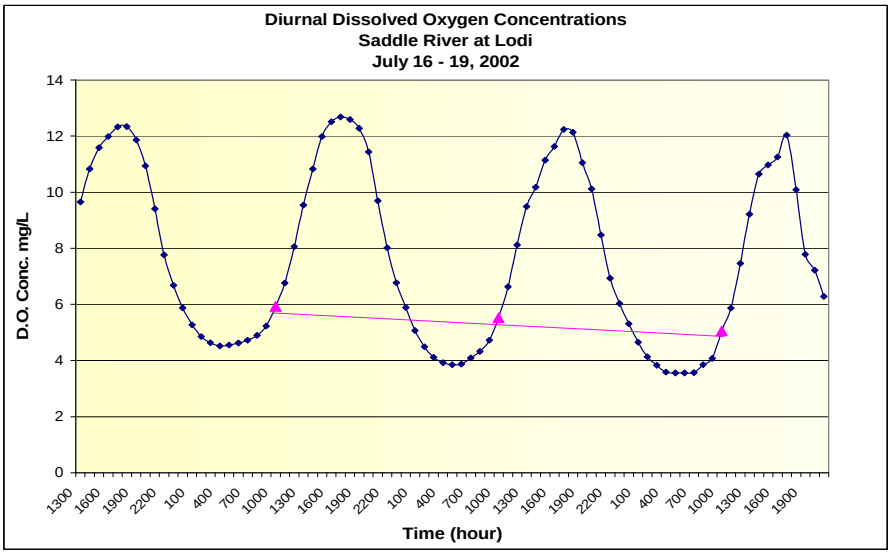
ANNOUNCEMENT

You're Invited to a Workshop sponsored by the New Jersey Department of Environmental Protection, United States Geological Survey - NJ Water Science Center and Rutgers University - NJ Water Resources Research Institute on:

Diurnal Cycling of Chemical Constituents in Surface Water and Related Media – Scientific and Regulatory Considerations

Please join us on Friday, December 12, 2008
9:00 AM to 4:00 PM
New Jersey Department of Environmental Protection
401 East State Street, Trenton New Jersey 08625

The graph below is an example of Diurnal DO - Which set of measurements gives the more accurate picture of dissolved oxygen?



When dissolved oxygen is measured in a stream at the same time every day, we get a "snapshot" of the concentration (pink curve). Continuous monitoring (blue curve) reveals that the concentration actually varies throughout the day in a strong diurnal cycle.

Over a 24-hour period, variations in dissolved oxygen, temperature, and pH concentrations often occur naturally in streams. There are also naturally induced cycles in concentrations of arsenic, mercury, other metals, nutrients and organic compounds that can occur. Concentrations of some constituents can vary by as much as several hundred percent on a daily basis, with concentration peaks usually occurring at predictable times.

The Diurnal Cycling of Chemical Constituents in Surface Water and Related Media – Scientific and Regulatory Considerations Workshop is a collaborative effort of the NJ Department of Environmental Protection, United States Geological Survey NJ Water Science Center and Rutgers University NJ Water Resources Research Institute.

The Workshop provides a forum for speakers and registrants to share their research results and discuss problems and new developments. Learn more about these cycles--

- What causes these cycles? How can we predict their occurrence?
- What do they mean to data collection efforts?
- A Closer Look at Principal Factors Affecting Diurnal DO Fluctuations

Topics:

Which Constituents Cycle and Why
Natural Drivers of Cycles--Biogeochemical, Photochemical, Stream Flow: Dissolved & Particulate Arsenic, Mercury & Other Metals: Nutrients & Dissolved Organic Carbon
Case Studies
Metals and Seasonality in Alkaline Streams
Metal Cycling in Acidic Streams
Cycles in Dissolved Organic Carbon and Seston
Organic Compounds and Volatiles near the Air/Water Interface
Natural and Human-induced Cycles
Why Regulators and Scientists Need to Know About Diurnal Cycles
Importance of Cycles to Total Maximum Daily Load (TMDL) Monitoring
Water-Quality Monitoring by Volunteers and Database Formation
Toxicity Considerations
Importance of Diurnal Cycles to Contaminant Assessments and Trend Studies
Sampling Strategies and How to Monitor Constituents that Cycle

Speakers (current list):
Chris Gammons, University of Montana
David Nimick and Julia Barringer, U.S. Geological Survey
Louis A. Kaplan, Stroud Water Research Center, Academy of Natural Sciences
Lisa (Totten) Rodenburg, Rutgers University
Marzooq Alebus, New Jersey Department of Environmental Protection

REGISTRATION:
There is no fee to attend the Workshop, but registration is required. To register or for additional information, please contact:
Kimberly Cenno, NJDEP (609) 239-4080 kimberly.cenno@dep.state.nj.us;
Julia Barringer, USGS (609) 771- 3960 jbarring@usgs.gov
Joan Ehrenfeld, Rutgers - NJWRRI (732) 932-1081 ehrenfel@rci.rutgers.edu

The Workshop location is very conveniently located 1 block from Public Transportation and Parking http://www.njtransit.com/rg/rg_servlet.srv and local restaurants. Please check back regularly at http://nj.usgs.gov/ for Workshop updates on Agenda, Speakers and additional details.