EPA United States Environmental Protection Agency

EPA's Office of Research and Development (ORD) invites you to a free webinar

Safe and Sustainable Water Resources Research Program

A monthly webinar series focused on EPA water research

Assessment of Major Ion Effects on Aquatic Organisms

Wednesday, April 27, 2016
2:00 to 3:00 pm EST

Register online: https://attendee.gotowebinar.com/register/764666730532554244

Natural geochemical weathering introduces several inorganic ions to natural waters, primarily Na^+, K^+, Ca^{2+}, Mg^{2+}, Cl^-, SO_4^{2-}, and HCO_3^-/CO_3^{2-}. These ions not only define the basic chemistry of surface waters, but they also have physiological roles and are actively regulated by aquatic organisms. However, several land uses, including energy and mineral extraction, can increase concentrations of these geochemical ions to concentrations that pose ecological risks, either through direct discharge of process or waste waters, or by accelerating geochemical weathering. The ecological effects of increased ion concentrations are being explored through several interrelated research efforts that span levels of biological organization from physiological through field community levels. Research to date demonstrates that these effects are dependent on both the specific ions that are elevated and on the background composition of the receiving water. This webinar provides an overview of EPA's research in this area and some of the implications for predicting ecological risks and informing management decisions.

Dr. David Mount

Dr. David Mount joined EPA's Office of Research and Development as a research aquatic biologist in 1995. He received his Ph.D. from the University of Wyoming in 1987, where his dissertation focused on the effects of surface water acidification on the reproductive physiology of fish. Prior to joining EPA, Dave worked for 5 years in the private sector and 2 years conducting research for the Department of the Interior. Dave's research has covered a variety of topics in environmental toxicology, including the bioavailability of environmental contaminants, methods to test and evaluate sediment contamination, assessing and modeling effects of chemical mixtures, and the effects of dietary exposure to contaminants. He often provides technical advice to EPA Regional and Program Office staff, particularly in areas of water quality criteria, toxicity test methods, and ecological risk assessment under the Superfund, RCRA, and FIFRA programs.

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