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WATER AVAILABILITY ANALYSIS



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ALTA WINES
2125 SILVERADO TRAIL
NAPA, CA 94558

APN 039-270-005

PROPERTY OWNER:

Alta Napa Valley Vineyards, LLC
1988 Thousand Oaks Blvd.
Berkeley, CA 94707



Project# 4117016.0
August 16, 2019



I. Executive Summary

Alta Wines (APN 039-270-005) proposes to construct a new winery with a tasting room and residence. There are three wells on the parcel. A groundwater recharge rate of 1.0 af/yr/acre for valley floor was adopted for the 22.65 acre parcel to give a total groundwater recharge of 22.65 af/yr for the project parcel.

Below is a summary of the existing and proposed water use. Detailed calculations can be found on the next page.

Usage Type	Existing Usage [af/yr]	Proposed Usage [af/yr]
Irrigation		
Vineyard – Well	7.83	7.58
Vineyard – Process Wastewater	0.00	-0.15
Landscaping	0.00	0.05
Winery		
Process Water	0.00	0.15
Domestic Water	0.00	0.07
Residential	0.08	0.07
Totals (Acre-ft per Year)	7.91	7.76
Estimated Water Recharge Rate (Acre-ft per Year)	22.65	22.65

The proposed modifications for the Alta Wines project will result in a decrease in the use of groundwater of 0.15 af/yr for a total annual usage of 7.76 af/yr which is less than the estimated groundwater recharge rate for the parcel of 22.65 af/yr.



II. Groundwater Use Calculation

Existing Residential Water Demand

Residences -- (120 gallons/bedroom x 5 bedrooms) = 0.08 af/yr

Existing Vineyard Irrigation and Landscaping Water Demand

Vineyard – Irrigation from well – (0.5 af/ac-yr x 15.66 acres vineyard) = 7.83 af/yr

Total Existing Water Demand Total = 7.91 af/yr

Proposed Residential Water Demand

Residence -- (120 gallons/bedroom x 4 bedrooms) = 0.07 af/yr

Proposed Vineyard Irrigation and Landscaping Water Demand

Vineyard – from well – (0.5 af/ac-yr x 15.15 acres vineyard) = 7.58 af/yr

Vineyard – from process wastewater – (5-gal water / 1-gallon wine x 10,000 gal wine/year) = -0.15 af/yr

Landscape – (0.5 af / 100,000-gallon wine x 10,000 gal wine/year) = 0.05 af/yr

Proposed Winery Process Water Demand

Process Water – (5-gal water / 1-gallon wine x 10,000 gal wine/year) = 0.15 af/yr

Proposed Winery Domestic Water Demand

PT Employees – (15 gal/person/day x 260 days/yr x 1 employees/day) = 0.01 af/yr

FT Employees – (15 gal/person/day x 260 days/yr x 2 employees/day) = 0.02 af/yr

Average Visitors – (3 gal/person/day x 52 weeks/yr x 70 visitors/week) = 0.03 af/yr

Total = 0.07 af/yr

Total Proposed Water Demand Total = 7.76 af/yr