

## A Preview of What's In This Issue

### Disasters and Environmental Health

New efforts are helping to protect human and environmental health during disasters. Two recent papers summarize important environmental health characteristics of materials released into the environment by natural and human-induced disasters.



### Complex Response to Decline in Atmospheric Deposition of Mercury

Mercury concentrations in water and methylmercury concentrations in fish in four lakes were found to decrease in some lakes but increase in others—a pattern inconsistent with the overall decreases in atmospheric deposition of mercury.



### Neonicotinoid Insecticides Documented in Midwestern U.S. Streams

Three neonicotinoid insecticides (clothianidin, thiamethoxam, and imidacloprid) were detected commonly throughout the growing season in water samples collected from nine midwestern streams.



### Water Management During Rice Production Influences Methylmercury Production

Management practices relating to raising and lowering water levels in agricultural wetlands used for rice production contributed to higher methylmercury concentrations.



### Small Decadal-Scale Changes in Pesticides in Groundwater

The most comprehensive evaluation to date (2014) of decadal-scale changes in pesticide concentrations in groundwater of the United States has been completed by USGS scientists.



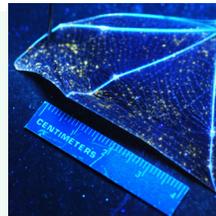
### Satellite Tracking of Birds in Alaska Points to Distant Sources of Lead and Mercury Exposure

Testing the levels of lead and mercury in birds in Alaska, together with satellite tracking of their migration routes, helped to determine where the birds were exposed to lead and mercury.



### Black-Light Detects White-Nose Syndrome in Bats

A method to detect white-nose syndrome in bats that uses long-wave ultraviolet (UV) light directed at their wings was discovered by USGS scientists and their collaborators.



### Mercury in Fish from 21 National Parks in the West

USGS and National Park Service scientists collaborated in the first study to measure mercury in fish from remote places in 21 national parks spanning 10 Western States, including Alaska.



### Winter Eagle Deaths at Great Salt Lake due to West Nile Virus

West Nile virus was found to be responsible for the death of numerous eared grebes and bald eagles in the winter of 2013 in the Great Salt Lake area, Utah.



### Chemicals from Land-Applied Biosolids Persist in Soil

Chemicals of emerging concern measured in biosolids that are applied to nonirrigated wheat fields were found to penetrate into the underlying soil, but uptake by mature wheat plants was minimal.



### Human Influenza Virus Infects Sea Otters

Evidence of the same influenza virus (H1N1) that caused the 2009 "swine flu" pandemic was found in sea otters living off the coast of Washington.



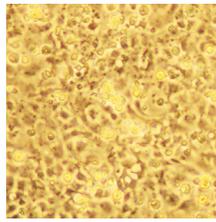
### Pipeline Crude Oil Spill Still a Cleanup Challenge after 30 Years

Research at a 1979 crude oil spill from a ruptured pipeline has exposed and helped to overcome many challenges facing an effective, cost-efficient cleanup of crude oil.



### Newly Discovered Picornavirus Spread by Baitfish

The complete gene sequence of a novel picornavirus isolated from minnows and baitfish in several areas of the United States shows that baitfish are spreading this novel virus.



### Metals in Acid Mine Drainage Affect Aquatic Insects

Aqueous metals from acid mine drainage and natural weathering were found to impact the ability of aquatic insects to reach adulthood.



### High Levels of Natural Perchlorate in a Desert Ecosystem

Naturally formed perchlorate falls from the atmosphere and accumulates in the soil of a Nevada desert at rates several times greater than previously thought.



### Toxins Produced by Molds Measured in U.S. Streams

Mycotoxins, toxic compounds produced by molds (fungi), were found commonly in U.S. stream waters.



### Sea Urchin Mortality in the Hawaiian Islands

Unusual mortality of sea urchins is occurring along four Hawaiian Islands. Sea urchins play a critical role in the ecology of coral reefs.



### Nutrient Inputs to the Nation's Estuaries and Great Lakes

Maps that show the major sources and contributing areas of nutrients to major estuaries throughout the conterminous United States are now available online.



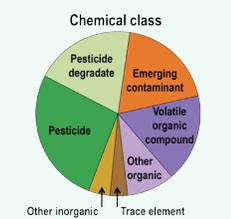
### Does Biodiversity Protect Humans Against Infectious Disease?

Conserving nature can improve human lives, but when might biodiversity lead to increased transmission of infectious diseases?



### USGS Health-Based Screening Levels Available

A newly updated USGS Health-Based Screening Level (HBSL) Web site includes human-health benchmarks for 351 contaminants.



### Arsenic in Minnesota Groundwater

Naturally occurring arsenic, common in groundwater in Minnesota, was found to exceed drinking water standards in about 15 percent of tested wells statewide.



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