



Wildfire Deteriorates Drinking Water Quality



Why you should care: Forested watersheds are critically important to the supply of clean drinking water. Wildfire consumes woody biomass and produces charcoal and ashes, which eventually are flushed into source water during rainstorms.

What we did: Surface materials from wildfire burned watersheds including ashes and soils were collected immediately, 3 months, and one years after the disaster. Samples were mixed with water, then analyzed for several EPA regulated chemicals following a standard water disinfection procedure.

Take Home Messages: Thick layers of ashes could be produced in a wildfire. Ashes gradually release charcoal-like pollutants into source water. These pollutants could react with disinfectants such as chlorine and produce carcinogenic chemicals during drinking water treatment. Release of these pollutants are likely occurred in the first few post-fire rainstorms.

What you can do: 1) Install water filters (e.g. activated carbon) to reduce pollutants in your tap water if your source water is affected by wildfire last year 2) Check with your water utility to obtain a recent water quality report, 3) Do not smoke or set up any camp fire in forest or wildland areas, and 4) Support environmental research against forest fire.

BG&EQ Science Communication 2 (2018) - Details of the study can be found in: Wang et al. (2016) Temporal variations of disinfection byproducts in wildfire detritus. Water Research 99: 66-73. Wang et al. (2015) Wildfire altering terrestrial precursors of disinfection byproducts in forest detritus. Environmental Science & Technology 49: 5921-5929. Contact: Dr. Alex Chow – <u>achow@clemson.edu</u>. Web page: <u>http://people.Clemson.edu/~ACHOW/</u>