



November 16, 2023

Tim Paradis
Paradis Vineyards
Via email: eastsidevineyards@gmail.com

**Re: New System and Well (PR#132-2023)
Paradis Vineyards (PWS ID#95719)
Conditional Approval**

Dear Tim:

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 Paradis Vineyards. On October 2, 2023, our office received a narrative of the system and a plan review fee of \$825.

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

The project includes a well (well ID MARI 5800) drilled to a depth of 85 feet in 1987, intended to serve a winery and tasting room. The system also has an 81-gallon Flexcon pressure tank installed. There appear to be grape vines and vehicle storage/road within 100' of the well, and cattle are occasionally fenced in a nearby field. It is unclear whether the cattle are held within 100' of the well. The well is within 500 feet of a surface water source (Abiqua Creek).

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

- The well meets current below-ground construction standards.
- The well is cased to a depth of 38.5 feet. The casing is sealed to a depth of 31 feet and extends 22 feet into a 38-foot-thick claystone layer of low permeability. Water can enter the well through the uncased portion of the borehole below a depth of 38.5 feet.

- The well draws water from a confined permeable sandstone aquifer. The water-bearing zone is reported to be 67 feet below ground level and is directly overlain by 20 feet of impermeable sandstone and 38 feet of claystone. The impermeable sandstone and claystone together act as a confining layer. Water within the aquifer is under pressure, rising 30 feet above the water-bearing zone to a depth of 37 feet below ground level.
- Results from a sensitivity analysis indicate that the well construction has a low sensitivity to local land use practices and the aquifer is not highly sensitive to local land use practices.
- Abiqua Creek is within 315 feet of the well. However, the water body is outside the comparable Groundwater Under the Direct Influence of Surface Water (GWUDI) setback distances for a water-bearing zone composed of permeable sandstone (75 feet). Therefore, the well is not considered to be susceptible to GWUDI.

The plans are approved with the following conditions:

- Please confirm that the cows are not allowed within 100' of the well.
- The vehicle parking/road within 100' of the well is considered a sanitary hazard, but since the well is drilled in a confined aquifer OAR 333-061-0050(2)(a)(D) applies. In order to approve this setback issue, information must be submitted that demonstrates how the well is "...protected against contamination from surface runoff or hazardous liquids which may be spilled on the roadway and is protected from unauthorized access". Generally, a well head that is raised above the surrounding grade plus grading that slopes away from the well head would meet this requirement. Photos and a description of the photos can be submitted to show how the well meets this requirement.
- Any chemical use on the vineyards within 100' of the well would be considered a sanitary hazard. Because the well is properly constructed in a confined aquifer, an application for a waiver from construction standards must be submitted. The link to the waiver form will be sent with the email that accompanies this letter.
- It was not possible to determine whether the well is located in a flood zone. If the well is in a flood zone, then well head must be at least 2' above the 100-year flood level. Please submit information that shows the well is outside of the 100-year flood level.
- Piping arrangements must include provisions for pumping the total flow of the well to waste. Pump-to-waste piping is typically installed for this, however, some systems plan to pump the flow to waste through the sample tap.
- A casing vent must be provided and the return bend must be fitted with a screen.
- One sample must be taken from the well head's raw water sample tap and analyzed for coliform bacteria. If the water system has a raw water coliform sample result for this

well, the result can be submitted in lieu of taking a new sample. Please note that this is a raw water sample and not a distribution system sample.

- Bypass piping around the pressure tank must be provided to permit operation of the system while the tank is being maintained or repaired (schematic or photo showing how this requirement is met would be acceptable).

Until we receive verification that the conditions have been met and final approval has been issued, the facility is not approved for use. Upon completion of the project, the engineer must verify in writing that construction was completed according to the submitted plans. If substantial changes are made, a set of as-built drawings must be submitted. Documentation demonstrating how the above conditions were met should reference Plan Review #132-2023 and can be emailed to me at Carrie.L.Gentry@oha.oregon.gov.

In addition to the above conditions, I have the following comment:

- 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 (OWRD) 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, OWRD