



October 3, 2023

Jodi Hanson
Urban Patterns
Via email: jodi@urbanpatterns.com

**Re: New System and Well (PR#117-2023)
Grange Hill Winery (PWS ID# Not Yet Assigned)
Site Plan and Conditional Approval**

Dear Jodi:

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for the new system and well for Grange Hill Winery. On August 31, 2023, our office received a site plan, well log, sample results, list of components used in the system, land use approval document and a plan review fee of \$825.

The project includes an existing well (well ID YAMH 53052, drilled in 2002 to a depth of 696 feet, to be used for a winery tasting room. The water system does not have the required 100' radius of control around the well. Also included in the system are a cistern, five 5,000-gallon Norwesco tanks, two 119-gallon WellXtroll WX-350 pressure tanks, a metal fire suppression tank as well as a water softener and UV light.

Under OAR 333-061-0060(1)(b), submittals must be prepared by a Professional Engineer registered in Oregon, unless exempted by DWS. Note that by utilizing this exemption, the water system takes full responsibility for the project.

A regional geologist reviewed the below ground well log construction details and noted the following:

- The below-ground construction meets current construction standards.
- The casing and casing seal extend to a depth of 118 feet, 7 feet into low permeability basalt that overlies the aquifer. A narrow diameter perforated liner, placed in the well,

helps keep the borehole open below the casing. Water can enter the well through the uncased portion of the well between 188 and 696 feet below ground.

- The well draws water from a deep confined layered basalt aquifer. The first water-bearing zone occurs at a depth of 378 feet and is overlain by 267 feet of low permeability basalt that acts as a confining layer. Water within the aquifer is under pressure, rising 63 feet above the first water-bearing zone to a final static water-level depth of 315 feet below ground.
- Results from a sensitivity analysis suggest that the well construction and the aquifer do not contribute to the overall sensitivity of this water source to local land use practices.

The plans are approved with the following conditions:

Well:

- Since the water system does not have the required 100-foot radius of control, a perpetual restrictive easement must be obtained by the water supplier for all land (with the exception of public rights-of-way) within that radius. The easement must be recorded with the county in which the well is located and with the recorded deed to the property. A certified true copy must be filed with the Authority. If an easement cannot be obtained by the landowners within the radius, a waiver from construction standards may be possible.
- A raw water sample tap is required close to the well head, prior to any storage or treatment.
- Piping arrangements must include provisions for pumping the total flow from the well to waste.
- A casing vent must be provided, and the return bend must be fitted with a screen.

Cistern:

- More details must be provided about the cistern, including volume, material used in its construction and piping (including inlet/outlet and drain).

Norwesco Tanks:

- The tanks appear to be inside a building, which may be considered an appropriate vandal deterrence. Information must be provided that demonstrates that access to the building is limited (i.e. the building is locked).
- More detail is needed about the piping of the tanks, including whether there is an overflow pipe and drain for each tank.
- A silt stop must be provided at the outlet of each tank.

Metal Tank (Fire Suppression Tank)

Based on the information submitted, this tank appears to be part of the potable water system. If that is the case, then the following items apply:

- The volume of the tank must be provided.
- Details on the piping for the tank must be provided, including:
 - Are there separate inlet and outlet pipes?
 - Is there an overflow pipe?
 - Is there a drain pipe?
 - If there is an overflow and a drain, do the two pipes connect prior to discharging?
Is there a flap valve over the end of the pipe?
- The roof access hatch must have curbing around the opening and a lockable watertight cover that overlaps the curbing.
- A silt stop must be provided at the outlet pipe.

Until we receive verification that the conditions have been met and final approval has been issued, the facility is not approved for use. Documentation demonstrating how the above conditions were met should reference Plan Review #117-2023 and can be emailed to me at Carrie.L.Gentry@oha.oregon.gov.

In addition to the above conditions, please note that water rights may be required for your water system, depending on how much water is utilized out of each well per day. Oregon's Water Resources Department regulates water rights and can be contacted at (503) 986-0900. Copies of water right permits or exemptions should be provided to DWS.

If you have any questions, please feel free to call me at (971) 201-9794.

Sincerely,



Carrie Gentry, PE
Regional Engineer
Drinking Water Services

cc: Sarah Schwab, REHS, Oregon Department of Agriculture
Tommy Laird, Well Construction Program Coordinator, Oregon Water Resource
Department