PUBLIC HEALTH DIVISION
Drinking Water Services
Tina Kotek, Governor

Oregon Health Authority

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February 28, 2024

Ryan Thornton
ryan@stollerwinegroup.com
PO Box 189
Dayton, OR 97114

Letter sent via e-mail only.

Re: **Chehalem Valley Winery Tasting Room (PWS #95731)**
2023 Well #1 (L151862, YAMH59420) and 5,300-gallon potable tank
Site Plan Evaluation (PR #28-2024)

Dear Mr. Thornton:

Thank you for your plans for the new well, 5,300-gallon potable water storage tank, and related facilities for the new water system (Chehalem Valley Winery Tasting Room – PWS ID# 95731). The well log was received on February 13, 2024, plans were received February 15, 2024, and a geotechnical report was received February 21, 2024. A payment in the amount of $825 was also received on February 20, 2024.

This project has been assigned plan review #28-2024 and can be tracked online at:
https://yourwater.oregon.gov/planreview.php?pwsno=95731

As a new transient non-community water system, this system has been assigned Public Water System (PWS) ID# 95731 as viewable online at:
https://yourwater.oregon.gov/inventory.php?pwsno=95731
and is subject to an annual $150 water system fee due July 1st each year (an invoice will be mailed). All new systems must undergo a Capacity Assessment, which will be completed concurrently with this plan review process.

The well was previously drilled 12/12/2023, however, construction on the other facilities has not been completed as shown in the enclosed water system site plans, which also shows a 36,000-gallon water storage tank for fire suppression. **The site plans were evaluated, however, in order to complete our review, additional drawings and specifications will need to be submitted for the treatment system, potable water storage tank, and wellhead/wellhouse, which as I understand it, are still being developed**.

Through my initial evaluation of the submitted information, I have identified the following items which will ultimately be required for Final Approval of the new facilities. Please refer to our construction standards under OAR 333-061-0050(1) - general requirements, -0050(2)(a) - wells, -0050(6)(b) - pressure tanks, -0050(8) - distribution piping, and -0050(10) - disinfection of new facilities:

OAR 333-061-0050(1) – General:

1. **Materials** in contact with well water are designed for potable water service and **meet NSF Standard 61**.

OAR 333-061-0050(2)(a) – Wells:

2. **A land use compatibility statement (LUCS) or building permit** is needed. Please refer to the land use form we have on our website at the links below and seek approval from Yamhill County Planning and Development: https://www.yamhillcounty.gov/283/Planning-Development

> *Land Use Statement*
>
> Certain plan review approvals for drinking water projects affect land use with city and county comprehensive plans and land use regulations.

   - Land Use Form PDF or MSWord

3. **Results from testing the well's raw water** (prior to any treatment) need to be submitted and need to include at a minimum, **nitrate, arsenic, and coliform bacteria**.

4. **Public or private roadways may be allowed within 100 feet of a confined well, provided 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;

5. **The following sanitary hazards are not allowed within 100 feet of a well** which serves a public water system unless waived by the Authority: any existing or proposed pit privy, subsurface sewage disposal drain field; cesspool; solid waste disposal site; pressure sewer line; buried fuel storage tank; animal yard, feedlot or animal waste storage; untreated storm water or gray water disposal; chemical (including solvents, pesticides and fertilizers) storage, usage or application; fuel transfer or storage; mineral resource extraction, vehicle or machinery maintenance or long term storage; junk/auto/scrap yard; cemetery; unapproved well; well that

has not been properly abandoned or of unknown or suspect construction; source of pathogenic organisms or any other similar public health hazards. No gravity sewer line or septic tank shall be permitted within 50 feet of a well which serves a public water system. Above-ground fuel storage tanks provided for emergency water pumping equipment may be exempted from this requirement by the Authority provided that a secondary containment system is in place that will accommodate 110 percent of the fuel tank storage.

6. Where submersible pumps are installed, the top of the casing shall be provided with a **watertight sanitary seal**.

7. **A casing vent** shall be provided and shall be fitted with a screened return bend.

8. A port, removable plug, or other provisions are made that shall **allow for measuring the depth to water surface in the well** under pumping and static conditions.

9. A **raw water sampling tap** shall be provided on the pump discharge line, prior to treatment and as close to the wellhead as possible.

10. Piping arrangements shall include provisions for **pumping the total flow from the well to waste**.

11. A **reinforced concrete slab** shall be poured around the well casing at ground surface. The slab shall be sloped to drain away from the casing. The top of the well **casing shall extend at least 12 inches above the concrete slab**. An example would be a 4" thick reinforced concrete slab extending at least 3-ft from the well casing in all directions and sloped away from the well casing.

12. The ground surface around the well slab shall be **graded so that drainage is away from the well**.

13. Provisions shall be made for protecting pump controls and other above-ground appurtenances at the well head. Where a **wellhouse** is installed for this purpose, it shall meet applicable building codes and shall be insulated, heated and provided with lights. Where the wellhouse consists of a **small removable box-like structure** (sometimes called a "dog house") the requirement for lights may be waived by the Authority. The wellhouse shall be constructed so that the well pump can be removed.

14. If water rights are needed, documentation (e-mail correspondence, letter, etc.) showing what water rights are needed. Joel Plahn, Water Master with Oregon Water Resources Department, has been cc'd on this letter and is aware of the new well. Please reach out to Joel for requirements pertaining to water rights.

District-22 NW Region	Joel Plahn joel.m.plahn@water.oregon.gov	725 Summer Street NE, Suite A Salem, OR 97301	503-508-2394	503-986-0904

OAR 333-061-0050(6)(a) – Finished Water Storage:

15. Distribution reservoirs and treatment plant storage facilities for finished water shall be constructed to meet the following requirements as applicable:
    A. They shall be constructed of concrete, steel, wood, or other durable material capable of withstanding external and internal forces which may act upon the structure;
    B. Ground-level reservoirs hall be constructed on undisturbed soil, bedrock or other stable foundation material capable of supporting the structure when full;
    C. Steel reservoirs, standpipes and elevated tanks shall be constructed in conformance with the AWWA Standards D100 and D103;
    D. Concrete reservoirs (not applicable per submitted plans)
    E. Wooden reservoirs (not applicable per submitted plans)
    F. Redwood tanks (not applicable per submitted plans)
    G. Ground-level reservoirs located partially below ground (not applicable per submitted plans)
    H. The finished water storage capacity shall be increased to accommodate fire flows when fire hydrants are provided (**consider cross connection control measures to keep potable water separated from fire suppression systems per local plumbing code**);
    I. Finished water storage facilities shall have **watertight roofs**;
    J. An **access manhole** shall be provided to permit entry to the interior for cleaning and maintenance. When the access manhole is on the roof of the reservoir there shall be a curbing around the opening and a lockable watertight cover that overlaps the curbing;
    K. **Internal ladders** of durable material, shall be provided where the only access manhole is located on the roof (may not be not required for the 5,300-gallon potable water tank).
    L. **Screened vents** shall be provided above the highest water level to permit circulation of air above the water in finished water storage facilities;

M. A **drain** shall be provided at the lowest point in the bottom of the storage facility and an overflow of sufficient diameter to handle the maximum flow into the tank shall be provided at or near the top of the sidewall. The outlet ends of the drain and overflow shall be fitted with angle-flap valves or equivalent protection and shall discharge to a watercourse or storm drain capable of accommodating the flow with a vertical separation between the bottom of the pipe and top of the receiving body or structure;
N. A **silt stop** shall be provided at the outlet pipe;
O. Where a single inlet/outlet pipe is installed and the reservoir floats on the system, provisions shall be made to ensure an **adequate exchange of water** and to prevent degradation of the water quality and to assure the disinfection levels required in subparagraph (5)(c)(D) of this rule;
P. A **fence or other method of vandal deterrence** shall be provided around distribution reservoirs;
Q. When **interior surfaces** of finished water storage tanks are provided with a protective coating, the coating **shall meet the requirements of NSF Standard 61**: Drinking Water System Components - Health Effects or equivalent.
R. Reservoirs and clearwells used for disinfection contact time to treat surface water – not applicable.
S. Reservoirs and clearwells that are to be used for disinfection contact time – not applicable.

OAR 333-061-0050(6)(b) – Pressure Tanks:

16. **Make and model of the pressure tank is identified and meets the following requirements**:
    a. is installed above normal ground surface;
    b. has bypass piping around the pressure tank to permit operation of the system while the tank is being maintained or repaired;
    c. has an access manhole and water site-glass if the tank holds more than 1,000 gallons of water;
    d. is provided with a drain, a pressure gauge, an air blow-off valve, means for adding air and pressure switches for controlling the operation of the pump(s); and
    e. is constructed of steel or an alternative material that is NSF 61 certified for potable water use and is designed for pressure at least 50 percent greater than the maximum system pressure anticipated.

OAR 333-061-0050(8) – Waterlines:

17. Where the system facilities and the premises being served are both on the same parcel of property, requirements relating to pipe materials and pipe installation shall comply with the local and/or State **Plumbing Code**.

18. **Where waterlines are located within public rights of way, construction shall conform to the following requirements under *OAR 333-061-0050(8) – Waterlines*.**

    a) **Buried waterlines made of nonconductive water pipe** (plastic or other material) that are not encased in conductive pipe or casing must have an electrically conductive **tracer wire** or other approved conductor for locating the pipe when the pipeline is underground. The wire shall be No. 18 AWG (minimum) solid copper with blue colored insulation. Ends of wire shall be accessible in water meter boxes, valve boxes or casings, or outside the foundation of buildings where the pipeline enters the building. The distance between tracer lead access locations shall not be more than 1,000 feet. Joints or splices in wire shall be waterproof.

    b) Distribution piping shall be designed and installed so that the **pressure measured at the furthest point of water use shall not be reduced below 20 psi**.

    c) Distribution piping shall be carefully bedded and fully supported in material free from rocks and shall be provided with a **cover of at least 30 inches**. Select backfill material shall be tamped in layers around and over the pipe to support and protect it. Large rocks or boulders shall not be used as backfill over the pipe.

    d) Provision shall be made at all bends, tees, plugs, and hydrants to **prevent movement of the pipe** or fitting (restrained joints or thrust blocks for example).

    e) Wherever possible, **dead ends shall be minimized** by looping. Where dead ends are installed, or low points exist, **blow-offs** of adequate size shall be provided for flushing.

    f) **Air-relief valves** shall be installed at high points where air can accumulate. The breather tube on air-relief valves shall be extended above ground surface and provided with a screened, downward facing elbow.

OAR 333-061-0050(10) – Disinfection of New Facilities:

19. New facilities are disinfected, flushed, and tested for the absence of coliform bacteria according to OAR 333-061-0050(10) online at: https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DRINKINGWATER/PLANREVIEW/Documents/OAR-333-061-0050.pdf
Procedures for disinfection (shock chlorination) of facilities are online at: https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DRINKINGWATER/OPERATIONS/Pages/shockchlorination.aspx

OAR 333-061-0061 – Capacity Requirements for Public Water Systems

20. As a new Transient Non-Community water system, there are certain capacity requirements that need to be met and assessed. As part of this review, a new system Capacity Assessment will be completed, which includes a site visit once construction is complete. Please refer to the Capacity Requirements enclosed with this letter for more information.
21. Refer to the "Planning documents" enclosure for planning documents needed for public water systems, which include:
    a. A coliform sampling plan (quarterly coliform sampling and annual nitrate sampling will be needed on an on-going basis), and
    b. An operation and maintenance manual.

A waiver from construction standards may be needed for the potable tank internal ladder (sometimes infeasible with polyethylene tanks) and the proximity of the gravity sewer and stormwater collection system if they cannot be relocated (both are located within 100-ft of the well as shown on the enclosed water system site plans). A waiver form is online at the links below and I can assist with completing the request if desired:

> As provided under OAR 333-061-0055 (end of page 26), Drinking Water Services may grant waivers from construction standards under some conditions. The construction standards waiver application is available as a
>
> fillable MS Word: https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DRINKINGWATER/PLANREVIEW/Documents/WAIVER.doc
>
> PDF document: https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DRINKINGWATER/PLANREVIEW/Documents/WAIVER.pdf

Please ensure that these conditions are met (or a waiver is sought) and shown in subsequent submittals. Thank you for your patience in this plan review process and if you have any questions, please feel free to call me at 971-200-0288 or e-mail me at evan.e.hofeld@oha.oregon.gov.

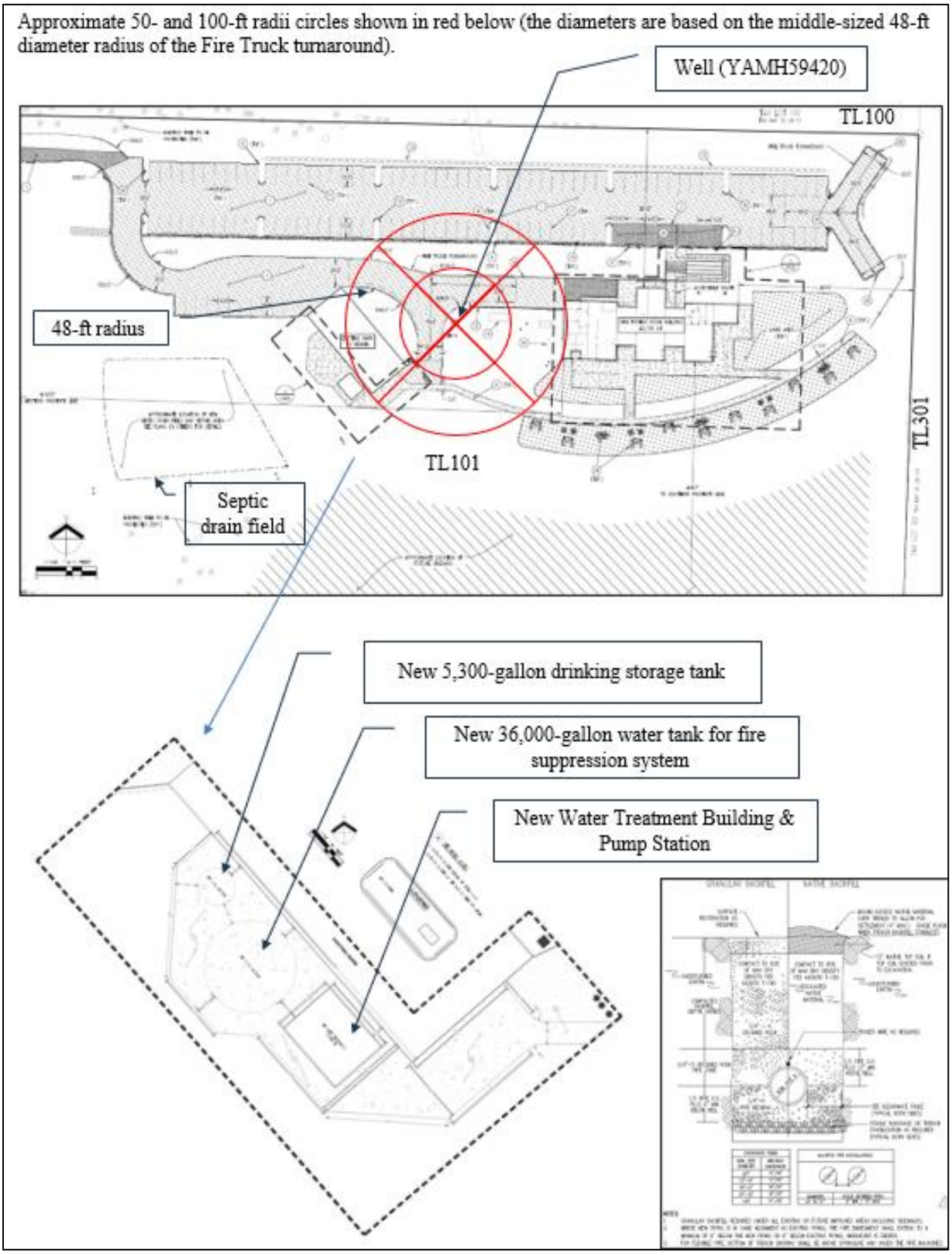
Sincerely,

Evan Hofeld, PE
Oregon Health Authority – Drinking Water Services

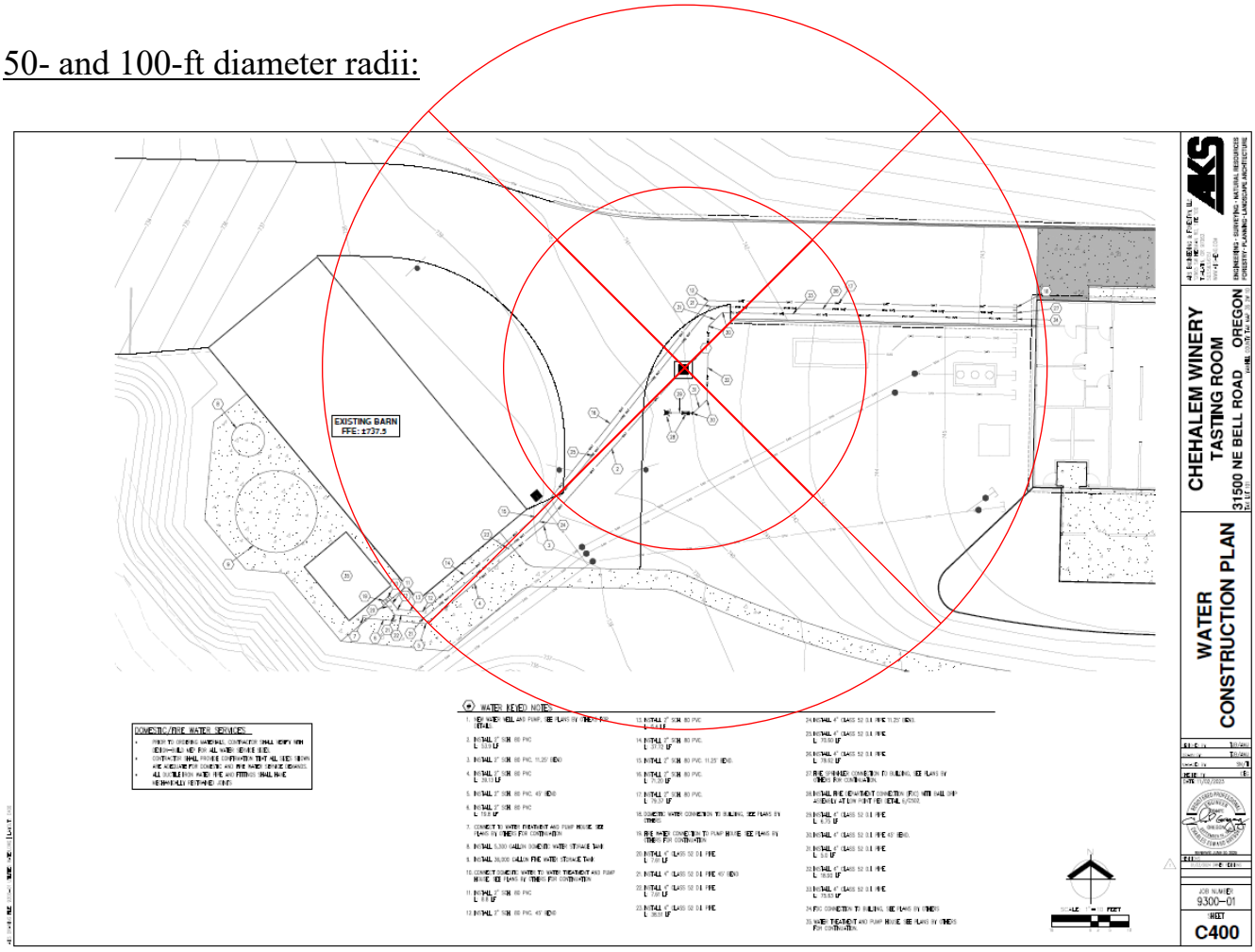
cc: Tommy Laird, OWRD – Well Construction Program Coordinator, Tommy.K.LAIRD@water.oregon.gov
Joel Plahn, OWRD – Water Master, joel.m.plahn@water.oregon.gov
Melissa Wong - Yamhill County Public Health, REHS, wongm@co.yamhill.or.us
Sarah Schwab - Oregon Dept of Agriculture, NRS4 Sarah.SCHWAB@oda.oregon.gov
drinkingwater@oda.oregon.gov

Encl. *Water system site plans*
New water system capacity requirements
Planning documents

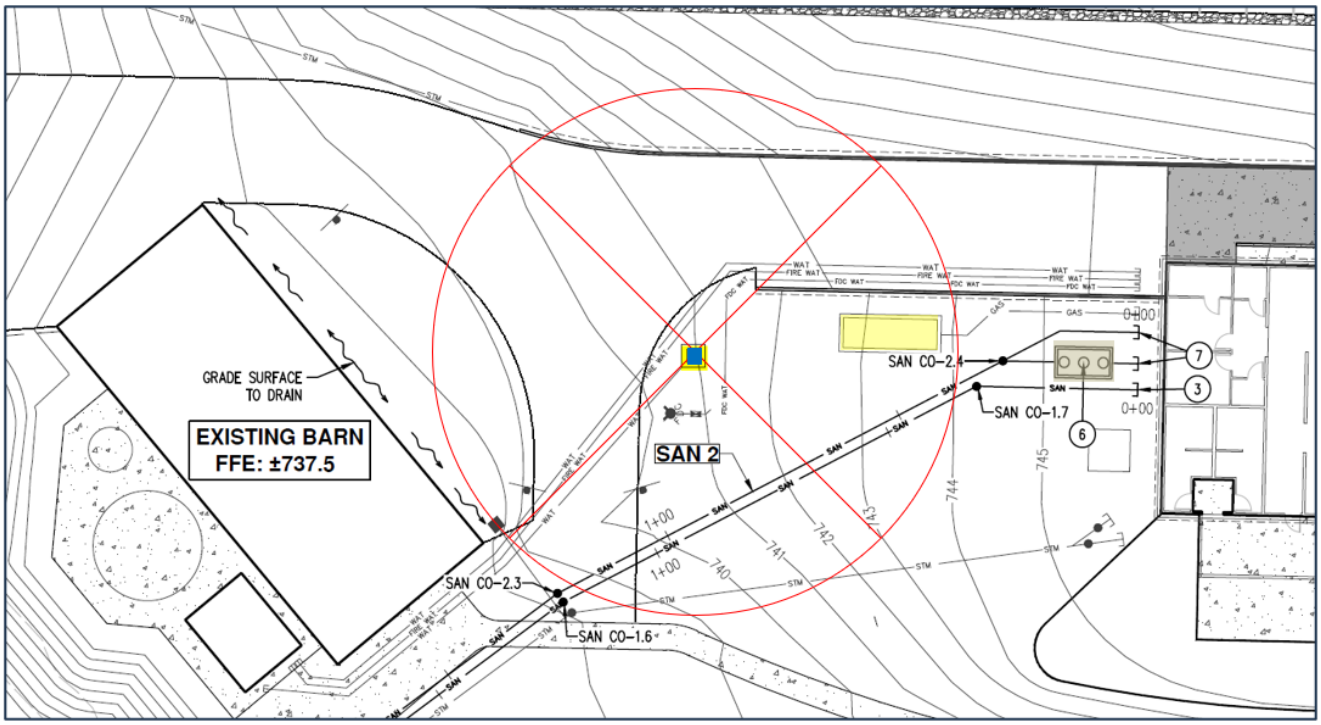
Water system site plans:

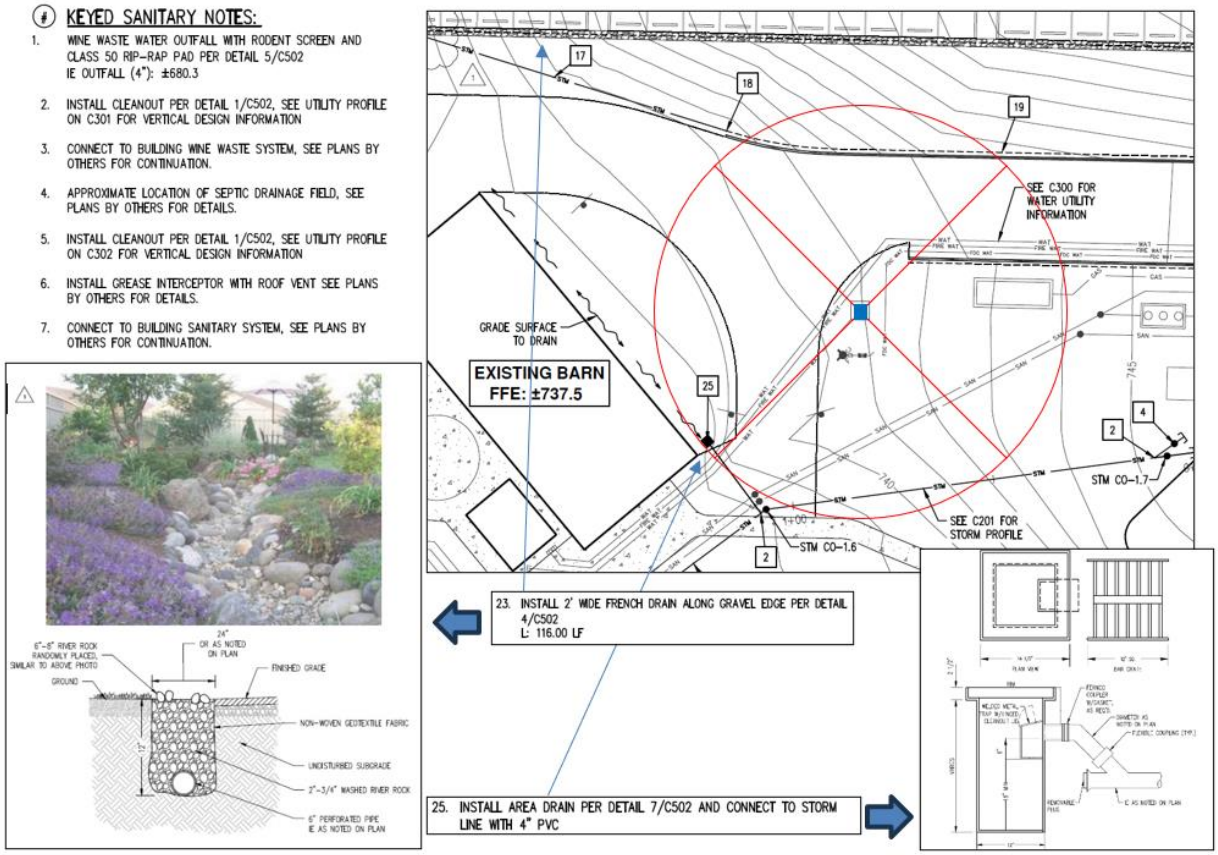


50- and 100-ft diameter radii:



Approximate 50-ft radius circle is drawn around the wellhead below showing the septic tank (shaded in brown) appears to be outside this setback distance. A propane tank (shaded in yellow) is within the 50-ft setback.





New water system capacity requirements:

333-061-0061
Capacity Requirements for Public Water Systems

(1) Water system capacity is defined as the technical, managerial, and financial capability of the water system necessary to plan for, achieve, and maintain compliance with applicable drinking water standards.

(2) Capacity requirements for new public water systems.

(a) Any new community, NTNC, or TNC public water system must meet the applicable requirements in this rule prior to serving drinking water to the public. The owner of such water system shall submit evidence of meeting all applicable requirements to the Authority for review and shall commence operation only after Authority approval. This rule does not apply to water systems that were built and operating prior to October 1, 1999.

(b) Requirements for Technical Capacity.

(A) The water system must comply with the local land use requirements of OAR 333-061-0062, including submission to the Authority of evidence of approval by the local land use authority. (B) The water system must comply with plan submission and review requirements of OAR 333-061-0060, and plans submitted must comply with construction standards in OAR 333-061-0050. (C) The owner of a new water system must demonstrate a valid water right permit as required and prescribed by the Oregon Water Resources Department (ORS chapter 537).	<< LUCS << PR#28-2024 << Pending
(D) The water system must submit initial water quality test results demonstrating compliance with applicable MCLs (OAR 333-061-0030), and applicable treatment requirements and performance standards (OAR 333-061-0032 and 0034).	<< Nitrate, arsenic, & coliform bacteria
(E) Community water systems shall have water use meters installed at all service connections. (F) Community water systems with 300 or more service connections or serving more than 1,000 people shall have a master plan meeting the requirements of OAR 333-061-0060(5). (c) Requirements for Managerial Capacity. (A) Community and NTNC water systems must employ or contract for the services of a certified operator as required by OAR 333-061-0225. (B) Community water systems within areas of Oregon where State or Federally listed sensitive, threatened or endangered fish species are located, shall consult with the Oregon Water Resources Authority. If required by the Oregon Water Resources Department, community water systems shall have water management and conservation plans meeting the requirements of Oregon Water Resources Department OAR 690-086-0010 through 0920.	<< Not Required for Transient Non-Community Water Systems
(d) Requirements for Financial Capacity. The water system must establish a water rate structure and billing procedure, or alternate financial plan, to assure that funds are collected and available to meet the anticipated operation, maintenance, and replacement costs of the water system.	<< Submit operating budget, financial plan, or other documentation.

Planning documents:

Planning documents needed for public water systems include the following:

a. A coliform sampling plan (quarterly coliform sampling and annual nitrate sampling will be needed on an on-going basis).
b. An operation and maintenance manual

Please refer to the following resources to help you meet these requirements:

Coliform Sampling

- Coliform Sampling Plan template: Fillable MS Word or PDF
- Revised Coliform Monitoring Requirements
- Groundwater Source Monitoring Resources
- Coliform Bacteria
- How to disinfect a well
- Turbidity and Coliform monitoring frequencies for all Systems
- Level 1 Coliform Investigation Form (Investigation completed by water supplier): Fillable MS Word or PDF
- Level 2 Coliform Investigation Form (Investigation completed by regulator): Fillable MS Word or PDF

Operations and Maintenance Manual

- Creating a Water System Operations Manual (pdf)
- From the Basics for Small Water Systems in Oregon course manual - Fact Sheet 3.2 - Developing and Maintaining an Operations & Maintenance Manual
- Shock Chlorination for Storage Tank, Well, and Distribution System - Procedure and Volume Calculation

Best Management Practices (BMPs)

Developed and prepared by the Drinking Water Advisory Committee (DWAC), these guidelines describe best practices for water systems and water suppliers. Systems and suppliers are encouraged to incorporate these BMPs into their routine operations.

- Cutting Into or Repairing Existing Water Mains
- Service Outages Due to Reduced Pressure Events

Owning a well

- Well Owner's Handbook (Pozos de agua Manual para el propietario)
  Handbook: The Oregon Water Resources Department (OWRD) and the Oregon Health Authority DWSP have partnered to release a revised 2016 Well Owner's Handbook, available in English and Spanish. The handbook includes health information on common contaminants, testing recommendations, and additional setback requirements for new construction.
- Well checklist
  Checklist: Oregon State University Extension Office checklist for well owners