

* Why was the variance revoked?
By PWB! Reported it's not "feasible"
to test the water as much as it req'd
to maintain the variance.

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BEFORE THE STATE OF OREGON
OREGON HEALTH AUTHORITY
PUBLIC HEALTH DIVISION

In the Matter of

Portland Water Bureau Public Water
System

BILATERAL COMPLIANCE AGREEMENT

The Portland Water Bureau (PWB) is a water supplier as defined in Oregon Revised Statute (ORS) 448.115(12) and Oregon Administrative Rule (OAR) 333-061-0020(211), and as a water supplier, has specific responsibilities that are identified in OAR 333-061-0025.

The City of Portland owns and operates the PWB water system, identified as public water system OR4100657 and located in Multnomah County, Oregon. The PWB water system is a Community water system serving approximately 614,000 customers and an additional 415,000 people through purchasing water systems and is subject to regulation under ORS 448.115 to 448.290 and OAR 333-061-0005 to 333-061-0272.

Pursuant to its authority established in ORS 431A.010 and 448.255, the Oregon Health Authority, Public Health Division, acting through Drinking Water Services (DWS) has reviewed the operation of the PWB water system. DWS has determined that water provided by PWB must be treated for *Cryptosporidium*.

I. PURPOSE

- A. Currently PWB does not treat its drinking water for *Cryptosporidium* as is required under OAR 333-061-0032(3)(e) through (g) because it was granted a variance by the Oregon Health Authority from that requirement. That variance is revoked on the date this Agreement is signed by DWS, at which time PWB will be subject to the requirements of OAR 333-061-0032(3)(e) through (g).
- B. Because PWB cannot meet the requirements of OAR 333-061-0032(3)(e) through (g) until it constructs facilities to treat for *Cryptosporidium*, this Bilateral Compliance Agreement ("Agreement") is entered into between DWS and PWB for the purpose of establishing a schedule for PWB to install such treatment facilities and a deadline by which water produced by the PWB water system shall meet all treatment technique requirements in OAR 333-061-0032. The Agreement is also intended to provide for protective interim measures until such time as treatment facilities are fully operational.

II. FINDINGS OF FACT AND CONCLUSIONS OF LAW

DWS makes the following Findings of Fact and Conclusion of Law. PWB denies the Conclusion of Law alleged by DWS, but enters into this Agreement for the purpose stated in Section I. For these purposes, this Agreement constitutes the legal requirements with which PWB must comply while the Agreement is in effect.

A. Findings of Fact:

1. PWB currently provides water from the Bull Run watershed that meets the exemption to filtration criteria in OAR 333-061-0032(2) and (3).
2. On March 14, 2012, DWS issued a Final Order granting a variance from the requirements to treat the water for *Cryptosporidium* and to provide at least two disinfectants, due to the nature of the raw water source and lack of detection of *Cryptosporidium*.
3. In January and February 2017, 17 *Cryptosporidium* oocysts were detected in 12- 50 liter samples. DWS determined that a boil water advisory was not necessary to protect public health.
4. On May 19, 2017, DWS issued the 'Order Revoking Variance; Delayed Revocation Date' ("Revocation Order"), because PWB notified DWS on March 8, 2017, that it is not feasible for PWB to conduct the amount of water sampling necessary to demonstrate that its annual average concentration of *Cryptosporidium* is less than the allowable threshold. The Revocation Order required PWB to propose a construction



For whatever going to the
they were build treat crypto.

schedule, interim control measures, and a monitoring plan by August 11, 2017. On August 1, 2017, per a request from PWB, DWS amended the May 19, 2017, Revocation Order extending the deadlines contained therein until October 11, 2017, for PWB to submit the required information.

5. On October 9, 2017, PWB submitted to DWS a proposed schedule to install filtration by 2027, proposed interim control measures and a *Cryptosporidium* monitoring plan.
6. Pursuant to the Revocation Order issued May 19, 2017, and amended August 1, 2017, November 21, 2017 and December 13, 2017, DWS revokes the Final Order granting a *Cryptosporidium* treatment variance effective on the date DWS signs this Agreement or on December 19, 2017, whichever is sooner.

B. Conclusion of Law:

On the effective date of this Agreement PWB no longer has a variance from the *Cryptosporidium* treatment requirements and therefore PWB is not in compliance with OAR 333-061-0032(3)(e) through (g).

III. CONSTRUCTION SCHEDULE:

Upon completion of the construction activities described below, by the interim deadlines agreed upon, PWB will meet the *Cryptosporidium* treatment requirements. **Water meeting all surface water and *Cryptosporidium* treatment requirements will be served to customers no later than September 30, 2027.**

- A. PWB will submit results of the pilot study as required per OAR 333-061-0050(4)(c)(C) and preliminary planning to DWS for review and approval no later than November 30, 2020. This information will include a schematic of treatment, filtration type, location, maximum capacity, and a more detailed design schedule. Upon approval by DWS, the submitted schedule for the following elements will become enforceable by incorporation:
 1. Begin design;
 2. Submit plans and specifications to OHA for review and approval; and
 3. Complete design.
- B. Final construction plans and a more detailed construction schedule must be submitted to DWS by the approved date in Section III. A above, but no later than October 31, 2022. Upon conditional or preliminary approval by DWS, the submitted schedule for the following elements will become enforceable by incorporation:
 1. Begin construction; and

G. Response Protocol for *Cryptosporidium* Detections and Risk Determination:

1. Within 5 days of the effective date of this Agreement, PWB must submit for DWS review and approval (or partial approval) its current response protocols that will be followed in the event that DWS has determined that additional precautions to protect public health are necessary, which may include, but are not limited to, shutdown of the Bull Run source and use of groundwater sources, or issuing a boil water advisory for the Bull Run service area. These protocols shall be updated as necessary by PWB. If PWB makes material modifications to a protocol, it shall resubmit the amended protocol to DWS for review and approval within 30 days of the modification.
2. In any instance that *Cryptosporidium* is detected at the Bull Run intake, DWS shall notify a team of public health experts, including representatives from ACDP, local public health agencies, and the US Environmental Protection Agency. The public health experts will evaluate health risk and determine whether additional precautions are necessary to protect public health. If deemed necessary by this team, representatives from the Center for Disease Control and Prevention will be consulted within one business day of the team's evaluation. Factors to be considered by DWS and the team shall include:
 - a. Number of detections;
 - b. Recent detection trends;
 - c. Human cryptosporidiosis case trends;
 - d. Recent watershed weather or events;
 - e. Coliform counts and turbidity at intake;
 - f. Other factors as deemed appropriate.
3. Any determination DWS makes through the process in G.2 above will be immediately communicated to PWB for appropriate response action. If a boil water advisory is determined to be needed, the advisory must be issued within 24 hours of the determination by DWS, and must extend to all water suppliers also receiving water from Bull Run. PWB must make reasonable efforts to contact facilities serving vulnerable populations about such a boil water advisory. PWB must submit a draft of the public notice and it must be approved by DWS before being issued.

V. DELAY OF PERFORMANCE / FORCE MAJEURE

A. PWB shall comply with the terms of this Agreement within the time limits set forth in this Agreement unless the performance is prevented or delayed by a Force Majeure event, or as otherwise agreed to in writing by DWS and PWB. *

↑ ↑ ↑
Both parties could renegotiate
the terms, the timeline and
the chosen methods.

- B. For purposes of this Agreement, a "Force Majeure" event is any event arising from causes beyond the control of PWB or any entity controlled by PWB that, notwithstanding due diligence by PWB or any entity controlled by PWB, delays or prevents performance of an obligation under this Agreement. The due diligence requirement includes using due diligence to anticipate any such event and to minimize the delay caused by any such event to the greatest extent practicable. A Force Majeure event does not include, inter alia, increased costs of performance, changed labor relations, financial or business difficulties, normal inclement weather, or changed circumstances arising from the sale, lease or other transfer or conveyance of real estate interest.
- C. If PWB believes that a Force Majeure event is likely to occur, is occurring, or has occurred that may affect its ability to perform an obligation under this Agreement, PWB shall notify DWS by telephone or email within two business days of when PWB first became aware of such event, and shall follow up with a formal notice to DWS within 15 days after the event with the following information:
1. The action that may be or has been affected;
 2. The reasons for the delay;
 3. The length or anticipated duration of the delay;
 4. The measures taken or to be taken to prevent or minimize the delay;
 5. A schedule for implementing such measures; and
 6. Any additional information deemed appropriate by PWB to support its Force Majeure claim.
- D. Failure to comply with the notice requirement of this paragraph shall constitute a waiver of any Force Majeure claim by PWB as to the event in question.
- E. If DWS agrees that an actual or anticipated delay is attributable to a Force Majeure event, the time for performance of the obligation shall be extended by written Agreement of the parties. An extension of the time for performing an obligation affected by a Force Majeure event shall not, of itself, extend the time for performing a subsequent obligation.
- F. PWB shall have the burden of proving that a Force Majeure event was the cause of the noncompliance and the duration of the noncompliance.
- G. For any other non-Force Majeure event that nevertheless may delay the performance of any obligation under the Agreement, PWB shall notify DWS in writing as soon as it becomes aware of such event and provide the same information as required for a Force Majeure event, as specified above. DWS may, in its discretion, extend the deadline for PWB to perform an obligation under the Agreement after receipt of such notification.

VIII. NOTICE OF RIGHT TO REQUEST A HEARING

PWB is entitled to hearing as provided by the Administrative Procedure Act (Oregon Revised Statutes, Chapter 183). By signing this Agreement, PWB waives its right to contest the violations in Section II of this Agreement in a proceeding brought by DWS to enforce this Agreement.


IX. MODIFICATION AND TERMINATION

1. This Agreement may be amended from time to time as necessary by mutual agreement of the parties.
2. DWS will terminate this Agreement upon making a determination that PWB has complied with all terms in this Agreement.
3. DWS may terminate this Agreement with 30 days written notice to PWB by certified mail if DWS determines that PWB is in violation of this Agreement or the facts or circumstances associated with this Agreement change.

X. EFFECTIVE DATE

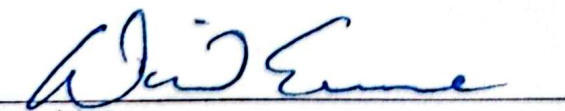
This Agreement shall become effective upon signature by DWS and PWB.

Dated this 18th day of December, 2017.



Michael Stuhr, PE
Administrator
Portland Water Bureau

Dated this 18th day of December, 2017.



David Emme
Program Manager
Oregon Health Authority, Drinking Water Services

Appendix A

Mandatory language to be included in press releases and public notices pursuant to Section II.C of this Agreement:

“The Portland Water Bureau does not currently treat for *Cryptosporidium*, but is required to do so under the drinking water regulations. Portland is working to install filtration by 2027 under a compliance schedule with the Oregon Health Authority. In the meantime, Portland Water Bureau is implementing interim measures such as watershed protection and additional monitoring to protect public health. [Insert actions customers should take, and what steps PWB is taking to correct the situation.]

Exposure to *Cryptosporidium* can cause cryptosporidiosis, a serious illness. Symptoms can include diarrhea, vomiting, fever, and stomach pain. People with healthy immune systems recover without medical treatment. According to the Center for Disease Control and Prevention (CDC), people with severely weakened immune systems are at risk for more serious disease. Symptoms may be more severe and could lead to serious life-threatening illness. Examples of people with weakened immune systems include those with AIDS, those with inherited diseases that affect the immune system, and cancer and transplant patients who are taking certain immunosuppressive drugs.

The Environmental Protection Agency has estimated that a small percentage of the population could experience gastrointestinal illness from *Cryptosporidium* and advises that customers who are immunocompromised and receive their drinking water from the Bull Run Watershed consult with their health care professional about the safety of drinking the tap water. [Insert list of water suppliers that serve Bull Run water] receive all or part of their drinking water supply from Bull Run. To learn if your drinking water comes from Bull Run, please contact your local drinking water provider.”

A mention of a boil water notice being implemented if filtration facility is not online by Sept 2027.

Crypto Variance

10. The Bull Run watershed is located 26 miles east of Portland. The watershed, or drainage area, for the PWB intake is 102 square miles. The legal boundaries for the Bull Run Watershed Management Unit (Unit) are slightly larger than the drainage area to provide a buffer around the watershed boundary. Approximately 95 percent of the Unit is federal land administered by the U.S. Forest Service (USFS); four percent is owned by the City of Portland, and one percent is federal land administered by the Bureau of Land Management (BLM).¹¹

11. Since 1991, the Bull Run watershed drinking water source is permitted to be unfiltered because it meets the requirements outlined in OAR 333-061-0032(2). These requirements include maintaining a fully protected and controlled watershed. PWB compliance with the criteria in this rule is confirmed in a watershed survey and inspection OHA conducts each year.

12. Water from the Bull Run watershed is treated with chlorine, with sufficient contact time available to achieve at least 99.9 percent inactivation of *Giardia lamblia*, now called *Giardia intestinalis*. Water is also treated with ammonia for disinfection residual maintenance, and caustic soda for pH and corrosion control. PWB is not currently treating for *Cryptosporidium*.¹²

PWB's Request for a Variance

13. On June 7, 2011, OHA received a variance request from PWB under section 1415(a)(1)(B) of the SDWA, (42 USC § 300g-4(a)(1)(B)), and ORS 448.135(2). Specifically, PWB requests a variance from the *Cryptosporidium* treatment requirements in 40 CFR 141.712(b), (c), and (d), and OAR 333-061-0032(3)(c) through (g). Under these rules a water system using unfiltered surface water must provide at least 2-log (99%) *Cryptosporidium* inactivation. Consistent with EPA's multiple barrier approach, a minimum of two disinfectants must also be used. Granting a variance to the *Cryptosporidium* treatment provision thus necessarily requires granting a variance to the requirement to provide two disinfectants as well.

14. PWB asserts that because of the nature of the Bull Run watershed, its raw water source, treatment at the source for *Cryptosporidium* is unnecessary.

15. Specifically, PWB asserts that the following characteristics of the watershed contribute to the low prevalence of *Cryptosporidium* in the Bull Run watershed:

nothing has changed!

- (a) Limited human access to the watershed;
- (b) No grazing of domesticated livestock;
- (c) Low wildlife densities and infection prevalence;
- (d) Good soil infiltration and limited runoff;
- (e) Raw water storage reservoirs upstream of the drinking water intake dilute and attenuate the concentration of pathogens.¹³

¹¹ PWB Variance request, Section 2.

¹² Data Online, <http://170.104.63.9/inventory.php?pwsno=00657>; OHA's PWB file.

¹³ PWB Variance Request, Section 2, Section 4.