



Wildfires and Resulting Impacts to Water Bodies Used as Drinking Water

September 29, 2020 from 2:00 to 3:00 pm ET

Optional Q&A session
from 3:00 to 3:30 pm ET

A certificate of attendance will be offered for this webinar

Detritus material in forest watersheds is the major terrestrial source of dissolved organic matter (DOM) and disinfection byproduct (DBP) precursors in water bodies used as drinking water sources and is also a fuel that can ignite wildfires. In these watersheds, hot temperatures and dry conditions increase the likelihood of high-severity wildfires. To help reduce this risk, low-severity prescribed burning is used as a forest management practice to reduce fuel loads from forest floor detritus material. In either high- or low-severity fires, DOM exported to source waters from managed watersheds is likely to have different characteristics and treatability compared to DOM exported from unburned watersheds. These potential source water quality changes may require that drinking water utilities adapt their treatment processes to account for these changes. Modeling and decision support tools can help explore treatability and adaptation strategies for these impacted water systems.

Wildfire Impacts on Drinking Water Quality

This presentation will provide information on the impacts of high- and low-severity wildfires on dissolved organic matter concentrations in water bodies used as drinking water sources and DBP formation during treatment.

Decision Support for Drinking Water Utilities Impacted by Wildfire

This presentation will discuss watersheds' response to post-fire sedimentation and will provide information on how water utilities can modify treatment plant operations to avoid disinfection byproducts. The 2012 High Park fire in Fort Collins, Colorado will be used as a real-world example to demonstrate the methods.

Presented by **Alex Chow** and **Tanju Karanfil**



Dr. Chow is a professor of Biogeochemistry in the Department of Forestry and Environmental Conservation, with a joint appointment in the Department of Environmental Engineering and Earth Science at Clemson University. He holds a Ph.D. in hydrologic science from University of California, Davis.



Dr. Karanfil is a professor of Environmental Engineering in the Department of Environmental Engineering and Earth Science and is also a vice president of research at Clemson University. He holds a Ph.D. in Environmental Engineering from University of Michigan.

Presented by **Fernando Rosario-Ortiz** and **Joseph Kasprzyk**



Dr. Rosario is a professor of environmental engineering at the University of Colorado Boulder. He also is the director of the Environmental Engineering Program at CU Boulder. He holds a D.Env. in environmental science and engineering from UCLA.



Dr. Kasprzyk is an associate professor in the Civil, Environmental, and Architectural Engineering Department at the University of Colorado Boulder. He holds a Ph.D. in civil engineering from Penn State University.

EPA awarded grants to four institutions for research in system-based strategies to improve our Nation's ability to plan and respond to water scarcity and drought, which includes investigations on surface and ground water quality and availability. The research being presented for this webinar was done under two of the awarded grants. For additional information on these and other research grants, visit EPA's water research grants website: epa.gov/research-grants/water-research-grants

Registration: attendee.gotowebinar.com/register/2152789201095229455



Progress for a Stronger Future

EPA turns 50 this year!
Join us in our year-long anniversary celebration.
epa.gov/50

Who should attend?

State primacy agencies, Tribes, community planners, technical assistance providers, academia, and water systems interested in issues facing community water systems and solutions to help solve them.

Looking for more webinars?

This webinar is part of EPA's Monthly Small Systems Webinar Series. A drinking water focused webinar will typically be held every month.

epa.gov/water-research/small-systems-monthly-webinar-series