

**Water Demand Calculations**

Project Name: Mountain Peak Winery  
 Project #: 08-31  
 Project Address: 3265 Soda Canyon Road  
 Napa, CA 94558  
 APN: 032-500-033  
 Date: May-2013

Description of Item	No. of Items	Percent Usage	Water use per Item [gpd/item]	Water Demand [gpd]
<b>Winery &amp; Tasting Room</b>				
Number of Employees (Full-Time, Part-Time & Seasonal)	27	100%	15.0	405
Number of Guests (Tours & Tasting)	80	100%	3.0	240
Number of Guests (Vintner Fundraiser Event)	125	100%	5.0	625
Annual Wine Production [gal]	0			
Permitted to Crush [gal]	0			
Averaged Annual Water Demand per Day	0	100%	6.0	0
Averaged Peak Water Demand per Day	0	100%	1.5	0
<b>Landscape Irrigation</b>				
Area [acres]	0	25%	1,500.0	0
Averaged Annual Site Water Demand per Day				1,270
Averaged Peak Site Water Demand per Day				1,270

Annual Allowable Water Allotment	20.88	ac-ft	6,803,806.54	gallons
Average Daily Allowable Water Allotment based on number of working days per year	365	days	18,640.57	gpd
	260	days	26,168.49	gpd
	213.02	days	31,939.83	gpd

	Units		
Site Hours of Operation	[hours]	8	10
Flow Rate based on Averaged Annual Site Demand	[gpm]	2.65	2.12
Flow Rate based on Averaged Peak Site Demand	[gpm]	2.65	2.12
Flow Peak Factor		1.5	1.5
Peak Flows for Averaged Annual Demands	[gpm]	4.0	3.2
Peak Flows for Averaged Peak Demands	[gpm]	4.0	3.2
Estimated period of time for Peak Flow	[hours]	5	5
Estimated Water Demand for Peak Flow Time Period based on Averaged Annual Demands	[gallons]	1,191	953
Estimated Water Demand for Peak Flow Time Period based on Averaged Peak Demands	[gallons]	1,191	953

	Units	
Estimated Well Yield (Existing)	[gpm]	50
Estimated Well Yield (Proposed)	[gpm]	
Estimated Well Yield (Proposed)	[gpm]	
Estimated Well Yield (Combined)	[gpm]	50
Estimated Water Treatment Rate	[gpm]	33
Water Treatment Hours of Operation	[hours]	24
Daily Volume of Treated Water	[gallons]	47,520

Notes:

1. Water Demand Calculations are based on assumed winery facility and tasting room.
2. Annual Allowable Water Allotment from Phase One Water Feasibility Study.
3. 1 Acre-Foot = 325,822.732 Gallons
4. Peak demand is during harvest season, which includes seasonal employees