

EXHIBIT E-1

TIER I WATER AVAILABILITY ANALYSIS

FOR THE

TRUST VINEYARD PARTNERS VINEYARD DEVELOPMENT EROSION CONTROL PLAN

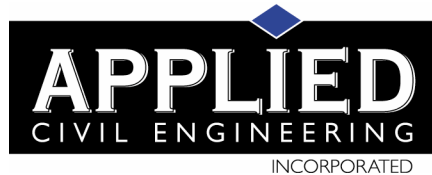
LOCATED AT:

St. Helena Highway
Napa County, CA
Napa County APN 027-490-006

PREPARED FOR:

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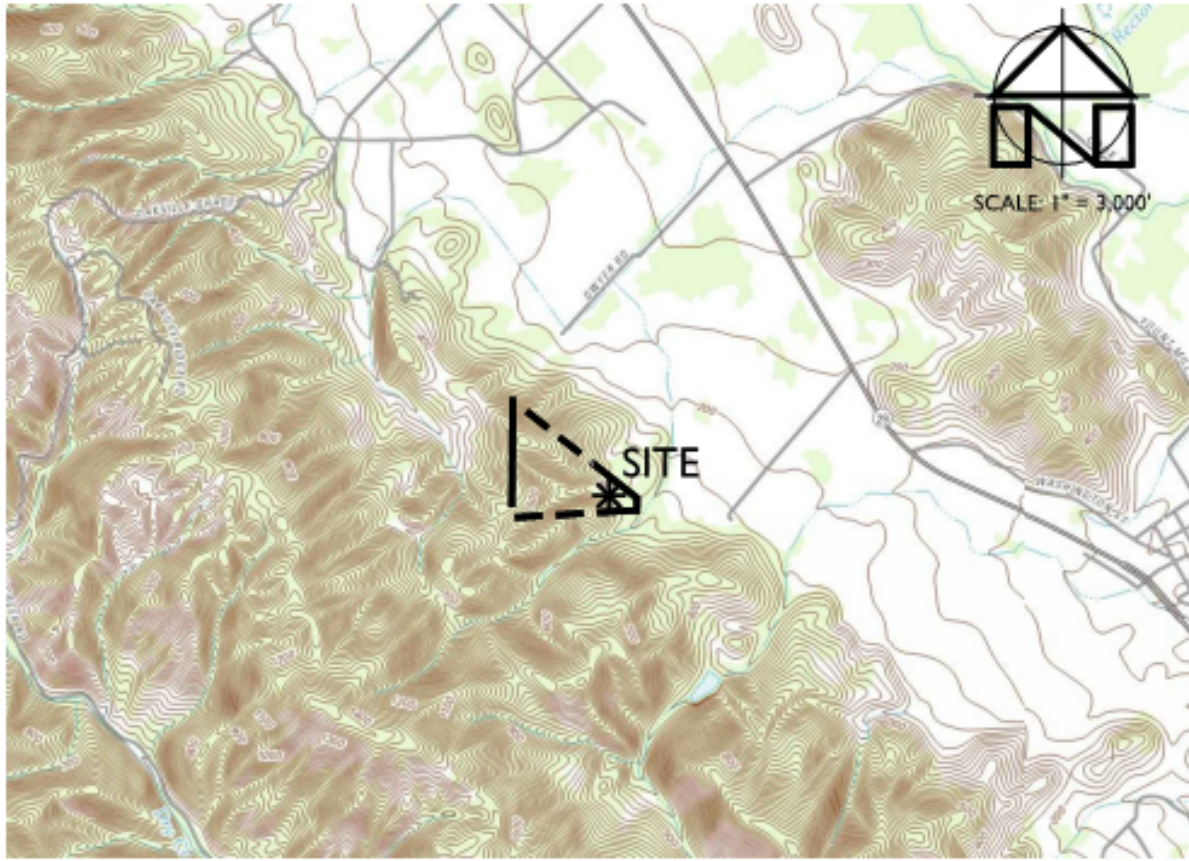
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INTRODUCTION

Trust Vineyard Partners is applying for an Erosion Control Plan permit to develop approximately 11.2 net acres of vineyard at their property located off St. Helena Highway in Napa County, California. The subject property, known as Napa County Assessor's Parcel Number 027-490-006, is located west of St. Helena Highway, northwest of the Town of Yountville.



LOCATION MAP

SCALE: 1" = 3,000'

Figure 1: Location Map

Existing development on the property includes several dirt, gravel and paved access roads and a small vineyard block. The property is not developed with any buildings.

Groundwater will be used for irrigation of the new vineyard. There is no well on the property so groundwater will be provided from three existing wells on other nearby properties under easement agreements with property owners (agreements are not yet in place but parties are willing to grant such easements and rights). These three groundwater wells are the only source of water for the new vineyard. The property owners also have access to approximately 4 ac-ft of additional water that is collected in vineyard subsurface drainage systems located on APNs 027-500-033, 027-381-002 & 027-381-003. This water can be used to irrigate the other vineyards on nearby properties but will not be used in the proposed new vineyard.

Trust Vineyard Partners has requested that Applied Civil Engineering Incorporated (ACE) prepare a Tier I Water Availability Analysis in accordance with the Water Availability Analysis (WAA) – Guidance Document adopted by the Napa County Board of Supervisors on May 12, 2015. The remainder of this report describes the estimated groundwater demand on the subject property and properties where the wells that will supply this new vineyard are located for existing and proposed conditions and compares that to the prescribed water use screening criteria for Valley Floor areas.

ESTIMATED GROUNDWATER DEMAND

Groundwater is currently used to irrigate approximately 70 acres of vineyard and to supply water to three residences and two pools located on APNs 027-500-032, 027-381-015 & -016 and 027-490-007. The project proposes 11.2 acres of new vineyard and no other changes are planned. For the purpose of this study we will consider all of the properties that utilize water from the three existing wells as the “Study Area”.

The estimated groundwater demand is summarized in the table below and details of the calculations supporting these estimates are included in the Water Use Estimate Supporting Calculations in Appendix I.

Table I: Estimated Groundwater Demand

	Existing (ac-ft/yr)	Proposed (ac-ft/yr)
Residential	2.45	2.45
Vineyard Irrigation	31.5	36.54
Total	34.0	39.0

The vineyard irrigation estimates presented above are slightly lower than previously estimated in earlier versions of this report. The new estimates are based on more refined irrigation historical records that have become available since the original report was prepared and are more reflective of actual use whereas the original estimates were based on County standard estimates.

WATER USE SCREENING CRITERIA

According to the WAA - Guidance Document properties located in the Napa Valley Floor area are subject to a Water Use Screening Criteria of 1.0 acre-feet of water per acre of land per year. A project complies with the requirements of the Tier 1 WAA if the total water use on the property is less than 1.0 acre-feet per acre per year. If the Tier 1 Water Use Screening Criteria is met and the property is located in the Napa Valley Floor area Tier 2 and Tier 3 Analyses are not required unless substantial evidence exists in the record that indicates a potential significant impact from the project.

Furthermore, Napa County is now also requiring that properties in the Napa Valley Subbasin area (aka Napa County Groundwater Sustainability Agency Boundary) limit groundwater use to a second Water Use Screening Criteria of 0.3 acre-feet per acre per year (hereinafter referred to as the Napa Valley Subbasin Water Use Screening Criteria) due to extended drought conditions except on properties where current use is more than 0.3 acre-feet per year in which case no-net increase in water use beyond existing baseline conditions is the applicable screening criteria. The Napa Valley Subbasin footprint is similar to but in some cases significantly different than the Napa Valley Floor area previously described.

The Study Area properties are unique in that they are located partially in the Napa Valley Floor area, and partially on the hillsides which are classified as “All Other Areas” in the WAA – Guidance Document. For the purpose of this study we have overlaid the Napa County “Valley Floor” region onto the subject parcels as shown in Figure 2.

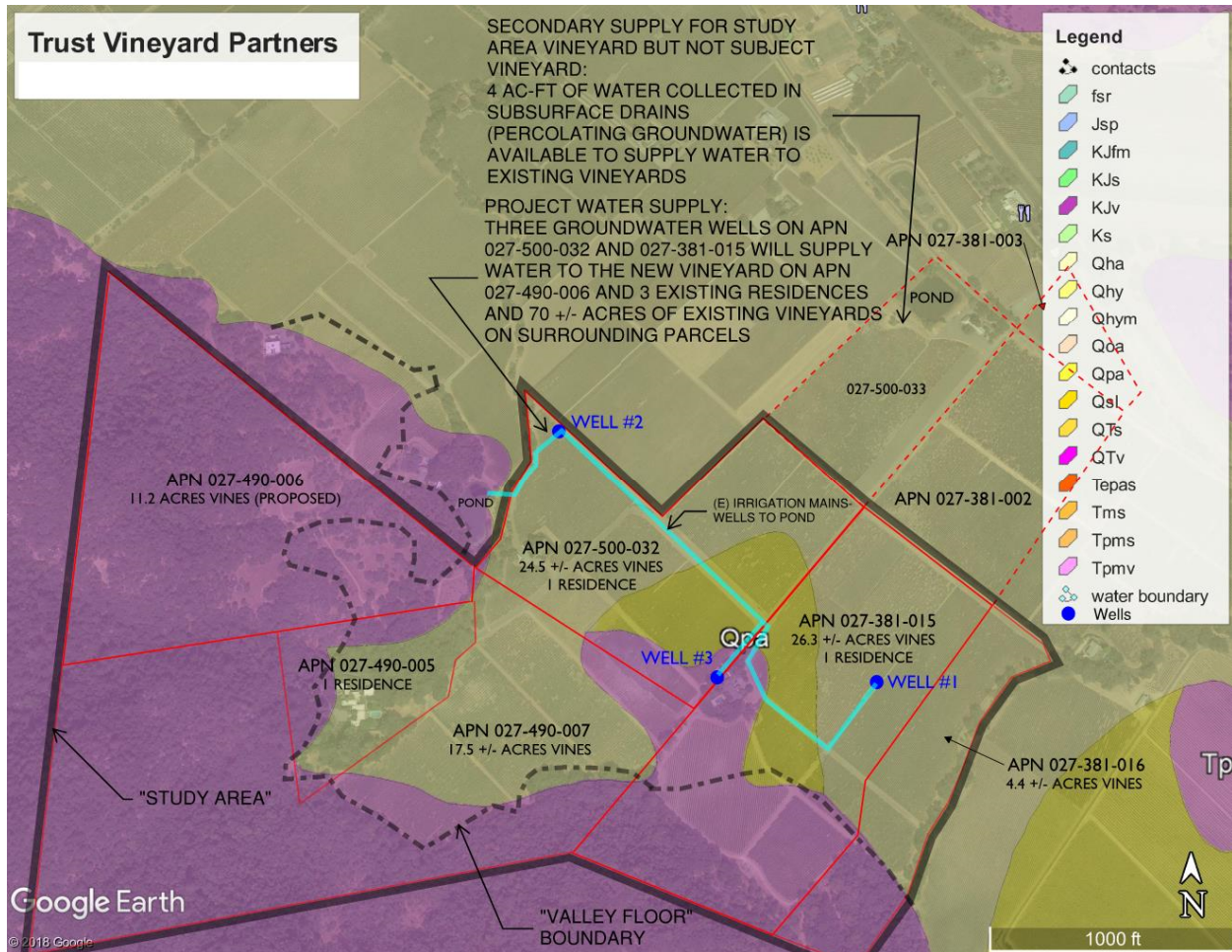


Figure 2: Map with “Valley Floor” Area Created with Google Earth Pro (Source USGS Scientific Investigations Map 2918 and Napa County GIS)

Since all groundwater extraction is from the Napa Valley Floor area we have evaluated only the screening criteria associated with the Napa Valley Floor. The approach is conservative because there is significant additional recharge that occurs in the hillside portion of the Study Area properties that is not included in this analysis.

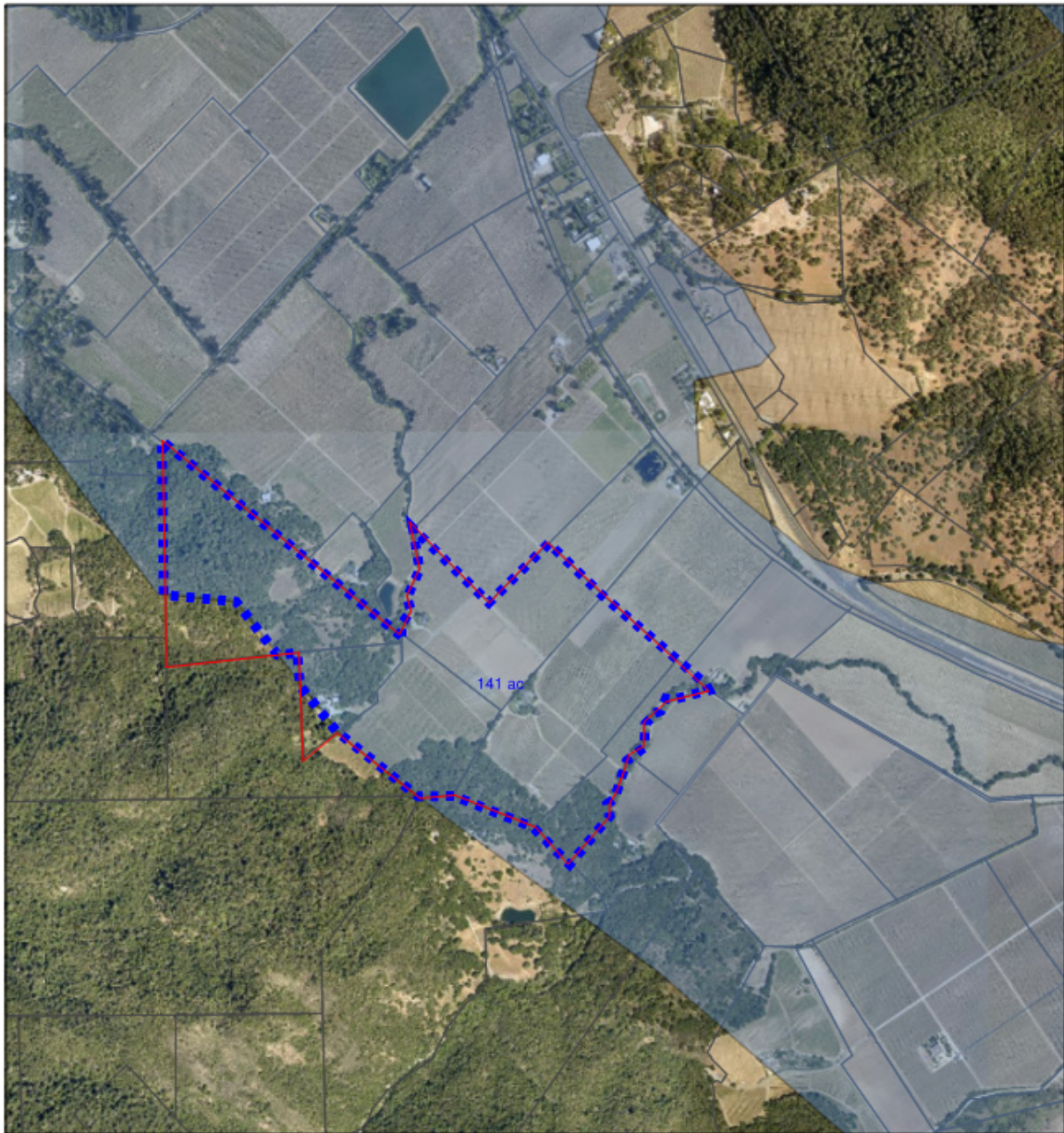
According to our analysis, approximately 77 acres of the Study Area are classified as Napa Valley Floor and therefore the water use screening criteria is calculated as follows:

Water Use Screening Criteria = 77 acres x 1.0 acre-foot per acre per year

Water Use Screening Criteria = 77 acre-feet per year

Similarly, for the purpose of evaluation the Napa Valley Subbasin Water Use Screening Criteria, we have determined that approximately 141 acres of the Study Area are within the Napa Valley Subbasin as shown in Figure 3.

GSA Boundary Map

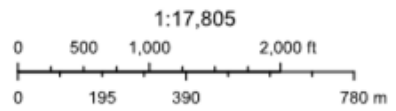


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 Napa Co. Groundwater Sustainability Agency Boundary (GSA)


 Subject Parcels / Study Area


 Subject Parcels / Study Area within GSA (141 acres)



Aerials - 2021

 Red: Band_1

 Green: Band_2

 Blue: Band_3

County of Napa, Esri, HERE, County of Napa, County of Solano, Sonoma County, Bureau of Land Management, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA

Napa County
County of Napa, County of Solano, Sonoma County, Bureau of Land Management, Esri, HERE, Garmin, GeoTechnologies, Inc., Intermap, USGS, EPA | County of Napa, Esri, HERE | <https://>

Figure 3: Map with “Napa Valley Subbasin” Area
(Source Napa County GIS)

Since all groundwater extraction is from the Napa Valley Subbasin area we have evaluated only the screening criteria associated with the Napa Valley Subbasin. The approach is conservative because there is significant additional recharge that occurs in the hillside portion of the Study Area properties that is not included in this analysis.

According to our analysis, approximately 141 acres of the Study Area are classified as Napa Valley Subbasin and therefore the water use screening criteria is calculated as follows:

Water Use Screening Criteria = 141 acres x 0.3 acre-foot per acre per year

Water Use Screening Criteria = 42.3 acre-feet per year

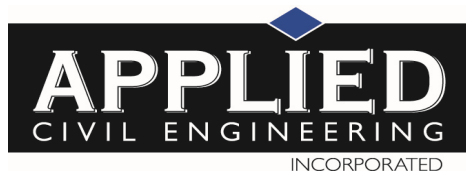
ANALYSIS

The total Estimated Water Use for existing conditions (34.0 ac-ft/yr) and proposed conditions (39.0 ac-ft/yr) are both below the Water Use Screening Criteria (77 ac-ft/yr) and the Napa Valley Subbasin Water Use Screening Criteria (42.3 acre-feet per year). Furthermore, this analysis very conservatively does not include groundwater recharge from the Hillside portion of the properties.

CONCLUSION

Since all Water Use Screening Criteria are met, even without accounting for recharge from the hillside portion of the properties, and an additional 4 ac-ft of groundwater available from the offsite subsurface drainage collection system, the project is found to comply with the Napa County Water Availability Analysis requirements. Tier 2 and Tier 3 Analyses are not required according to the WAA – Guidance Document.

APPENDIX I: Water Use Estimate Supporting Calculations



**Trust Vineyard Partners
Groundwater Use Estimate**

	Estimated Water Use (Acre-Feet / Year)	
	Existing	Proposed
Residential Water Use		
Primary Residence ⁽¹⁾	2.25	2.25
Pool ⁽²⁾	0.20	0.20
Second Dwelling Unit - Not Applicable	0.00	0.00
Guest Cottage - Not Applicable	0.00	0.00
Total Residential Domestic Water Use	2.45	2.45
Irrigation Water Use		
Vineyard - Irrigation ⁽³⁾	31.50	36.54
Vineyard - Frost Protection	0.00	0.00
Vineyard - Heat Protection	0.00	0.00
Total Irrigation Water Use	31.50	36.54
Total Combined Water Use	34.0	39.0

Estimates per Napa County Water Availability Analysis - Guidance Document, May 12, 2015 unless noted

⁽¹⁾ 0.5-0.75 ac-ft/yr (includes some landscape) per WAA Guidance Document x 3 Residences

⁽²⁾ 0.1 ac-ft/yr for pool per WAA Guidance Document x 2 pools

⁽³⁾ 0.45 ac-ft/ac/yr estimated per analysis of past irrigation records - 70 acres vineyard existing and 11.2 additional acres proposed