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Wastewater Feasibility Study



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Proposed Use Winery Wastewater Flow Calculations
 for the
 Benessere Vineyard Winery

Located at:
 1010 Big Tree Road
 Saint Helena, CA 94574

Date: 10/19/2016

Rev: 8/31/2017

Project # 00197

Legend

Requires Input
Automatically Calculates
Important Value Automatically Calculate
Important Value Requires Input

Hit ctrl + alt + shift + F9 when finished to recalc all formulas

Winery Waste Flow Summary

The existing winery wastewater system was designed to handle 1520 gallons per day of domestic and process wastewater flow. The proposed change in use will not exceed this design peak flow. The proposed large events will be serviced by portable toilets. The medium and smaller events will be held at times when regular visitors are not attending.

Winery Proposed Process Waste Flow Calculations

Wine Production =	44000	gal/wine/yr
Crush Duration =	60.00	days (30 -60)
Peak Process Waste Flows During Crush =	1100.00	gal/day ((1.5 x production)/crush days)
Average Process Flows (non crush) =	602.74	gal/day ((5 x production)/days in yr)
Additional Process Flow =	0.00	gal/day (usually 0)
Total Design Peak Process Waste Flows =	1100.00	gal/day

Existing & Proposed Domestic Waste Flows

Typical Crush Weekend

Number of FT Employees =	5	#
Number of PT Employees =	5	#
Number of daily visitors =	60	#
Event people count serviced by this system =	80	# (no visitors on event days)
FT employee daily domestic waste flow =	75.00	gal/day (15 g/p)
PT employee daily domestic waste flow =	40.00	gal/day (8 g/p)
Visitor daily domestic waste flow =	180.00	gal/day (3 g/p)
Event daily domestic waste flow =	400.00	gal/day (5 g/p)
Winery Dimestic Flow =	400.00	gal/day

Typical Non Crush Weekend

Number of FT Employees =	2	#
Number of PT Employees =	1	#
Number of daily visitors =	60	#
Event people count serviced by this system =	80	# (no visitors on event days)
FT employee daily domestic waste flow =	30.00	gal/day (15 g/p)
PT employee daily domestic waste flow =	8.00	gal/day (8 g/p)
Visitor daily domestic waste flow =	180.00	gal/day (3 g/p)
Event daily domestic waste flow =	400.00	gal/day (5 g/p)
Winery Dimestic Flow =	400.00	gal/day

Typical Weekday

Number of FT Employees =	5	#
Number of PT Employees =	1	#
Number of daily visitors =	36	#
Event people count serviced by this system =	80	# (no visitors on event days)
FT employee daily domestic waste flow =	75.00	gal/day (15 g/p)
PT employee daily domestic waste flow =	8.00	gal/day (8 g/p)
Visitor daily domestic waste flow =	108.00	gal/day (3 g/p)
Event daily domestic waste flow =	400.00	gal/day (5 g/p)
Winery Dimestic Flow =	400.00	gal/day

Total Winery Waste Peak Design Flows =	1500	gal/day
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Combined Winery Waste Annual Volume Calculations

Winery Combined Process & Domestic Waste Flows

Typical Crush Weekend Volumes

Number of FT Employees =	5	#
Number of PT Employees =	5	#
Number of daily visitors =	60	#
FT employee daily domestic waste flow =	75.00	gal/day (15 g/p)
PT employee daily domestic waste flow =	40.00	gal/day (8 g/p)
Visitor daily domestic waste flow =	180.00	gal/day (3 g/p)
Number of Flow Days =	60.00	gal/day
Total domestic wastewater volume =	17700	gal/year
Total process wastewater volume =	36164	gal/year
Combined Process and Domestic Volume =	53864	gal/year

Typical Non Crush Weekend Volumes

Number of FT Employees =	2	#
Number of PT Employees =	1	#
Number of daily visitors =	60	#
FT employee daily domestic waste flow =	30.00	gal/day (15 g/p)
PT employee daily domestic waste flow =	8.00	gal/day (8 g/p)
Visitor daily domestic waste flow =	180.00	gal/day (3 g/p)
Number of Flow Days =	86.00	gal/day
Total domestic wastewater volume =	18748	gal/year
Total process wastewater volume =	51836	gal/year
Combined Process and Domestic Volume =	70584	gal/year

Typical Weekday Volumes

Number of FT Employees =	5	#
Number of PT Employees =	1	#
Number of daily visitors =	36	#
FT employee daily domestic waste flow =	75.00	gal/day (15 g/p)
PT employee daily domestic waste flow =	8.00	gal/day (8 g/p)
Visitor daily domestic waste flow =	108.00	gal/day (3 g/p)
Number of Flow Days =	219.00	gal/day
Total domestic wastewater volume =	41829	gal/year
Total process wastewater volume =	132000	gal/year
Combined Process and Domestic Volume =	173829	gal/year

Special Event Visitor Volumes

	visitors	days/yr	flow/day	gallons
Large Events =	150	4	5	3000
Medium Events =	80	4	5	1600
Other =	25	24	5	3000
Other 2 =			5	0
Total Annual Event Visitor Waste Volume =	7600	gal/year		

Total annual domestic wastewater volume =	85877	gal/yr	0.26	af
Total annual process wastewater volume =	220000	gal/yr	0.68	af
Total Winery Wastewater Annual Vol =	305877	gal/yr	0.94	af

Attachment “E”

LAFCO Documentation

From: Freeman, Brendon <bfreeman@napa.lafco.ca.gov>
Sent: Monday, January 29, 2018 3:11 PM
To: cameron cmpengineering.com
Subject: RE: 00197 - Benessere Vineyard Winery Proposed Non-CommunityTransient water system

Good afternoon Cameron,

I am confirming that we did speak on the telephone about the proposed public winery water system for Benessere Vineyards Winery located at 1010 Big Tree Road, Saint Helena, CA. As mentioned over the telephone, LAFCO will not authorize the City of St. Helena to extend water service to serve the winery. Under State law, St. Helena can only provide public water service outside its jurisdictional boundary and sphere of influence in response to a documented threat to public health and safety (CA Government Code Section 56133). 1010 Big Tree Road is unlikely to be included within St. Helena's sphere of influence in the foreseeable future. Therefore, absent a documented threat to public health and safety, LAFCO would not approve an outside service extension request for this property.

Please let me know if you have any additional questions or if there is anything else I can provide that may be helpful.

Thank you,

Brendon Freeman, Executive Officer
Local Agency Formation Commission of Napa County
1030 Seminary Street, Suite B
Napa, California 94559
Office: (707) 259-8645
Mobile: (707) 363-1783
www.napa.lafco.ca.gov

From: cameron cmpengineering.com [mailto:cameron@cmpengineering.com]
Sent: Monday, January 29, 2018 3:02 PM
To: Freeman, Brendon <bfreeman@napa.lafco.ca.gov>
Subject: 00197 - Benessere Vineyard Winery Proposed Non-CommunityTransient water system

Hi Brendon,

It was good speaking with you today. When you get a chance could you respond to this email just confirming that you and I discussed the subject proposed public winery water system located at the Benessere Vineyards Winery, 1010 Big Tree Road, Saint Helena, CA (APN: 022-032-011). Also could you confirm that LAFCO has no intention of extending Saint Helena City's public water service to the subject winery. Thank you for your help in this matter.

Regards,

Cameron Pridmore PE, PLS, QSD
CMP Civil Engineering & Land Surveying
P-(707) 266-2559