PUBLIC HEALTH DIVISION
Center for Health Protection, Drinking Water Services
Tina Kotek, Governor

Oregon Health Authority

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Portland, OR 97232-2162
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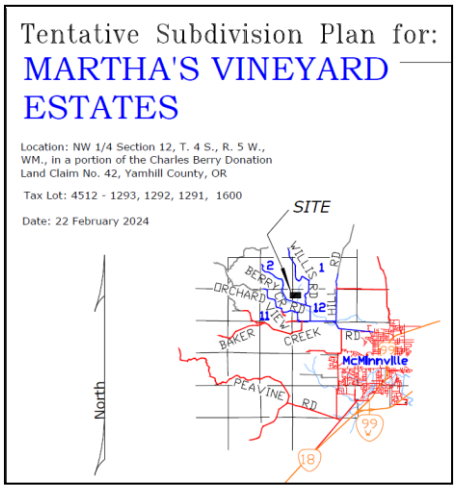
www.healthoregon.org/dws

March 20, 2024

Edwin Sharer
e_sharer@hotmail.com
16500 Southeast Lafayette Highway
Dayton, OR 97114

Letter sent by email only.



Re: **New Subdivision w/ 2 Wells & Tank (PR#34-2024)**
Martha's Vineyard Estates (PWS ID#01562)
Site Plan Approval

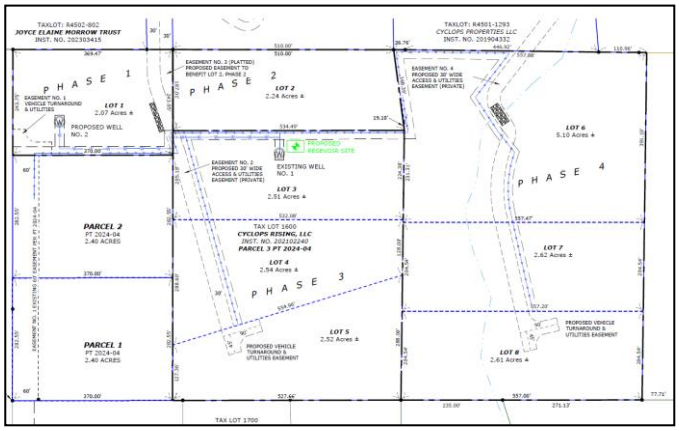
Dear Mr. Sharer

Thank you for your submittal to the Oregon Health Authority's Drinking Water Services (DWS) of plan review information for two new wells to serve the new *Martha's Vineyard Estates* subdivision. On February 26, 2024, our office received a "Tentative Subdivision Plan" showing the location of an existing well and the location of a 2nd well proposed to be constructed to serve a new 8-lot subdivision located northwest of McMinnville in Yamhill County. On March 6, 2024, we received the land use application submitted to Yamhill County. A plan review fee payment in the amount of $825 was received on March 8, 2024 under plan review # 34-2024, which is trackable online at:
https://yourwater.oregon.gov/planreview.php?pwsno=01562

More details about the community water system as viewable online at
https://yourwater.oregon.gov/inventory.php?pwsno=01562

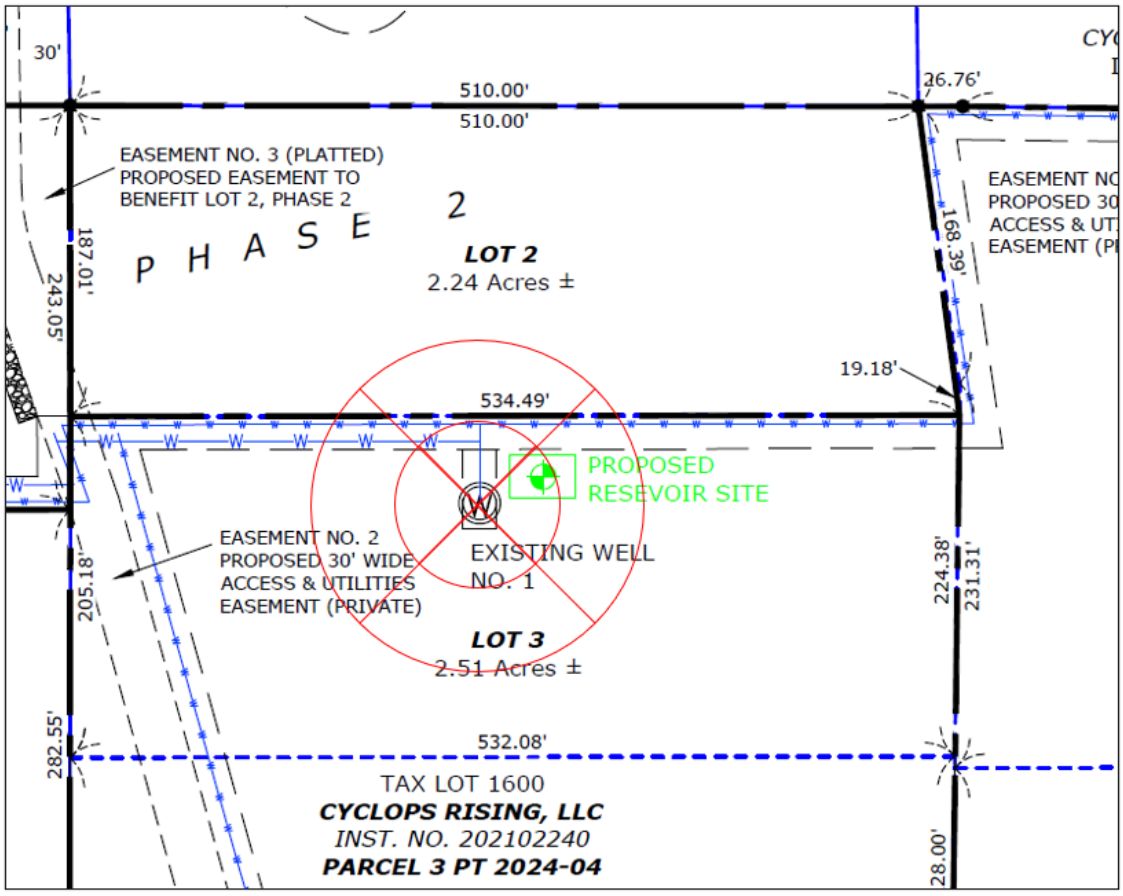
The water system consists of a tank and 2 new wells on a single entry point (EP-A):

- SRC-AA Well #1 – L149436, YAMH59159 constructed 11/30/2022 on Lot 3 and
- SRC-AB Well #2 proposed to be constructed on Lot 1 as shown in the following maps:



SRC-AA - Well #1 (L149436)

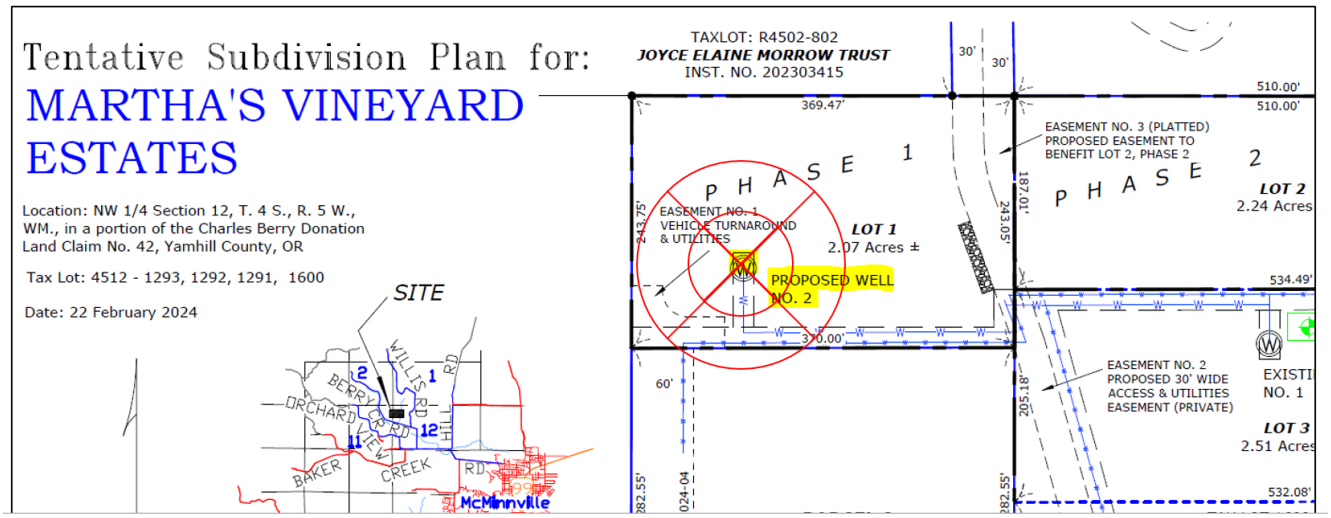
Approximate 50-ft and 100-ft radii around the existing Well #1.



SRC-AB - Well #2 (Proposed)

The proposed well will be 108 feet from the neighboring property to the west, and the well will be 77 feet north of the Lot # 2, owned by Jahnke Family

Approximate 50-ft and 100-ft radii around the proposed Well #2:



A regional geologist in our program, Tom Pattee, reviewed the well log for well #1 (YAMH59159) and the proposed well #2 location. Mr. Pattee noted the following, which should be shared with the well driller:

- Well #1 (L149436):

As Built Well Construction Evaluation for Plan Review and/or Setback Waiver:

☒ Well/Spring meets current construction standards.
Comments: This well was drilled to a depth of 401 ft. The casing and casing seal extend to a depth of 101.5 ft, 17 ft into low permeability basalt that overlies the aquifer. A narrow diameter liner and liner screen extend to the bottom of the hole and helps keep the borehole open below the casing. Water can enter the well through the uncased portion of the well below a depth of 101.5 ft. Sensitivity Analysis results suggest that well construction does not contribute to the overall sensitivity of this water source to local land use practices.

Nature of Aquifer Evaluation:

Aquifer Nature: ☒ Confined aquifer ☐ Semi-confined aquifer ☐ Unconfined aquifer
Comments: This well is designed to capture water from a deep confined layered basalt aquifer. The water-bearing zone is reported to occur at a depth of 217 ft and is overlain by 133 ft of low permeability basalt that acts as a confining layer. Water within the aquifer is under pressure, rising 118.5 ft above the water-bearing zone to a recorded depth of 98.5 ft below ground level. Sensitivity Analysis results suggest that the aquifer is not highly sensitive to nearby land use practices.

Construction Setback Waiver Info:

Hydrogeologist comments regarding Waiver from Construction Standards Request: A property line boundary is present within the 100 ft sanitary setback. The well is adequately constructed to draw water from a deep confined layered basalt aquifer. Sensitivity Analysis results suggest that water quality from this drinking water source has a low susceptibility to activities associated with future residential development.

- Well #2 (Proposed):

Proposed Well Construction Recommendations:

Estimated depth to water–bearing zone: ~180 to 230 ft
Estimated aquifer nature: ☒ Confined ☐ Unconfined
Estimated depth of casing seal: 50 ft or deeper.
Comments: Based on the well log for the nearby Martha's Vineyard Estates 2022 Well #1 (YAMH59159), it is likely that a well drilled at this location will draw water from a deep confined basalt aquifer. The depth to competent bedrock is likely to be 45 to 90 ft.

The project is granted site plan approval. Once construction of Well #2 is complete, please submit the following for both wells and related subdivision:

1. The well driller's report (well log).
2. Well pumping test information including static water level, pumping rate, draw-down and rate of recovery.
3. Pump information (e.g., type of pump, make/model, capacity, and lubricant used).
4. Documentation showing ownership or easements for 100-ft radius around both wells.

5. Raw (Untreated) Water Quality Data including:
    - Coliform bacteria,
    - Chemical groups including:
        1. Inorganic compounds (IOC) including nitrate and arsenic, among others,
        2. Volatile organic compounds (VOC),
        3. Synthetic organic compounds (SOC),
    - Radionuclides (gross alpha, uranium, and radium 226/228),

    These samples are to be taken from each of the new well's raw water sample tap at the wellhead and analyzed by a lab certified in Oregon for drinking water analysis (ORELAP certified lab). See the complete list of chemical analytes required to be sampled in the enclosed list of *Chemical Contaminants and Maximum Levels*.
6. Engineered plans & photos that show the above-ground wellhead structure detail including the well house (or pitless adapter if applicable), concrete slab, drainage, pump-to-waste piping and plans and specifications for connection of the new well to the water system.
7. A copy of the Water Right Permit for each well from WRD, if a Water Right Permit is required or, if not required, correspondence from Oregon Water Resources Department that demonstrates a water right is not required for either well. Contact Joel Plahn if you have questions regarding water rights:

Joel Plahn Joel.M.PLAHN@water.oregon.gov	Oregon Water Resources Dept. 725 Summer Street NE, Suite A Salem, OR 97301	503-508-2394	503-986-0904

8. Additional plans and specifications related to the new subdivision's water system (waterlines, tanks, pumping facilities, etc.) in conformance with OAR 333-061-0050: https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DRINKINGWATER/PLANREVIEW/Documents/OAR-333-061-0050.pdf

The above items should reference Plan Review #34-2024 & PWS ID #01562 and can be emailed to me at evan.e.hofeld@oha.oregon.gov. If you have any questions, please feel free to call me at 971-200-0288.

Sincerely,

Evan Hofeld, Regional Engineer - OHA-Drinking Water Services
evan.e.hofeld@oha.oregon.gov

cc:

- Jonathan Jahnke – Cyclops Rising, LLC- jondjahnke@gmail.com
- Melissa Wong, REHS - Yamhill County Public Health - wongm@yamhillcounty.gov
- Tommy Laird, Well Const. Prog. Coord., OWRD - Tommy.K.LAIRD@water.oregon.gov

Enclosure: *Chemical Contaminants & Maximum [Contaminant] Levels (MCLs)*

Contaminants and Maximum Levels

Inorganics	mg/L
Antimony Total	0.006
Arsenic	0.010[A]
Asbestos	7 MFL[B]
Barium	2
Beryllium Total	0.004
Cadmium	0.005
Chromium	0.1
Cyanide	0.2
Fluoride	4.0
Mercury	0.002
Nickel	Nickel MCL under review
Nitrate	10
Nitrate-Nitrite	10
Nitrite	1
Selenium	0.05
Sodium	20[C]
Thallium Total	0.002

Lead and Copper [D]	
Lead	0.015
Copper	1.3

Volatile Organics	
1,1-Dichloroethylene	0.007
1,1,1-Trichloroethane	0.2
1,1,2-Trichloroethane	0.005
1,2-Dichloropropane	0.005
1,2-Dichloroethane	0.005
1,2,4-Trichlorobenzene	0.07
Benzene	0.005
Carbon Tetrachloride	0.005
Cis-1,2-Dichloroethylene	0.07
Dichloromethane	0.005
Ethylbenzene	0.7
Monochlorobenzene	0.1
O-Dichlorobenzene	0.6
P-Dichlorobenzene	0.075
Styrene	0.1
Tetrachloroethylene (PCE)	0.005
Toluene	1.0
Total Xylenes	10.0
Trans-1,2-Dichloroethylene	0.1
Trichloroethylene (TCE)	0.005
Vinyl Chloride	0.002

Radionuclides	
Gross alpha particles	15 pCi/L[E]
Combined radium 226/228	5 pCi/L[E]
Uranium	0.03
Beta/photon emitters	4 mrem/yr[F]

Synthetic Organics	mg/l
2,4-D	0.07
2,4,5-TP (Silvex)	0.05
Adipates Di(2-ethylhexy)	0.4
Alachlor (Lasso)	0.002
Atrazine	0.003
Benzo(A)Pyrene (PAH's)	0.0002
BHC-gamma (Lindane)	0.0002
Carbofuran	0.04
Chlordane	0.002
Dalapon	0.2
Dibromochloropropane (DBCP)	0.0002
Dinoseb	0.007
Dioxin (2,3,7,8-TCDD)	$3x10^{-8}$
Diquat	0.02
Endothall	0.1
Endrin	0.002
Ethylene Dibromide (EDB)	0.00005
Glyphosate	0.7
Heptachlor Epoxide	0.0002
Heptachlor	0.0004
Hexachlorobenzene (HCB)	0.001
Hexachlorocyclopentadiene (HEX)	0.05
Methoxychlor	0.04
Pentachlorophenol	0.001
Phthalates Di(2-ethylhexy) (DEHP)	0.006
Picloram	0.5
Polychlorinated Biphenyls (PCB)	0.0005
Simazine	0.004
Toxaphene	0.003
Vydate (Oxamy)	0.2

[A] MCL lowered to 0.010 mg/L on 1/23/06
[B] Million Fibers per liter
[C] Advisory only
[D] Action level
[E] Picocuries per liter
[F] Millirems per year