



November 18, 2020

DeEtta Fosbury, RG
GSI Water Solutions, Inc.
55 SW Yamhill Street, Suite 300
Portland, OR 97204

Re: **Horizontal Collector Well (PR#146-2020)**
Salem Public Works (PWS ID#00731)
Site Plan Approval

Dear DeEtta:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for the new horizontal collector well for Salem Public Works. On October 5, 2020, our office received a set of plans and specifications. A plan review fee of \$3,300 was received on October 8, 2020. The land use compatibility statement was received on November 11, 2020.

The project includes constructing a new horizontal collector well on Geren Island. The well is meant to increase Salem Public Works' resiliency and water supply capacity. The distance from the horizontal collector well to the North Santiam River is approximately 250 feet (150 feet from laterals depending on orientation). The water will be treated by the water system's current surface water treatment facility. DWS will consider the source to be self-declared groundwater under the direct influence of surface water (GWUDI) unless we hear otherwise prior to final approval.

A regional geologist in our program reviewed the proposed well construction. He noted the following:

- The estimated depth of the casing seal is 18 feet minimum outside of the caisson structure or as per Special Constructed Standard issued by Oregon Water Resource Department (OWRD).
- The aquifer nature is expected to be unconfined.
- The estimated depth to a water-bearing zone is about 5 feet, based on recently constructed monitoring wells located within 100 feet of the proposed well location.
- The aquifer is composed of coarse grain gravels and cobbles. If the distance between any part of a lateral and the North Santiam River is less than 200 feet, GWUDI would be a concern and would prevent future use of this source as groundwater without appropriate surface water treatment.

The project is granted site plan approval. Once construction of the horizontal collector well is complete, please submit:

1. The well driller's report (well log) from OWRD.
2. Well pumping test information including static water level, pumping rate, drawdown and rate of recovery.
3. Raw (Untreated) Water Quality Data including IOC, SOC, VOC and radionuclides. These are to be taken from the new well's raw water sample tap.

Note that all items in contact with potable water must be NSF 61 or equivalent.

The above items should reference Plan Review #146-2020 and can be emailed to me at Carrie.L.Gentry@state.or.us or mailed to:

Attn: Carrie Gentry
OHA-Oregon Drinking Water Program
PO Box 14450
Portland, OR 97293-0450

Note that adding a new source may require the water system to conduct two 6-month rounds of lead and copper sampling at the increased number of samples sites (60), or otherwise demonstrate that the new source has no effect on the water system's current corrosion control results.

If you have any questions, please feel free to call me at (971) 673-0191.

Sincerely,



Carrie Gentry, PE
Regional Engineer
Drinking Water Services

ec: Chantal Wikstrom, OHA/DWS
Dwayne Barnes, Salem Public Works
John Kennedy, PE, City of Salem
Chris Johnson, PE, Carollo Engineers, Inc.