Left: After receiving 7+ inches of rainfall in north central KS, a 1961 stage measurement record was broken at Salt Creek near Ada, KS, (06876700) during the Sept. 9th flood event. The maximum gage height measured 22.68 ft.

Top: The Algal and Environmental Toxins Unit is currently testing point-of-use drinking water treatment and filtration systems for the removal of algal toxins from freshwater sources.


The CPWSC, in cooperation with the Kansas Water Office and U.S. Army Corps of Engineers, will be collecting continuous and discrete water-quality data to quantify and characterize downstream effects of Tuttle Creek water-injection dredging. Sampling and monitoring of downstream Kansas River locations to evaluate the extent of downstream impacts will be done in cooperation with additional partners, including the Kansas Department of Health and Environment, The Nature Conservancy, the Cities of Lawrence, Olathe and Topeka, WaterOne, and Evergy. Read more information *here*.
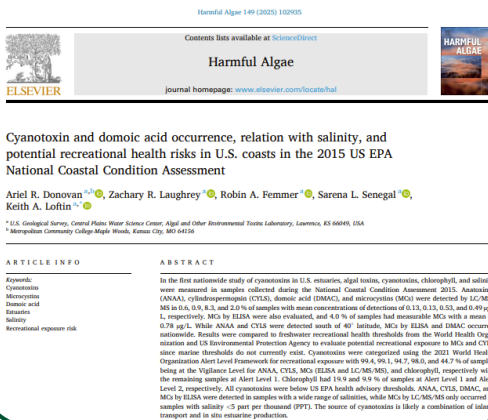
A nationwide study of cyanotoxins in U.S. estuaries was featured in the recently published article *Cyanotoxin and domoic acid occurrence, relation with salinity, and potential recreational health risks in U.S. coasts in the 2015 US EPA National Coastal Condition Assessment*. This study detected anatoxin-a (ANAA), cylindrospermopsin (CYLS), domoic acid (DMAC), and microcystins (MCs) using LC/MS/MS in samples collected during the first National Coastal Condition Assessment in 2015. Read more at: https://doi.org/10.1016/j.hal.2025.102935

Science Spotlights
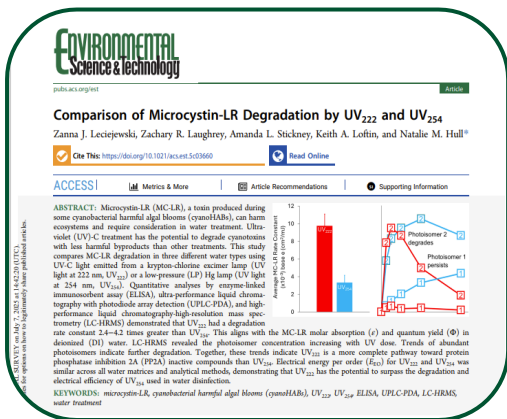
Comparison of Microcystin-LR Degradation by UV_{222} *and* UV_{254} was recently published highlighting ultraviolet (UV-C) treatment as a potential way to degrade cyanotoxins while avoiding harmful degradant products. This study focused on UV treatment of three different water types and results were analyzed using Enzyme Linked Immunosorbent Assay (ELISA), ultra-performance liquid chromatography with photodiode array detection (UPLC-PDA), and high-performance liquid chromatography-high resolution mass spectrometry (LC-HRMS). Read more at: https://doi.org/10.1021/acs.est.5c03660
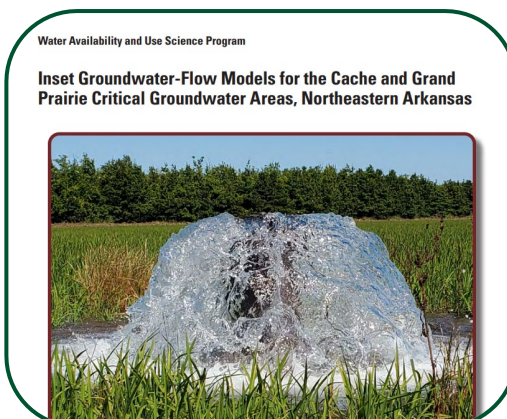
Scientific Investigations Report 2024-5088, *Inset Groundwater-Flow Models for the Cache and Grand Prairie Critical Groundwater Areas, Northeastern Arkansas* was published, detailing a multidisciplinary project to develop numerical groundwater models to characterize groundwater flows of focus regions including the Cache and Grand Prairie regions of northeastern Arkansas. These regions are designated as Critical Groundwater Areas due to decline from primarily agricultural groundwater use over the course of decades. Read the report here: https://doi.org/10.3133/sir20245088
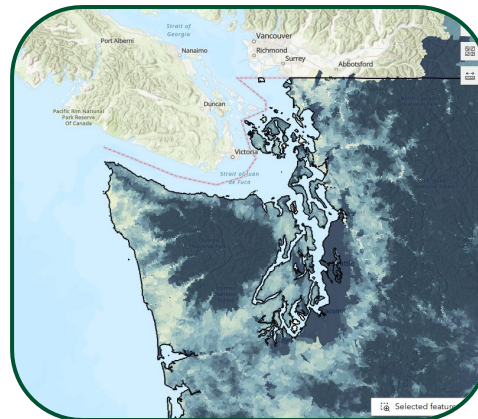
A tool developed by the USGS Environmental Health Program for exploring sources of the compound 6PPD-quinone was recently released which provides a source heat map, potentially helping scientists and environmental managers of geographic areas make informed decisions regarding factors that contribute to 6PPD-quinone.
The map can be found here: 6PPD-quinone Source Heat Map
For further information, read the associated data release here: Presumptive sources and relative heat index of 6PPD-quinone at the NHDPlusV2 catchment scale across the conterminous U.S. - ScienceBase-Catalog

Seminar Series

Andrea Tokranov from the New England Water Science Center will be presenting *An Overview of PFAS Science at the USGS* on October 22nd at 12:00 PM CDT. Andrea's research focuses on exposure, fate, transport and modeling of PFAS in the environment. She co-leads the PFAS Core Technology Team within the Environmental Health Program, which aims to provide advanced technological capabilities enabling national PFAS research. The talk will provide a high-level overview of USGS PFAS science including a summary of analytical and interpretive capabilities and a detailed discussion of the recent nationwide model predicting tools of PFAS in groundwater and private drinking water supplies.

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