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Protecting Aquatic Life and Human Health from Chemicals and Microbes in Water

From EPA

Draft Plan to Study the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources. EPA/600/D-11/001. Possible contamination of drinking water resources from natural gas drilling.

Go to [Report](#) or water.epa.gov/type/groundwater

Toxicological Review of Methanol (Non-Cancer). EPA/635/R-11/001. Review draft for public comment. IRIS summary of the hazard and dose-response assessment of methanol.

Go to [Report](#) or www.epa.gov/iris

Disinfection By-Products: Formation and Occurrence in Drinking Water. Richardson, S.D., 2011. *Encyclopedia of Environmental Health*, Chapter 2, J.O. Nriagu (ed.), 110-136.

Go to [Article](#) or www.epa.gov/nerl

EPA and HHS Announce New Scientific Assessments and Actions on Fluoride. Working to maintain benefits of preventing tooth decay while preventing excessive exposure.

Go to [Article](#) or water.epa.gov/drink

EPA Requires Testing of 19 Widely Used Chemicals. Final rule under the Toxic Substances Control Act; manufacturers of high production volume chemicals to test health and environmental effects.

Go to [Article](#) or <http://www.epa.gov/ocsp>

EPA Expands and Enhances WCIT: A Robust Tool for the Water Sector. Added 700 contaminants and 212 analytical methods to online database profiling contaminants of concern.

Go to www.epa.gov/wcit

EPA Awards \$7 Million to Study Effects of Pollution Exposures and Social Stressors on Communities. Research grants aim to gather comprehensive community wide data on human health impacts.

Go to [Article](#) or www.epa.gov/ncercumulative

EPA Awards \$5.5 Million to Support Nanotechnology Research. Research to help determine whether health and environmental risks exist.

Go to [Article](#) or www.epa.gov/nanoscience

Colloidal Properties of C60 Fullerenes. Ma, X., 2011. Presented at University of Cincinnati. Studied processes of nano-size C60 in environmental aqueous systems, formation kinetics, particle-particle interactions, particle-surface interactions, and Lewis acid-base interactions.

Go to [Report](#) or www.epa.gov/nrmrl

Monitored Natural Attenuation of Inorganic Contaminants in Ground Water. Ford, R.G. and R.T. Wilkin, 2011. Volume 3: Assessment for Radionuclides Including Tritium, Radon, Strontium, Technetium, Uranium, Iodine, Radium, Thorium, Cesium, and Plutonium-Americium.

Go to [Report](#) or www.epa.gov/nrmrl

New Robot System to Test 10,000 Chemicals for Toxicity. Purchased by the Tox21 collaboration, which merges resources to develop ways to predict how chemicals will affect human health and the environment.

Go to [Article](#) or www.epa.gov/ncct

Embracing Change: The Next Generation of Risk Assessment. New practices to match pace of discoveries as they relate to human and environmental health.

Go to [Article](#) or www.epa.gov/risk/nexgen

Problem Formulation for Human Health Risk Assessments of Pathogens in Land-Applied Biosolids. EPA/600/R-08/035F. Includes literature studies; pathogen stressors; conceptual models; risk assessment evaluation; existing tools/methodologies.

Go to [Report](#) or www.epa.gov/ncea

Review of EPA's Responsiveness to SAB 2007 Recommendations for the Revision of Cancer Assessment of Inorganic Arsenic - A Report of the SAB Inorganic Arsenic Cancer Review Work Group.

Go to [Report](#) or www.epa.gov/sab

Quality Assurance and Quality Control Practices for Rehabilitation of Sewer and Water Mains. EPA/600/R-11/017. Interviewed with vendors, engineers, and utilities that use trenchless rehabilitation technologies.

Go to [Report](#) or www.epa.gov/nrmrl

The Proposal for the Third Unregulated Contaminant Monitoring Regulation (UCMR 3) Was Signed by EPA Administrator. Would require monitoring for 30 contaminants during 2013-2015.

Go to [Article](#) or water.epa.gov/lawsregs/rulesregs

From Collaborators

WERF - Measuring Water Ingestion among Water Recreators. Used survey research and environmental chemistry methods to evaluate rates of water ingestion during swimming, canoeing/kayaking, and wading/fishing to address knowledge gap.

Go to [Article](#) or www.werf.org

National Study Explores the Reaction and Transport of Tungsten in Drinking Water. Investigates how concentrations change along groundwater flow paths and modify the groundwater makeup.

Go to [Article](#) or www.physorg.com

Using Mining By-Products to Reduce Algal Blooms. CSIRO. Can prevent nutrients from entering river systems, thereby reducing algal blooms.

Go to [Article](#) or www.csiro.au

WERF - Diagnostic Tools to Evaluate Impacts of Trace Organic Compounds. Prioritizes TOrCs of most concern; develops framework to identify TOrCs by source type, exposure-response models for high priority TOrCs, and a relational database of TOrC exposure and effects data.

Go to [Article](#) or www.werf.org

WaterRF - Iodoacids in Drinking Water Supplies: Methods and Occurrence. Weinberg, H.S., et al., 2011. #3175. Develops method for measuring iodoacetic acids to low levels in drinking water, studies mechanistic pathways of formation, and conducts an occurrence survey of source water quality and treatment scenarios likely to produce iodoacids.

Go to [Report](#) or www.waterrf.org

NIH Launches Largest Oil Spill Health Study. Studying health effects of the oil spill on 55,000 cleanup workers and volunteers; largest health study of its kind ever conducted among this population.

Go to [Article](#) or www.niehs.nih.gov

In Hot Water: Rising Public Health Concerns from Changing Ocean Conditions. Meeting session covered health effects of changes in harmful algal bloom seasons and toxicity, global production and oceanic deposition of desert dust, and in storm event frequency.

Go to [Article](#) or oceansandhumanhealth.noaa.gov

WERF's Paul L. Busch Award Offers \$100,000 for Innovative Water Quality Research. Award to encourage researchers working in wastewater, water reuse, biosolids, stormwater, watersheds, and other areas.

Go to [Article](#) or www.werf.org/PaulLBusch

EA Engineering, Science, and Technology, Inc. Wins Engineering Excellence Merit Award from ACEC/Nebraska for Groundwater Nitrate Investigation Project. Investigation of elevated nitrate levels affecting community water systems in the Lower Platte South Natural Resources District of Nebraska.

Go to [Article](#) or www.eaest.com

From the Journals

Association between Children's Blood Lead Levels, Lead Service Lines, and Water Disinfection, Washington, DC, 1998-2006. Brown, M.J., et al. 2011. *Environmental Research*, 111(1), 67-74.

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A Measure of Community Exposure: PFOA in Well Water Correlates with Serum Levels. Betts, K.S., 2011. *Environmental Health Perspectives*, 119(1).

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Habitat-Specific Bioaccumulation of Methylmercury in Invertebrates of Small Mid-Latitude Lakes in North America. Chételat, J., et al., 2011. *Environmental Pollution*, 159(1), 10-17.

Go to [Article](#)

Pharmaceuticals, Hormones and Bisphenol A in Untreated Source and Finished Drinking Water in Ontario, Canada – Occurrence and Treatment Efficiency. Kleywegt, S., et al., 2011. *Science of the Total Environment*, 409(8), 1481-1488.

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Are Oral Contraceptives a Significant Contributor to the Estrogenicity of Drinking Water? Wise, A., K. O'Brien, and T. Woodruff, 2011. *Environmental Science & Technology*, 45(1), 51-60.

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Private Drinking Water Wells as a Source of Exposure to Perfluorooctanoic Acid (PFOA) in Communities Surrounding a Fluoropolymer Production Facility. Hoffman, K., et al., 2011. *Environmental Health Perspectives*, 119(1), 92-97.

Go to [Article](#)

Transport of Polycyclic Aromatic Hydrocarbons in Highly Vulnerable Karst Systems. Schwarz, K., et al., 2011. *Environmental Pollution*, 159(1), 133-139.

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Impact of Plumbing Age on Copper Levels in Drinking Water. Turek, N.F., et al., 2011. *Journal of Water Supply: Research and Technology-AQUA*, 60(1), 1-15.

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Intellectual Impairment in School-Age Children Exposed to Manganese from Drinking Water. Bouchard, M.F., et al., 2011. *Environmental Health Perspectives*, 119(1), 138-143.

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The Impact of Bisphenol A and Triclosan on Immune Parameters in the U.S. Population, NHANES 2003-2006. Clayton, E.M.R., et al., 2011. *Environmental Health Perspectives*, 119(3), 390-396.

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Toward Identifying the Next Generation of Superfund and Hazardous Waste Site Contaminants. Ela, W.P., et al., 2011. *Environmental Health Perspectives*, 119(1), 6-10.

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Accumulation and Clearance of Perfluorooctanoic Acid (PFOA) in Current and Former Residents of an Exposed Community. Seals, R., et al., 2011. *Environmental Health Perspectives*, 119(1), 119-124.

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Disinfection Byproducts in Canadian Provinces: Associated Cancer Risks and Medical Expenses. Chowdhury, S., et al., 2011. *Journal of Hazardous Materials*, 187(1-3), 574-584.

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Behavioral Responses of Adult Male and Female Fathead Minnows to a Model Estrogenic Effluent and Its Effects on Exposure Regime and Reproductive Success. Lavelle, C. and P.W. Sorensen, 2011. *Aquatic Toxicology*, 101(3-4), 521-528.

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Investigation of Human Sewage Pollution and Pathogen Analysis at Florida Gulf Coast Beaches. Korajkic, A., et al., 2011. *Journal of Applied Microbiology*, 110(1), 174-183.

Go to [Article](#)

Mechanistic Basis of Resistance to PCBs in Atlantic Tomcod from the Hudson River. Wirgin, I., et al., 2011. *Science*, 331(6022), 1322-1325.

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Unregulated Drinking Water Initiative for Environmental Surveillance and Public Health. Backer, L.C. and N. Tosta, 2011. *Journal of Environmental Health*, 73(7), 31-32.

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Comparison of Acute and Chronic Toxicity of Silver Nanoparticles and Silver Nitrate to *Daphnia magna*. Zhao, C. and W. Wang, 2011. *Environmental Toxicology and Chemistry*, 30 (4), 885-8892.

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Accumulation and Tolerance Characteristics of Chromium in a Cordgrass Cr-Hyperaccumulator, *Spartina argentinensis*. Redondo-Gómez, S., et al., 2011. *Journal of Hazardous Materials*, 185(2-3), 862-869.

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Arsenic Pollution of Groundwater in Vietnam Exacerbated by Deep Aquifer Exploitation for More than a Century. Winkel, L.H.E., et al., 2011. *Proceedings of the National Academy of Sciences*, 108(4), 1246-1251.

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Information Needs for Siting New, and Evaluating Current, Nuclear Facilities: Ecology, Fate and Transport, and Human Health. Burger, J., et al., 2011. *Environmental Monitoring and Assessment*, 172(1-4), 121-134.

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Modelling Temporal and Spatial Changes of PCBs in Fish Tissue from Lake Huron. El-Shaarawi, A.H., et al., 2011. *Environmental Monitoring and Assessment*, 173(1-4), 611-623.

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Bioaccumulation of Organochlorine Pesticides in Aquatic System – An Overview. Chopra, A., et al., 2011. *Environmental Monitoring and Assessment*, 173(1-4), 905-916.

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Test of Significant Toxicity: A Statistical Application for Assessing Whether an Effluent or Site Water is Truly Toxic. Denton, D., J. Diamond, and L. Zheng, 2011. *Environmental Toxicology and Chemistry*, 30(5), 1117-1126.

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Enhancement Effect of Water Associated with Natural Organic Matter (NOM) on Organic Compound – NOM Interactions: A Case Study with Carbamazepine. Borisover, M., et al., 2011. *Chemosphere*, 82(10), 1454-1460.

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Bioaccumulation of Copper and Toxic Effects on Feeding, Growth, Fecundity and Development of Pond Snail *Lymnaea luteola* L. Das, S. and B.S. Khangarot, 2011. *Journal of Hazardous Materials*, 185(1), 295-305.

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Fluorine Contamination in Groundwater: A Major Challenge. Dar, M.A., et al., 2011. *Environmental Monitoring and Assessment*, 173(1-4), 955-968.

Go to [Article](#)

Upcoming Meetings

3rd International Conference on Occurrence, Fate, Effects, and Analysis of Emerging Contaminants in the Environment. August 23-26, 2011 in Copenhagen.

Go to www.emcon2011.com

IWA Specialty Conference on Natural Organic Matter: From Source to Tap and Beyond. July 27-29, 2011 in Costa Mesa, CA.

Go to www.regonline.com/NOM2011

2011 Water Quality Technology Conference and Exposition. November 13-17, 2011 in Phoenix, AZ.

Go to [Meeting Page](#) or www.awwa.org/Conferences

Innovative and Affordable Tools and Technologies for Sustainable Public Health Protection

From EPA

An Innovative Membrane Bioreactor Process for Achieving Sustainable Advanced Wastewater Treatment. Venosa, A.D., et al., 2011. Presented at ICOSSE 11, January 9-13 in Tucson, AZ. Efficacy of a gravity-flow Biomass Concentrator Reactor (BCR) for removal of COCs at trace level concentrations.

Go to [Report](#) or www.epa.gov/nrmrl

Arsenic Removal from Drinking Water Small Systems Research. Sorg, T.J., 2011. Presented at USEPA Region 6 five-state meeting, January 25-27, 2011 in Dallas, TX.

Go to [Report](#) or www.epa.gov/nrmrl

ETV Report - Removal of Microbial Contaminants in Drinking Water. Blumenstein, M., B. Bartley, and J.Q. Adams, 2011. EPA/600/R-11/004. Dow Chemical Company Water Solutions SFD-2880 Ultrafiltration Module.

Go to [Report](#) or www.epa.gov/etv

Evaluation of Combined Heat and Power Technologies for Wastewater Treatment Facilities. EPA and Columbus Water Works Report. Examination of CHP technologies for converting anaerobic digester gas to electrical power and process heat.

Go to [Report](#) or water.epa.gov/scitech/wastetech

Mineralogy of Galvanic Corrosion By-Products in Domestic Drinking Water Pipes. Desantis, M., 2011. Presented at Cincinnati Area Water Distribution Systems Networking Seminar, Cincinnati, OH, January 26, 2011.

Go to [Report](#) or www.epa.gov/nrmrl

Removal of Inorganic, Microbial, and Particulate Contaminants from Secondary Treated Wastewater - Village Marine Tec. Expeditionary Unit Water Purifier, Generation 1.

Go to [Article](#) or www.epa.gov/etv

Climate Resilience Evaluation and Awareness Tool (CREAT). Designed for water and wastewater utilities to assess the risk of potential climate change impacts.

Go to [Tool](#) or water.epa.gov/infrastructure

From Collaborators

Assessment of Water Reuse as an Approach for Meeting Future Water Supply Needs. Potential for water reclamation and reuse of municipal wastewater to expand and enhance the nation's water supply alternatives.

Go to [Report](#) or dels.nas.edu

WaterRF - Simultaneous Oxidation and Removal of As(III) and As(V) by Electrocoagulation-Filtration. Lakshmanan, D., et al., 2011. #3160. Determines the technical and economic feasibility of using electrocoagulation-filtration for arsenic removal.

Go to [Report](#) or www.waterrf.org

WaterRF - Desalination Facility Design and Operation for Maximum Efficiency. Veerapaneni, S., et al., 2011. #4038. Recommendations for design and operation of desalination facilities to maximize energy efficiency.

Go to [Report](#) or www.waterrf.org

WERF - Nutrient Management Volume II: Removal Technology Performance & Reliability. Statistical variability is a characteristic of all plants and should be recognized in technology evaluation and in determining appropriate effluent limits.

Go to [Report](#) or www.werf.org

Post-Treatment Stabilization of Desalinated Water. Duranceau, S.J., et al., 2011. #4079. Lessons learned, industry practices, and concepts and guidelines for the post treatment stabilization of membrane permeate.

Go to [Report](#) or www.waterrf.org

Electrifying New Way to Clean Dirty Water. Low voltage helps microbes eat mining and other waste during water treatment.

Go to [Article](#) or www.inotec.us

Managed Aquifer Recharge Symposium (Presentations). National Water Research Institute. January 25-26, 2011 in Irvine, CA.

Go to [Presentations](#) or www.nwri-usa.org

WERF - Nanomaterials Provide Boost to Biosolids Dewaterability and Odor Reduction. Adding to dewatering polymers led to lower polymer dose, improved filtrate quality, and reduced odors.

Go to [Article](#) or www.werf.org

WERF - Quantitative Tools to Determine the Expected Performance of Wastewater Soil Treatment Units. Includes literature and model review, toolkit user's guide, Excel spreadsheet tools (STUMOD and N-CALC), and supplemental information.

Go to [Report](#) or www.werf.org

Global Water Research Coalition - Energy Efficiency in the Water Industry: A Compendium of Best Practices and Case Studies. Examination of current best practices and technologies as well as promising new developments.

Go to [Report](#) or www.globalwaterresearchcoalition.net

WERF - Phosphorus Removal Potential Using Biogenic Iron Oxides. Evaluated biogenic iron oxides produced by microaerobic, iron-oxidizing bacteria as a phosphorus filtration matrix.

Go to [Report](#) or www.werf.org

Glendale Looks at Microfiltration to Reduce Chromium-6 Levels. International Desalination Association. Evaluating microfiltration in advance of anticipated lower hexavalent chromium maximum levels.

Go to [Article](#) or www.desalination.biz

WERF, EPA Collaboration Yields Needed Data on Combined Heat and Power Technologies.

Go to [Report](#) or www.werf.org

From the Journals

Influence of Organic Matter on Arsenic Removal by Continuous Flow Electrocoagulation Treatment of Weakly Mineralized Waters.

Pallier, V., et al., 2011. *Chemosphere*, 83(1), 21-28.

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Treatment of Oily Wastewater of a Gas Refinery by Electrocoagulation Using Aluminum Electrodes.

Saeedi, M. and A. Khalvati-Fahlyani, 2011. *Water Environment Research*, 83(3), 256-264.

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Wastewater Polishing Index: A Tool for a Rapid Quality Assessment of Reclaimed Wastewater.

Verlicchi, P., et al., 2011. *Environmental Monitoring and Assessment*, 173(1-4), 267-277.

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Rapid Determination of Dichlorodiphenyltrichloroethane and Its Main Metabolites in Aqueous Samples by One-Step Microwave-Assisted Headspace Controlled-Temperature Liquid-Phase Microextraction and Gas Chromatography with Electron Capture Detection. Kumar, P.V. and J.F. Jen, 2011. *Chemosphere*, 83(2), 200-207.

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Removal of Arsenic from Water Using Fe-Exchanged Natural Zeolite. Li, Z., et al., 2011.

Journal of Hazardous Materials, 187(1-3), 318-323.

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Using Cl/Br Ratios and Other Indicators to Assess Potential Impacts on Groundwater Quality from Septic Systems: A Review and Examples from Principal Aquifers in the United States. Katz, B.G., et al., 2011. *Journal of Hydrology*, 397(3-4), 151-166.

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Sequestration of Cadmium Ions Using Titanate Nanotube. Du, A.J., et al., 2011. *Journal of Hazardous Materials*, 187(1-3), 401-406.

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Methane, Carbon Dioxide, and Nitrous Oxide Emissions from Septic Tank Systems.

Diaz-Valbuena, L.R., et al., 2011. *Environmental Science & Technology*, 45(7), 2741-2747.

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Wind-Powered Desalination: An Estimate of Saline Groundwater in the United States.

Androwski, J., et al., 2011. *Journal of the American Water Resources Association*, 47(1), 93-102.

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Performance and Biofilm Activity of Nitrifying Biofilters Removing Trihalomethanes.

Wahman, D.G., et al., 2011. *Water Research*, 45(4), 1669-1680.

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Pilot Scale Evaluation on Ferric Floc Sludge Concentration with Pelleting Flocculation Blanket Process.

Huang, T.L., et al., 2010. *Water Science & Technology*, 62(9), 2021-2027.

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Distribution and Availability of Trace Elements in Municipal Solid Waste Composts.

Paradelo, R., et al., 2011. *Journal of Environmental Monitoring*, 13(1), 201-211.

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Research Advances and Challenges in the Microbiology of Enhanced Biological Phosphorus Removal – A Critical Review.

Gebremariam, S., et al., 2011. *Water Environment Research*, 83(3), 195-219.

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Pilot Scale Testing of a New Configuration of the Membrane Aerated Biofilm Reactor (MABR) to Treat High-Strength Industrial Sewage.

Stricker, A., et al., 2011. *Water Environment Research*, 83(1), 3-14.

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Biosorption of Heavy Metals from Mining Influenced Water onto Chitin Products.

Pinto, P.X., S.R. Al-Abed, and D.J. Reisman, 2011. *Chemical Engineering Journal*, 166(3), 1002-1009.

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Banana Peel Applied to the Solid Phase Extraction of Copper and Lead from River Water: Preconcentration of Metal Ions with a Fruit Waste.

Castro, R.S.D., et al., 2011. *Industrial & Engineering Chemistry Research*, 50(6), 3446-3451.

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Free Chlorine and Monochloramine Application to Nitrifying Biofilm: Comparison of Biofilm Penetration, Activity, and Viability.

Lee, W.H., D.G. Wahman, P.L. Bishop, and J.G. Pressman, 2011. *Environmental Science & Technology*, 45(4), 1412-1419.

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Metal Removal Efficiency and Ecotoxicological Assessment of Field-Scale Passive Treatment Biochemical Reactors.

Butler, B., M.E. Smith, D.J. Reisman, and J.M. Lazorchak, 2011. *Environmental Toxicology and Chemistry*, 30(2), 385-392.

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Longitudinal Evaluation of the Efficacy of Heat Treatment Procedures against *Legionella* spp. in Hospital Water Systems by Using a Flow Cytometric Assay.

Allegra, S., et al., 2011. *Applied and Environmental Microbiology*, 77(4), 1268-75.

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Development of Chemically Engineered Porous Metal Oxides for Phosphate Removal.

Delaney, P., et al., 2011. *Journal of Hazardous Materials*, 185(1), 382-391.

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Non-Biological Inhibition-Based Sensing (NIBS) Demonstrated for the Detection of Toxic Arsenic Compounds.

Monty, C.N., et al., 2011. *Chemosphere*, 82(11), 1644-1648.

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Application of a New Vertical Profiling Tool (ESASS) for Sampling Groundwater Quality During Hollow-Stem Auger Drilling.

Harte, P.T. and S.M. Flanagan, 2011. *Ground Water Monitoring & Remediation*, 31(1), 86-98.

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Upcoming Meetings

26th Annual WaterReuse Symposium. September 11-14, 2011 in Phoenix, AZ.

Go to www.watereuse.org/conferences/symposium/26

Potable Reuse Conference. November 13-15, 2011 in Hollywood, FL.

Go to www.watereuse.org/conferences/potable/11

84th Annual Water Environment Federation Technical Exhibition and Conference. October 15-19, 2011 in Los Angeles, CA.

Go to www.weftec.org

WaterSmart Innovations Conference and Exposition. October 5-7, 2011 in Las Vegas, NV.

Go to www.watersmartinnovations.com

IWA Water Loss 2012. February 26-25, 2012 in Manila, Philippines.

Go to www.iwa-waterloss.org/2012

Energy and Water 2011 - Efficiency, Generation, Management, and Climate Impacts. July 31-August 3, 2011 in Chicago, IL.

Go to www.wef.org/energy

2011 WaterSmart Innovations Conference & Expo. October 5-7, 2011 in Las Vegas, NV.

Go to www.watersmartinnovations.com

Groundwater: Cities, Suburbs, and Growth Areas – Remediating the Past/Managing for the Future. August 8-9, 2011 in Los Angeles, CA.

Go to [Meeting Page](#) or www.ngwa.org

Philadelphia Low Impact Development Symposium. September 25-28, 2011 in Philadelphia, PA.

Go to www.bae.ncsu.edu/stormwater/2011lid

Ecological Systems Approach to Protect and Restore Sustainable Water Quality and Water Quantity on a Watershed Basis

From EPA

Coming Together for Clean Water: EPA's Strategy to Protect America's Waters. Framework for how EPA's national water program will address the challenges; EPA's priorities for achieving clean water goals.

Go to [Report](#) or water.epa.gov

EPA Takes Step to Improve Lake Champlain Water Quality. Work with Vermont to develop plan for reductions in phosphorus. Elevated levels cause algae blooms and other water quality problems.

Go to [Report](#) or www.epa.gov/region1/eco/tmdl

Active Pharmaceutical Ingredients and Aquatic Organisms. Daughton, C.G. and B.W. Brooks, 2011. *Environmental Contaminants in Biota: Interpreting Tissue Concentrations*, Chapter 8, N. Beyer and J. Meador (ed.).

Go to [Report](#) or www.epa.gov/nerl

The Effects of Mountaintop Mines and Valley Fills on Aquatic Ecosystems of the Central Appalachian Coalfields. EPA/600/R-09/138F. National Center for Environmental Assessment.

Go to [Report](#) or www.epa.gov/ncea

Can Rain Barrels and Gardens Help Keep Sewage in the Sewers? Investigates how they retain stormwater and how to motivate the public to adopt these "green" practices.

Go to [Article](#) or www.epa.gov/nrmrl/std/seb

EPA to Open Public Comment on Proposed Standards to Protect Aquatic Ecosystems. Protect billions of fish and other aquatic organisms drawn into cooling water systems each year.

Go to [Article](#) or water.epa.gov/lawsregs

NCEA - Climate Change Vulnerability Assessments: Four Case Studies of Water Utility Practices. EPA/600/R-10/077F.

Go to [Report](#) or www.epa.gov/ord/npd

NCEA - Aquatic Ecosystems, Water Quality, and Global Change: Challenges of Conducting Multi-Stressor Global Change Vulnerability Assessments. Blue, J., J. Maxted, N. Hiremath, M. Diebel, C. Herrnick, J. Koplos, C. Weaver. EPA/600/R-11/01A. External Review Draft..

Go to [Report](#) or www.epa.gov/ord/npd

From Collaborators

Effects of the Deepwater Horizon Mississippi Canyon-252 Oil Spill on Ecosystem Services in the Gulf of Mexico. Framework to assess the effects of the oil spill within the context of other human activities.

Go to [Article](#) or www.nationalacademies.org

Scientists Discover Invasive Mussel Killing Bacteria. California company preparing commercial product to control the environmentally hazardous zebra and quagga mussels.

Go to [Article](#) or www.nysm.nysed.gov

USACE - Application of Long Distance Conveyance (LDC) of Dredged Sediments to Louisiana Coastal Restoration. Welp, T. and G. Ray, 2011. ERDC TR-11-2. Describes dredging and transport methodologies in relation to LDC design and economic considerations and potential environmental impacts of LDC across Louisiana wetlands.

Go to [Report](#) or el.erdc.usace.army.mil

Measuring Forestry's Impact on Water Availability. Tools from CSIRO help water managers better estimate how forest plantations affect stream flows.

Go to [Article](#) or www.csiro.au

USACE - Meeting Water Quality and Water Control Objectives in River Basins with Multiple Reservoirs. ERDC TN-SWWRP-11-2. Tool to help determine if temporal and spatial distribution of water quality is met at right place and time for an operational change.

Go to [Report](#) or el.erdc.usace.army.mil

USACE - Hydrologic Analyses for Stream Restoration Design. Fischenich, J.C. and S.K. McKay, 2011. ERDC TN-EMRRP-EBA-8. Planners should focus on hydrologic and geomorphic factors when evaluating ecosystem restoration (e.g., magnitude/duration of peak annual discharges, duration of low flow conditions, etc.).

Go to [Report](#) or el.erd.usace.army.mil

National Assessment of Shoreline Change: Historical Shoreline Change along the New England and Mid-Atlantic Coasts. Hapke, C.J., et al., 2011. 68% of beaches in this area eroding.

Go to [Article](#) or woodshole.er.usgs.gov

USGS - An Initial SPARROW Model of Land Use and In-Stream Controls on Total Organic Carbon in Streams of the Conterminous United States. Shih, J.H., et al., 2011. Spatially Referenced Regression on Watershed Attributes (SPARROW).

Go to [Report](#) or pubs.usgs.gov

Managed Retreat of Coastal Communities: Understanding Responses to Projected Sea Level Rise. CSIRO. Alexander, K. S., et. al., 2011. A meta-theoretical social functionalist framework to analyze the range of personal concerns and responses to proposed policy options for vulnerable coastal shorelines.

Go to [Report](#) or www.csiro.au

WERF - Canine Scent and Microbial Source Tracking in Santa Barbara, CA. Pilot-scale study results show canine scent tracking should be expanded for use by researchers and stormwater managers.

Go to [Article](#) or www.werf.org

The Future of Research on Climate Change Impacts on Water. Raucher, R.S., 2011. WaterRF, WERF, NOAA, UCAR, EPA, and NASA. Report on Workshop that focused on adaptation strategies and information needs.

Go to [Report](#) or www.waterrf.org

WaterRF & NCAR - Climate Change in Water Utility Planning: Decision Analytic Approaches. Yates, D. and K. Miller, 2011. #3132. Vulnerabilities and adaptations needed to manage risk.

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Upcoming Meetings

NGWA Focus Conference on Fractured Rock and Eastern Groundwater Regional Issues. National Ground Water Association. September 26-27, 2011 in Burlington, VT.

Go to [Meeting Page](#) or www.ngwa.org

AWRA 2011 Annual Water Resources Conference. November 7-10, 2011 Albuquerque, NM.

Go to www.awra.org/meetings/ABQ2011

Declining Groundwater Levels: Measuring/Monitoring/Mitigation, an NGWA Virtual Conference. National Ground Water Association. Energy & Environmental Science. October 19, 2011, Online.

Go to [Meeting Page](#) or www.ngwa.org

Federal Committee on Statistical Methodology Research Conference. Federal Committee on Statistical Methodology. January 10-12, 2012 in Washington D.C.

Go to www.fcsm.gov/events

Clean Water is Americans' Top Environmental Concern

At least three in four Americans surveyed in Gallup's 2011 Environment poll worry about water contamination. Respondents were asked if they personally worry about contamination of soil and water by toxic waste, pollution of rivers, lakes, and reservoirs, pollution of drinking water, and the maintenance of the nation's supply of fresh water for household needs. Interestingly, Americans are less worried today than they were 10 years ago about these same issues Gallup measured in 2001. The decline spans a period when the public often expressed surging concern about terrorism, the Iraq war, gas prices, and the economy.

Percent of Americans that Worry about Environmental Problems *

Environmental Problem	2011
Contam of Soil/Water by Toxic Waste	79%
Pollute River/Lake/Reservoir	79%
Pollute Drinking Water	77%
Maintain Fresh Water for Households	75%
Pollute Air	72%
Extinction of Plants/Animals	64%
Loss of Rain Forests	63%
Urban Sprawl/Loss of Open Space	57%
Global Warming	51%

* Percent that Worry a Great Deal/Fair Amount

Bottom Line: Americans largely recognize the importance of clean water to their lives. All four environmental issues referring to "water" in this year's Gallup poll rank in the upper tier of environmental concerns, with air pollution a close fifth. What may surprise some, given the broad exposure the issue has received in recent years, is that global warming ranks lowest -- with barely half of Americans concerned and 48% only a little or not at all concerned.

Adapted from Lydia Saad's [Article](#), March 28, 2011. www.gallup.com

EPA Small Business Innovative Research (SBIR) Grants

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Advanced Contaminant Inactivation System for Drinking Water. Kimble, M.C.

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Combination of Chlorine-Free Electrolytic and Photochemical Methods for Sterilization of Contaminated Waters. Barashkov, N.

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In-Situ Imaging of Water Pipelines Using Ultrasonic Guided Waves. Mu, J.

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