

Short-term Considerations for Surface Water Public Water Systems with Watersheds Impacted by Wildfires

Wildfire can have serious negative consequences for a water system's ability to provide safe potable drinking water. Water systems can be directly affected and may require facility and distribution repairs, while other systems will be indirectly affected due to water quality changes in the watershed. It is important to determine the full impact of the fires on your water system to reduce potential health risks. In this document, the Division of Drinking Water (Division) focuses on two potential short-term impacts, including source water quality and water treatment plant performance and operations.

Potential impacts to surface water treatment plant: performance and operations

Be ready! The first flush¹ can bring elevated turbidity and TOC. Consider using alternative sources.

- Change in coagulant dosing and oxidant demand – consider jar testing
- Significant increase in turbidity and total organic carbon – if the plant is unable to meet performance standards, contact our office
- Increased disinfectant demand
- Shorter filter runs
- Subsequent algal blooms
- Sedimentation at the intake
- Taste and odor issues
- Increased chemical demands and associated treatment costs
- Reduced system pressures – if the system was dewatered, contact our office

Potential Changes in the following Water Quality Parameters: The Division expects, at minimum, surface water public water systems in recently impacted watersheds to collect the water quality samples marked with an asterisk (*) during the first flush **at the entrance to the distribution system**. The Division may request additional monitoring due to unique circumstances.

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| • Nitrate* | • Total Organic Carbon* |
| • Turbidity* | • Ammonia |
| • Mercury | • Zinc |
| • Arsenic (if structures)* | • Sulfate and Chloride |
| • Phosphate | • Chromium (if structures)* |
| • Lead (if structures)* | • Total Dissolved Solids |
| • ↑pH and ↑alkalinity | • Iron/Manganese |
| • Asbestos (if structures) | • Polynuclear aromatic hydrocarbons |
| • Color/Odor/Taste | • Cyanide |
| • Dioxin | • Diammonium phosphates |
| • Ammonium sulfates | • Aluminum |
| • VOCs (if structures) | • Disinfection byproducts |
| • SOCs (if structures) | • Heavy metals (if ash) |

The impacted surface water system shall contact the Division within 24 hours of receiving laboratory results to discuss any further actions necessary. All chemical constituents will be electronically reported to the Division's water quality database using PS-CODEs.

Reference and additional considerations: Effects of Wildfire on Drinking Water Utilities and Best Practices for Wildfire Risk Reduction and Mitigation, WRF & EPA, Web Report #4482

¹ precipitation event exceeding 1 inch in a 24 hour period or during a peak raw turbidity event