Phase 1 Water Availability Analysis
12530_Girard Winery
February 18, 2014
Revised: November 25, 2014

Always Engineering, Inc.
Civil Engineering & Topographic Surveying
131 Stony Circle, Suite 1000 (707) 542-8795
Santa Rosa, CA 95401 Fax (707) 542-8798
www.alwayseng.com JasonH@alwayseng.com

John McDowell
Deputy Planning Director
Napa County Department of Planning, Building,
and Environmental Services
1195 3rd Street, Room 210
Napa, Ca 94559

Project: Girard Winery
Use Permit Application
Phase 1 Water Availability
APN: 020-150-017 (Girard Winery Use Permit)
APN: 020-150-012 (Clos Pegase Winery)

Dear Mr. McDowell,

This correspondence is provided to clarify and supplement the Phase One Groundwater Water Availability prepared and originally submitted with the Girard Winery Use Permit. As required by the Napa County Department of Public Works, this letter provides the Phase 1 Water Availability Analysis as a supplement to the Girard Winery Use Permit application. The following information is provided to meet this requirement.

SITE PLAN

The Use Permit Site Plan has been provided and is attached. This site plan provides the existing and proposed site conditions for Girard winery. The site consists of existing vineyards, open space, waste water treatment ponds, an agricultural building, and infrastructure. Also provided is a portion of the USGS quad map indicating location of the project parcel and approximate well locations. There is also included two additional site plans; one displaying the existing groundwater supply system components, and one displaying the existing vineyards associated with the two parcels.

PROJECT DESCRIPTION

Girard Winery, located at 1077 Dunaweal Ln, Calistoga, California (APN 020-150-017) is applying for a use permit to construct a new winery on this parcel.

It is proposed to construct a new winery with a production of 200,000 gallons of wine per year. Also includes associated site improvements, tasting room, and hospitality events.

Always Engineering, Inc.
Civil Engineering & Topographic Surveying
131 Stony Circle, Suite 1000 (707) 542-8795
Santa Rosa, CA 95401 Fax (707) 542-8798
www.alwayseng.com JasonH@alwayseng.com

On the project parcel, there is an existing well which currently serves the Clos Pegase Winery, which is located across the street at 1060 Dunaweal Lane, Calistoga (APN: 020-150-012). This analysis will take into account both parcels' water use. There is a second well, located on the Clos Pegase parcel. This well was disconnected from the existing public water system, as it did not meet proper seal depth, and is now used for backup irrigation only for the Clos Pegase parcel.

GIRARD ALLOWABLE WATER ALLOTMENT

The proposed parcel is 26.53 acres and located in the valley floor

Parcel acreage	=	26.53 acres
Parcel Location Factor	=	1.0 ac-ft/ac-yr (Valley Floor)
Allowable Water Allotment	=	26.53 ac-ft/yr

Based on Step #2 of the Water Availability Study, the allowable water allotment for the site is 26.53 ac-ft/yr.

GIRARD WATER CONSUMPTION

Presented below, and in the attached spreadsheets, are the calculations used to complete the Phase One Study with the assumed Napa County values.

Girard Vineyard Use

14.53 acres x 0.5 ac-ft/ac-yr (irrigation)	=	7.265 ac-ft/yr
14.53 acres x 0.25 ac-ft/ac-yr (frost protection)	=	3.6325 ac-ft/yr
14.53 acres x 0.0 ac-ft/ac-yr (heat protection)	=	0 ac-ft/yr
Total Vineyard Use	**=**	**10.8975 ac-ft/yr**

The total amount of vineyard water use on the Girard parcel is estimated to be 10.8975 ac-ft/yr using the Napa County Public Works values. It should be noted that this value includes irrigation and frost protection. No heat protection occurs at this site. It should also be noted that all vineyard irrigation is supplied by the irrigation reservoir on the Girard parcel. This pond is filled solely with rainwater, vineyard subdrain water, and treated winery process wastewater. This pond is the sole source of irrigation for all vineyards and landscape on the Girard and Clos Pegase parcels. Vineyard irrigation demand has been included in this analysis to show that the use is below the threshold, should well water be required in an extremely dry year, which has not been needed to date.

Always Engineering, Inc.
Civil Engineering & Topographic Surveying
131 Stony Circle, Suite 1000 (707) 542-8795
Santa Rosa, CA 95401 Fax (707) 542-8798
www.alwayseng.com JasonH@alwayseng.com

Girard Winery Process Use

Process water demand is estimated using the factors in the Napa County Phase One form.

200,000 gallons wine/yr x 2.15 ac-ft/100,000 gallons wine = 4.3 ac-ft/yr

Additionally, water use data for the existing Clos Pegase and Girard process operations was reviewed for the wastewater feasibility study preparation. In that analysis, it was estimated that approximately 920,000 gallons (2.82 ac-ft/yr) of process water will be required. This number is used as an estimate of treated process wastewater available for irrigation of onsite vineyards and landscape. That volume is subtracted from the parcel demand, as it is not a demand on groundwater resources.

Girard Winery Domestic Use

In the attached spreadsheets, domestic water use for the site has been estimated. This estimate has been prepared using peak and average employee, tasting visitor, and event use numbers for the site. Detailed calculations are shown in the spreadsheets with a summary below:

Employee Use	=	0.184 ac-ft/yr
Tasting Visitor Use	=	0.287 ac-ft/yr
Event Use	=	0.025 ac-ft/yr
Total Domestic Use	=	0.496 ac-ft/yr

A total of 0.496 ac-f/yr is estimated for domestic uses. This value assumes that employees will be onsite 7 days a week and 52 weeks a year. It also assumes maximum tasting room weekday and weekend visitation and therefore is likely conservative in the value generated.

Girard Winery Landscape Use

Because the Phase 1 form includes landscape and domestic uses together, and domestic uses are calculated individually in this report, the Phase 1 form values are used to estimate landscape in this calculation. Girard Winery will have approximately 0.4 acres of additional landscaped area which is primarily to be planted in native plants with low water use. The demand using the Phase 1 values is estimated as follows:

0.5 ac-ft/100,0000 gallons production x 200,000 gallons of production = 1.0 ac-ft/year

To be conservative, we will also evaluate the use of lawn in these areas. To estimate the water demand from lawn, reference evapotranspiration rates from the Angwin Field Stattion of California Irrigation Management Information System (CIMIS). Based on field conditions in Angwin (likely hotter than our site), approximately 2.55 ac-ft/yr is required to irrigate one acre of lawn. Therefore, the demand for Girard winery is estimated as follows:

Always Engineering, Inc.
Civil Engineering & Topographic Surveying
131 Stony Circle, Suite 1000 (707) 542-8795
Santa Rosa, CA 95401 Fax (707) 542-8798
www.alwayseng.com JasonH@alwayseng.com

0.4 acres landscape	x	2.55 ac-ft/ac-yr	=	1.02 ac-ft/yr

Therefore, approximately 1.0 to 1.02 ac-ft/year will be required for landscape irrigation.

Total Girard Winery Use

Process Use	=	4.30 ac-ft/yr
Domestic Use	=	0.496 ac-ft/yr
Landscape Use	=	1.02 ac-ft/yr
Total Winery Use	**=**	**5.816 ac-ft/yr**

The total winery water use is estimated to be 5.816 ac-ft/yr.

Total Girard Water Use

The **total estimated water demand** from the project is the sum of the winery use (5.816 ac-ft/yr) and vineyard use (10.8975 ac-ft/yr), and is estimated to be **16.7135 ac-ft/yr.** This is less than the parcel threshold of 26.53 ac-ft per year and represents approximately 63% of the threshold for additional analysis.

CLOS PEGASE ALLOWABLE WATER ALLOTMENT

The existing Clos Pegase Winery parcel (APN 020-150-012) is 20.39 acres and located in the valley floor

Parcel acreage	=	20.39 acres
Parcel Location Factor	=	1.0 ac-ft/ac-yr (Valley Floor)
Allowable Water Allotment	=	20.39 ac-ft/yr

Based on Step #2 of the Water Availability Study, the allowable water allotment for Clos Pegase Winery is 20.39 ac-ft/yr. however, potable water for the site is provided by a well on the Girard Winery parcel and will be reviewed later in this document under the combined analysis. In addition, all of the landscape and vineyard irrigation on the Clos Pegase parcel is provide by the irrigation reservoir on the Girard parcel. That reservoir is filled solely with vineyard subdrain water, rain water, and treated process wastewater and therefore should not present a demand on groundwater.

Always Engineering, Inc.
Civil Engineering & Topographic Surveying
131 Stony Circle, Suite 1000 (707) 542-8795
Santa Rosa, CA 95401 Fax (707) 542-8798
www.alwayseng.com JasonH@alwayseng.com

CLOS PEGASE WATER CONSUMPTION

Presented below are the calculations used to complete the Phase One Study with the assumed Napa County values.

Clos Pegase Vineyard Use

4.0 acres x 0.5 ac-ft/ac-yr (irrigation)	=	2.0 ac-ft/yr
4.0 acres x 0.25 ac-ft/ac-yr (frost protection)	=	1.0 ac-ft/yr
4.0 acres x 0 ac-ft/ac-yr (heat protection)	=	0 ac-ft/yr
Total Vineyard Use	**=**	**3.0 ac-ft/yr**

The total amount of vineyard water use on the Clos Pegase parcel is estimated to be 3.0 ac-ft/yr using the Napa County Public Works values. As noted above, this value includes irrigation and frost protection. No heat protection occurs at this site. Also noted aboe is that all vineyard irrigation is supplied by the irrigation reservoir on the Girard parcel. This pond is filled solely with rainwater, vineyard subdrain water, and treated winery process wastewater. This pond is the sole source of irrigation for all vineyards and landscape on the Girard and Clos Pegase parcels. Vineyard irrigation demand has been included in this analysis to show that the use is below the threshold, should well water be required in an extremely dry year, which has not been needed to date.

Clos Pegase Winery Process Use
Process water demand is estimated using the factors in the Napa County Phase One form.

200,000 gallons wine/yr x 2.15 ac-ft/100,000 gallons wine = 4.30 ac-ft/yr

Additionally, water use data for the existing Clos Pegase and Girard process operations was reviewed for the wastewater feasibility study preparation. In that analysis, it was estimated that approximately 920,000 gallons (2.82 ac-ft/yr) of process water will be required. This number is used as an estimate of treated process wastewater available for irrigation of onsite vineyards and landscape. That volume is subtracted from the parcel demand, as it is not a demand on groundwater resources.

Winery Domestic Use

In the attached spreadsheets, domestic water use for the site has been estimated. This estimate has been prepared using peak and average employee, tasting visitor, and event use numbers for the site. Detailed calculations are shown in the spreadsheets with a summary below:

Always Engineering, Inc.
Civil Engineering & Topographic Surveying
131 Stony Circle, Suite 1000 (707) 542-8795
Santa Rosa, CA 95401 Fax (707) 542-8798
www.alwayseng.com JasonH@alwayseng.com

Employee Use	=	0.251 ac-ft/yr
Tasting Visitor Use	=	0.347 ac-ft/yr
Event Use	=	0.0552 ac-ft/yr
Total Domestic Use	=	0.6537 ac-ft/yr

A total of 0.6537 ac-f/yr is estimated for domestic uses. This value assumes that employees will be onsite 7 days a week and 52 weeks a year. It also assumes maximum tasting room weekday and weekend visitation and therefore is likely conservative in the value generated.

Clos Pegase Winery Landscape Use

Because the Phase 1 form includes landscape and domestic uses together, and domestic uses are calculated individually in this report, the Phase 1 form values are used to estimate landscape in this calculation. Clos Pegase Winery has approximately 0.6 acres of landscaped area, much of which is lawn. The demand using the Phase 1 values is estimated as follows:

0.5 ac-ft/100,0000 gallons production x 200,000 gallons of production = 1.0 ac-ft/year

To be conservative, we will also evaluate the use of lawn in these areas. To estimate the water demand from lawn, reference evapotranspiration rates from the Angwin Field Stattion of California Irrigation Management Information System (CIMIS). Based on field conditions in Angwin (likely hotter than our site), approximately 2.55 ac-ft/yr is required to irrigate one acre of lawn. Therefore, the demand for Girard winery is estimated as follows:

0.6 acres landscape	x	2.55 ac-ft/ac-yr	=	1.53 ac-ft/yr

Therefore, approximately 1.0 to 1.53 ac-ft/year will be required for landscape irrigation at Clos Pegase Winery.

Total Clos Pegase Winery Use

Process Use	=	4.30 ac-ft/yr
Domestic Use	=	0.6537 ac-ft/yr
Landscape Use	=	1.53 ac-ft/yr
Total Winery Use	=	**6.4837 ac-ft/yr**

The total winery water use is estimated to be 6.4837 ac-ft/yr.

Always Engineering, Inc.
Civil Engineering & Topographic Surveying
131 Stony Circle, Suite 1000 (707) 542-8795
Santa Rosa, CA 95401 Fax (707) 542-8798
www.alwayseng.com JasonH@alwayseng.com

Clos Pegase Residential Use

Primary Residence x 0.75 ac-ft/yr = 0.75 ac-ft/yr

Total Clos Pegase Water Use

The total estimated water demand from the project is the sum of the winery use (6.48 ac-ft/yr), vineyard use (3.0 ac-ft/yr), and residence use (0.75 ac-ft/yr) and is estimated to be 10.234 ac-ft/yr. This value is approximately 50% of the parcel's threshold.

COMBINED ALLOWABLE WATER ALLOTMENT

The combined acreage of the parcel is 46.92 acres and located in the valley floor. Combined allowable threshold is calculated as follows:

Parcel acreage	=	46.92 acres
Parcel Location Factor	=	1.0 ac-ft/ac-yr (Valley Floor)
Allowable Water Allotment	=	46.92 ac-ft/yr

Based on Step #2 of the Water Availability Study, the allowable water allotment for the combined parcels is 46.92 ac-ft/yr.

COMBINED WATER CONSUMPTION/DEMAND

Presented below is a summary of the demands estimated in previous sections of this report and used to complete the Phase One Study.

Girard Winery Total Demand	=	16.7135 ac-ft/yr
Clos Pegase Winery Total Demand	=	10.234 ac-ft/yr.
Total Combined Water Demand	=	26.9475 ac-ft/yr.

However, this number does not take into account the use of treated process wastewater for irrigation of vineyard and landscape on both parcels, nor does it account for all irrigation being provided by sources other than groundwater. To adjust the total demand on groundwater and present a more accurate look at actual groundwater use, we will provide 3 scenarios; 1) one where treated process wastewater is subtracted from the total demand, and 2) a second where all vineyard irrigation is removed from the demand, and 3) a third where vineyard and landscape irrigation are removed from demand.

Always Engineering, Inc.
Civil Engineering & Topographic Surveying
131 Stony Circle, Suite 1000 (707) 542-8795
Santa Rosa, CA 95401 Fax (707) 542-8798
www.alwayseng.com JasonH@alwayseng.com

Total Combined Water Use Subtracting Treated Wastewater Reuse (Scenario 1)

Total Combined Water Demand	=	26.9475 ac-ft/yr.
Treated Process Wastewater Reuse	=	5.64 ac-ft/yr.
Adjusted Combined Water Demand	=	21.3 ac-ft/yr.

Total Combined Water Use Subtracting Vineyard Irrigation (Scenario 2)

Total Combined Water Demand	=	26.9475 ac-ft/yr.
Treated Process Wastewater Reuse	=	13.8975 ac-ft/yr.
Adjusted Combined Water Demand	=	13.05 ac-ft/yr.

Total Combined Water Use Subtracting Vineyard and Landscape Irrigation (Scenario 3)

Total Combined Water Demand	=	26.9475 ac-ft/yr.
Treated Process Wastewater Reuse	=	16.4475 ac-ft/yr.
Adjusted Combined Water Demand	=	10.50 ac-ft/yr.

A summary of these demands is presented in a comparison table in the summary and conclusions below.

EXISTING WATER SUPPLY SYSTEM

The existing potable water system consists of the onsite well and treatment (parcel 017) which also serves Clos Pegase Winery, under the same ownership across Duvaweal Ln. There is a storage tank on the Clos Pegase parcel. A new tank will be provided for Girard Winery. Each property also has an existing supplemental irrigation well, which are not currently used.

CURRENT GROUNDWATER CONDITIONS

The report titled, *Napa County Groundwater Conditions and Groundwater Monitoring Recommendations,* dated February 2011 by Luhdorf & Scalmanini Consulting Engineers was obtained and reviewed in light of current groundwater conditions, specifically in the project vicinity. Appendix A of the report provides groundwater hydrographs showing historical groundwater depth for the wells on record. Copies of the groundwater depth graphs for the Calistoga area has been attached to this report. With the exception of the late 1970s (historical drought) and few well readings circa 2004, groundwater elevations in the Calistoga area are typically between 5 and 20 feet below existing grade. The existing well for the site had static water levels at approximately 25 feet deep in June of 1991. This is deeper than the wells on record, but should be assumed to be consistent with the groundwater table in the area. Therefore, sufficient supply appears to be available. There is no record of a depleted groundwater table in the project vicinity.

Always Engineering, Inc.
Civil Engineering & Topographic Surveying
131 Stony Circle, Suite 1000 (707) 542-8795
Santa Rosa, CA 95401 Fax (707) 542-8798
www.alwayseng.com JasonH@alwayseng.com

SUMMARY AND CONCLUSIONS

As presented above, the overall water use for the proposed Girard Winery and existing Clos Pegase Winery is expected to be 10.50 ac-ft/yr combined, which presents approximately 48% of the Girard parcel allotment, and 22% of the allotment for both parcels combined. Therefore, the Phase 1 study should be sufficient to satisfy the requirements of the Public Works Department.

PARCEL	ALLOTMENT (AC-FT/YR)	DEMAND (AC-FT/YR) (without irrigation)	DEMAND (AC-FT/YR) (without vineyard irrigation)	DEMAND (AC-FT/YR) (includes vineyards and subtracts wastewater reuse)	IS DEMAND GREATER THAN ALLOTMENT?
GIRARD WINERY APN: 020-150-017	26.53	4.80	5.82	13.89	NO
CLOS PEGASE WINERY APN: 020-150-012	20.39	0	0	0	NO
COMBINED APN: 020-150-017 & 020-150-012	46.92	10.50	13.05	21.30	NO

It should be reiterated that all of the vineyard and landscape irrigation needs will be met by reusing treated process waste effluent from the wastewater pond system as well as the collection of vineyard subdrain water and rain water in the irrigation reservoir. This analysis has included irrigation of vineyards from a groundwater source, should that be required in the future, to show that the combined uses are still below the threshold for the Girard Winery parcel. If parcel threshold ever becomes an issue in the future, a second supply well, located on the Close Peagse parcel could be used to provide irrigation and potable water for that site, which would then lessen the demands on the Girard parcel.

Always Engineering, Inc.
Civil Engineering & Topographic Surveying
131 Stony Circle, Suite 1000 (707) 542-8795
Santa Rosa, CA 95401 Fax (707) 542-8798
www.alwayseng.com JasonH@alwayseng.com

In summary, this project should not pose a burden to groundwater supplies and should be approved for the following reasons:

- The Girard Winery project does not exceed the groundwater threshold for the parcel it is proposed on.
- The combined Girard Winery and Close Pegase Winery projects do not exceed the groundwater threshold for the Girard parcel and substantially below the combined threshold of both parcels.

If there are questions regarding that presented, please feel free to contact me.

Sincerely,

Ben Monroe, P.E.
Always Engineering, Inc.

cc: Heather McCollister

A Tradition of Stewardship
A Commitment to Service

Department of Public Works

1195 Third Street, Suite 201
Napa, CA 94559-3092
www.co.napa.ca.us/publicworks

Main: (707) 253-4351
Fax: (707) 253-4627

Donald G. Ridenhour, P.E.
Director

WATER AVAILABILITY ANALYSIS - PHASE ONE STUDY

Introduction: As an applicant for a permit with Napa County, It has been determined that Chapter 13.15 of the Napa County Code is applicable to approval of your permit. One step of the permit process is to adequately evaluate the amount of water your project will use and the potential impact your application might have on the static groundwater levels within your neighborhood. The public works department requires that a Phase 1 Water Availability Analysis (WAA) be included with your application. The purpose of this form is to assist you in the preparation of this analysis. You may present the analysis in an alternative form so long as it substantially includes the information required below. Please include any calculations you may have to support your estimates.

The reason for the WAA is for you, the applicant, to inform us, to the best of your ability, what changes in water use will occur on your property as a result of an approval of your permit application. By examining the attached guidelines and filling in the blanks, you will provide the information we require to evaluate potential impacts to static water levels of neighboring wells.

Step #1:

Provide a map and site plan of your parcel(s). The map should be an 8-1/2"x11" reproduction of a USGS quad sheet (1:24,000 scale) with your parcel outlined on the map. Include on the map the nearest neighboring well. The site plan should be an 8-1/2"x11" site plan of your parcel(s) with the locations of all structures, gardens, vineyards, etc in which well water will be used. If more than one water source is available, indicate the interconnecting piping from the subject well to the areas of use. Attach these two sheets to your application. If multiple parcels are involved, clearly show the parcels from which the fair share calculation will be based and properly identify the assessor's parcel numbers for these parcels. Identify all existing or proposed wells

Step #2: Determine total parcel acreage and water allotment factor. If your project spans multiple parcels, please fill a separate form for each parcel.

Determine the allowable water allotment for your parcels:

Parcel Location Factors

The allowable allotment of water is based on the location of your parcel. There are 3 different location classifications. Valley floor areas include all locations that are within the Napa Valley, Pope Valley and Carneros Region, except for areas specified as groundwater deficient areas. Groundwater deficient areas are areas that have been determined by the public works department as having a history of problems with groundwater. All other areas are classified as Mountain Areas.

Please underline your location classification below (Public Works can assist you in determining your classification if necessary):

Valley Floor	**1.0 acre feet per acre per year**
Mountain Areas	**0.5 acre feet per acre per year**
MST Groundwater Deficient Area	**0.3 acre feet per acre per year**

Assessor's Parcel Number(s)	Parcel Size (A)	Parcel Location Factor (B)	Allowable Water Allotment (A) X (B)
020-150-017 (GIRARD WINERY)	26.53	1.0 ac-ft/ac-yr	26.53 ac-ft/yr

Step #3:

Using the guidelines in Attachment A, tabulate the existing and projected future water usage on the parcel(s) in acre-feet per year (af/yr). Transfer the information from the guidelines to the table below.

EXISTING USE:		PROPOSED USE:	
Residential	0 af/yr	Residential	0 af/yr
Farm Labor Dwelling	0 af/yr	Farm Labor Dwelling	0 af/yr
Winery	0 af/yr	Winery	4.796 af/yr
Commercial	0 af/yr	Commercial	0 f/yr
Vineyard*	0 af/yr	Vineyard*	0 af/yr
Other Agriculture	0 af/yr	Other Agriculture	af/yr
Landscaping	0 af/yr	Landscaping	0 af/yr
Other Usage (List Separately):		Other Usage (List Separately):	
_____	_____ af/yr	_____	_____ af/yr
_____	_____ af/yr	_____	_____ af/yr
_____	_____ af/yr	_____	_____ af/yr

TOTAL: 0 af/yr
0 gallons**

TOTAL: 0.4796 af/yr TOTAL:
TOTAL: 156,278 gallons**

Is the proposed use less than the existing usage? ☐ Yes ☒ No ☐ Equal

Step #4:

Provide any other information that may be significant to this analysis. For example, any calculations supporting your estimates, well test information including draw down over time, historical water data, visual observations of water levels, well drilling information, changes in neighboring land uses, the usage if other water sources such as city water or reservoirs, the timing of the development, etc. Use additional sheets if necessary. See attached report.

Conclusion: Congratulations! Just sign the form and you are done! Public works staff will now compare your projected future water usage with a threshold of use as determined for your parcel(s) size, location, topography, rainfall, soil types, historical water data for your area, and other hydrogeologic information. They will use the above information to evaluate if your proposed project will have a detrimental effect on groundwater levels and/or neighboring well levels. Should that evaluation result in a determination that your project may adversely impact neighboring water levels, a phase two water analysis may be required. You will be advised of such a decision.

Signature: _____ Date: 11/25/14 Phone: 707-542-8795 x17

A Tradition of Stewardship
A Commitment to Service

Department of Public Works

1195 Third Street, Suite 201
Napa, CA 94559-3092
www.co.napa.ca.us/publicworks

Main: (707) 253-4351
Fax: (707) 253-4627

Donald G. Ridenhour, P.E.
Director

WATER AVAILABILITY ANALYSIS - PHASE ONE STUDY

Introduction: As an applicant for a permit with Napa County, It has been determined that Chapter 13.15 of the Napa County Code is applicable to approval of your permit. One step of the permit process is to adequately evaluate the amount of water your project will use and the potential impact your application might have on the static groundwater levels within your neighborhood. The public works department requires that a Phase 1 Water Availability Analysis (WAA) be included with your application. The purpose of this form is to assist you in the preparation of this analysis. You may present the analysis in an alternative form so long as it substantially includes the information required below. Please include any calculations you may have to support your estimates.

The reason for the WAA is for you, the applicant, to inform us, to the best of your ability, what changes in water use will occur on your property as a result of an approval of your permit application. By examining the attached guidelines and filling in the blanks, you will provide the information we require to evaluate potential impacts to static water levels of neighboring wells.

Step #1:

Provide a map and site plan of your parcel(s). The map should be an 8-1/2"x11" reproduction of a USGS quad sheet (1:24,000 scale) with your parcel outlined on the map. Include on the map the nearest neighboring well. The site plan should be an 8-1/2"x11" site plan of your parcel(s) with the locations of all structures, gardens, vineyards, etc in which well water will be used. If more than one water source is available, indicate the interconnecting piping from the subject well to the areas of use. Attach these two sheets to your application. If multiple parcels are involved, clearly show the parcels from which the fair share calculation will be based and properly identify the assessor's parcel numbers for these parcels. Identify all existing or proposed wells

Step #2: Determine total parcel acreage and water allotment factor. If your project spans multiple parcels, please fill a separate form for each parcel.

Determine the allowable water allotment for your parcels:

Parcel Location Factors

The allowable allotment of water is based on the location of your parcel. There are 3 different location classifications. Valley floor areas include all locations that are within the Napa Valley, Pope Valley and Carneros Region, except for areas specified as groundwater deficient areas. Groundwater deficient areas are areas that have been determined by the public works department as having a history of problems with groundwater. All other areas are classified as Mountain Areas.

Please underline your location classification below (Public Works can assist you in determining your classification if necessary):

Valley Floor	**1.0 acre feet per acre per year**
Mountain Areas	**0.5 acre feet per acre per year**
MST Groundwater Deficient Area	**0.3 acre feet per acre per year**

Assessor's Parcel Number(s)	Parcel Size (A)	Parcel Location Factor (B)	Allowable Water Allotment (A) X (B)
020-150-012 (CLOS PEGASE)	20.39	1.0 ac-ft/ac-yr	20.39 ac-ft/yr.

Step #3:

Using the guidelines in Attachment A, tabulate the existing and projected future water usage on the parcel(s) in acre-feet per year (af/yr). Transfer the information from the guidelines to the table below.

EXISTING USE:		PROPOSED USE:	
Residential	0.75 af/yr	Residential	0.75 af/yr
Farm Labor Dwelling	0 af/yr	Farm Labor Dwelling	0 af/yr
Winery	4.95 af/yr	Winery	4.95 af/yr
Commercial	0 af/yr	Commercial	0 f/yr
Vineyard*	0 af/yr	Vineyard*	0 af/yr
Other Agriculture	0 af/yr	Other Agriculture	0 af/yr
Landscaping	0 af/yr	Landscaping	0 af/yr
Other Usage (List Separately):		Other Usage (List Separately):	
_____	_____ af/yr	_____	_____ af/yr
_____	_____ af/yr	_____	_____ af/yr
_____	_____ af/yr	_____	_____ af/yr
TOTAL:	5.7 af/yr	TOTAL:	5.7 af/yr TOTAL:
	1,857,351 gallons**	TOTAL:	1,857,351 gallons**

Is the proposed use less than the existing usage? ☐ Yes ☐ No ☒ Equal

Step #4:

Provide any other information that may be significant to this analysis. For example, any calculations supporting your estimates, well test information including draw down over time, historical water data, visual observations of water levels, well drilling information, changes in neighboring land uses, the usage if other water sources such as city water or reservoirs, the timing of the development, etc. Use additional sheets if necessary. See Attached Report.

Conclusion: Congratulations! Just sign the form and you are done! Public works staff will now compare your projected future water usage with a threshold of use as determined for your parcel(s) size, location, topography, rainfall, soil types, historical water data for your area, and other hydrogeologic information. They will use the above information to evaluate if your proposed project will have a detrimental effect on groundwater levels and/or neighboring well levels. Should that evaluation result in a determination that your project may adversely impact neighboring water levels, a phase two water analysis may be required. You will be advised of such a decision.

Signature: _____ **Date:** 6/25/14 **Phone:** 707-542-8795 x17

A Tradition of Stewardship
A Commitment to Service

Department of Public Works

1195 Third Street, Suite 201
Napa, CA 94559-3092
www.co.napa.ca.us/publicworks

Main: (707) 253-4351
Fax: (707) 253-4627

Donald G. Ridenhour, P.E.
Director

WATER AVAILABILITY ANALYSIS - PHASE ONE STUDY

Introduction: As an applicant for a permit with Napa County, It has been determined that Chapter 13.15 of the Napa County Code is applicable to approval of your permit. One step of the permit process is to adequately evaluate the amount of water your project will use and the potential impact your application might have on the static groundwater levels within your neighborhood. The public works department requires that a Phase 1 Water Availability Analysis (WAA) be included with your application. The purpose of this form is to assist you in the preparation of this analysis. You may present the analysis in an alternative form so long as it substantially includes the information required below. Please include any calculations you may have to support your estimates.

The reason for the WAA is for you, the applicant, to inform us, to the best of your ability, what changes in water use will occur on your property as a result of an approval of your permit application. By examining the attached guidelines and filling in the blanks, you will provide the information we require to evaluate potential impacts to static water levels of neighboring wells.

Step #1:

Provide a map and site plan of your parcel(s). The map should be an 8-1/2"x11" reproduction of a USGS quad sheet (1:24,000 scale) with your parcel outlined on the map. Include on the map the nearest neighboring well. The site plan should be an 8-1/2"x11" site plan of your parcel(s) with the locations of all structures, gardens, vineyards, etc in which well water will be used. If more than one water source is available, indicate the interconnecting piping from the subject well to the areas of use. Attach these two sheets to your application. If multiple parcels are involved, clearly show the parcels from which the fair share calculation will be based and properly identify the assessor's parcel numbers for these parcels. Identify all existing or proposed wells

Step #2: Determine total parcel acreage and water allotment factor. If your project spans multiple parcels, please fill a separate form for each parcel.

Determine the allowable water allotment for your parcels:

Parcel Location Factors

The allowable allotment of water is based on the location of your parcel. There are 3 different location classifications. Valley floor areas include all locations that are within the Napa Valley, Pope Valley and Carneros Region, except for areas specified as groundwater deficient areas. Groundwater deficient areas are areas that have been determined by the public works department as having a history of problems with groundwater. All other areas are classified as Mountain Areas.

Please underline your location classification below (Public Works can assist you in determining your classification if necessary):

Valley Floor	**1.0 acre feet per acre per year**
Mountain Areas	**0.5 acre feet per acre per year**
MST Groundwater Deficient Area	**0.3 acre feet per acre per year**

Assessor's Parcel Number(s)	Parcel Size (A)	Parcel Location Factor (B)	Allowable Water Allotment (A) X (B)
020-150-017 & 020-150-012	46.92	1.0 ac-ft/ac-yr.	46.92 ac-ft/yr

Step #3:

Using the guidelines in Attachment A, tabulate the existing and projected future water usage on the parcel(s) in acre-feet per year (af/yr). Transfer the information from the guidelines to the table below.

EXISTING USE:		PROPOSED USE:	
Residential	0.75 af/yr	Residential	0.75 af/yr
Farm Labor Dwelling	0 af/yr	Farm Labor Dwelling	0 af/yr
Winery	4.95 af/yr	Winery	9.746 af/yr
Commercial	0 af/yr	Commercial	0 f/yr
Vineyard*	0 af/yr	Vineyard*	0 af/yr
Other Agriculture	0 af/yr	Other Agriculture	0 af/yr
Landscaping	0 af/yr	Landscaping	0 af/yr
Other Usage (List Separately):		Other Usage (List Separately):	
_____	_____ af/yr	_____	_____ af/yr
_____	_____ af/yr	_____	_____ af/yr
_____	_____ af/yr	_____	_____ af/yr
TOTAL:	5.7 af/yr 1,857,351 gallons**	**TOTAL:** **TOTAL:**	10.50 af/yr **TOTAL:** 3,421,436 gallons**

Is the proposed use less than the existing usage? ☐ **Yes** ☒ **No** ☐ **Equal**

Step #4:

Provide any other information that may be significant to this analysis. For example, any calculations supporting your estimates, well test information including draw down over time, historical water data, visual observations of water levels, well drilling information, changes in neighboring land uses, the usage if other water sources such as city water or reservoirs, the timing of the development, etc. Use additional sheets if necessary. See attached report for explanation of calculations.

Conclusion: Congratulations! Just sign the form and you are done! Public works staff will now compare your projected future water usage with a threshold of use as determined for your parcel(s) size, location, topography, rainfall, soil types, historical water data for your area, and other hydrogeologic information. They will use the above information to evaluate if your proposed project will have a detrimental effect on groundwater levels and/or neighboring well levels. Should that evaluation result in a determination that your project may adversely impact neighboring water levels, a phase two water analysis may be required. You will be advised of such a decision.

Signature: _____ **Date:** 11/25/14 **Phone:** 707-542-8915 x17

PHASE ONE WATER AVAILABILITY
GIRARD WINERY USE PERMIT

11/24/2014

ALLOTMENT

GIRARD WINERY (APN 020-150-017)			
PARCEL SIZE	26.53	ACRES	
PARCEL LOCATION FACTOR	1	AC-FT/AC-YR	(VALLEY FLOOR)
ALLOWABLE WATER ALLOTMENT	**26.53**	**AC-FT/YR**	

CLOS PEGASE WINERY (APN 020-150-012)			
PARCEL SIZE	20.39	ACRES	
PARCEL LOCATION FACTOR	1	AC-FT/AC-YR	(VALLEY FLOOR)
ALLOWABLE WATER ALLOTMENT	**20.39**	**AC-FT/YR**	

DEMAND

GIRARD WINERY (APN 020-150-017)	
USE	DEMAND (AC-FT/YR.)
VINEYARD	10.8975
WINERY PROCESS USE	4.3000
DOMESTIC USE	0.4961
LANDSCAPE	1.0200
RESIDENCE	0.0000
TOTAL CALCULATED DEMAND (NO DEDUCTIONS)	16.7136
TREATED PROCESS WASTEWATER REUSE[1]	2.8200
TOTAL DEMAND (WASTEWATER REUSE ACCOUNTED)	13.8936
TOTAL ACUTAL DEMAND (NO VINEYARD IRRIGATION)[2]	5.8161

CLOS PEGASE WINERY (APN 020-150-012)	
USE	DEMAND (AC-FT/YR.)
VINEYARD	3.0000
WINERY PROCESS USE	4.3000
DOMESTIC USE	0.6537
LANDSCAPE	1.5300
RESIDENCE	0.7500
TOTAL CALCULATED DEMAND (NO DEDUCTIONS)	10.2337
TREATED PROCESS WASTEWATER REUSE[1]	2.8200
TOTAL DEMAND (WASTEWATER REUSE ACCOUNTED)	7.4137
TOTAL ACUTAL DEMAND (NO VINEYARD IRRIGATION)[2]	7.2337

1. See aditional notes on process use calculations sheet regarding process wastewater generation and irrigation reuse on the estate vineyard and landscape.

2. In the actual demand, vineyard irrigation has been omitted. Currently, all vineyard irrigation is provided for using the existing irrigation pond. The existing irrigation pond is filled with rainwater, vineyard subdrain collection water, and treated process wastewater. No well has been used to irrigate the existing vineyards and landscape at the site.

PHASE ONE WATER AVAILABILITY - DEMAND/ALLOTMENT SUMMARY (WITH VINEYARD IRRIGATION)

PARCEL	ALLOTMENT (AC-FT/YR)	DEMAND ON GIRARD PARCEL (AC-FT/YR)	DEMAND ON CLOS PEGASE PARCEL (AC-FT/YR)
GIRARD WINERY (APN: 020-150-017)	26.53	13.8936	0.0000
CLOS PEGASE WINERY (020-150-012)	20.39	7.4137	0.0000
COMBINED (APN: 020-150-018 & 020-150-012)	46.92	21.3073	0.0000

PHASE ONE WATER AVAILABILITY - DEMAND/ALLOTMENT SUMMARY (WITHOUT VINEYARD IRRIGATION)

PARCEL	ALLOTMENT (AC-FT/YR)	DEMAND ON GIRARD PARCEL (AC-FT/YR)	DEMAND ON CLOS PEGASE PARCEL (AC-FT/YR)
GIRARD WINERY (APN: 020-150-017)	26.53	5.8161	0.0000
CLOS PEGASE WINERY (020-150-012)	20.39	7.2337	0.0000
COMBINED (APN: 020-150-018 & 020-150-012)	46.92	13.0498	0.0000

GIRARD WINERY
DOMESTIC WATER USE

EVENTS

EVENT SIZE	# OF EVENT VISITORS	FLOW PER VISITOR	DAYS PER YEAR OCURRED	WATER USE PER YEAR (GAL/YEAR)	(AC-FT/YR)
LARGE	500	5	1	2,500	0.0077
MEDIUM	200	5	4	4,000	0.0123
SMALL	75	5	4	1,500	0.0046
		SUTOTAL		8,000	0.0246

TASTING VISITORS

DAY	# OF EVENT VISITORS	FLOW PER VISITOR	DAYS PER WEEK	WEEKS PER YEAR	WATER USE PER YEAR (GAL/YEAR)	(AC-FT/YR)
WEEKDAY	75	3	4	52	46,800	0.1436
WEEKEND	100	3	3	52	46,800	0.1436
				SUTOTAL	93,600	0.2872

EMPLOYEES

TIME PERIOD	# OF EMPLOYEES	FLOW PER EMPLOYEE	DAYS PER WEEK	WEEKS PER YEAR	WATER USE PER YEAR (GAL/YEAR)	(AC-FT/YR)
HARVEST FULL-TIME)	12	15	7	13	16,380	0.0503
HARVEST (PART-TIME)	7	7.5	7	13	4,778	0.0147
NON-HARVEST (FULL-TIME)	8	15	7	39	32,760	0.1005
NON-HARVEST (PART-TIME)	3	7.5	7	39	6,143	0.0189
				SUTOTAL	60,060	0.1843

GIRARD DOMESTIC TOTAL	**161,660**	**0.4961**

CLOS PEGASE WINERY
DOMESTIC WATER USE

EVENTS

EVENT SIZE	# OF EVENT VISITORS	FLOW PER VISITOR	DAYS PER YEAR OCURRED	WATER USE PER YEAR (GAL/YEAR)	(AC-FT/YR)
AVERAGE	150	5	24	18,000	0.0552
			SUTOTAL	18,000	0.0552

TASTING VISITORS

DAY	# OF EVENT VISITORS	FLOW PER VISITOR	WEEKS PER YEAR	WATER USE PER YEAR (GAL/YEAR)	(AC-FT/YR)
PEAK WEEK	725	3	52	113,100	0.3471
			SUTOTAL	113,100	0.3471

EMPLOYEES

TIME PERIOD	# OF EMPLOYEES	FLOW PER EMPLOYEE	DAYS PER WEEK	WEEKS PER YEAR	WATER USE PER YEAR (GAL/YEAR)	(AC-FT/YR)
HARVEST FULL-TIME)	30	15	7	13	40,950	0.1257
HARVEST (PART-TIME)	0	7.5	7	13	0	0.0000
NON-HARVEST (FULL-TIME)	10	15	7	39	40,950	0.1257
NON-HARVEST (PART-TIME)	0	7.5	7	39	0	0.0000
				SUTOTAL	81,900	0.2513

CLOS PEGASE DOMESTIC TOTAL	**213,000**	**0.6537**

PHASE ONE WATER AVAILABILITY
GIRARD WINERY USE PERMIT
11/24/2014

VINEYARD IRRIGATION DEMAND

GIRARD WINERY PARCEL (APN: 020-150-017)

ACRES OF VINEYARD	=	14.53	ACRES	
IRRIGATION	=	7.265	AC-FT/YR	
FROST PROTECTION	=	3.6325	AC-FT/YR	
HEAT PROTECTION	=	0	AC-FT/YR	(NONE OCCURS ONSITE)
VINEYARD TOTAL		**10.8975**	**AC-T/YEAR**	

CLOS PEGASE WINERY PARCEL (APN: 020-150-012)

ACRES OF VINEYARD	=	4	ACRES
IRRIGATION	=	2	AC-FT/YR
FROST PROTECTION	=	1	AC-FT/YR
HEAT PROTECTION	=	0	AC-FT/YR
VINEYARD TOTAL		**3**	**AC-FT/YR**

TOTAL COMBINED VINEAYRD DEMAND 13.8975 AC-FT/YR

PHASE ONE WATER AVAILABILITY
GIRARD WINERY USE PERMIT
11/24/2014

VINEYARD IRRIGATION DEMAND

GIRARD WINERY PARCEL (APN: 020-150-017)

ACRES OF VINEYARD	=	14.53	ACRES	
IRRIGATION	=	7.265	AC-FT/YR	
FROST PROTECTION	=	3.6325	AC-FT/YR	
HEAT PROTECTION	=	0	AC-FT/YR	(NONE OCCURS ONSITE)
VINEYARD TOTAL		**10.8975**	**AC-T/YEAR**	

CLOS PEGASE WINERY PARCEL (APN: 020-150-012)

ACRES OF VINEYARD	=	4	ACRES
IRRIGATION	=	2	AC-FT/YR
FROST PROTECTION	=	1	AC-FT/YR
HEAT PROTECTION	=	0	AC-FT/YR
VINEYARD TOTAL		**3**	**AC-FT/YR**

TOTAL COMBINED VINEAYRD DEMAND 13.8975 AC-FT/YR

PHASE ONE WATER AVAILABILITY
GIRARD WINERY USE PERMIT
11/24/2014

WINERY PROCESSING
WATER USE

GIRARD WINERY				
PRODUCTION	=	200,000	GALLONS WINE PER YEAR	
PHASE 1 WAA WATER USE RATE	=	2.15	AC-FT/YR PER 100,000 GALLONS WINE PRODUCED	
PHASE 1 WAA PROCESS USE	**=**	**4.3**	**AC-FT/YEAR**	
PROJECTED PROCESS USE	=	2.82	AC-FT/YR.	(BASED ON WATER USE AT EXISTING GIRARD OPERATION)
				(NUMBER CONSISTENT WITH WASTEWATER FEASIBLITY STUDY)

CLOS PEGASE WINERY				
PRODUCTION	=	200,000	GALLONS WINE PER YEAR	
PHASE 1 WAA WATER USE RATE	=	2.15	AC-FT/YR PER 100,000 GALLONS WINE PRODUCED	
PHASE 1 WAA PROCESS USE	**=**	**4.3**	**AC-FT/YEAR**	
PROJECTED PROCESS USE	=	2.82	AC-FT/YR.	(BASED ON WATER USE AT EXISTING GIRARD OPERATION)
				(NUMBER CONSISTENT WITH WASTEWATER FEASIBLITY STUDY)

PHASE ONE WATER AVAILABILITY
GIRARD WINERY USE PERMIT
11/24/2014

LANDSCAPE WATER USE - PHASE ONE WATER AVAILABILITY METHOD

GIRARD WINERY			
PRODUCTION	=	200,000	GALLONS WINE PER YEAR
PHASE 1 WAA WATER USE RATE[1]	=	0.5	AC-FT/YR PER 100,000 GALLONS WINE PRODUCED
PHASE 1 WAA LANDSCAPE USE	**=**	**1**	**AC-FT/YEAR**

CLOS PEGASE WINERY			
PRODUCTION	=	200,000	GALLONS WINE PER YEAR
PHASE 1 WAA WATER USE RATE[1]	=	0.5	AC-FT/YR PER 100,000 GALLONS WINE PRODUCED
PHASE 1 WAA LANDSCAPE USE	**=**	**1**	**AC-FT/YEAR**

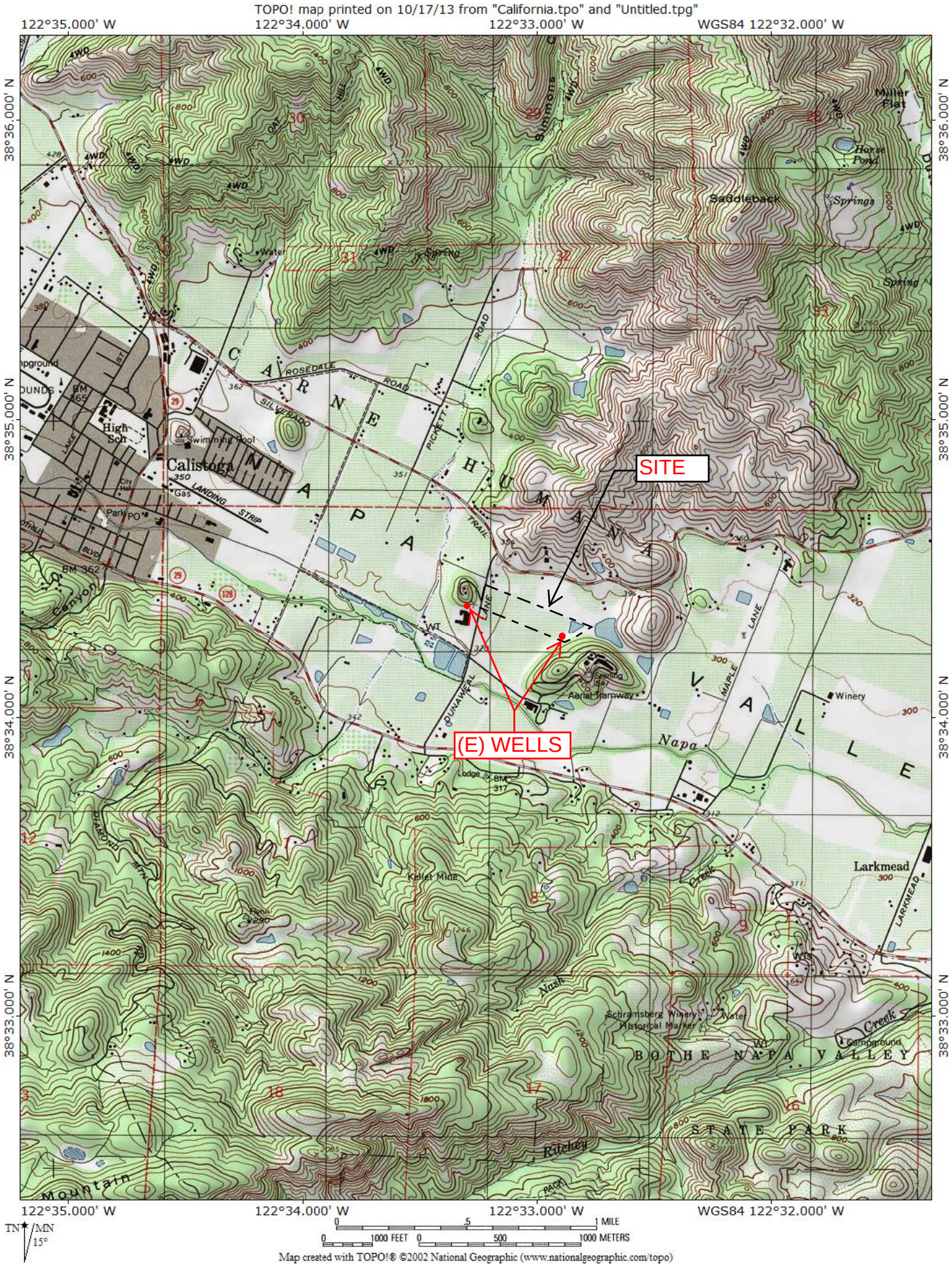
1. it should be noted that the Phase One Water Availability Form provides for 0.5 ac-ft/ac per 100,000 gallons produced for doemstic and landscape.
Because domestic is calculated separately, the entire 0.5 ac-ft/yr is dedicated to landscape in this calculation.

LANDSCAPE WATER USE - CALIFORNIA IRRIGATION INFORMATION MANAGEMENT SYSTEM (CIMIS) METHOD

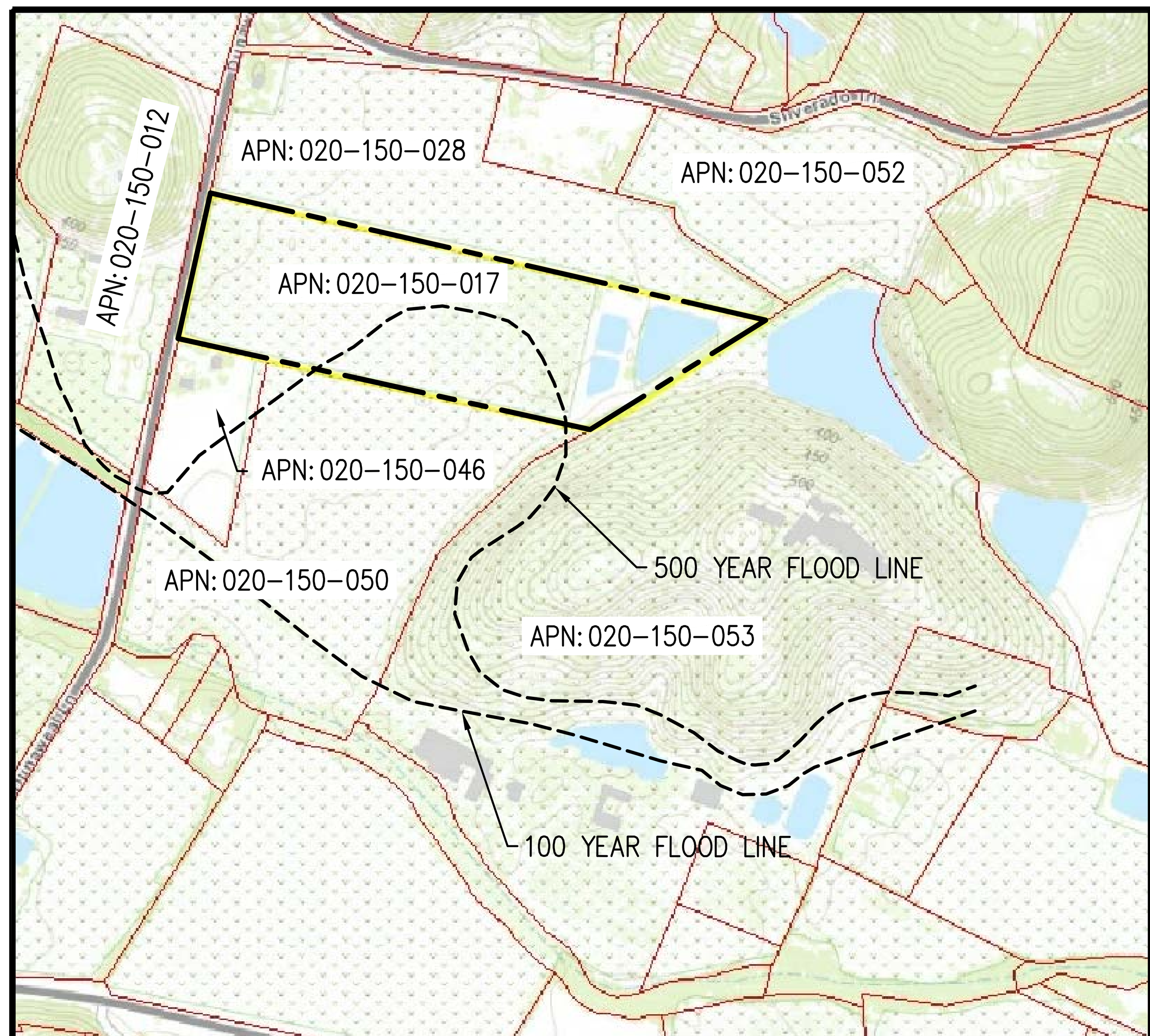
GIRARD WINERY			
LANDSCAPE AREA	=	0.40	ACRES
IRRIGATION DEMAND RATE[1]	=	2.55	AC-FT/AC-YR
CIMIS LANDSCAPE USE	**=**	**1.02**	**AC-FT/YEAR**

CLOS PEGASE WINERY			
PRODUCTION	=	0.60	ACRES
PHASE 1 WAA WATER USE RATE[1]	=	2.55	AC-FT/AC-YR
CIMIS LANDSCAPE USE	**=**	**1.53**	**AC-FT/YEAR**

1. Reference Evapotranspiration data is for the Angwin FS obtained from the California Irrigation Management Information System . See http://wwwcimis.water.ca.gov/cimis/monthlyEToReport.do


TOPO! map printed on 10/17/13 from "California.tpo" and "Untitled.tpg"
122°35.000' W
122°34.000' W
122°33.000' W
WGS84 122°32.000' W
38°36.000' N
38°35.000' N
38°34.000' N
38°33.000' N
SITE
(E) WELLS
Calistoga
Saddleback
Miller Flat
Horse Pond
Springs
Spring
Water
ROSEDALE ROAD
SILVERADO TRAIL
PICKETT ROAD
LANDING STRIP
Park
PO
Gas
Swimming Pool
High Sch
BM 465
BM 362
Canyon
Aerial Tramway
Winery
MAPLE LANE
DUNAWEAL LANE
Napa
Lodge
BM 317
Keller Mine
Larkmead
LARKMEAD
Nash Creek
Schramsberg Winery
Historical Marker
Campground
Ritchey Creek
Mountain
DIAMOND MTN
CALISTOGA
NAPA VALLEY
STATE PARK
TN
MN
15°
0 1 MILE
0 1000 FEET 0 500 1000 METERS
Map created with TOPO!® ©2002 National Geographic (www.nationalgeographic.com/topo)

 When printed=Feb 13, 2014 – 1:52:48PM File=UP-140122.dwg



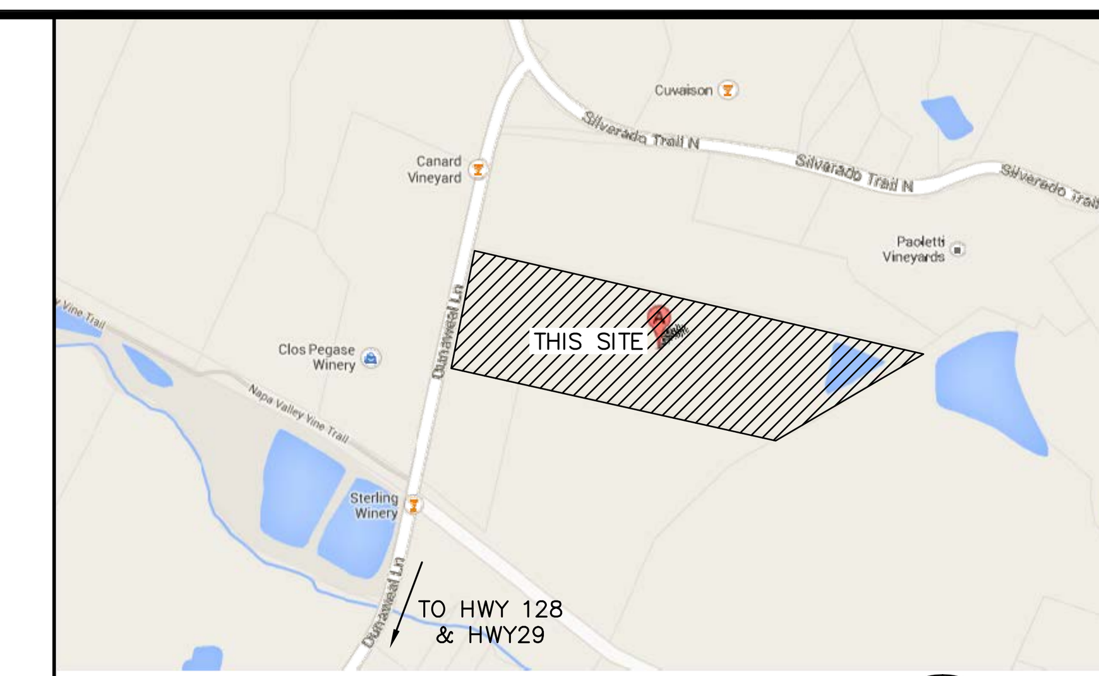
USGS SITE PLAN
SCALE" 1" = 500'

GIRARD WINERY

1077 Dunaweal Ln.
Calistoga, California 94515

APN 022-150-017

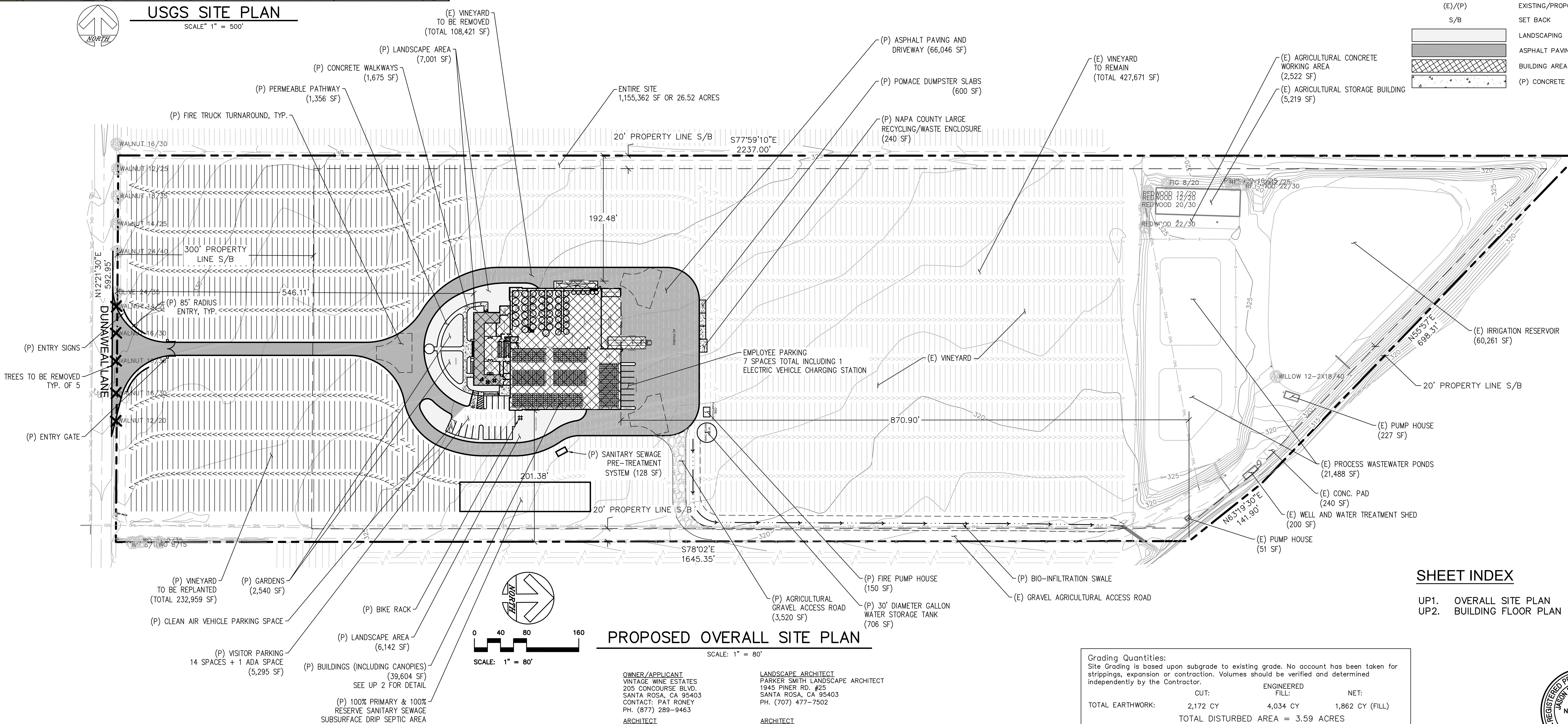
USE PERMIT APPLICATION



VICINITY MAP
NO SCALE

LEGEND

- APPROXIMATE PROPERTY LINE
- FENCE
- EDGE OF PAVEMENT
- EDGE OF GRAVEL DRIVEWAY
- DRAINAGE COURSE FLOWLINE
- VINEROW
- OVERHEAD UTILITIES
- SETBACK
- 100 YEAR FLOOD PLAIN
- 500 YEAR FLOOD PLAIN
- 5 FOOT INDEX 1' INTERVAL CONTOURS
- WELL
- (E)/(P) EXISTING/PROPOSED
- S/B SET BACK
- LANDSCAPING
- ASPHALT PAVING
- BUILDING AREA
- (P) CONCRETE WALKWAY



PROPOSED OVERALL SITE PLAN
SCALE: 1" = 80'

OWNER/APPLICANT
VINTAGE WINE ESTATES
205 CONCOURSE BLVD.
SANTA ROSA, CA 95403
CONTACT: PAT RONEY
PH. (877) 289-9463

ARCHITECT
DEL STARRETT ARCHITECT
181 CONCOURSE BLVD., SUITE A
SANTA ROSA, CA 95403
CONTACT: DEL STARRETT
PH. (707) 526-9645

LANDSCAPE ARCHITECT
PARKER SMITH LANDSCAPE ARCHITECT
1945 PINER RD. #25
SANTA ROSA, CA 95403
PH. (707) 477-7502

ARCHITECT
ALWAYS ENGINEERING INC.
131 STONY CIRCLE, SUITE 1000
SANTA ROSA, CA 95401
CONTACT: BEN MONROE
PH. (707) 542-8795

Grading Quantities:
Site Grading is based upon subgrade to existing grade. No account has been taken for strippings, expansion or contraction. Volumes should be verified and determined independently by the Contractor.

	CUT:	ENGINEERED FILL:	NET:
TOTAL EARTHWORK:	2,172 CY	4,034 CY	1,862 CY (FILL)

TOTAL DISTURBED AREA = 3.59 ACRES

Note: Excess spoils will be disposed of in a county approved site or spread in onsite vineyards. Temporary grading spoils will be stockpiled onsite in the unplanted vineyard area until ready for use.

SHEET INDEX

UP1. OVERALL SITE PLAN
UP2. BUILDING FLOOR PLAN

REGISTERED PROFESSIONAL ENGINEER
JASON FRANK HOCHEDER
No. C66429
CIVIL
STATE OF CALIFORNIA

REVISION	DESCRIPTION	BY	DATE

Always Engineering, Inc.
Civil Engineering & Topographic Surveying
131 Stony Circle, Suite 1000 (707) 542-8795
Santa Rosa, CA 95401 Fax (707) 542-8798
www.alwayseng.com JasonH@alwayseng.com

Prepared for:
GIRARD WINERY
1077 DUNAWEAL LN., CALISTOGA, CA

Prepared on:
February 13, 2014

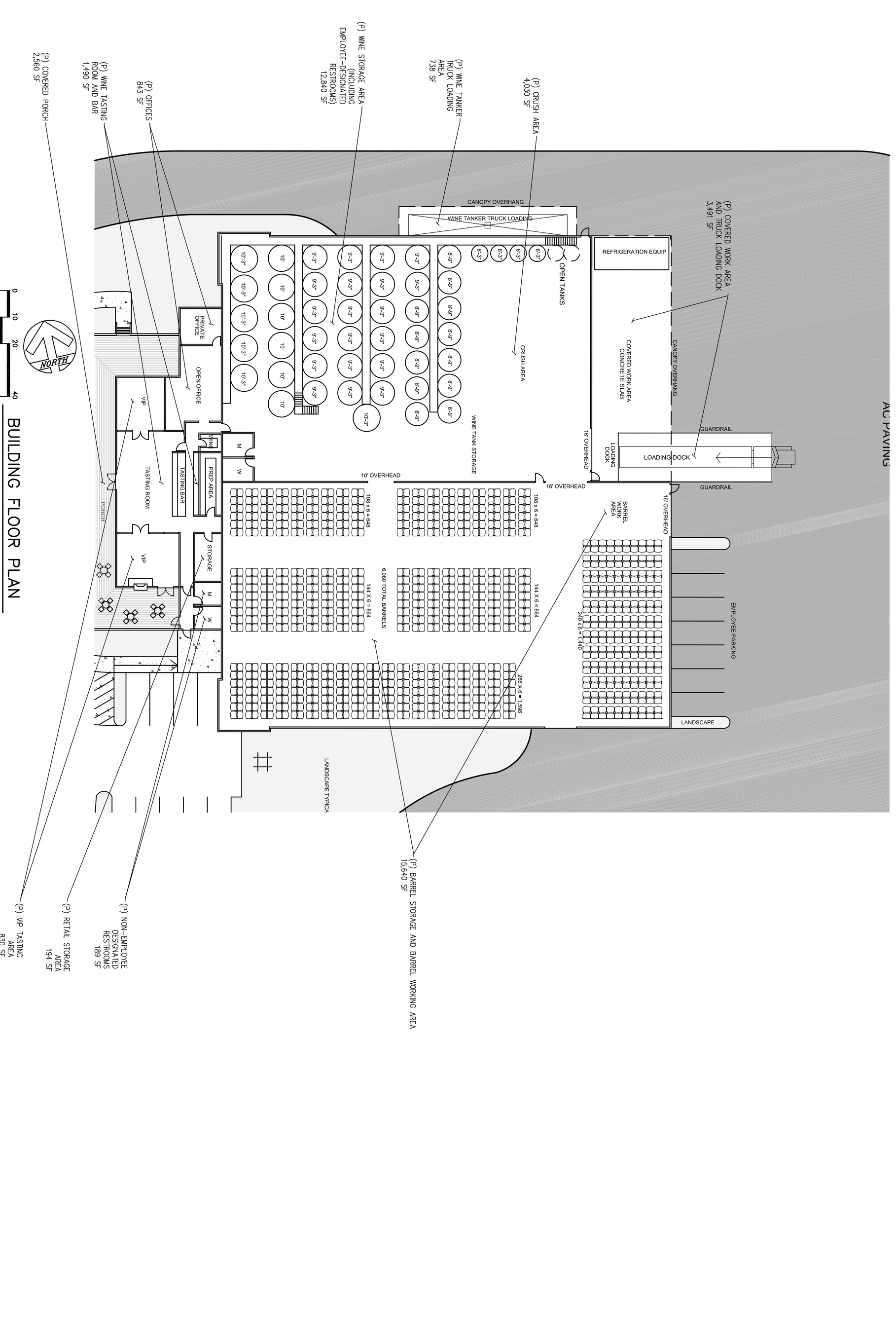
USE PERMIT
OVERALL SITE PLAN
1077 DUNAWEAL LN., CALISTOGA, CA
APN:020-150-017

JOB# 13530
SHEET
UP1 OF UP2

 When printed=Feb 13, 2014 – 1:52:14PM File=UP-140122.dwg

BUILDING FLOOR PLAN

SCALE: 1" = 20'



REGISTERED PROFESSIONAL ENGINEER
JASON FRANK HOCHEDER
No. C66429
CIVIL
STATE OF CALIFORNIA

UP2 OF UP2 SHEET

JOB# 13530

USE PERMIT
BUILDING FLOOR PLAN

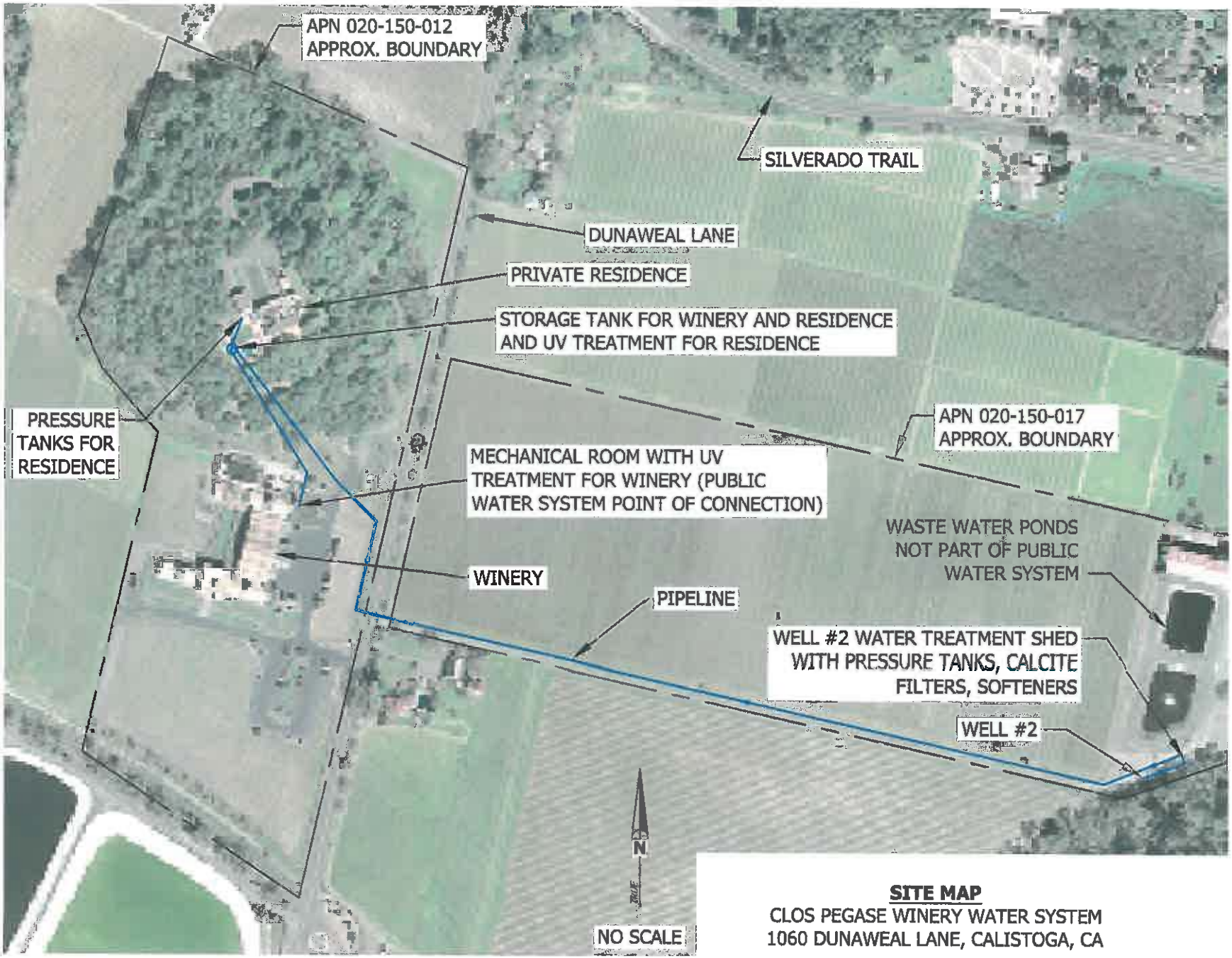
1077 DUNAWEAL LN., CALISTOGA, CA
APN:020-150-017

Prepared for:
GIRARD WINERY
1077 DUNAWEAL LN., CALISTOGA, CA

Prepared on:
February 13, 2014

Always Engineering, Inc.
Civil Engineering & Topographic Surveying
131 Stony Circle, Suite 1000 (707) 542-8795
Santa Rosa, CA 95401 Fax (707) 542-8798
www.alwayseng.com JasonH@alwayseng.com

REVISION	DESCRIPTION	BY	DATE



SITE MAP

CLOS PEGASE WINERY WATER SYSTEM
1060 DUNAWEAL LANE, CALISTOGA, CA

TRIPLICATE
Owner's Copy

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

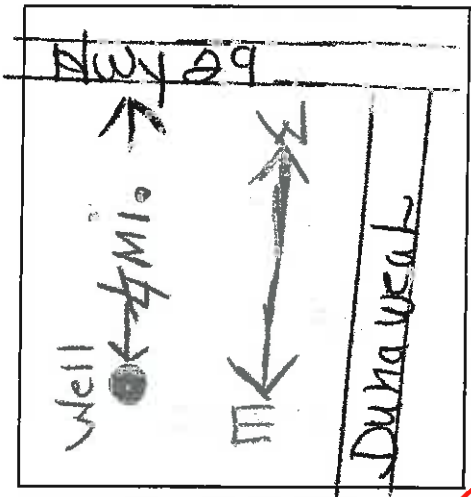
Do not fill in
No. 384909

Notice of Intent No. _____
Local Permit No. or Date _____

State Well No. _____
Other Well No. _____

(1) OWNER: Name Clos Pegase Winery
Address 1060 Dunaweal Lane
City Calistoga ZIP _____

(2) LOCATION OF WELL (See instructions):
County 28 Owner's Well Number _____
Well address if different from above same
Township _____ Range _____ Section _____
Distance from cities, roads, railroads, fences, etc. ¼ Mile
East of Hwy 29 on
Dunaweal Lane



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☐
Industrial ☒
Test Well ☐
Municipal ☐
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☒ No ☐ Size #2 RV
Diameter of bore 9
Packed from 55 to 220 ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☒ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
0	220	5	200

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size
80	220	Screen

(9) WELL SEAL.
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 55 ft.
Were strata sealed against pollution? Yes ☒ No ☐ Interval 30-45 ft.
Method of sealing cement

(10) WATER LEVELS:
Depth of first water, if known _____ ft.
Standing level after well completion 25 ft.

(11) WELL TESTS:
Was well test made? Yes ☒ No ☐ If yes, by whom? Driller
Type of test Pump ☐ Bailer ☐ Air lift ☒
Depth to water at start of test 25 ft. At end of test 200 ft.
Discharge 30 gal/min after 3 hours Water temperature _____
Chemical analysis made? Yes ☐ No ☒ If yes, by whom? _____
Was electric log made Yes ☐ No ☒ If yes, attach copy to this report

(12) WELL LOG: Total depth 220 ft. Completed depth 220 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	30	Clay
30	40	Sandy clay & boulders
40	90	Clay
90	175	grey ash streaks of broken up gray ash
175	220	greyish

Work started 6-5- 19 91 Completed 6-13- 19 91

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Signed _____ (Well Driller)
NAME Fullan Well Drilling (Person, firm, or corporation) (Typed or printed)
Address 2877 Piedmont Ave.
City Napa ZIP 94558
License No. 348677 Date of this report 7-1-91

DWR 188 (REV. 12-86) IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM 86 96355

TRIPLICATE
Owner's Copy

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

WATER WELL DRILLERS REPORT

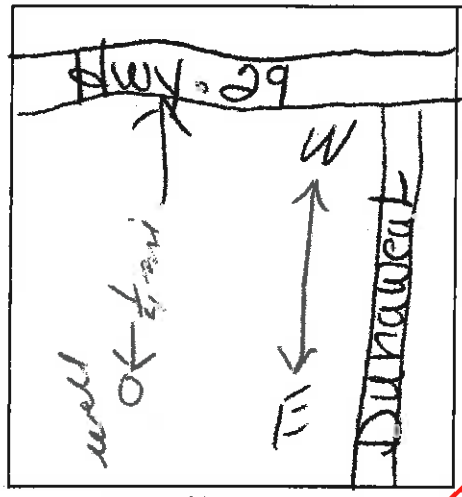
Do not fill in
No. 384910

Notice of Intent No. _____
Local Permit No. or Date _____

State Well No. _____
Other Well No. _____

(1) OWNER: Name Clos Pegase Winery
Address 1060 Dunaweal Lane
City Calistoga ZIP _____

(2) LOCATION OF WELL (See instructions):
County 28 Owner's Well Number _____
Well address if different from above Same
Township _____ Range _____ Section _____
Distance from cities, roads, railroads, fences, etc. 1/4 East of Hwy-29 on Dunaweal Lane



WELL LOCATION SKETCH

(3) TYPE OF WORK:
New Well ☒ Deepening ☐
Reconstruction ☐
Reconditioning ☐
Horizontal Well ☐
Destruction ☐ (Describe destruction materials and procedures in Item 12)

(4) PROPOSED USE:
Domestic ☐
Irrigation ☒
Industrial ☐
Test Well ☐
Municipal ☐
Other ☐
(Describe)

(5) EQUIPMENT:
Rotary ☒ Reverse ☐
Cable ☐ Air ☐
Other ☐ Bucket ☐

(6) GRAVEL PACK:
Yes ☒ No ☐ Size: #2-4
Diameter of bore 9
Packed from 55 to 220 ft.

(7) CASING INSTALLED:
Steel ☐ Plastic ☒ Concrete ☐

From ft.	To ft.	Dia. in.	Gage or Wall
0	220	5"	200

(8) PERFORATIONS:
Type of perforation or size of screen

From ft.	To ft.	Slot size
80	220	SCREEN

(9) WELL SEAL:
Was surface sanitary seal provided? Yes ☒ No ☐ If yes, to depth 55 ft.
Were strata sealed against pollution? Yes ☒ No ☐ Interval 30 40 ft.
Method of sealing Cement

(10) WATER LEVELS:
Depth of first water, if known _____ ft.
Standing level after well completion 25 ft.

(11) WELL TESTS:
Was well test made? Yes ☒ No ☐ If yes, by whom? Driller
Type of test Pump ☐ Bailer ☐ Air lift ☒
Depth to water at start of test 25 ft. At end of test 100 ft.
Discharge 30 gal/min after 3 hours Water temperature _____
Chemical analysis made? Yes ☐ No ☒ If yes, by whom? _____
Was electric log made Yes ☐ No ☒ If yes, attach copy to this report

(12) WELL LOG: Total depth 220 ft. Completed depth 220 ft.

from ft.	to ft.	Formation (Describe by color, character, size or material)
0	30'	clay
30	40'	sandy clay & boulders
40	90'	clay
90	175'	gray ash streaks of brown gray ash
175	220'	gray ash

Work started 6-5- 19 91 Completed 6-13- 19 91

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Signed _____ (Well Driller)
NAME Pullian Well Drilling (Person, firm, or corporation) (Typed or printed)
Address 2877 Piedmont Ave
City Napa ZIP 94558
License No. 348677 Date of this report 6-22-91

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

FEE 120
RECEIPT NO. 28489
BY PS

A.P.# 20-150-17
RECORD # 3328

NAPA COUNTY
DEPT. OF ENVIRONMENTAL MANAGEMENT
APPLICATION & PERMIT TO CONSTRUCT A WATER WELL

NAME Ciel Pegal Winery (Owner) ADDRESS 1060 Munaweal (Job Location)

NAME Pullum Well Drilling (Well Driller) PHONE # 2249396 ADDRESS

TYPE OF WORK New Class I PERMIT ___ New Class II PERMIT X Well Reconstruction ___ Well Destruction ___ Test Hole Date Called In 4/30/91 / 5/7/91 U.S.G.S. Map Received ___ Well Deepening ___ High Hazard ___ Low Hazard ___ Horizontal Well ___ Hand Dug ___

PROPOSED USE DOMESTIC X TEST WELL ___ IRRIGATION ___ HOT WATER ___ INDUSTRIAL X (m) 7/8/91 per owner (D.O.G. Clearance ___) MUNICIPAL ___ OTHER ___

Sewage Disposal System (existing or proposed) Public ___ Individual ___ Private X
Distance from well to any part of nearest sewage disposal system 60 LF feet.
Septic System Location Determined By: Well Driller - Ponds
Plot plan of well location received Yes County road setback 90 ft. from centerline.

WORKER'S COMPENSATION COVERAGE: (Check one of the following)
___ A certificate of current Worker's Compensation Insurance coverage is presently on file with this office.
X A certificate of current Worker's Compensation Insurance is being filed with this application.
___ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Compensation laws in California.

****

TERMS OF PERMIT

) Call at least 24 hours in advance to schedule an inspection.
) Prior to receiving a Final Clearance on the well, a copy of the Department of Water Resources "Water Well Drillers Report" (DWR-188) must be returned to our Department.
ld Wells to be Destroyed:
ther Remarks:

Brel Pullen
Signature of Applicant

Date

****

FOR OFFICE USE ONLY

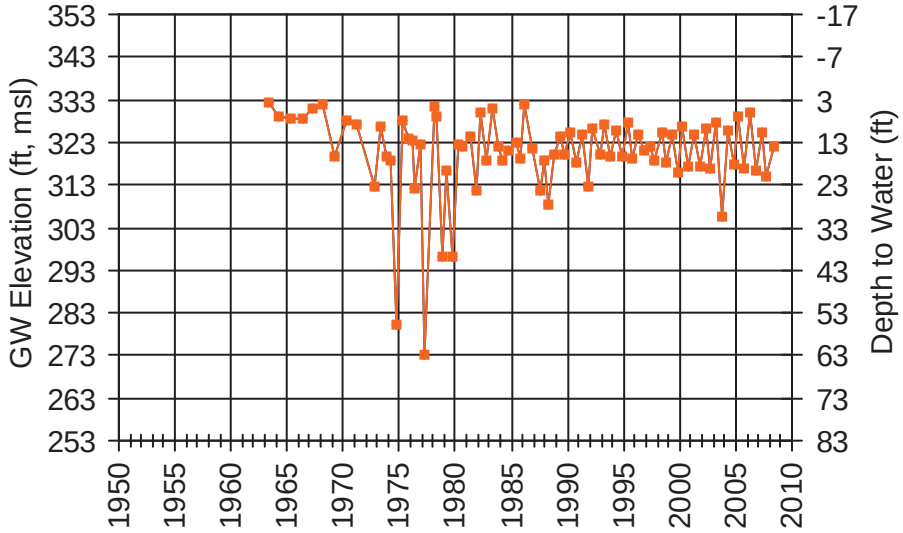
	Date	By	Remarks
City Clearance			
Pub. Works Clearance			
Pre-Inspection			
Class II Approval	5/2/91	See attached Cat. Exemption from Planning	
Permit Issued	5/7/91	CMrechel	" "
Const. Insp.	6/12/91	CMrechel	12 hole, 5 casing, seal to 54'. 3" OK annular seal
Well Log Rec.			
Final Insp.			

White-Office Yellow-Owner Pink-Contractor
EHM Form Letter#6 / 12-14-88

WellID: 08N06W06L004M RPE: 336 ft, msl

SWN: 008N006W06L004M Source: DWR

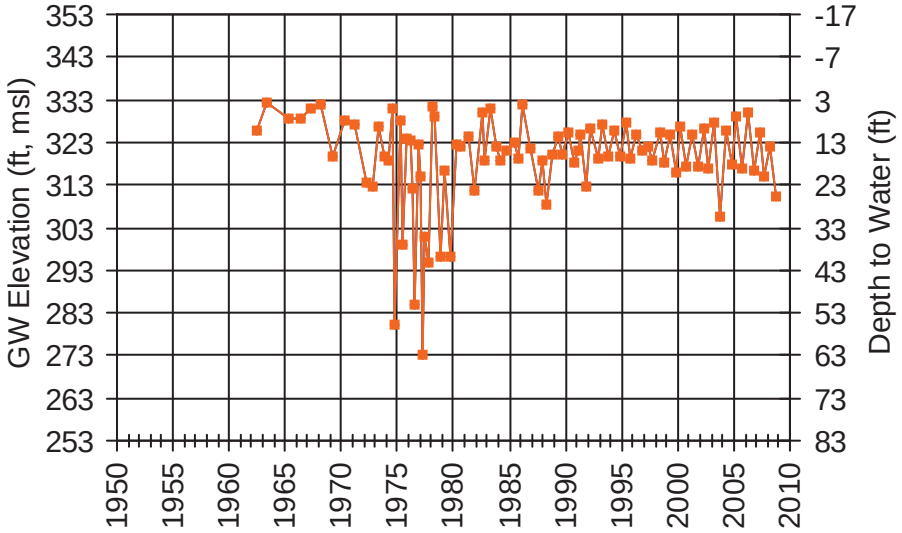
Subarea: Napa Valley Floor-Calistoga



WellID: NapaCounty-129 RPE: 336 ft, msl

SWN: 008N006W06L004M Source: NapaCounty

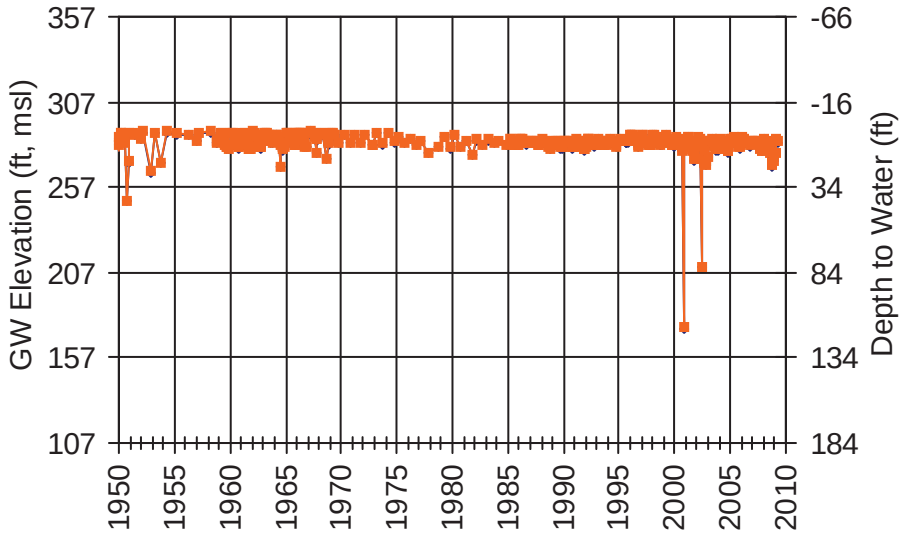
Subarea: Napa Valley Floor-Calistoga



WellID: 08N06W10Q001M RPE: 290.6 ft, msl

SWN: 008N006W10Q001M Source: DWR

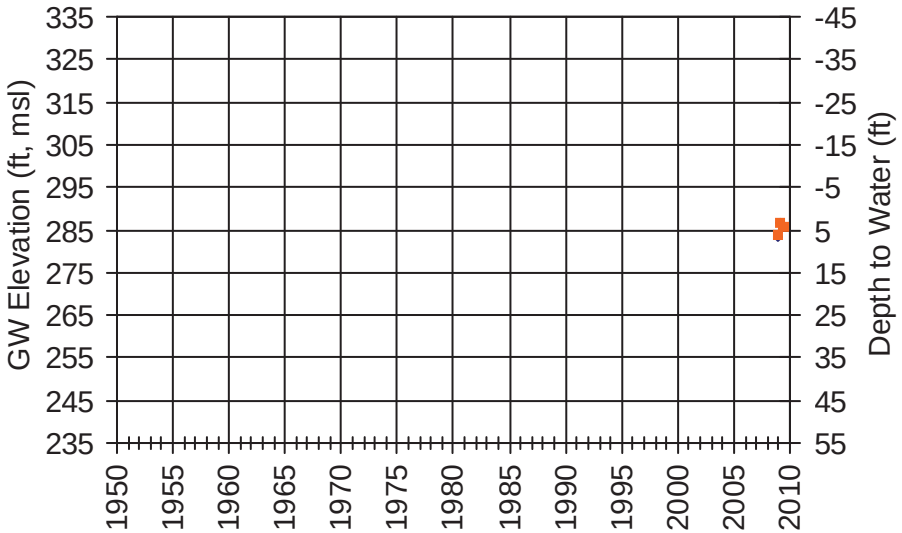
Subarea: Napa Valley Floor-Calistoga



WellID: T0605500272MW-2 RPE: 289.79 ft, msl

SWN: Unknown Source: Geotracker

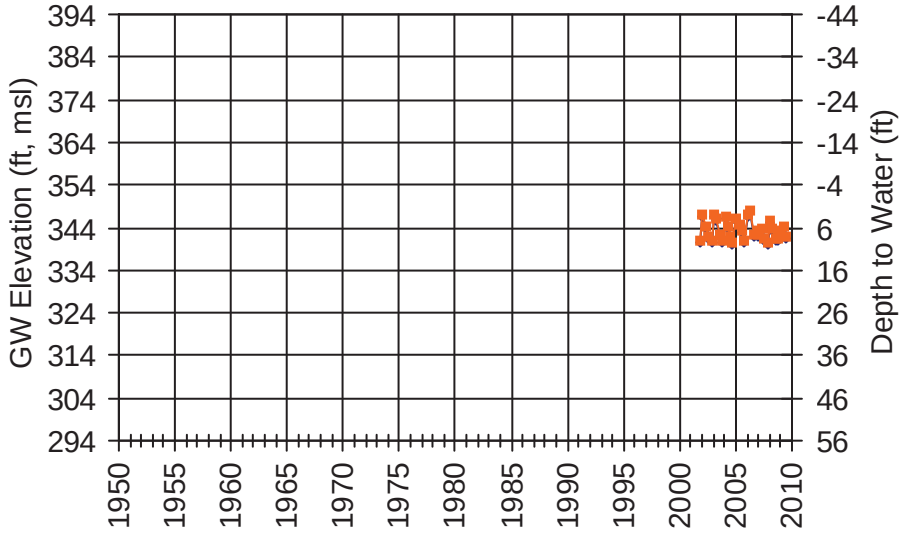
Subarea: Napa Valley Floor-Calistoga



WellID: T0605500136MW-10 RPE: 349.54 ft, msl

SWN: Unknown Source: Geotracker

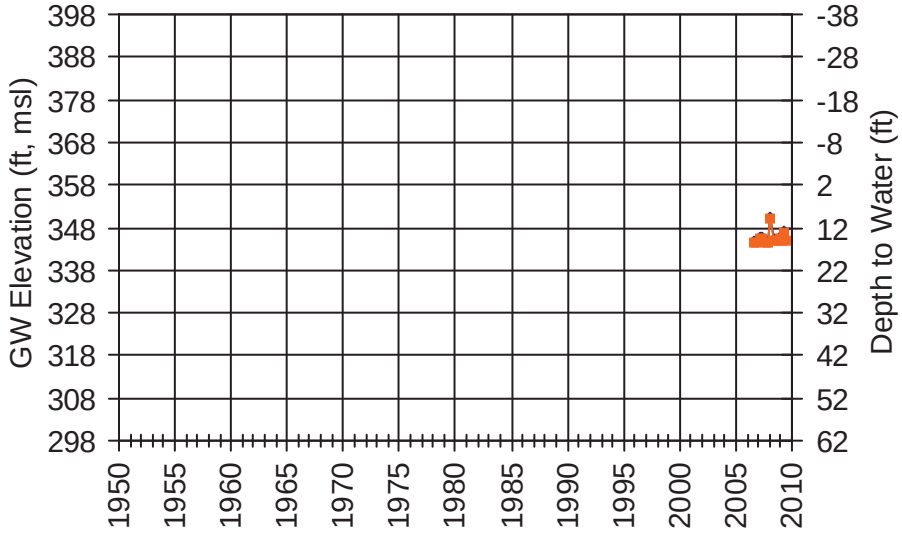
Subarea: Napa Valley Floor-Calistoga



WellID: T0605500250MW-6 RPE: 360.46 ft, msl

SWN: Unknown Source: Geotracker

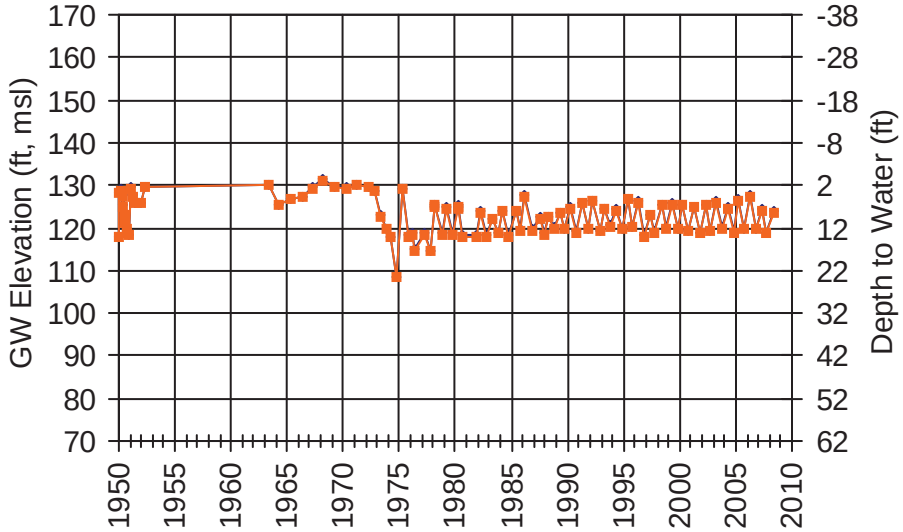
Subarea: Napa Valley Floor-Calistoga



WellID: 09N06W31Q001M RPE: 132.2 ft, msl

SWN: 009N006W31Q001M Source: DWR

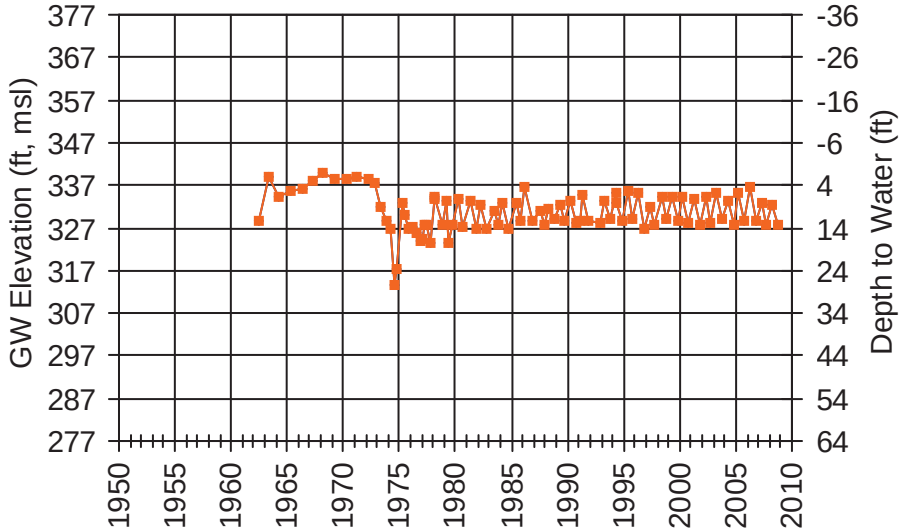
Subarea: Napa Valley Floor-Calistoga



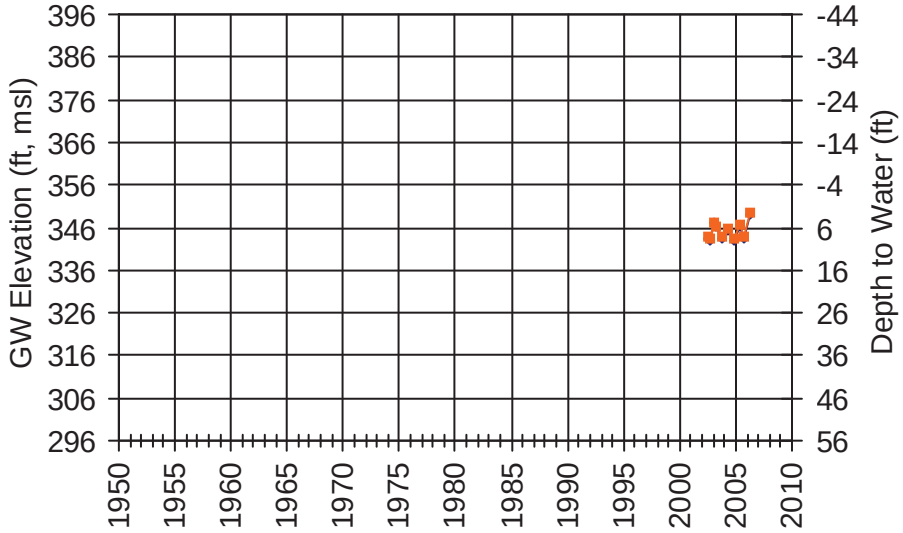
WellID: NapaCounty-128 RPE: 341 ft, msl

SWN: 009N006W31Q001M Source: NapaCounty

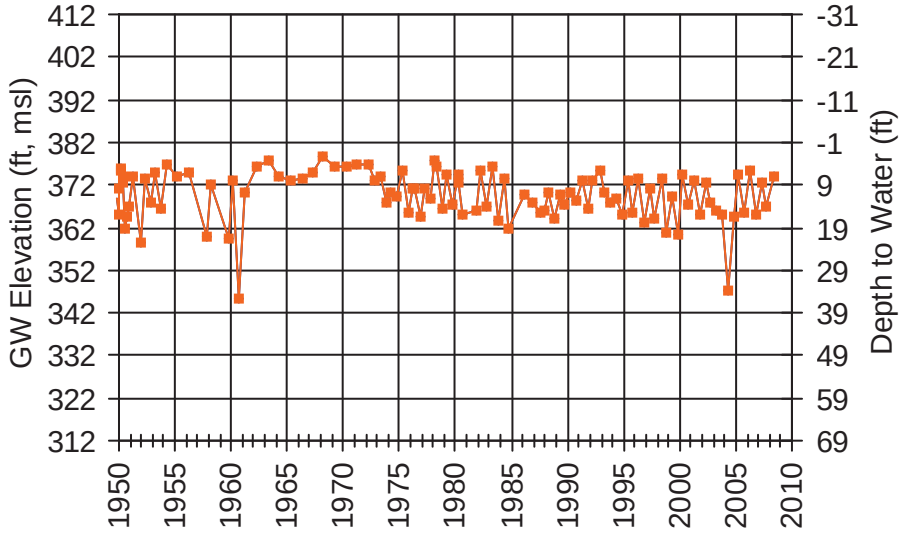
Subarea: Napa Valley Floor-Calistoga



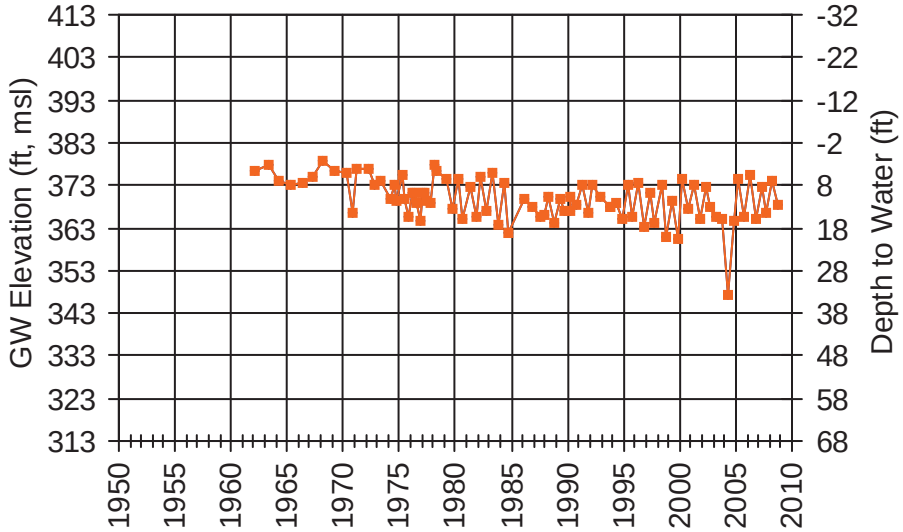
WellID: T0605500029MW-3 RPE: 351.6 ft, msl
SWN: Unknown Source: Geotracker
Subarea: Napa Valley Floor-Calistoga



WellID: 09N07W25N001M RPE: 381 ft, msl
SWN: 009N007W25N001M Source: DWR
Subarea: Napa Valley Floor-Calistoga



WellID: NapaCounty-127 RPE: 381 ft, msl
SWN: 009N007W25N001M Source: NapaCounty
Subarea: Napa Valley Floor-Calistoga



WellID: SL0605506371MW-4 RPE: 219.87 ft, msl
SWN: Unknown Source: Geotracker
Subarea: Napa Valley Floor-St. Helena