

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

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This double issue of the Newsletter presents information on:

- US EPA Science Advisory Board report on the unreliability of US EPA's proposed approach for developing nutrient and other water quality criteria
- US EPA program to address the public health impacts of PCBs in caulk that is present in older buildings including schools, and in C&D wastes that are managed by land disposal
- US EPA effort to characterize the impacts of pesticides on aquatic life
- new US EPA program to address differences in the regulatory approaches followed by the US EPA Office of Pesticides Programs and the US EPA Office of Water Programs to control aquatic life toxicity in runoff/discharges from areas where pesticides are used
- California Central Valley Regional Water Quality Control Board's proposed water quality criteria for several common pesticides that are causing aquatic life toxicity
- ACS National Meeting Symposium Devoted to Pesticides-Caused Aquatic Life Toxicity
- SETAC books on impacts of pesticides and copper
- Clean Water Act Implementation Across the Mississippi River Basin
- stormwater management including discharges from newly developed & redeveloped sites
- inadequacies in monitoring programs for hazardous chemicals in stormwater runoff from Superfund sites
- ATSDR's "National Conversation on Public Health and Chemical Exposures"
- GAO Testimony "Longstanding Issues Impact EPA's and States' Enforcement Efforts"
- GAO Testimony on Chemical Regulation under TSCA
- DTSC Nanotechnology Symposia – Symposium #5
- US EPA Solid Waste and Emergency Response Discussion Forum
- US EPA's Nonpoint Source News – Notes, Issue #88 (October 2009)

US EPA SAB Draft Report on the Reliability of the US EPA's Proposed Nutrient Criteria Development Approach

Newsletters NL-11-9, 12-5, and 12-6 discussed the unreliability of the US EPA's proposed statistical approach for establishing nutrient and other water quality criteria. Many, including Lee and Jones-Lee (e.g., as cited below), were critical of its approach noting that the proposed conditional probability (statistical) approach is technically invalid and does not incorporate cause-and-effect relationships between nutrients inputs and water quality.

Lee, G. F., and Jones-Lee, A., "Comments on US EPA's Conditional Probability Approach for Developing Phosphorus Nutrient Criteria," Report of G. Fred Lee & Associates, El Macero, CA, September 26 (2008).

<http://www.gfredlee.com/Nutrients/PCriterionCondProb.pdf>

Lee, G. F., and Jones-Lee, A., "Comments on 'US EPA "Empirical Approaches for Nutrient Criteria Derivation" Prepared by US EPA, Office of Water, Office of Science and Technology, Science Advisory Board Review, Draft August 17, 2009'," Report of G. Fred Lee & Associates, El Macero, CA, September 4 (2009).
http://www.gfredlee.com/Nutrients/EPA_Empirical_CritDevel.pdf

In response to comments, the US EPA had its Science Advisory Board (SAB) conduct an independent expert-panel review of the Agency's proposed approach for developing nutrient criteria. In early December 2009 the SAB released the results of that review entitled, "Ecological Processes and Effects Committee Augmented for Review of Nutrient Criteria Guidance - Discussion of Draft Report" and the draft report, "SAB Review of Empirical Approaches for Nutrient Criteria Derivation,"
[<http://yosemite.epa.gov/sab/sabproduct.nsf/MeetingCal/337AB4B00801276C8525765B007867F9?OpenDocument>].

Overall, the SAB expert panel found that the US EPA's statistically based "conditional probability" approach is not a valid approach for developing nutrient criteria. It recognized that that approach lacks necessary cause and effect relationships, and that statistical correlations do not mean "cause-and-effect." The expert panel noted that there is a variety of factors that influence primary producers and secondary consumers in streams, that are not related to nutrient concentrations/loads.

A bulleted summary of the SAB findings is available at:

US EPA SAB, "SAB Ecological Processes and Effects Committee 12/3/09 Draft Review of Empirical Approaches for Nutrient Criteria Derivation - Key Findings," US EPA, Office of Water, Office of Science and Technology, Science Advisory Board Review, December 3 (2009).
[<http://www.gfredlee.com/Nutrients/SABNutCritDraft-KeyFindings.pdf>]

Comments on the SAB review by Hall and Associates are available at:

Hall, J. C., Letter to T. Armitage, US EPA, Washington, D.C. "Re: Comments on SAB Ecological Processes and Effects Committee Draft Report," Hall & Associates, Washington, D. C., December 2 (2009).
[<http://www.gfredlee.com/Nutrients/Hall-Comments-SAB-NutrCritFindings.pdf>]

PCBs in Caulk in Older Buildings

According to the US EPA [<http://www.epa.gov/pcbsincaulk>]

"Caulk is a flexible material used to seal gaps to make windows, door frames, masonry and joints in buildings and other structures watertight or airtight. At one time caulk was manufactured to contain PCBs because PCBs imparted flexibility."

"In recent years, EPA has learned that caulk containing potentially harmful polychlorinated biphenyls (PCBs) was used in many buildings, including schools, in the 1950s through the 1970s. In general, schools and buildings built after 1978 do not contain PCBs in caulk. On September 25, 2009, EPA announced new guidance for school administrators and building managers with important information about managing PCBs in caulk and tools to help minimize possible exposure. Through EPA's Regional PCB Coordinators, the Agency will also assist

communities in identifying potential problems and, if necessary, developing plans for PCB testing and removal. The Agency has prepared a Fact Sheet (PDF) [<http://www.epa.gov/pcbsincaulk/caulk-fs.pdf>] (2 pp, 26K) and Questions and Answers (PDF) [<http://www.epa.gov/pcbsincaulk/caulk-faqs.pdf>] (11 pp, 63K) on this announcement.”

“EPA also has developed an informational brochure to provide the general public with important information on PCBs in building caulk, Preventing Exposure to PCBs in Caulking Material PDF version, [<http://www.epa.gov/pcbsincaulk/caulkexposure.htm>] EPA Publication EPA-747-F-09-005 (4 pp, 2.7MB).”

In addition to health concerns for persons within buildings, PCBs in building caulk is of concern because of the potential for environmental pollution by such PCBs associated with disposal of construction and demolition (C&D) waste. This issue was discussed in Newsletter NL 9-4 issued in March 2006 [available at <http://www.gfredlee.com/newsindex.htm>]. While some state regulatory agencies classify C&D wastes as “inert,” as discussed by Lee and Jones-Lee cited below, C&D wastes disposed of on land have a significant potential to pollute groundwater and surface waters through stormwater runoff from C&D waste disposal areas.

Lee, G. F., and Jones-Lee, A., “Flawed Technology of Subtitle D Landfilling of Municipal Solid Waste,” Report of G. Fred Lee & Associates, El Macero, CA, December (2004). Updated September (2009).

<http://www.gfredlee.com/Landfills/SubtitleDFlawedTechnPap.pdf>

EPA Pesticide Program Updates from EPA's Office of Pesticide Programs 12/04/09

Previous issues of the Newsletter, NL-1-1, 2-1, 3-5, 3-6, 6-3, 6-4, 7-6/7, 8-1/2, 9-3, 9-4, 9-6, 9-7, 9-8, 10-3, 10-8, 10-12, 11-4, 11-7/8, and 12-4 [available at <http://www.gfredlee.com/newsindex.htm>] have discussed the significant aquatic life toxicity that occurs in surface waters that receive stormwater runoff from urban and agricultural areas where pesticides are used in accord with permits. One of the major issues that was reviewed is the difference in approach to regulating aquatic life toxicity caused by runoff of pesticides from areas of permitted use followed by the US EPA Office of Pesticide Programs (OPP) and Office of Water (OW). The OPP regulatory approach allows aquatic life toxicity in receiving waters for runoff as long as it is considered to be “insignificant,” while the OW, under the Clean Water Act, requires the control of aquatic life toxicity in surface waters from pesticides and other toxic chemicals in runoff/discharges from areas of use.

Recently, the US EPA announced the following:

“1) Regional Stakeholder Meetings on Common Methodology to Characterize Pesticide Effects on Aquatic Life” at, <http://www.epa.gov/pesticides>. In the November 25, 2009, Federal Register, EPA announced that starting January 2010, it will conduct six public meetings across the country to solicit input on methods being evaluated by the Office of Pesticide Programs (OPP), the Office of Water (OW), with the support of the Office of Research and Development (ORD), to characterize effects from pesticides on fish, other aquatic organisms, and aquatic plants in aquatic ecosystems. At the public meetings, EPA will detail initial thinking on how to ensure that effects are characterized consistently by both OPP and OW. Following these meetings, EPA plans to develop a set of white papers describing potential new tools and analytical approaches that may be used by US EPA, state pesticide and water quality agencies, and other stakeholders. These white papers will explore methods for estimating aquatic toxicity data for deriving

community level benchmarks and methods to address effects on plants. US EPA expects to solicit additional stakeholder input on the tools and approaches as the white papers are developed. The tools and approaches will undergo peer review prior to being made available. Information that will be presented at the meetings is available on the US EPA Web site at www.epa.gov/oppefed1/cwa_fifra_effects_methodology/index.html.

The Federal Register notice providing dates, locations, and times is available at <http://www.regulations.gov>, identified by Docket ID No. EPA-HQ-OPPTS-2009-0773, as well as on the EPA Web site given above. Scientific views and other comments received from the public regarding information presented at the public meeting will also be available on the Web site and in the electronic docket at <http://www.regulations.gov>, identified by Docket ID No. EPA-HQ-OPPTS-2009-0773.”

Notice of Public Meeting – Central Valley Pesticide TMDL and Basin Plan Amendment

More than 20 years ago, the California Regional Water Quality Control Board (CVRWQCB) staff found aquatic life toxicity in surface waters in rural and urban areas of the Central Valley that was caused by pesticides used in accord with US EPA OPP and the California Department of Pesticide Regulation (DPR) labels. That toxicity violated the Clean Water Act (CWA), which requires the control of such toxicity. In accord with CWA requirements, the CVRWQCB established TMDLs to control the toxicity. As part of implementing those TMDLs, the CVRWQCB staff will hold a public meeting on January 7, 2010, at the Central Valley Water Board – Training Room in Rancho Cordova, California to discuss, and provide an update on, the development of amendments to the Basin Plan for the control of discharges of pesticides into selected surface waters in the Sacramento and San Joaquin Valleys, including the Delta. Additional information about this project is available on the Regional Water Board’s website at: http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/central_valley_pesticides/index.shtml.

A key component of controlling the pesticide-caused aquatic life toxicity outlined in the Central Valley Pesticide TMDL and Basin Plan Amendment Project is the development of draft water quality criteria for the insecticides bifenthrin and malathion; draft criteria for these insecticides have been derived and are being circulated for public comment. The CVRWQCB staff has also developed draft water quality criteria for diazinon and diuron. The draft water quality criteria derivation documents are available at http://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/central_valley_pesticides/criteria_method/index.shtml.

While the focus of the CVRWQCB staff in implementing control programs for pesticide-caused aquatic life toxicity is the Central Valley of California, the results of this effort have applicable to other areas of the US. Questions regarding this meeting or suggestions for agenda topics should be directed to Danny McClure at (916) 464-4751 or dmcclure@waterboards.ca.gov, or Joshua Grover at jgrover@waterboards.ca.gov or (916) 464-4691.

ACS National Meeting Devoted to Symposium Devoted to Pesticides-Caused Aquatic Life Toxicity

The 239th American Chemical Society (ACS) National Meeting & Exposition will be held on March 21-25, 2010 in San Francisco, CA. The AGRO Division of ACS will hold several symposia devoted to pesticide-caused aquatic life toxicity and human health impacts including the following:

- **Pesticide Mitigation Strategies for Surface Water Quality**
Organizers: Brian Bret, Dow AgroSciences, 916-780-7477; Tom Potter, USDA-ARS; Nick Poletika, Dow AgroSciences; Kean Goh, California Dept. of Pesticide Regulation
- **Pesticides and Urban Water Quality: Monitoring, Modeling and Mitigation**
Organizers: Jay Gan, University of California-Riverside, 951-827-2712; Frank Spurlock, California Department of Pesticide Regulation; Paul Hendley, Syngenta Crop Protection Inc.
- **Pesticides in Urban Settings and Aggregate Human Exposures**
Organizers: Daniel M. Stout II, U.S. EPA, 919-541-5767; Bob Krieger, University of California-Riverside; Chris Peterson, USDA-USFS

Information on this ACS national meeting is available at http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_TRANSITIONMAIN&node_id=2060&use_sec=false&sec_url_var=region1&__uuid=24c1b10c-bf88-471f-adfa-a18c2db965e6. Information on the national meeting and these symposia will be available at this URL.

SETAC (Society for Environmental Toxicology and Chemistry)

Books on Impacts of Pesticides and Copper

- **Linking Aquatic Exposure and Effects: Risk Assessment of Pesticides**

According to SETAC, this book *“provides guidance and recommendations for linking aquatic exposure and ecotoxicological effects in the environmental assessment of agricultural pesticides. Leading international scientists share their expertise in aquatic exposure assessment, aquatic ecotoxicology, and the risk assessment and management of plant protection products. The book incorporates the tools and approaches currently available for assessing the environmental risks of time-variable exposure profiles of pesticides. It also discusses the science behind these techniques.*

This volume covers the extrapolation techniques, including models that address the environmental fate, toxicokinetics, toxicodynamics, and ecological effects, for performing accurate aquatic environmental risk assessments of pesticides. It explains how to link aquatic exposure and effects in the risk assessment procedure for plant protection products.”

Member Price \$99, Non-Member Price \$130, ISBN 978-1-4398-1347-8, 440 pp Information on this November 2009 book is available at,

https://www.setac.net/setacssa/ecssashop.show_product_detail?p_product_serno=350&p_mode=detail

- **Ecological Models for Regulatory Risk Assessments of Pesticides: Developing a Strategy for the Future**

SETAC describes this book as, *“Bringing together more than thirty influential regulators, academics, and industry scientists, Ecological Models for Regulatory Risk Assessments of*

Pesticides: Developing a Strategy for the Future provides a coherent, science-based view on ecological modeling for regulatory risk assessments. It discusses the benefits of modeling in the context of registrations, identifies the obstacles that prevent ecological modeling being used routinely in regulatory submissions, and explores the actions needed to overcome these obstacles.

Focusing on ecological models, such as unstructured population models, stage-structured matrix models, and individual- or agent-based models, this volume helps regulatory authorities, manufacturers, and scientists assess the risk of plant protection products in nontarget organisms. Armed with this knowledge, readers will better understand the challenges of using ecological modeling in the regulatory process.”

Member Price \$55, Non-Member Price \$100, ISBN 978-1-4398-0513-8, 149 pp

https://www.setac.net/setacssa/ecssashop.show_product_detail?p_product_serno=351&p_mode=detail

- **Aquatic Macrophyte Risk Assessment for Pesticides**

SETAC describes this book: “*Given the essential role that primary producers play in aquatic ecosystems, it is imperative that the potential risk of pesticides to the structure and functioning of aquatic plants is adequately assessed. An integration of regulatory and research information from key specialists in the area of environmental regulation, Aquatic Macrophyte Risk Assessment for Pesticides provides a state-of-the-art guide to ecotoxicological risk assessment. Written by well-known experts in the field of aquatic risk assessment, this book is a practical reference for the assessment of the risk of pesticides with herbicidal activity to aquatic macrophytes.*

The book supplies a concise, coherent, and science-based view from influential regulators, academics, and industry scientists. The editors address the selection of additional species, critical regulatory endpoints, and assessment of the risk of plant protection products to aquatic macrophytes. They also present a clear description of key issues in macrophyte risk assessment, information on macrophyte test methods, suitable measurement endpoints, and data evaluation and interpretation.

Filled with recommendations distilled from existing regulatory experiences of aquatic macrophyte risk assessment, the book includes case studies to identify issues, data gaps, and inadequacies in study design. It also identifies improvements to risk assessment that could be implemented immediately and those for which further research is needed. An authoritative resource, the book points the way to an improved approach to aquatic macrophyte risk assessment.”

Member Price \$88, Non-Member Price \$120, ISBN 978-1-4398-2211-1, 156 pp

https://www.setac.net/setacssa/ecssashop.show_product_detail?p_product_serno=352&p_mode=detail

- **Copper: Environmental Fate, Effects, Transport and Models: Papers from Environmental Toxicology and Chemistry, 1982 to 2008 and Integrated Environmental Assessment and Management, 2005 to 2008**

According to SETAC, “*This compilation of papers on environmental chemistry, fate, effects, modeling, and regulatory findings should prove a valuable resource for those interested in risk assessments of copper in the environment and their regulatory implications. Made possible by a*

contribution from the Copper Development Association.” ISBN 978-1-880611-96-8, DVD-ROM Member Price \$20, Non-Member Price \$85
https://www.setac.net/setacssa/ecssashop.show_product_detail?p_product_serno=349&p_mode=detail

National Academy of Science Meeting Information:

Clean Water Act Implementation Across the Mississippi River Basin

The National Academy of Sciences, Division of Earth and Life Sciences will hold a meeting on December 14, 2009 in Washington DC devoted to “Clean Water Act Implementation Across the Mississippi River Basin.” A major focus of the meeting will be a discussion of nutrient management in the Mississippi River watershed. As discussed in Newsletters NL 9-1/2, 9-10, 10-1, and 12-5 with reference to hypoxia in the Gulf of Mexico, there is considerable interest in controlling nutrients discharged by agricultural lands, owing to their contribution to the low-dissolved-oxygen conditions that develop in the Gulf of Mexico; the nutrients stimulate the growth of algae which subsequently undergo bacterial decomposition with associated oxygen consumption. Information on this meeting, which is open to the public, is available at <http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingId=4018>. For additional information, contact: Anita Hall, (202) 334-3422. A summary of the meeting will be posted after the meeting.

Stormwater Management Including Discharges from Newly Developed and Redeveloped Sites

The US EPA has announced the following:

“Stormwater Management Including Discharges from Newly Developed and Redeveloped Sites, Information Collection Request (ICR)’ for proposed rulemaking in which the agency in apparently going to strengthen the regulation of stormwater runoff regulations. Information on this activity is at <http://cfpub.epa.gov/npdes/stormwater/rulemaking.cfm>. The US EPA is proposing to disseminate a survey to owners, operators, developers, and contractors of developed sites, owners and operators of municipal separate storm sewer systems (MS4s), and states and U.S. territories, which is designed to inform a rulemaking to strengthen stormwater regulations and to establish a comprehensive program to reduce stormwater from newly developed and redeveloped sites. Stormwater discharges from developed sites can harm water quality through increases in stormwater volume and pollutant loadings into nearby waterways. Generally, as sites are developed there is an increase in areas where water cannot infiltrate, so stormwater volume increases. The resulting stormwater flows across roads, rooftops, and other surfaces, transporting pollutants that are then discharged into waterways.”

US EPA 1992 Stormwater Runoff Water Quality Monitoring Guidance

Over the past 30 years G. Fred Lee has been involved in the investigation and management of hazardous chemicals in releases from hazardous chemical sites, including Superfund sites and Brownfield. (*“Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands.”* <http://epa.gov/brownfields/>) G. F. Lee has found that at many of these sites, there is inadequate investigation of the releases of hazardous chemicals in stormwater runoff, and of the impacts of

those releases on receiving water quality. The US EPA and many state Superfund and hazardous chemical site agencies have not developed adequate guidance on how to monitor stormwater runoff to reliably characterize the concentrations and loads of hazardous chemicals in the runoff. An example of this situation is provided by the University of California Davis/Department of Energy (UCD/DOE) Laboratory for Environmental Health-Related Research (LEHR) National Priority List Superfund site; Dr. Lee serves as the US EPA-supported Technical Assistance Grant (TAG) Advisor to the public (through the Davis South Campus Superfund Oversight Committee) for that site. The LEHR site includes three campus landfills and numerous shallow pits where campus and laboratory wastes, including radioactive wastes, and solvents) have been deposited. Surface soils at the site also contain mercury derived from former mercury mining operations in the upstream watershed. In review of the adequacy of the UCD/DOE LEHR Superfund Site investigation and remediation, he found that US EPA Superfund site investigation guidance does not include specific guidance on the approach that should be followed to properly and adequately assess stormwater runoff from Superfund sites for the protection of public health and environmental quality. UCD/DOE have been allowed by the federal and state regulatory agencies (RPMs) to monitor the stormwater runoff from the LEHR Superfund site as though it were an urban area (requiring collection of only a single grab sample of runoff at some arbitrary time during a couple of storms events each year) rather than an industrial site with hazardous wastes present at the site.

In discussions of this issue with Dr. G. Fred Lee, representatives of US EPA headquarters suggested that the US EPA Stormwater monitoring guidance:

US EPA, "NPDES Stormwater Sampling Guidance Document (EPA/833/B-92/001)" for implementing the Agency NPDES stormwater management program. (1992).

(<http://yosemite.epa.gov/R10/WATER.NSF/NPDES+Permits/SW+guidance+&+fact+sheets+--+Region+10/>)

would be applicable to stormwater runoff monitoring at Superfund sites. Review of that guidance shows that it is applicable to monitoring stormwater runoff from industrial sites on which mixtures of hazardous chemicals exist,

ATSDR National Conversation on Public Health and Chemical Exposures

According to the Center for Disease Control and Prevention (CDC) the Agency for Toxic Substances and Disease Registry (ATSDR):

"In keeping with our charge to protect public health, NCEH/ATSDR is sponsoring an 18-month project titled The National Conversation on Public Health and Chemical Exposures. We value your opinion; therefore, we invite you to help us generate fresh ideas and share useful strategies to help strengthen the way the United States protects the public from exposure to harmful chemicals. Together we will create an action agenda to help guide us through the process.

The National Conversation kick-off meeting was held June 26 in Washington DC.

NCEH/ATSDR will post updates on this Website. You can also stay informed by receiving e-mail updates on the National Conversation project. Or, you can send your contact information to nationalconversation@cdc.gov."

GAO “Longstanding Issues Impact EPA’s and States’ Enforcement Efforts”

In the GAO “Highlights” within its “Testimony Before the Committee on Transportation and Infrastructure, U.S. House of Representatives October 15, 2009,”

[<http://www.gao.gov/new.items/d10165t.pdf>] the US Government Accountability Office (GAO) discussed, “Why GAO Did This Study.” In that section, the GAO stated,

“Congress enacted the Clean Water Act to help reduce water pollution and improve the health of the nation’s waterways. The Environmental Protection Agency (EPA) administers its enforcement responsibilities under the act through its Office of Enforcement and Compliance Assurance (OECA), as well as its 10 regional offices and the states.

Over the last 9 years, GAO has undertaken a number of reviews of EPA’s environmental enforcement activities, including for the Clean Water Act. For this testimony statement, GAO was asked to summarize the results of five prior reports on the effectiveness of EPA’s enforcement program. Specifically, this statement includes information on the (1) factors that cause variations in enforcement activities and lead to inconsistencies across regions, (2) impact that inadequate resources and work force planning has had on enforcement, (3) efforts EPA has taken to improve priority planning, and (4) accuracy and transparency of measures of program effectiveness.

GAO’s prior recommendations have included the need for EPA to collect more complete and reliable data, develop improved guidance, and better performance measures. Although EPA has generally agreed with these recommendations, its implementation has been uneven. GAO is not making new recommendations in this statement.”

GAO Testimony on Chemical Regulation under TSCA

On December 2, 2009, the Government Accountability Office (GAO) released the following testimony: *Chemical Regulation: Observations on Improving the Toxic Substances Control Act. GAO-10-292T, December 2.* That testimony is available at

<http://www.gao.gov/cgi-bin/getrpt?GAO-10-292T>. Highlights of the testimony are available at <http://www.gao.gov/highlights/d10292thigh.pdf>.

In the “Highlights - Why GAO Did This Study” section, GAO stated:

“The Environmental Protection Agency (EPA) is authorized under the Toxic Substances Control Act (TSCA) to obtain information on the risks of chemicals and to control those that it determines to pose an unreasonable risk. EPA also conducts assessments of chemicals under its Integrated Risk Information System (IRIS) program. Nonetheless, EPA does not have sufficient information to determine whether it should establish controls to limit public exposure to many chemicals that may pose substantial health risks. GAO has recommended statutory changes to TSCA to, among other things, provide EPA with additional authorities to obtain health and safety information from the chemical industry and to shift more of the burden to chemical companies for demonstrating the safety of their chemicals. GAO has also recommended that EPA adopt a streamlined, more transparent IRIS assessment process to address significant productivity and credibility issues. Problems with TSCA and IRIS led GAO to add transforming EPA’s processes for assessing and controlling toxic chemicals to its list of high-risk areas warranting attention by Congress and the executive branch.”

DTSC Nanotechnology Symposia – Symposium #5

Nanomaterials. A “new” group of pollutants that is becoming recognized is the “nanomaterials.” Nanomaterials are very small-sized engineered particles and have the potential to become significant water pollutants. A large amount of information about nanomaterials and their potential public health and environmental impacts is available on the Internet. While it is known that these types of materials are getting into the environment, little is known about their impact on water quality. The Stormwater Runoff Water Quality Newsletters NL 12-3 and 12-4 (available at <http://www.gfredlee.com/newsindex.htm>) provide background information on these concerns.

The California Department of Toxic Substances Control (DTSC) has been given the responsibility by the state legislature to assess the potential hazards of these materials to public health and the environment, and has organized a series of symposia on nanomaterials including the most recent, “California Nanotechnology Initiative Symposium V: An Industrial Perspective” held on November 16, 2009. The agenda and the PowerPoint Slides used by the presenters are available at

http://www.dtsc.ca.gov/TechnologyDevelopment/Nanotechnology/upload/NanoV_Industry_DTSC_agenda.pdf.

Because the development and use of nanomaterials is comparatively recent, it is unlikely that stormwater runoff from Superfund or other hazardous chemical sites will be impacted by nanomaterials in the near-term. However there is a potential for stormwater runoff from areas with leaking domestic sewerage systems or from urban areas where reclaimed domestic wastewaters are used for landscape irrigation to contain nanomaterials that could impact receiving water quality. Also of concern is stormwater runoff from areas where nanomaterials are being manufactured or used in such a manner that could cause them to be present in runoff.

Solid Waste and Emergency Response Discussion Forum

According to the US EPA,

“In order to enhance the dialogue between EPA and the public, this online forum provides an opportunity for private citizens, environmental groups, businesses, community groups, and local and tribal governments to discuss topics relating to EPA’s Office of Solid Waste and Emergency Response. OSWER will post a new discussion topic monthly.

Each question below leads to a conversation on that topic. Click on a link to read or participate in a conversation. We encourage you to comment; knowing your thoughts and ideas helps us shape better environmental policy.

December 1, 2009 - How can EPA better engage and prepare local communities, especially economically disadvantaged communities, to meaningfully participate in government decisions on land cleanup, emergency response, and the management of hazardous materials and waste?”

Information on this issue is available at <http://blog.epa.gov/oswerforum/>

US EPA's Nonpoint Source News-Notes, Issue #88 (October 2009)

NPS News-Notes Issue #88 is now available online at www.epa.gov/newsnotes/pdf/88issue.pdf. The newsletter's cover page includes hyperlinks to each section, article, and announcement listed below. For previous issues of News-Notes, see www.epa.gov/newsnotes.

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IN THIS ISSUE:

The following are excerpts. For the full text of articles, see www.epa.gov/newsnotes/pdf/88issue.pdf.

(1) **EPA Water Quality Video Contest Entertains and Educates** Lights, camera, water—action! EPA's Office of Wetlands, Oceans and Watersheds recently held its first water pollution video contest. EPA invited the public to develop and submit short videos that would educate the public about water pollution and offer simple steps that individuals and communities can take to improve and protect water quality. EPA selected two winners: one for a short, 30- or 60-second video that can be used as a public service announcement, and another for a longer, one-to three-minute video...

(2) **Agencies Act to Reduce Harmful Impacts from Coal Mining** Multiple federal agencies recently joined forces to significantly reduce the harmful environmental consequences of Appalachian surface coal mining operations ("mountaintop mining"), while ensuring that future mining remains consistent with federal law. In June 2009 the U.S. Department of the Interior, EPA and the U.S. Army Corps of Engineers signed a Memorandum of Understanding (MOU). The MOU outlines an interagency action plan that coordinates agencies' regulation of Appalachian surface coal mining...

(3) **EPA's Total Maximum Daily Load Web Site Redesigned** EPA recently revised its "Impaired Waters and Total Maximum Daily Loads" Web site to better serve federal, state and local agencies and the general public. The new Web page, found at www.epa.gov/owow/tmdl, features an overview of the Clean Water Act section 303(d) program activities, highlights new technical resources and provides easier access to program resources...

(4) **New Tools Available to Find Nonpoint Source Project Information**

In keeping with the federal government's goal of greater transparency, EPA is providing easier public access to information about Clean Water Act (CWA) section 319-funded nonpoint source

(NPS) projects. Each year, EPA provides funding to support state NPS programs in the form of CWA section 319 grants. EPA tracks information about the projects funded under section 319 in its Grants Reporting and Tracking System (GRTS). Now, EPA has added two new search tools to the GRTS Web site that allows watershed groups, researchers and the general public to view and learn about current and previous state- and EPA-funded NPS projects...

(5) Nonpoint Source and Stormwater Outreach: Achieving Results with Tight Budgets. In May 2009, people from around the country came together to share ideas and information at the Fifth National Conference for Nonpoint Source and Stormwater Outreach in Portland, Oregon. The theme of the 2009 conference was “Achieving Results with Tight Budgets.” Fortunately for those who could not attend, conference organizers have compiled a comprehensive proceedings document, along with copies of presenters’ PowerPoint presentations, and made them available online at www.epa.gov/nps/outreach2009...

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**NOTES FROM THE STATES, TRIBES AND LOCALITIES
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The following are excerpts. For the full text of articles, see www.epa.gov/newsnotes/pdf/88issue.pdf.

(6) Promising New Practice Reduces Turbidity Levels from Construction Sites Fighting construction-related erosion and sedimentation problems? North Carolina State University researchers have found that natural fiber check dams enhanced with polyacrylamide remove significantly more sediment from runoff than do rock check dams—a commonly used sediment control practice—and for about the same cost or less...

(7) Ordinance Improves Huron River Quality—Restrictions Spread Nationwide Many government entities are finding ways to reduce residents’ use of lawn fertilizers that contain phosphorus. Some governments choose to pass laws or ordinances prohibiting the use of fertilizers that contain phosphorus except in special cases, such as on new lawns or when a soil test indicates that phosphorus is needed. Others are increasing education efforts to help residents better understand that fertilizer with phosphorus is not always necessary. Evidence suggests that these endeavors are making a difference. The City of Ann Arbor, Michigan, for instance, has seen phosphorus levels in the Huron River drop an average of 28 percent after it enacted a phosphorus ordinance in 2006...

(8) New York City Welcomes Back the Alewife In spring 2009, the New York City Department of Parks and Recreation announced that its scientists and community partners found several mature alewife, or river herring, migrating up the Bronx River—possibly the first time that this fish has been seen or recorded in the river in hundreds of years. In the mid-1600s the first dams were built on Bronx River, blocking upstream access to anadromous fish like alewife, as well as local fish. Plus, the Bronx River’s water quality deteriorated over time as industrial and domestic wastewater effluent and urban stormwater runoff added pollutants into the system. Fortunately, it appears federal clean water regulations and watershed restoration efforts over the past several decades have paid off. The Bronx River is clean once again and provides more diverse habitats that can support the fish that historically lived in it...

(9) Pervious Pavement Project Gains Nationwide Attention The eyes of the world, it seems, are on a \$1.4 million paving project in Shoreview, Minnesota. Shoreview is replacing less than a mile of residential street in a neighborhood adjacent to a lake. The city removed the existing street and its traditional stormwater drainage features completely and replaced it with pervious concrete (curb-to-curb). The road, which allows stormwater to pass right through, serves both as

a road and a stormwater control feature. While pervious pavement costs more up front than conventional pavement, the cost savings over time could be considerable. If successful, the project could have huge implications for road and stormwater control projects across the country...

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** NOTES ON WATERSHED MANAGEMENT
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The following are excerpts. For the full text of articles, see www.epa.gov/newsnotes/pdf/88issue.pdf.

(10) Restoring a Watershed, One Neighbor at a Time When Dorie and John Belisle left an automotive repair business behind in Florida and bought a farm in Washington State in 1995, they hoped to reconnect with nature and find community. Now, almost 15 years later, they have achieved more than that. The couple established a thriving apple orchard and won awards for their sustainable farming practices. They got to know their neighbors and fell in love with their land. Before they knew it, they had become the leaders of a community effort to restore water quality in their local watershed...

(11) Agency Expands Efforts to Protect the Nation's Forests Climate change, catastrophic fires, disease and pests have all led to declining forest health in recent decades. The resulting impact on watersheds, the climate, local economies, wildlife and recreation recently prompted the U.S. Department of Agriculture to offer a revised vision for the U.S. Forest Service—one that emphasizes conserving, managing and restoring forests. In an August 2009 speech, Agriculture Secretary Tom Vilsack outlined his vision for the future of the United States' forests...

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**REVIEWS AND ANNOUNCEMENTS
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The following is a list of topics. For the full descriptions, see www.epa.gov/newsnotes/pdf/88issue.pdf.

- Agricultural Census Information Now Available By Watershed
- Airport Deicing Rule Proposed
- Atmospheric Sources of Nitrogen Biggest Contributor in Southeast
- Bacteria in Recreational Waters—Literature Reviews
- Big Apple Releases Street Design Manual
- Enhanced Aquatic Ecosystem Simulation Model Released by EPA
- EPA Begins Testing Pesticides for Endocrine Disruption
- EPA Document Analyzes Benefits of Using Green Roofs for Stormwater Control
- EPA Releases Guidance on Environmental Models
- Estimating Atrazine Levels in a Stream Near You
- Extreme BMP Makeover Report Available
- Invasive Species Expert Directory Available
- Minnesota Promotes Low Impact Development
- Music with an Invasive Species Message
- National AgLaw Center Opens New Virtual Reading Room
- National Water Program Guidance Available
- New Tool Helps Estimate LID Implementation Costs
- Nutrient Concentrations in Streams Hold Steady
- Online Game Encourages Kids to Go Outside

- O Wow! EPA Water Office Tweets
- Pond and Wetland Management Guidebooks Online
- Report Calls Flame Retardants Concern to Coastal Ecosystems
- Report Evaluates Decentralized Stormwater Controls
- Smart Growth Guide Released
- Stream Corridor Restoration Tools Now Available Online
- Study Assesses Mercury Levels in Nation's Streams
- Study Shows Further Evidence of Asphalt Sealcoat Dangers
- Supplemental Water Quality Standards Training Modules Released
- Video Highlights Daylighting Project in Seoul Korea.

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****RECENT AND RELEVANT PERIODICAL ARTICLES**
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- Coasts Catch Fish Farming's Dirty Drift
- Freshwater Mussels Found in Cuyahoga River, Indicating Improved Water Quality
- Nitrates in Groundwater
- Residential Car Washing.

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**** WEB SITES WORTH A BOOKMARK**
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- EPA's New Stormwater Road-Related MS4s Web Site
(www.epa.gov/npdes/stormwater/roads)
- My Environment (www.epa.gov/myenvironment)
- Nature and the Environment (
www.loc.gov/teachers/classroommaterials/themes/nature)
- Riffle Fish (www.rifflefish.com)
- Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov>)

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