nanotubes, will be presented.

Southern California Regional Chapter of the
Society of Environmental Toxicology and Chemistry

2018 ANNUAL MEETING • APRIL 12–13

Loyola Marymount University

Seaver Life Science Building ◆ 1 LMU Drive ◆ Los Angeles, CA 90045

PROGRAM HIGHLIGHTS

- *Platform/Poster Presentations on Selected Topics (below)*
- *Platform/Poster Presentations on Unrestricted Topics of Interest to Local Scientists and SoCal SETAC Members*
- *Annual Chapter Awards*
- *Best Student Poster and Platform Awards*

Thursday, April 12 — Sediment Quality & Passive Sampling

Friday, April 13 — Microplastics /Marine Debris & Unrestricted Topics

ABSTRACTS ARE DUE MARCH 2, 2018

Southern California Regional Chapter of the Society of Environmental Toxicology and Chemistry

2018 ANNUAL MEETING • APRIL 12–13

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TENTATIVE SCHEDULE OF EVENTS

Thursday, April 12

08:00–17:00	Registration
08:15–08:30	Welcome and Announcements
08:30–10:00	**Special Session: Sediment Quality** – Speakers will present on sediment quality objective state policy and development, sediment toxicity testing, and the bioaccumulation of contaminants.
10:00–10:30	Coffee Break
10:30–12:00	Morning Session continued
12:00–13:30	Lunch
13:30–15:00	**Special Session: Passive Sampling** – Speakers will present on the current state of passive sampling technologies and methods, regulatory implications for passive sampling, in situ & ex situ studies, kinetic modeling, and more.
15:00–15:30	Coffee Break
15:30–17:00	Afternoon Session continued
17:30–19:30	Poster Social and Happy Hour

Friday, April 13

08:00–17:00	Registration
08:15–08:30	Welcome and Announcements
08:30–10:00	**Special Session: Marine Debris/Microplastics** – Speakers will present on the issues associated with marine debris and microplastics including: the North and South Pacific Gyre Patch; the identification and measurement of microplastics; risks to aquatic life (e.g., ecological, endocrine-disruption), and more.
10:00–10:30	Coffee Break
10:30-12:00	Morning Session continued
12:00–13:00	Lunch
13:00-14:30	**Unrestricted Session** – Speakers will present on topics related to environmental toxicology and chemistry
14:30–15:00	Coffee Break
15:00-16:00	Afternoon Session continued
16:00-17:00	Presentation of Awards, Raffle Prizes, and Closing Remarks

Meeting registration includes food & drinks for scheduled events

2018 ANNUAL MEETING • APRIL 12–13

Southern California Regional Chapter of the Society of Environmental Toxicology and Chemistry

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Loyola Marymount University

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DIRECTIONS

The Loyola Marymount University main campus is located in Westchester at 1 LMU Dr., approximately 4 miles north of the Los Angeles International Airport (LAX).

Directions from the 405 Freeway, LAX, from the 105 Freeway, and from the 10 Freeway are available online:
http://admission.lmu.edu/connect/visit/directionsmaps/

CAMPUS MAP & PARKING

A campus map is available at:
http://www.lmu.edu/media/admin/parking/LMU%20Visitor%20Campus%20Map%202017%2008%2002.pdf
There is an information kiosk located at the LMU Drive Entrance. The Life Science Building (LSB) is in quadrant H-6 and the LSB Auditorium is on the north side of the LSB. Parking Lot D is directly below the Life Science Building. Parking rates are $12.50 per day. Carpooling is encouraged.

METRO RAIL

The Metro Rail stop closest to LMU is located on Aviation Blvd & Imperial Hwy and is 5 miles away from the LMU campus. Busses and ridesharing services are available at this station.

POSSIBLE HOTELS

There are many hotels in the area. The two following hotels offer discounts for SETAC Meeting attendees:

Hilton Garden Inn Marina del Rey is in Marina del Rey and is walking distance to Venice Pier.
LMU Special Rate: $199/night; self-parking: $20/night
LMU Direct Booking Link: http://corporate.hilton.com/LMU
Hotel phone: 310-301-2000; email: marinadelreysales@ih-corp.com

The Custom Hotel is in Westchester and is walking distance to LMU.
SETAC Special Rate: $129/night; Group code: SETAC; rate valid until March 16.
Valet parking: $20/night; street parking available nearby
Direct Booking Link: https://gc.synxis.com/rez.aspx?Hotel=79283&Chain=17719&group=SETAC
Email: sales@customhotel.com or call reservations: 877-287-8601 and mention group code "SETAC"

Registration to SoCal SETAC events grants consent to the use of your visual image by SoCal SETAC for appropriate purposes, including but not limited to: still photography, videotape, electronic/print publications, social media, and websites.

Southern California Regional Chapter of the Society of Environmental Toxicology and Chemistry

2018 ANNUAL MEETING • APRIL 12–13

Loyola Marymount University

Seaver Life Science Building ◆ 1 LMU Drive ◆ Los Angeles, CA 90045

Name:				Affiliation:					
Address:				Phone:					
City:				Email:					
State:		Zip:		Attending on:		Both Days		Thurs only	Fri only

Affiliation Category (select one)

☐ Student ☐ Academic ☐ Government ☐ Industry/Business ☐ Consultant ☐ NGO ☐ Other (specify) _____

Annual Membership Category

ACTIVE* $20 REGIONAL $20 STUDENT $10

**describes SETAC North America members (requires separate dues)*

2018 SoCal SETAC Annual Meeting Registration

DAYS OF ATTENDANCE	STUDENT[1]				ACTIVE/REGIONAL			
	Current Member[2]		New Member[3]		Current Member[2]		New Member[3]	
BEFORE March 16 (select one)								
2 day Pre-Registration		$50		$60		$130		$150
1 day Pre-Registration		$25		$35		$85		$105
AFTER March 16 (select one)								
2 day Registration		$60		$70		$150		$170
1 day Registration		$30		$40		$105		$125

[1]Annual membership dues waived for all Student poster/platform meeting presenters (when making payment select Current Member)
[2]Current member meeting registration does not include annual membership dues, which must be paid annually
[3]New member registration includes annual membership valid through April 30, 2019
Cancellation refund requests, minus $25 processing fee, must be emailed to mistymercier@physislabs.com by April 5

Register by PayPal on our website https://www.socal-setac.org/annual-meeting

OR

Mail this completed form with a check or money order payable to SoCal SETAC

c/o Misty Mercier, SoCal SETAC Secretary, Physis Environmental Labs, 1904 E. Wright Circle, Anaheim, CA 92806

OR

Bring completed form to register on-site (cash, check, money order or credit card)

Registration to SoCal SETAC events grants consent to the use of your visual image by SoCal SETAC for appropriate purposes, including but not limited to: still photography, videotape, electronic/print publications, social media, and websites.

CALL FOR ABSTRACTS

Posters and Platform Presentations

SoCal SETAC is requesting abstracts for platform or poster presentations at the 2018 Annual Meeting. Any primary research, case study, monitoring program data, or policy-based papers related to environmental toxicology, chemistry or related fields are invited. We also encourage presentation of student proposals and research at the meeting by offering Best Student Poster and Platform Presentation Awards. Every student presenter will receive a *free 1 year SoCal SETAC membership* and the Best Student Poster and Platform presentations will be awarded a *cash scholarship*. This meeting is also a great opportunity to present information from the 2017 SETAC North America annual meeting to local members who could not attend or to prepare for the upcoming 2018 SETAC North America meeting in November.

Abstract Instructions

The abstract deadline is **March 2, 2018** and the format for submission is as follows. The abstract, including the authors and title, are limited to 300 words. Longer abstracts may be edited. At the top of the file, provide the name, address, phone, and e-mail information of the presenting author. Please list your preference for a platform or poster presentation and whether this paper is to be judged for the Best Student Paper Award. Skip a line and type the title of the abstract in bold using title case. Then list the authors, last name first, then the first and middle initial, and place an asterisk (*) after the name of the presenting author. Include the name, city, and state of the institution for each author but not the department or street address. Without skipping a line, begin the text of the abstract. An example of the correct submission format can be found on the next page.

Abstracts should be submitted as a Microsoft Word file via e-mail attachment. Send the files via e-mail to **Rachel Adams** (rachel.adams@lmu.edu). The presenting author will be notified of acceptance status two weeks after the abstract deadline.

STUDENT PRESENTERS: If you wish to have your poster judged for best award, your poster must be up by 4:30 PM on Thursday, April 12. If possible, please leave your poster up overnight for attendees to view on Friday, April 13.

EXAMPLE OF CORRECT ABSTRACT FORMAT

Philip J. Markle
County Sanitation Districts of Los Angeles
San Jose Creek Water Quality Laboratory
1965 Workman Mill Road
Whittier, CA 90601
T: 562-699-0405, ext. 3055
F: 562-695-7267
E: pmarkle@lacsd.org

My preference is a PLATFORM presentation.
I do not wish to be judged for the Best Student Paper Award.

Application of the Pearson Product-Moment Correlation for Evaluating Whole Effluent Toxicity Test Concentration Response Relationships.

Phil Markle*, Joseph Gully, and Carlita Barton. County Sanitation Districts of Los Angeles, Whittier, CA.

The dose response relationship has been characterized as the most fundamental and pervasive concept of toxicology. This concept assumes a causal relationship between the dose or concentration of a substance and the measured response. This has been recognized in the latest USEPA chronic bioassay testing protocols through the requirement to evaluate the concentration-response relationships of all NPDES multi-concentration tests. Although the protocols provide complicated and subjective guidance on evaluating dose response relationships, the SETAC NA Expert Advisory Panel for Performance Evaluation and Data Interpretation has recommended the use of the Pearson product-moment correlation statistic in their Wild, Wild, WET short course. The Pearson product-moment correlation is a relatively simple and objective analysis that establishes whether a significant relationship exists between concentration and response. The two methods were compared by evaluating the dose responses from 149 NPDES reported chronic toxicity tests using both the EPA protocol recommended guidance and the Pearson product moment correlation. The USEPA and Pearson product-moment correlation typically agreed in terms of establishing an appropriate concentration response relationship prior to identifying a sample as being toxic. Results indicate that the two methods were in agreement in 93% of the tests. However, in 3% of the tests, the USEPA guidance identified the sample as "toxic" while the Pearson product-moment correlation did not identify a significant concentration response. Conversely, 4 % of the tests identified a significant concentration response curve but would have been considered "non-toxic" according to USEPA guidance.

SOCAL SETAC CALENDAR

February

February 12-14
Pretreatment, Pollution Prevention, and Stormwater Annual Conference | *Riverside, CA*

March

March 8
SoCal SETAC Spring Dinner Meeting | *Westchester, CA*

March 18-22
255th ACS National Meeting & Exposition | *New Orleans, LA*

March 25-27
2018 Water Reuse California Annual Conference | *Monterey, CA*

March 26-29
7th Young Environmental Scientists (YES) Meeting | *Madison, WI*

April

April 8-12
The 11th International Conference on Remediation of Chlorinated and Recalcitrant Compounds | *Providence, RI*

April 12-13
SoCal SETAC 2018 Annual Meeting | ***Los Angeles, CA***

April 17-20
CWEA Annual Conference 2018 | *Sacramento, CA*

April 28
Southern California Academy of Sciences Annual Meeting | Santa Monica, CA

May

May 7-8
2018 WE&RF Research Conference | *Atlanta, GA*

May 13-17
SETAC Europe 28th Annual Meeting | *Rome, IT*

June

June 20-23
Association for Environmental Studies and Sciences Conference 2018 | *Washington, DC*

June 25-28
Dredging Summit & Expo 2018 | *Norfolk, VA*

August

August 5-10
Ecological Society of America 2018 Annual Meeting | *New Orleans, LA*

August 6-10
National Environmental Monitoring Conference 2018 | *New Orleans, LA*

August 12-16
StormCon: The Surface Water Quality Conference & Expo | *Denver, CO*

September

September 9-12
33rd Annual Water Reuse Symposium | *Austin, TX*

September 16-19
SETAC Asia-Pacific 2018 Annual Meeting | *Daegu, KR*

October

October 15-17
California Stormwater Quality Association Annual Conference | *Riverside, CA*

November

November 4-8
SETAC North America 39th Annual Meeting | *Sacramento, CA*

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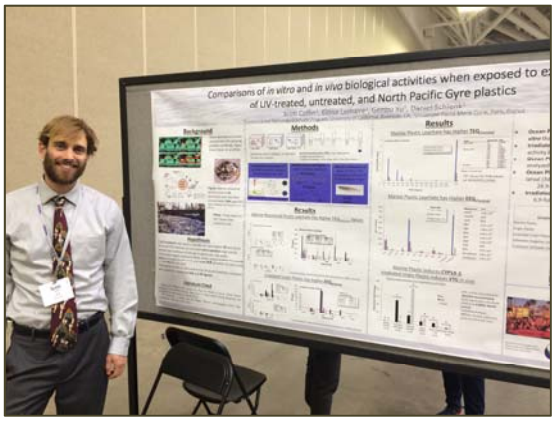
SETAC SCENES

From the N/A 38th Annual Meeting in Minneapolis……



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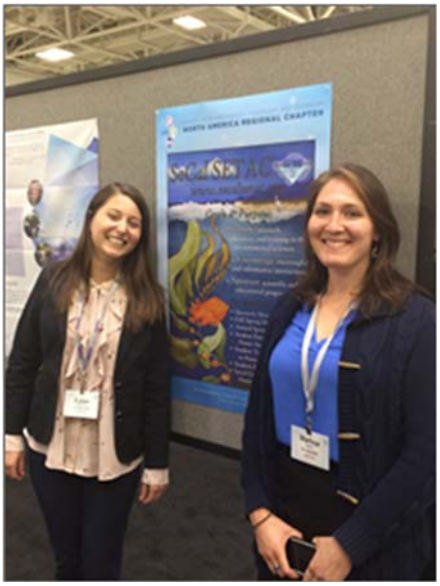


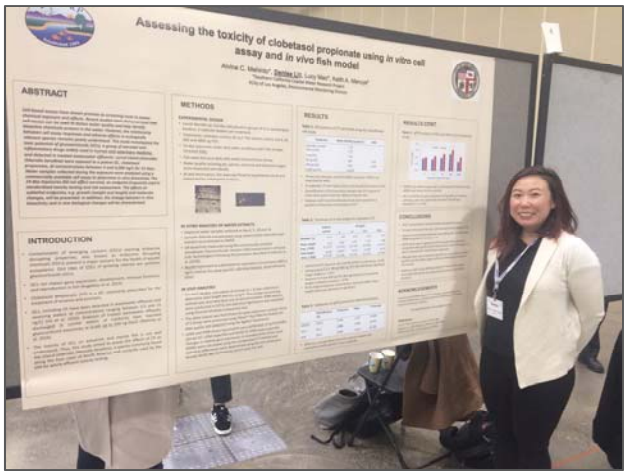
2.

1. Scott Coffin, Ph.D. candidate from UC Riverside and student board member, with his poster on the potential effects of chemicals associated with microplastics in the ocean.

2. Postdoctoral scholar Luisa Bertotto (left) and Ph.D. student Marissa Giroux (right) of UC Riverside manning the SoCal SETAC Chapter poster during the poster social.

3. Denise Li, City of Los Angeles, with her poster on the toxicity of glucocorticoid steroids on silversides (*Menidia* spp).

4. The Minneapolis Convention Center and nearby Mississippi River.



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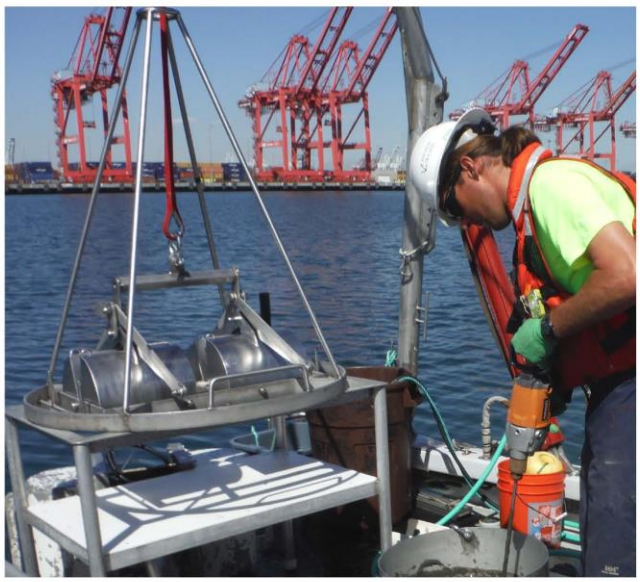

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Sheepshead Minnows (*Cyprinodon variegatus*)	embryo larvae/juvenile
Mysid Shrimp (*Americamysis bahia*)	juvenile adult
Inland Silverside (*Menidia beryllina*)	embryo juvenile
Topsmelt (*Atherinops affinis*)	embryo/larvae juvenile
Hyalella azteca	juvenile/adult
Lumbriculus variegatus	juvenile/gram
Chironomus dilutus	second instar/eggs
Leptocheirus plumulosus	juvenile/adult
Raphidocelis subcapitata (at 3 x10^7 cells per ml)	½ Liter
YTC Daphnid Feed Mixture (with total solids data and pesticide/metals analysis)	½ Liter
Wheatgrass for YTC (with pesticide/metals analysis)	gram
Marine Rotifers (*Branchionus plicatilis*)	½ Liter
Zeigler® Finfish Starter #1 (for making YTC)	1 lb.
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Daphnia magna	Starter culture Neonates
Daphnia pulex	Starter culture Neonates

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