

The Bull Run Filtration Project will remove *Cryptosporidium* and other contaminants from the Bull Run water supply, producing cleaner, safer water for the nearly one million people who use our water today and for future generations. The project is required by the federal Safe Drinking Water Act and must be completed by September 30, 2027, per a bilateral compliance agreement with the Oregon Health Authority.

Learn More

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portlandoregon.gov/bullrunprojects

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Risk of Harmful Algal Blooms in the Bull Run Watershed

Cyanobacteria, also known as blue-green algae, are naturally-occurring bacteria that are found around the world in rivers, lakes, and oceans. Some cyanobacteria can produce toxins that can be harmful to human and animal health. Under certain environmental conditions, toxin-producing cyanobacteria can grow out of control and release toxins into the water. This is called a harmful algal bloom. Harmful algal blooms are more likely to form in warm and stagnant water that has high levels of nutrients. High levels of nutrients typically enter water bodies from human-caused sources, such as agriculture (fertilizer and livestock manure), sewage, or stormwater runoff.

Current Conditions in the Bull Run Watershed

- The rivers and reservoirs in the Bull Run Watershed are not currently vulnerable to conditions that would encourage or support a harmful algal bloom.
- The land in the Bull Run Watershed is naturally low in nutrients. Additionally, strict watershed protections do not allow activities, such as agriculture or commercial or residential development, in the watershed that would contribute additional nutrients. As a result, the Bull Run Watershed does not have a history of harmful algal blooms.
- The Portland Water Bureau tests Bull Run water for algae on a weekly basis.
- There are many types of algae found in the Bull Run reservoirs and at the raw water intake. Levels of algae increase on a seasonal basis.
- The algae found are typical for lakes in the region and do not pose a health risk.



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Current Regulations and Cyanotoxin Monitoring

- There are currently no rules at the federal level for harmful algal blooms or cyanotoxins in drinking water. However, the EPA may develop rules in the future.
- The State of Oregon requires some water providers that they determined are at higher risk of cyanotoxins to routinely test their water. These cyanotoxin testing rules were developed in response to the cyanotoxin drinking water advisory in Salem during Summer 2018.
- The Portland Water Bureau is fortunate to have high-quality drinking water sources and is not a water system that is currently required to test for cyanotoxins by the state.
- If cyanotoxins are detected in Portland's drinking water in the future, the Portland Water Bureau will follow Oregon's cyanotoxin rules for monitoring, testing, and public notification.
- The Portland Water Bureau tested the Bull Run source water for cyanotoxins in the summers of 2018 and 2019. All test results did not detect cyanotoxins in the water.

Risk of Harmful Algal Blooms

- Even though the Bull Run Watershed is not currently at risk for harmful algal blooms, climate change may change the conditions of the watershed in the future.
- A warming climate could increase the temperature of the region's lakes, creating conditions that are more supportive of harmful algal blooms.
- Additionally, climate change could increase the duration of hot, dry weather, which could increase the likelihood of wildfires. After a wildfire, more nutrients can run off the land into water bodies.
- Currently, Portland does not have a way to remove algae or their potential toxins from its drinking water.
- Portland's current treatment system could actually increase toxin levels. If toxin-producing cyanobacteria were present in the water, chlorine can break open the cyanobacteria cells and release any toxins from inside the cells into the water.
- Because there are currently no water treatment options to remove toxins from Portland's water, there could be a public health risk if a harmful algal bloom occurred in the Bull Run Watershed.



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