

**Stormwater Runoff Water Quality Newsletter**  
**Devoted to Urban/Rural Stormwater Runoff**  
**Water Quality Management Issues**

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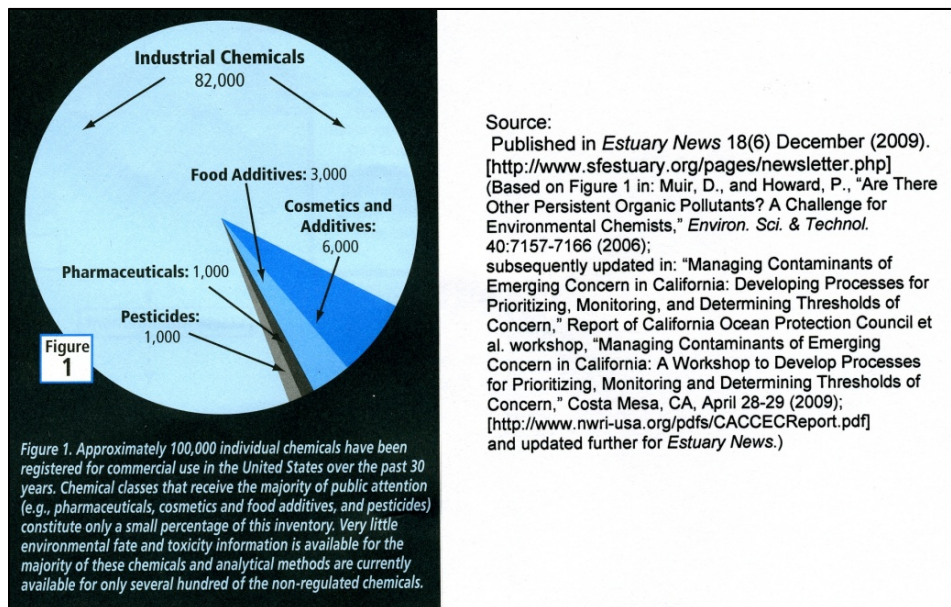
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This issue of the Newsletter provides information on a recent report concerning impacts of the large number of unmonitored, unregulated, and unrecognized chemicals in the aquatic systems; the availability of a new California Stormwater Quality Association (CASQA) Construction BMP Handbook; and a US EPA Office of Pesticide Programs request for public comment on options for disclosing inert ingredients in pesticides. In addition, information is provided on an upcoming US EPA symposium on groundwater-borne infections diseases, the NorCal SETAC annual meeting focusing on contaminants of emerging concern, and a series of CA Department of Pesticide Regulations' workshops on regulating pesticides for protection of surface water quality.

**Managing Contaminants of Emerging Concern in California's Water Resources**

At this time the US water quality management programs focus on about 100 to 200 out of the many tens of thousands of chemicals used in commerce and discharged to waterbodies. As discussed in past Newsletters [NL-7-3, 8-5, 9-3, 10-7, 11-7/8, 11-11, 12-6 available at [http://www.gfredlee.com/swnews\\_indexa.pdf](http://www.gfredlee.com/swnews_indexa.pdf)] there is increasing concern about the impacts of the large number of unmonitored, unregulated, and unrecognized chemicals in the Nation's waters. In April 2009, a California Ocean Protection Council et al. workshop, "Managing Contaminants of Emerging Concern in California: A Workshop to Develop Processes for Prioritizing, Monitoring and Determining Thresholds of Concern," was held in Costa Mesa, CA; a report on issues and discussions at that workshop was made available in September (2009) [<http://www.nwri-usa.org/pdfs/CACCECReport.pdf>].

Figure 1 presents a summary, derived from that report, of current information on numbers of chemicals from various sources that are of concern as potential pollutants.



The National Water Research Institute (NWRI) discussed a number of key issues pertinent to managing contaminants of emerging concern in California waters, including issues addressed in the workshop report. Presented below are excerpts from that NWRI discussion.

*“Managing Contaminants of Emerging Concern in California’s Water Resources” available at, <http://www.nwri-usa.org/pdfs/CACCECReport.pdf>. Report Developed by Water Community Offers Strategies to Monitor and Regulate Pharmaceuticals and Other Contaminants of Concern in Water*

*12.29.2009 – FOUNTAIN VALLEY, Calif. – A new workshop report is now available that discusses strategies to begin addressing contaminants of emerging concern (CECs) in California’s water resources. The report provides a list of recommended steps that involve new and evolving approaches for prioritizing compounds to study, identifying monitoring goals and objectives, and assessing thresholds of human and ecological health concern.*

*This report was prepared by a consortium of nonprofit and university sponsors interested in water quality issues in California, including the California Ocean Protection Council, California Ocean Science Trust, National Water Research Institute, San Francisco Estuary Institute, Southern California Coastal Water Research Project, and Urban Water Research Center at the University of California, Irvine.*

*CECs are a group of mostly unmonitored and unregulated chemicals whose potential to impact the beneficial uses of water resources in California is largely unknown. CECs, which include pharmaceuticals and personal care products, pesticides, and industrial and household compounds, have been found at trace levels (parts per trillion) in wastewater discharges, ambient receiving waters, and drinking water supplies.*

*Approximately 100,000 individual chemicals have been registered for use in the United States over the past 30 years. However, the analytical methodologies used to measure trace levels of CECs in the environment are currently limited to several hundred of these non-regulated chemicals.*

*Having a limited pool of analytical methods restricts the ability of researchers to accurately describe CEC occurrence, which in turn limits the ability to assess potential risks. Due to this knowledge gap, regulatory agencies thus far have been unable to develop a comprehensive strategy for monitoring and regulating CECs.*

*In response, a workshop was held on April 28-29, 2009, in Costa Mesa, CA, to bring together scientists, water quality managers, and stakeholders to .*

*The workshop included interactive break-out sessions that focused on:*

- CECs of sufficient concern that should be incorporated into routine monitoring programs.*
- Measurement techniques for monitoring these CECs.*
- Thresholds of ecological and human health concern for interpreting CEC monitoring data.*

*Conclusions from the workshop were summarized in a 37-page workshop report entitled, “Managing Contaminants of Emerging Concern in California: Developing Processes for Prioritizing, Monitoring, and Determining Thresholds of Concern.”*

*Major findings included:*

- The current chemical-specific risk assessment approach is neither feasible nor cost-effective for prioritizing and managing the vast majority of CECs. The U.S.*

*Environmental Protection Agency currently regulates 129 priority chemicals, but tens of thousands of CECs exist that may require risk assessment. The traditional risk-based approach may not be feasible given the extreme data gaps for most CECs. Therefore, a new paradigm that prioritizes chemicals with similar toxicological modes of action for further evaluation is needed.*

- Because we are currently in the investigative phase, developing regulatory limits would be premature at this time. In lieu of regulations or compliance monitoring, investigative monitoring should be used as a first step towards the development of a management strategy. Identifying a clear set of goals for investigative monitoring is essential for filling in critical data gaps.*
- A flexible, multi-element prioritization framework is needed to identify those compounds of highest concern. This framework would integrate risk-, occurrence-, and modeling-based prioritization elements to select the highest priority CECs for specific monitoring applications and geographic locations.*
- The creation of a single master list of CECs that agencies could apply effectively across all applications is unlikely. It is more likely that constituents of concern will vary depending upon a number of application-specific parameters, such as type of waterbody, degree of treatment, impact of concern (human or ecological health), and land use. Therefore, a more logical step would be the formulation of preliminary lists of priority CECs that will address the investigative monitoring goals for various applications, such as drinking water or recycled water.*
- The interpretation of monitoring data and subsequent decision making should be based on tiered, multiple thresholds. Thresholds associated with no, little, moderate, and high probabilities of impact should be used to trigger risk-appropriate actions aimed at protecting the beneficial uses of the resource.*
- An adaptive management strategy is imperative to respond to rapidly changing knowledge. Little is known about CECs at this time. Therefore, new information and technology will affect our ability to monitor for CECs, and preliminary CEC monitoring lists will be subject to trial and error. Further advances in treatment technologies and changes in chemical use will also affect the occurrence of CECs. Therefore, CEC management processes must also be able to adapt to new information.*

*In addition to these findings, the workshop report also includes the following recommended next steps toward developing a CEC management strategy for California:*

- Fill in data gaps, which can be accomplished through investigative monitoring and targeted research.*
- Synthesize current knowledge to select a proposed list of CECs for the purposes of monitoring.*
- Identify and, as necessary, develop and test the most appropriate monitoring methods for these CECs.*
- Incorporate measurements of proposed CECs into the design and implementation of existing and future planned studies.*

*Finally, it was determined that trust among water quality managers, scientists, and the public is a key component in moving the process forward in developing a comprehensive strategy for monitoring and regulating CECs.”*

Information on the National Water Research Institute is available at <http://www.nwri-usa.org/>.

### **NorCal SETAC Meeting – May 2010**

The Northern California Regional (NorCal) Chapter of the Society of Environmental Toxicology and Chemistry (SETAC) will hold its 2010 Annual Meeting – devoted to **Contaminants of Emerging Concern: Responding to a 21st Century Challenge** – on May 12-13, 2010 at the UC Berkeley Clark Kerr campus, Berkeley CA 94705.

Plenary Speakers: Christian Daughton (US EPA, ORD, Las Vegas NV), David Epel (Stanford University), Daniel Schlenk (University of California Riverside)

May 12th (Short Courses), May 13th (Plenary, Posters, Social)

NorCal SETAC stated with regard to the meeting:

*“The meeting theme will bring three experts, Dr. Christian Daughton, Dr. Daniel Schlenk and Dr. David Epel together in the plenary session to present the complex environmental responses to contaminants we have begun to notice in the water, air and soil of Northern California. We are soliciting short course ideas – what would you like to learn and what would you like to teach? Contact Katie Henry (katie.henry@tetrattech.com) immediately for further information, since time is short and funds are limited. On-line registration will begin in early February 2010. Abstracts for platform and poster sessions are due on March 26, 2010. The 2010 "call for abstracts" and instructions for submitting them will be sent to you by email and posted on the web site (www.norcalsetac.org).”*

### **Construction BMP Handbook**

The California State Water Resources Control Board announced,

*“CASQA [California Stormwater Quality Association] has developed a new CASQA Construction BMP Handbook / Portal to complement the new State Construction General Permit that takes effect July 2010.*

*CASQA is making the new CASQA Construction BMP Handbook / Portal available now for annual subscription to help permittees and other users prepare for when the new permit takes effect in July. For more information about purchasing an annual subscription to the Construction BMP Handbook / Portal visit [www.casqa.org/store/products/tabid/154/p-167-construction-handbookportal-initial-subscription.aspx](http://www.casqa.org/store/products/tabid/154/p-167-construction-handbookportal-initial-subscription.aspx).*

*The format of the new version reflects a switch from a paper-based handbook format to an interactive web portal format. Therefore, CASQA will not be commercially printing and selling the new version of the Construction Handbook / Portal. Instead, CASQA is making the new version available through an annual subscription at a discounted cost to members and full cost to non-members. The subscription will provide the subscriber access to the Handbook / Portal as well as to future information distributed to subscribers. Subscribers are also provided limited pre-permission copyrights that allow for individual, personal electronic distribution and paper printing of Handbook / Portal PDF files. CASQA plans to make annual updates to the web portal and will provide access to these updates through annual subscription renewals. Subscribers are given access to the online information through use of a unique user name and password. For organizations that have purchased more than one copy of the printed 2003 Construction BMP Handbook, CASQA recommends purchasing a similar number of annual subscriptions to ensure users continuing and unimpeded access to the latest BMP information.*

*The Stormwater Best Management Practice Handbooks were originally published in 1993, and last updated in 2003. This new update of the Construction Handbook reflects the current state of construction stormwater quality management practices and revised regulatory requirements that take effect in July. Overall, in addition to being written to complement the new permit, the information in the Construction Handbook has been reorganized and updated to reflect the very latest information. Hyperlinks have been provided throughout the Handbook / Portal and in the References and Resources section to direct users to additional information.*

*Over the next several years, CASQA will be updating and converting its other three BMP Handbooks (Industrial and Commercial, Municipal, and New Development and Redevelopment) to the web portal format.*

*Note: The current State Construction General Permit (99-08 DWQ) remains in effect through the current wet season until July 1, 2010, when the new Construction General Permit (2009-0009 DWQ) takes immediate effect. CASQA developed the 2003 Construction BMP Handbook to complement the current (99-08 DWQ) permit [www.cabmphandbooks.com](http://www.cabmphandbooks.com).*

*For more information, contact CASQA at [info@casqa.org](mailto:info@casqa.org) [email]; [www.CASQA.org](http://www.CASQA.org) [website].”*

### **Pesticide Inert Ingredients**

US EPA Pesticide Program Updates, from US EPA's Office of Pesticide Programs 12/24/09  
<http://www.epa.gov/pesticides>:

*“WASHINGTON - The U.S. Environmental Protection Agency is requesting public comment on options for disclosing inert ingredients in pesticides. In this anticipated rulemaking, EPA is seeking ideas for greater disclosure of inert ingredient identities. Inert ingredients are part of the end use product formulation and are not active ingredients. Revealing inert ingredients will help consumers make informed decisions and will better protect public health and the environment.*

*‘Consumers deserve to know the identities of ingredients in pesticide formulations, including inert ingredients,’ said Steve Owens, assistant administrator for EPA's Office of Prevention, Pesticides and Toxic Substances. “Disclosing inert ingredients in pesticide products, especially those considered to be hazardous, will empower consumers and pesticide users to make more informed choices.”*

*EPA believes public disclosure is one way to discourage the use of hazardous inert ingredients in pesticide formulations. The agency is inviting comment on various regulatory and voluntary steps to achieve this broader disclosure.*

*Pesticide manufacturers usually disclose their inert ingredients only to EPA. Currently, EPA evaluates the safety of all ingredients in a product's formulation when determining whether the pesticide should be registered.*

*On October 1, 2009, EPA responded to two petitions (one by Northwest Coalition for Alternatives to Pesticides, and a second by several state attorneys general), that designated more than 350 inert pesticide ingredients as hazardous. The petitioners asked EPA to require that these ingredients be identified on the labels of products that include them in their formulations.*

*EPA will accept comments on the advance notice of proposed rulemaking for 60 days after it has been published in the Federal Register.*

*Contact Information: Dale Kemery kemery.dale@epa.gov 202-564-7839 202-564-4355*

*More information: <http://www.epa.gov/opprd001/inerts/index.htm>”*

**DPR Surface Water Workshops on Regulating Pesticides to Protect Surface Water Quality – Winter/Spring 2010**

The California Department of Pesticide Regulation (DPR) has planned workshops to get input on development of regulations to prevent pesticide contamination of surface water. Early in 2009, DPR sent interested parties a letter stating that the Department, concerned about the adverse impact of pesticides used in the agricultural and urban settings, was exploring options for regulating pesticides to protect surface water. The letter opened an informal dialogue with stakeholders on potential restrictions to protect surface water. DPR's goals are to set up requirements that are practical, enforceable, and protect surface water. An update has been posted on DPR's Web site, <http://www.cdpr.ca.gov/docs/emon/surfwtr/regulatory.htm>, along with a draft of potential restrictions and background material. Workshops to get input on regulatory approaches to address surface water problems have been tentatively scheduled in the Sierra Hearing Room, Cal/EPA Headquarters Building, 1001 I Street, Sacramento, on these dates:

- February 11, 2010 - 10 a.m. to Noon
- March 26, 2010 - 10 a.m. to Noon
- April 28, 2010 - 10 a.m. to Noon
- May 11, 2010 - 10 a.m. to Noon

The surface water workshops will be Webcast (<http://www.calepa.ca.gov/Broadcast/>).

Questions and comments should be sent to Mark Pepple, [mpepple@cdpr.ca.gov](mailto:mpepple@cdpr.ca.gov) .

**US EPA Symposium on Ground Water-borne Infectious Disease Epidemiology, Etiologic Agents and Indicators – January 2010**

The US EPA has issued the following announcement of its 2-day, public “Symposium on Ground Water-borne Infectious Disease Epidemiology, Etiologic Agents and Indicators” to be held on January 26 – 27, 2010 at the Carnegie Institute of Washington, Washington, DC:

*The EPA is sponsoring a 2-day symposium to discuss newly published and forthcoming information on epidemiology studies related to people who consume drinking water from public systems supplied by groundwater. Renowned speakers will focus on endemic disease and predictive methods. There will also be discussions of pathogen and fecal indicator occurrence and transport – primarily E. coli and Cryptosporidium – in the subsurface.*

*Details about the agenda and registration information can be found at:*

*<http://www.epa.gov/ncer/events/#jan2610>*

**Fellow, American Society of Civil Engineers (ASCE)**

We are pleased to announce that Dr. G. Fred Lee has been elected as a Fellow member of ASCE. The Fellow membership is awarded in recognition of an individual’s long-standing leadership in the civil and related engineering professions, professional distinction, and support of ASCE's leadership in the profession.