



Portland Utility Board

LT2 Treatment Update

Portland Water Bureau
September 5, 2017



Overview

- Timeline
- Requirements due by Oct 11, 2017
- Schedule considerations
- Interim measures
- Sampling schedule
- Questions

Timeline

September 5	PUB meeting
September – November	Other outreach opportunities
October 10	PUB meeting
October 11	Proposal due to OHA
October 11 – November 22	Negotiation period
November 22	Compliance agreement and revocation of the variance
	Annual report to City Council

To remain in compliance, the Portland Water Bureau must submit the following to OHA on or before October 11, 2017:

- A description of which ***Cryptosporidium* treatment technology** the Portland Water Bureau intends to pursue for compliance with the 2-log *Cryptosporidium* treatment requirement.
- A detailed **proposed schedule** of when the treatment will be in place, with a schedule that indicates treatment will be in place as soon as practically possible. Specific dates must be included for plan submittal for review and approval, and must identify when water that fully meets all requirements will be served to the public.
- **Measures** the Portland Water Bureau intends to take to reduce the risk of the public's exposure to *Cryptosporidium* until such a time as treatment is in place, that are at least as protective as the applicable conditions in the variance order.
- A proposed **sampling schedule** for *Cryptosporidium* at the intake until adequate treatment is in place.

Cryptosporidium treatment technology: Filtration

A proposed schedule will include the following elements

- Planning
- Pilot study and planning complete
- Design start
- Submit plans and specs to OHA for review and approval
- Design completed
- Begin construction
- Start-up and commissioning begins
- Compliance achieved
- Complete construction
- Operational Workup

Considerations in Schedule Development (from previous Corrosion Control project)

1. Planning

2. Land Use & Permitting

3. Public Interactions

4. Location

5. Geotechnical Evaluations

6. Operational Considerations

7. Procurement Processes

8. Market Conditions

9. Equipment & Labor

Interim Measures

PWB plans to propose interim control measures to reduce the risk of the public's exposure to *Cryptosporidium* until such a time as treatment is in place, that are at least as protective as the applicable conditions in the 2012 Variance Order.

These include:

- Watershed legal and operational protections
- Environmental sampling
 - Annual Watershed Inspection and Monitoring Plan
 - Water and scat monitoring
- Reporting and notification
- Allowing access to watershed by OHA

DRAFT PWB Proposed Interim Control Measures for LT2 Source Water Treatment Compliance (1)

Subject	OHA Variance Condition - 2012	PWB Proposed Interim Control Measures
<u>Watershed Protection</u>		
Legal and operational protections	Ensure that all legal and operational protections for the Unit are maintained at current levels or strengthened.	Keep
Trespass	Monitor known trespass points on a routine basis, and make all reasonable efforts to eliminate potential unauthorized entry.	Keep
Human Sewage	Ensure that any human sewage within the Bull Run watershed is contained within portable toilets or permanent sanitary facilities. Where possible portable toilets or sanitary facilities are to 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.	Keep

DRAFT PWB Proposed Interim Control Measures for LT2 Source Water Treatment Compliance (2)

Subject	OHA Variance Condition - 2012	PWB Proposed Interim Control Measures
---------	-------------------------------	---------------------------------------

Watershed Protection

Watershed Inspections and Monitoring Plan	<p>Propose a plan to OHA by June 1, 2012, for conducting field inspections and water and scat sampling within the Bull Run watershed. OHA will approve a final plan by August 1, 2012, and implementation must be initiated in the Fall of 2012. The plan must include but is not limited to:</p> <p>Objectives, methodology, rationale for selected approach, sample collection, analytical methods, and quality control specifications.</p> <p>Semi-annual field inspections of high-risk areas, including the boundary of the watershed, the fence around the diversion pool, tributaries where wildlife is known to exist in higher concentrations, any suspected locations of illicit activities or human entry/camping, high risk soil erosion areas, or other areas as identified by PWB. One of these inspection events must occur during dry weather (peak hiking season and peak riparian grazing), and one must occur in the wet weather season (during a period of time without snow on the ground on the inspected area). Observations to be noted during the inspections include the visual presence of debris or water contamination, trash, human wastes, high concentrations of wildlife scat, evidence of fire or landslides, and any evidence of domesticated animal wastes. Any suspicious activity or potential Cryptosporidium source, excluding wildlife, be fully investigated and re-inspected as necessary.</p> <p>Semi-annual environmental sampling in priority locations identified during the field inspections. At a minimum, this must include sampling wildlife scat in high risk areas, and sampling water in tributaries previously identified as high risk due to erosion potential, wildlife habitat, or evidence of storm impacts. The sites may be based on previous monitoring results, a combination of continuous stations and/or those selected probabilistically.</p>	<p>Keep, with some modifications:</p> <p>A revised watershed plan to be proposed along with the interim control measures document by August 11th. Similar to current plan with some minor modifications. Implementation of new plan to start on October 1, 2017 (WY 2018).</p> <p>Inspections will include:</p> <ul style="list-style-type: none"> • Security • Diversion Pool • Erosion • Sanitary <p>Sampling will include:</p> <ul style="list-style-type: none"> • Tributaries • Wildlife scat <p>Omit category of "Wildlife Inspection Areas" and absorb general wildlife observations into scat monitoring and diversion pool inspections.</p> <p>Remove frequency of semi-annual and wet/dry seasons, "No snow on the ground" and state that frequencies and seasonality will vary by inspection type but at least be annual.</p>
--	---	---

DRAFT PWB Proposed Interim Control Measures for LT2 Source Water Treatment Compliance (3)

Subject	OHA Variance Condition - 2012	PWB Proposed Interim Control Measures
<u>Reporting and Notification</u>		
Annual Report	Maintain a system for documenting the watershed inspections, monitoring, and investigation results in accordance with the plan approved by OHA under paragraph 1(a)(D) of this Order. All results must be reported to OHA on an annual basis in a Bull Run Watershed Report that also includes maps of inspection and sampling locations. OHA will work with PWB to identify any actions necessary to address outstanding issues.	Keep
24-hour notification to OHA	Notify OHA, Environmental Public Health, Drinking Water Program within 24 hours of any laboratory results from either the watershed or the intake that include any Cryptosporidium detections.	Modify. Omit scat samples for 24-hour reporting, limit to water samples.
Press release	At a minimum, send a press release to Portland-metro media outlets and post information on its website if Cryptosporidium is detected at the intake.	Keep
Website	Post information on its website, including this Order, explaining that it does not treat for Cryptosporidium because it is operating under a variance issued in accordance with federal and state law.	Keep. Language will state we do not treat for Crypto but have a compliance agreement to treat by 20XX.
Monthly intake data report	Submit the following information to OHA, Environmental Public Health, Drinking Water Program 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 oocysts counted, and a summary of this information for the reporting month and the previous eleven months.	Keep
Timely notification of circumstances	Timely notify OHA, Environmental Public Health, Drinking Water Program of any circumstances that may impact any of the conditions in this Order, including but not limited to land management decisions, environmental events, or structural changes within or on land immediately adjacent (lands abutting the watershed boundary or within a 3-mile buffer from the boundary) to the Unit boundaries. Keep, but edit to say we will notify them of these circumstances.	Keep. ...any circumstances that may impact the risk of the public's exposure to Cryptosporidium, including but not limited to...

DRAFT PWB Proposed Interim Control Measures for LT2 Source Water Treatment Compliance (4)

Subject	OHA Variance Condition - 2012	PWB Proposed Interim Control Measures
<u>Access to Watershed; Information</u>		
OHA Access	PWB must allow OHA or its designee, upon request, access to the watershed, laboratory results and pertinent documents, in order to assess compliance with this Order or for special studies.	Keep

Draft Intake Monitoring Schedule

- Use EPA Method 1623, 1623.1 or equivalent, accredited lab
- Routine Monitoring: at least 100 liters per week over 2 days
- Increased Monitoring: if Crypto is detected, at least 200 liters per week over four days
- Continue Increased Monitoring until no detections for a minimum of two weeks w/ no detections
- Provisions for missed or invalidated samples
 - If missed due to extreme situation: sample as soon as practical
 - If invalidated: collect replacement sample as soon as practical

Questions?