

## A Preview of What's In This Issue

The title of each article links to the on-line version

### New Method Developed to Quantify Spatial Extent of Cyanobacterial Blooms

This study provides a method for quantifying changes in the spatial extent of cyanobacterial blooms at local and regional scales using remotely sensed data to determine if bloom occurrence and size are increasing or decreasing for inland water resources.



### Body Symmetry in Forster's Terns Related to Mercury Exposure

Body symmetry of Forster's terns (*Sterna forsteri*) in San Francisco Bay was related to blood and feather mercury concentrations. Body asymmetry can affect a bird's fitness by reducing flight efficiency, which can interrupt normal feeding and breeding behaviors.



### Understanding Associations between Mussel Productivity and Cyanotoxins in Lake Erie

Study findings indicate that cyanobacteria and cyanotoxins were not associated with mussel mortality at the concentrations present in Lake Erie during a recent study (2013-15), but mussel growth was lower at sites with greater microcystin concentrations.



### Sources of Contaminants to Congaree National Park—USGS and National Park Service Working Together

A National Park Service (NPS) and U.S. Geological Survey (USGS) study determined the concentrations, potential for degradation, and potential for fish and animal exposure to organic contaminants in water and sediment within Congaree National Park.



### Scientists Examined Native Pollinator Exposure Risk to Neonicotinoids in Native Prairie Strips

Neonicotinoids were not detected in native prairie plants placed next to agricultural fields several years after discontinuation of neonicotinoid seed treatment.



### Cyclical Mobilization and Attenuation of Naturally Occurring Arsenic in an Underground Petroleum Plume

Scientists found that naturally occurring arsenic in aquifer sediments was mobilized into groundwater and attenuated through reattachment to sediments within an underground petroleum plume.



### Occurrence of Avian Influenza Virus in Groundwater—Study Provides Baseline Data and Informs Future Studies

This pilot study provided baseline data on avian influenza virus occurrence in groundwater underlying poultry farms and documented the challenges for conducting a pathogen transport study during a disease outbreak.



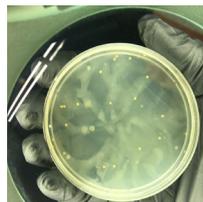
### Comparison of Predicted and Measured Pharmaceutical Concentrations in Rivers

New study evaluated if predicted environmental concentrations of pharmaceuticals reflect measured environmental concentrations in two rivers of different sizes and demographics.



### Optimized Approaches Coupled with Interactive Mapping Application Provide a Tool to Visualize the Occurrence of Soil Pathogens

Scientists optimized existing methods to collect and identify microorganisms including *Bacillus anthracis*, in soil samples across the United States, and developed a geographic information system (GIS)-based application to visualize microorganism occurrence.



### Estimated Toxicity to Aquatic Organisms in Midwestern Streams Driven by Relatively Few of the 227 Pesticides Analyzed

USGS scientists estimated potential acute and chronic toxicity for 227 pesticides in agricultural and urban streams in Midwestern United States.



The GeoHealth Newsletter provides information on new USGS environmental health science activities related to safeguarding the health of the environment, fish and wildlife, domesticated animals, and people.



Michael J. Focazio, Editor  
Kathy E. Lee, Managing Editor  
Victoria G. Christensen, Assistant Editor  
David W. Morganwalp, Coordinating Editor  
Stephane R. Walker, Copy Editor

The title of each article links to the on-line version, which have links to additional information. For additional information contact:

David W. Morganwalp  
U.S. Geological Survey  
913 National Center  
Reston, VA 20192  
geohealth@usgs.gov



Sign up to receive email notifications about new issues and to access past issues at:

<https://www2.usgs.gov/envirohealth/geohealth/>

Scan this with your  
smartphone QR code  
reader app to get past  
and future issues of the  
USGS GeoHealth  
Newsletter

