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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

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

2. Begin start-up and commissioning.

#### IV. INTERIM MEASURES:

In order to reduce risk of *Cryptosporidium* in the watershed and at the intake and protect public health, the following interim control measures must be achieved until water from the Bull Run watershed meets all surface water and *Cryptosporidium* treatment requirements:

##### A. Watershed Protection:

1. All legal and operational protections for the Bull Run Watershed Management Unit controlled by the City of Portland must be maintained at current levels or strengthened. If protections are loosened by other government entities, PWB must notify DWS.
2. All known trespass points will be monitored on a routine basis, and reasonable efforts must be made to eliminate potential unauthorized entry.
3. Any human sewage within the Bull Run watershed must be contained within portable toilets or permanent sanitary facilities. Where possible portable toilets or sanitary facilities must be kept at least 200 feet from any stream, lake, or reservoir within the watershed, except when being transported for disposal outside the watershed. Any portable toilet that cannot be physically located more than 200 feet from a stream, lake or reservoir must have secondary containment to prevent the release of waste. PWB must ensure that pump-outs and transport of portable toilets are performed with extreme caution to prevent spills and releases.
4. Within 30 days of the effective date of this Agreement, PWB must propose a plan for conducting field inspections and water and scat sampling within the Bull Run watershed. Implementation of the plan will begin upon approval of the plan by DWS. The plan will include:
  - a. Objectives, methodology, rationale for selected approach, sample collection, analytical methods, and quality control specifications.
  - b. Field inspections of high-risk areas in the watershed including the boundary, the fence around the diversion pool, suspected locations of illicit activities or human entry/camping, high risk soil erosion areas, sanitary facilities, or other areas as identified by PWB. Inspection frequencies must be described in the plan and may vary by inspection type, but must occur no less than annually. Observations to be noted during the inspections include the visual presence of debris or water contamination, trash, human wastes, high concentrations of wildlife scat or other unusual signs of wildlife, evidence of fire or landslides, and any evidence of domesticated animal wastes. Any suspicious activity or

potential *Cryptosporidium* source, excluding wildlife, will be fully investigated and re-inspected as necessary.

- c. Semi-annual environmental sampling in priority locations. At a minimum, this must include sampling wildlife scat in high risk areas and sampling water in major tributaries to the Bull Run reservoirs.

#### B. Intake Monitoring for *Cryptosporidium*:

In order for DWS and partner public health officials to adequately assess public health risk, monitoring for *Cryptosporidium* must be conducted by PWB at the PWB intake of the Bull Run watershed as follows:

1. All samples must be analyzed by a laboratory that is accredited to analyze *Cryptosporidium* in water. The laboratory PWB uses to analyze the samples must use the EPA-approved method 1622, 1623, or 1623.1, or another EPA-approved method that applies at the time samples are analyzed. Matrix spike recoveries will be performed at least monthly.
2. Routine monitoring shall consist of sampling at least 100 liters over at least two days of each week, when Bull Run water is being delivered to customers. A week is considered Sunday through Saturday.
3. Increased monitoring: If *Cryptosporidium* is detected in any sample, PWB will sample at least 200 liters per week over at least four days. Increased monitoring will begin no later than the week following the day the positive sample is reported to PWB.
4. Results from at least three weeks of increased monitoring must show no detections of *Cryptosporidium* in order to resume routine monitoring.
5. For any sample in which the presence of *Cryptosporidium* is detected, PWB will attempt to have the sample genotyped.
6. During periods when the Bull Run source is not provided to customers, at least 50 liters must continue to be sampled each week, barring safety or accessibility issues. If the Bull Run source is shut off due to risk of *Cryptosporidium*, PWB will consult with DWS prior to resuming Bull Run operations.
7. Missed samples: If an extreme condition or situation exists that may pose danger to the sample collector or that cannot be avoided and prevents PWB from sampling as prescribed in Sections IV. B2, B3, and B6 of this Agreement, PWB will sample as close to the scheduled week as possible. PWB will submit an explanation for the delayed sample to DWS concurrent with the submittal of the replacement sample to the laboratory.
8. Invalidated samples: If PWB is unable to report a valid analytical result as prescribed in Sections IV. B2, B3, and B6 of this Agreement due to equipment failure, loss of or



damage to the sample, failure to comply with the analytical method requirements (including the quality control requirements), or the failure of an accredited laboratory to analyze the sample, PWB will sample as close to the scheduled week as possible. PWB will submit an explanation for the delayed sample to DWS concurrent with the submittal of the replacement sample to the laboratory.

9. Based on intake results, or if sufficient or timely intake monitoring results are not available for any reason, PWB will take additional reasonable public health protections if requested by DWS.

C. Public Notification and Outreach:

1. In accordance with OAR 333-061-0042(2)(a)(H) and (3)(a), within 24 hours of validated results indicating *Cryptosporidium* is detected at the intake and water from Bull Run was delivered at the time the sample was collected and is still present in the distribution system, PWB must issue a press release to Portland-metro media outlets, post information about the detection on its website, and utilize any appropriate social media used by PWB. PWB's public notice must include the language in Appendix A. If DWS has determined that no additional protective measures are necessary to protect public health, DWS may allow the press release to be issued within one business day of receiving results. If a press release regarding *Cryptosporidium* detections has been issued within the previous seven days, PWB, with DWS approval, may issue periodic press releases that summarize the sampling results from the day of issuance to the previous detection, not to exceed seven day intervals.
2. In accordance with OAR 333-061-0042(3)(b) and (4)(a), as soon as practical, but within 30 days after the effective date of this Agreement, PWB must provide public notice that it does not meet the *Cryptosporidium* treatment requirements in OAR 333-061-0032(3)(e) through (g). The notification may be in the form of a press release. PWB's public notice must include the language in Appendix A. PWB must repeat the notice each quarter until this Agreement is terminated.
3. PWB must continually post on its website, linked from PWB's homepage, information found in Appendix A, or other language provided by DWS. This information must be provided to each of the water suppliers that also provides water from the Bull Run for posting on their websites, if applicable.
4. Annually in PWB's consumer confidence report, PWB must include information found in Appendix A, or other language provided by DWS. This information must be provided to each of the water suppliers that also provide water from the Bull Run. PWB's report may substitute for one of the quarterly press releases required above in C.2.

5. PWB must conduct outreach activities to health care providers of people most vulnerable to *Cryptosporidium* (such as people with AIDS, people with inherited diseases that affect the immune system, and cancer and transplant patients who are taking certain immunosuppressive drugs) within the Bull Run service area, according to a plan approved by DWS.
6. Language in all public notifications must not contain additional language which nullifies the purpose of the notice, and must not be formatted in a way that defeats the purpose of the notice.
7. In any press release or public notice issued in accordance with Section IV.C.1 or IV.C.2, PWB must use the language contained in Appendix A unless DWS provides updated language to be used in lieu of the language in Appendix A.
8. Reports required in Section IV.D1, 4, 6, and 7 shall be posted on PWB's website, linked from PWB's homepage within seven days of providing it to DWS. PWB shall redact any personally identifiable or secure information. PWB shall maintain this information on its website for one year and state that previous reports are available upon request.

D. Reporting to DWS:

1. PWB must maintain a system for documenting the watershed inspections, monitoring, and investigation results in accordance with the plan approved by DWS under Section IV.A4. All results must be reported to DWS on an annual basis in a Bull Run Watershed Report that also includes maps of inspection and sampling locations. DWS will work with PWB to identify any actions necessary to address outstanding issues.
2. PWB must notify DWS within 24 hours of any laboratory results from the intake that include any *Cryptosporidium* detections.
3. No later than 10 days after the end of the first month following the month sample results are received, PWB must submit to DWS any *Cryptosporidium* detections from scat or water from a location other than the intake.
4. PWB must submit the following information to DWS no later than 10 days after the end of the first month following the month when the intake samples are collected: sample collection date; sample type (field or matrix spike); sample volume filtered in liters; analysis method used; the number of *Cryptosporidium* oocysts counted; the number of *Giardia* cysts if analyzed, the compliance turbidity and raw coliform counts; and a summary of this information for the reporting month in spreadsheet format.
5. PWB must timely notify DWS of any circumstances that may impact the risk of the public's exposure to *Cryptosporidium*, including but not limited to unusually high turbidity or fecal coliform counts, and significant watershed or weather events.

6. PWB must provide DWS a status report every quarter until compliance is achieved. This report is intended to be a brief summary and must be submitted no later than 10 days after the end of the first month following the end of each calendar quarter. The following information must be included:
  - a. Intake monitoring results and genotyping results received the previous quarter;
  - b. Watershed activities conducted the previous quarter including inspections (security, sanitary facilities, landslides, diversion pool fence), significant events or changes, and tributary or scat monitoring results received the previous quarter; and
  - c. Status of progress towards construction of filtration facility and any milestones specific in Section III of this Agreement.
7. Annually, PWB must report to DWS a summary of the outreach activities completed in accordance with the plan described in Section IV.C5 of this Agreement. Any proposed changes to this plan may be included in this report and must be approved by DWS.

E. Access to Watershed & Information:

PWB must allow DWS or its designee, upon request, access to the watershed, laboratory results and pertinent documents, in order to assess compliance with this Agreement or for special studies.

F. Public Health Surveillance Activities:

1. On a continual basis, regardless of *Cryptosporidium* oocyst detects, DWS will coordinate with Oregon Health Authority-Acute and Communicable Disease Program (ACDP) regarding cryptosporidiosis cases. If sporadic human cases in Multnomah County reach a threshold of the maximum expected value based on a 5 year average, ACDP will consult with DWS, PWB, and local health agencies. If case counts remain elevated for more than two weeks an outbreak investigation will be opened; an outbreak investigation may also be opened earlier based on other compelling factors. If drinking water is a suspected cause, DWS shall immediately consult with the team of public health experts identified in Section IV.G.2.
2. PWB will participate in any cryptosporidiosis investigation or surveillance activities associated with the consumption of water supplied by PWB from the Bull Run watershed as requested by Multnomah County or the Oregon Health Authority.



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.

- 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.

## **VI. NOTICE OF NONCOMPLIANCE**

- A. Prior to termination of the Agreement if DWS believes that PWB is in violation of the Agreement, DWS shall notify PWB in writing of the alleged violation and give PWB a deadline for submitting a plan of correction along with timelines for coming into compliance. If the plan of correction is acceptable, DWS shall inform PWB of that fact in writing. If the plan of correction is not acceptable to DWS, DWS shall notify PWB in writing and require that the plan of correction be modified and resubmitted no later than 10 working days from the date the letter of non-acceptance was mailed to PWB.
- B. Nothing in this section is intended to limit DWS's authority as set out in the Reservation of Rights.

## **VII. RESERVATION OF RIGHTS**

- A. This Agreement does not constitute a waiver, suspension or modification of the requirements of the Oregon Drinking Water Quality Act; ORS 448.115 to 448.290 and administrative rules OAR 333-061-0005 to 333-061-0272, which remain in full force and effect.
- B. This Agreement does not relieve PWB of any responsibilities or liabilities established pursuant to any applicable federal, state, or local law or regulation.
- C. Nothing in this Agreement is intended to limit DWS's authority to take any action permitted by law in order to protect the public's health. In the event that *Cryptosporidium* detections increase or other circumstances presenting risks to public health occur, DWS reserves all authorities to require PWB to implement additional interim public health protection measures on an expedited timeline.
- D. DWS reserves the right to pursue enforcement actions against PWB for failure to meet the requirements contained within this Agreement, which may include assessment of civil penalties or other legal remedies pursuant to ORS 431A.010, 431.155, 448.255 and 448.280. The City of Portland reserves all rights to defend such actions, except as provided in Section VIII of this Agreement.

### 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 18<sup>th</sup> day of December, 2017.



Michael Stuhr, PE  
Administrator  
Portland Water Bureau

Dated this 18<sup>th</sup> 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.”