

FREQUENTLY ASKED QUESTIONS

1. What is *Cryptosporidium*?

Cryptosporidium is a parasite that lives in the intestines of infected animals or humans. An oocyst (oh-sist) refers to the resting stage of a single *Cryptosporidium* organism. The oocyst has a protective shell-like structure that protects the organism from harsh environmental conditions, such as chlorine disinfection. Many types of *Cryptosporidium* exist, but not all are known to cause illness in humans.

2. Does Portland treat for *Cryptosporidium*?

No. On March 14, 2012, the Oregon Health Authority (OHA) issued the Portland Water Bureau a 10-year variance from treating Bull Run drinking water for *Cryptosporidium*. As a result of the variance, the bureau is the only surface water system in the country that does not have to treat for *Cryptosporidium*. The treatment variance was issued in accordance with federal and state regulations.

3. Why was the Portland Water Bureau granted a treatment variance?

In 2011, Portland Water Bureau demonstrated to the Oregon Health Authority that the Bull Run water source is of such high quality that no additional treatment for *Cryptosporidium* would be necessary to protect public health. Extensive water quality monitoring showed that the average *Cryptosporidium* concentration was below the EPA's critical level of 0.075 oocysts per 1,000 liters, which is equivalent to the level of public health protection that a system with treatment would provide.

The Bull Run watershed has stringent watershed protections, a natural environment that limits contamination, and is protected from the most common *Cryptosporidium* sources such as human waste and livestock.

4. What are the benefits of having the variance?

As a result of the variance, the bureau has not had to construct a treatment facility for *Cryptosporidium*, which saved ratepayers money. The efforts involved in applying for, and maintaining the variance provided the Portland Water Bureau with a better understanding and knowledge of the characteristics of the watershed.

5. What has changed?

Starting in January 2017 and continuing through March 2017, the bureau detected low levels of *Cryptosporidium* in several raw water samples from the Bull Run Watershed. A total of 19 individual *Cryptosporidium* oocysts were detected over this timeframe—the first detections since December 2011.

On May 19, 2017, the bureau received a letter from OHA, the bureau's regulatory authority, revoking the variance effective on the date OHA signs a compliance schedule and interim measures agreement, or on September 22, 2017, whichever is sooner.

6. How was the decision made to revoke the variance?

To allow for ample time to arrive at the most responsible outcome, the bureau notified OHA in March that it would not be able to demonstrate a *Cryptosporidium* concentration below the allowable level that EPA has deemed as equivalent protection to that provided by treatment. OHA

responded with a letter on May 19 that under the terms agreed upon in 2012, the variance will be revoked.

7. Is the bureau in compliance with the Safe Drinking Water Act?

Yes, the Portland Water Bureau has and is adhering to all state and federal drinking water regulations. With notice from OHA that the variance will be revoked, the City will consider options to remain in compliance with the Safe Drinking Water Act.

8. Is our water safe to drink?

Yes. The bureau's regulator and public health partners agree that the risk to public health remains low. Ongoing public health surveillance has not shown any increase in *Cryptosporidium*-related illness. As always, people with severely weakened immune systems should seek specific advice from their health care providers about drinking water.

9. If there are no ongoing *Cryptosporidium* detections, why is the variance being revoked?

In 2011 the bureau demonstrated over an intensive one-year monitoring period that the Bull Run *Cryptosporidium* concentration was below EPA's critical level for a variance. Under the terms of the variance, the bureau is required to continue to demonstrate these low levels. After the repeated detections in January, February, and March 2017, it became apparent that the one-year concentration would not be below that level, even with no further detections for the remainder of the year.

10. Do state and federal regulations make any distinction about the different genotypes, or wildlife sources, of *Cryptosporidium*?

No, there is no regulatory distinction between the types of *Cryptosporidium*. All detections are treated the same.

11. What does the City intend to do now to comply with *Cryptosporidium* regulations?

The City will continue to work with its regulator to proactively protect public health. For 10 years, the City gathered data used to qualify for the variance and for five additional years, it operated under the variance and without treatment. The bureau agreed to the terms of the variance, knowing this would be the last chance for an exception to treatment. The bureau acknowledges that, based on current levels of detection, it is impossible to meet the conditions of the variance. The bureau's immediate next steps (beyond continuing to monitor for *Cryptosporidium*) are to provide information on compliance options to City Council, who will make final decisions.

12. What is next for the bureau as a result of OHA revoking the variance?

The bureau will continue to monitor for *Cryptosporidium* and submit the information listed in OHA's letter. No decisions have been made about what will replace the variance. All decisions will involve the Council, the Portland Water Bureau's regulator, technical staff, and public health partners at every step. The bureau will communicate these decisions with its customers and the public. The bureau will present options to City Council in a work session.

13. What are the treatment options?

In July 2009—following a thorough review of all options—the City Council, through Council Resolution 36720, directed the bureau to design an

ultraviolet (UV) treatment plant at the same time as it attempted to obtain the variance. This and other options will be presented to Council at the work session.

14. How much will treatment cost? How will this impact rates?

A 2009 presentation to Council estimated the cost of a UV treatment plant at \$100 million (the estimated cost of a filtration plant then was \$385 million). Cost estimates will be updated and presented at the work session.

15. What will the Water Bureau do if there are additional *Cryptosporidium* detections before treatment is in place?

As the bureau demonstrated this winter, it will be ready to respond if necessary. The bureau will continue to monitor during this process, notify the public, and work with its health partners to make the best decisions for public health.