DAVIES WINERY ANALYSES OF IMPACT

Water Information:

Based on this analysis, the projected peak use of process water for the project's 75,000 gallons a year wine production capacity is 2,980 gallons/day X 5 days per week = 20 X 2,980 = 59,600 gal/mo X 12 mo. = 715,200 gals/yr. = 4.134 residential houses per year @ 173,000 gal. each. (California Building Foundation standard).

The winery would employ a maximum of 15 employees on a full-time basis. An additional 30 employees would be hired during harvest in the fall of each year.

Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a towering of the local groundwater table level (e.g., the production rate of pre-exIsting. Nearby wells would drop to a level which would not support existing land uses or planned uses far which permits have been granted?

Verdict: Potentially Significant Impact Mitigated (due to pretreatment of wastewater or other factors)

Discussion:

a. The applicant's proposal to dispose of wastewater in the City's system. This could result in a significant impact as identified and discussed 111 Section 8, Hydrology and Water Quality. Adherence to the Mitigation Measure 1 in the Hydrology and Water Quality section of this Initial Study will ensure this impact will be less-than-significant.

b. The applicant proposes minor upgrades to the wastewater system in the form of private lift stations to dispose of secondarily treated effluent to reach the City's wastewater treatment plant on the southeast side of town. Proposed improvements would either be on-site or within public rights-of-way no impacts would result with respect to this topic.

c. Water to support increased operations of the winery expansion would come from groundwater sources. Under current drought conditions, use of groundwater could result in a significant impact. See Mitigation Measure 2.

d. Water for the project would be supplied by use of City potable water for employee and visitors. Winery process water would be provided by an approved on-site well. See the discussion in the Hydrology section regarding the stability of the local aquifer.

e. The project would not create any additional landfill demands. Trash and recycling receptacles will be located throughout the park but are anticipated to generate little in terms of additional solid waste.

f. Refer to (e) above.

Conclusion:
This project would have a less than significant impact with adherence to mitigation measures.

Traffic Analysis: p. 1 of Traffic Analysis, Introduction:

"The traffic analysis is based on discussions with City staff and includes evaluation of the following issues: Existing and future weekday and weekend peak hour operations at the Winery access driveways and Main Street intersections at Grayson Avenue and Pope Street; Near-term (Year 2020) traffic conditions reflecting other approved/pending projects in the study area; Long-Term Cumulative (Year 2030) (conditions based on the St. Helena General Plan; Project trip generation relative to proposed winery production, employment and visitors; and vehicle access at the project driveways on Main Street and Grayson Avenue."

TABLE 1
EXISTING HARVEST WITHOUT PROJECT CONDITIONS: PEAK HOUR INTERSECTION LOS

Intersection	Control Type	Wkday. AM LOS	Wkday. AM Delay	Wkday. PM LOS	Wkday. PM Delay	Saturday Peak LOS	Saturday Peak Delay
Main Street / Pope Street – Mitchell Dr.	SIGNAL	D	39.4	D	40.1	D	36.4
Main Street / Grayson Avenue	MSSC	eb: F nb lt: B	55.5 11.3	F B	59.0 11.6	D B	28.2 10.8
Main Street / Project Driveway	MSSC	eb: C nb lt: B	18.6 10.6	A A	0.0 0.0	A A	0.0 0.0
Grayson Avenue / Project Driveway	MSSC	sb: A eb lt: A	-	A	-	A	-

Legend: MSSC - Minor-Street Stop Control.
Intersection LOS based on Highway Capacity Manual operations methodology and yields a vehicle delay in seconds.
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Main Street / Project Driveway	MSSC	eb: C nb lt: B	18.6 10.6	A A	0.0 0.0	A A	0.0 0.0
Grayson Avenue / Project Driveway	MSSC	sb: A eb lt: A	-	A	-	A	-

Legend: MSSC - Minor-Street Stop Control.
Intersection LOS based on Highway Capacity Manual operations methodology and yields a vehicle delay in seconds.
The existing Grayson Avenue/Project Driveway intersection is closed to vehicle access.

Project Components -- proposed use. p. 9, top.

The proposed use modification would consist of the following vehicle trip generating components:

- Expanding the existing winery production from 20,000 gallons per year to 75,000 gallons. All grapes/juice would be on-haul from offsite.
- Employment: 15 full-time employees consisting of production, administration, and tasting/tours personnel (Up to 30 additional part-time employees during harvest season.)
- Daily visitation of 160 visitors (no appointment) for wine tastings and tours (I0:00am-6:00pm daily).
- Marketing events throughout the year, comprised of Food & Wine Pairing Events (lunches and dinners served with wines):
  Maximum of 24 per year with up to 50 people per event;
  Wine Club Release Events: Maximum of 6 events per year with up to 200 people per event plus maximum of 6 events per year with up to I00 people per event; Wine Auction: Maximum of 2 events per year with up to 125 people per event.
  The tours/tasting visitation of 160 people would be reduced on days with larger marketing events.

The proposed project includes reconfiguring the site to include reconstruction of the existing building,

construction of a new building, and other infrastructure improvements such as a redesigned parking area. The project would also consist of wastewater being trucked offsite approximately two times per month during non harvest (and approximately 2-3 times per week during harvest).

The trip generating components arc based on information provided by the project applicant and City personnel in combination with standard trip generation rates utilized for wineries in Napa County. (Napa County Conservation, Development, and Planning Department Use Permit trip rates).

Based on the proposed production, employment, and visitor levels, the project was calculated to generate 9 AM weekday peak hour trips, 33 weekday PM peak hour trips, and 27 Saturday peak hour trips. Since the existing winery generates 2 AM peak hour trips, the total winery trip generation (existing winery plus project) would consist of II /AM weekday peak hour trips, 33 PM peak hour trips, and 27 Saturday peak hour trips.

Harvest Friday AM Peak Hour Traffic:	
Existing:	
Visitors: 0	= 0
Employees: 2	= 1 (1 in, 0 out)
Trucks: 1	= 1 (0 in, 1 out)
	= 2 (1 in, 1 out) Existing
Project:	
Visitors: 160 (0 pk. hr.)	= 0
Employees full-time: Production 6 (50% pk. hr.)	= 3 (3 in, 0 out)
Admin 4 (50% pk. hr.)	= 2 (2 in, 0 out)
Tours/Tasting 5 (0 pk. hr.)	= 0
Employees part-time: Production 30 (0 pk. hr.)	= 0
Trucks: Production 75,000 gallons (1 pk. hr.)	= 2 (1 in, 1 out)
Trucks: Grape Delivery (2 pk. hr.)	= 4 (2 in, 2 out)
Trucks: Wastewater Collection: (2-3 trucks/week; 0 pk. hr.)	= 0
	11 (8 in, 3 out) Total
	– 9 (7 in, 2 out) Above Existing*
	= 9 (7 in, 2 out) New minus Pass-by**
Harvest Friday PM Peak Hour Traffic:	
Existing:	
Visitors: 0	= 0
Employees: 2	= 0
Trucks: 0	= 0
	0 Existing
Project:	
Visitors: 160 (2.6/car, 20% pk. hr., 30% pass-by)	= 25 (12 in, 13 out) total
70% new	[18 (9 in, 9 out) new]
30% pass-by	[7 (3 in, 4 out)] pass-by
Employees full-time: Production 6 (50% pk. hr.)	= 3 (0 in, 3 out)
Admin 4 (50% pk. hr.)	= 2 (0 in, 2 out)
Tours/Tasting 5 (50% pk. hr.)	= 3 (0 in, 3 out)
Employees part-time: Production 30 (0 pk. hr.)	= 0
Trucks: Production 75,000 gallons (0 pk. hr.)	= 0
Trucks: Grape Delivery (0 pk. hr.)	= 0
Trucks: Wastewater Collection (0 pk. hr.)	= 0
	= 33 (12 in, 21 out) Total
	– 33 (12 in, 21 out) Above Existing*
	= 26 (9 in, 17 out) New minus Pass-by**

*Represents new trips at project driveways.
**Represents new trips added to street network.

TABLE 3
TRIP GENERATION:
PROPOSED DAVIES VINEYARDS WINERY PROJECT

PROJECT TRIPS Continued

Harvest Saturday Peak Hour Traffic:	
Existing:	
Visitors 0	= 0
Employees 0	= 0
Delivery Trucks 0	= 0
	0 Existing
Project:	
Visitors: 160 (2.8/car, 20% pk. hr., 30% pass-by)	= 23 (11 in, 12 out) total
	[16 (8 in, 8 out) new]
	[7 (3 in, 4 out)] pass-by
Employees full-time: Production 5 (20% pk. hr.)	= 2 (1 in, 1 out)
Admin 0	= 0
Tours/Tasting 6 (20% pk. hr.)	= 2 (1 in, 1 out)
Employees part-time: Production 30 (0 pk. hr.)	= 0
Trucks: Production 75,000 gallons	= 0
Trucks: Grape Delivery 0	= 0
Trucks: Wastewater Collection	= 0
	= 27 (13 in, 14 out) Total
	= 27 (13 in, 14 out) Above Existing*
	= 20 (10 in, 10 out) New minus Pass-by**

*Represents new trips at project driveways.
**Represents new trips added to street network.

Total visitation, employee and truck data provided by project applicant as provided in initial study and previous traffic study. Trip rate calculations based on County of Napa, Conservation, Development, and Planning Department, Use Permit Traffic Generation Characteristics, 2012.

ST. HELENA SIGNIFICANCE CRITERIA:

The significant criteria applied in this study are based on the City of St Helena's General Plan Circulation Element documentation for road and intersection operations as outlined in the previous traffic report for the winery (*could not find this report*). Based on this information, the significance criteria are provided as follows:

[Level of Service = LOS]

The City's current LOS standard is LOS D for signalized intersections on Main Street (SR 291128) and LOS C elsewhere. Based on City of St Helena and CEQA standards, a project's impact would be considered significant if any of the following conditions occur:

- If operating conditions at a signalized intersection on Main Street (SR 29/1 28) deteriorate from LOS D without the project to LOS E or F with the project.
- If operating conditions at a signalized intersection on Main Street (SR 29/128) operating at LOS E without the project deteriorate to LOS F with the project.
- If the average intersection delays at a signalized intersection operating at LOS E or F without the project increases by more than five seconds with the project.

- If the operating conditions at an un-signalized intersection on Main Street (SR 29/128) operating at LOS D or better without the proJect degrade to LOS E or F with the project and the volumes would qualify for signalization under the CalTrans peak hour volume warrants for signalization.
- If operating conditions at an un-signalized intersection not on Main Street operating at LOS C or better without the project degrade to LOS D, E, or F with the project and the volumes would qualify for signalization under the CalTrans peak hour volume warrants for signalization.
- If average delay at an un-signalized intersection on Main Street (SR 29/128) operating at LOS E or F without the project increases by five or more seconds with the project and the volumes qualify for signalization under the CalTrans peak hour volume warrants for signalization.
- If average delay at an un-signalized intersection not on Main Street operating at LOS D, E. or F without the project increases by five or more seconds with the project and the volumes qualify for signalization under the CalTrans peak hour volume warrants for signalization.
- If the traffic volumes at an un-signalized intersection meet the peak hour signal warrant thresholds, then a significant impact is considered if volumes increase by one percent with the project.
- For vehicle queuing, if the lane storage length sufficiently accommodates the 95'" percentile vehicle queue length without the project and the vehicle queue length would increase to exceed the available storage with the project.
- If the 95th percentile queue length exceeds the available storage length without the project and the turning movement volume would increase by three percent or more with the project and increase the total intersection volume by one percent.

TABLE 4
EXISTING PLUS PROJECT CONDITIONS: PEAK HOUR INTERSECTION LOS

	Weekday AM		Weekday PM		Saturday Peak	
Intersection	Existing	Existing + Proj.	Existing	Existing + Proj.	Existing	Existing +Proj.
Main Street / Pope Street - Mitchell Dr.	D 39.4	D 39.6	D 40.1	D 40.7	D 36.4	D 36.8
Main Street / Grayson Avenue	eb: F 55.5 nb lt: B 11.3 signal: -	F 58.0 D 11.3 B 15.7	F 59.0 B 11.6 -	F 75.7 B 11.7 B 14.2	D 28.* B 10.8 -	D 30.9 B 10.9 A 7.2
Main Street / Project Driveway	eb: C 18.6 nb lt: B 10.6	C 18.7 B 10.6	A 0.0 A 0.0	A 0.0 A 0.0	A 0.0 A 0.0	A 0.0 A 0.0
Grayson Drive / Project Driveway	A - A -	B 11.0 A 0.0	A - A -	B 10.5 A 0.0.	A - A -	A 9.3 A 0.0

Intersection LOS based on Highway Capacity Manual operations methodology and yields a vehicle delay in seconds.
The Main Street/Grayson Avenue intersection is scheduled to be signalized.
The existing Grayson Avenue driveway is closed to vehicle access.

TABLE 5
NEAR-TERM PLUS PROJECT CONDITIONS: PEAK HOUR INTERSECTION LOS

	Weekday AM		Weekday PM		Saturday Peak	
Intersection	Near-Term	N.T. + Proj.	Near-Term	N.T. + Proj.	Near-Term	N.T. +Proj.
Main Street / Pope Street - Mitchell Dr.	D 46.2	D 46.5	E 62.8	E 64.1	D 49.3	D 49.8
Main Street / Grayson Avenue	C 24.9	C 25.4	B 14.5	B 17.2	A 9.1	A 10.0
Main Street / Project Driveway	eb: C 22.0 nb lt: B 11.5	C 22.1 B 11.5	A 0.0 A 0.0	A 0.0 A 0.0	A 0.0 A 0.0	A 0.0 A 0.0
Grayson Drive / Project Driveway	A - A -	B 11.5 A 0.0	A - A -	B 10.5 A 0.0	A - A -	A 9.3 A 0.0

Intersection LOS based on Highway Capacity Manual operations methodology and yields a vehicle delay in seconds.
The Main Street/Grayson Avenue intersection is scheduled to be signalized.
The existing Grayson Avenue driveway is closed to vehicle access.

CUMULATIVE YEAR 2030 PROJECTIONS:
The long-term cumulative year 2030 conditions were derived from the previous winery study cumulative volume projections, The Year 2030 volumes reflect projected traffic growth with buildout of the City's General Plan. The long-term cumulative volumes include the Year 2020 harvest season volumes calculated for the near-term approved development scenario plus an added growth rate of 0.75 percent per year to year 2030 (I0 years).

TABLE 6
YEAR 2030 PLUS PROJECT CONDITIONS: PEAK HOUR INTERSECTION LOS

	Weekday AM		Weekday PM		Saturday Peak	
Intersection	Year 2030	2030 + Proj.	Year 2030	2030 + Proj.	Year 2030	2030 +Proj.
Main Street / Pope Street - Mitchell Dr.	E 56.0	E 56.4	F 81.5	F 82.8	E 61.7	E 62.6
Main Street / Grayson Avenue	C 33.5	C 34.5	C 20.2	C 22.3	B 10.6	B 12.2
Main Street / Project Driveway	eb: C 24.2 nb lt: B 12.0	C 24.3 B 12.0	A 0.0 A 0.0	A 0.0 A 0.0	A 0.0 A 0.0	A 0.0 A 0.0
Grayson Drive / Project Driveway	A - A -	B 11.8 A 0.0	A - A -	B 10.7 A 0.0	A - A -	A 9.4 A 0.0

Intersection LOS based on Highway Capacity Manual operations methodology and yields a vehicle delay in seconds.
The Main Street/Grayson Avenue intersection is scheduled to be signalized.
The existing Grayson Avenue driveway is closed to vehicle access.

Marketing Event Traffic:
The following types of marketing events are proposed for the project:

- Food & Wine Pairing Events (lunches and dinners served with wines): Maximum of 24 per year with up to 50 people per event;
- Wine Club/Release Events: Maximum of 6 events per year with up to 200 people per event, plus maximum of 6 events per year with up to I00 people per event;
- Wine Auction: Maximum of 2 events per year with up to 125 people per event.

Frequency in Average Month			
Week One	Week Two	Week Three	Week Four
Pairing Event (50 people twice a month)		Pairing Event (50 people twice a month)	Wine Club Release Events (100 -200 people, once a month)
Wine Auctions, 2 events per year with 125 people.			

The tours/tasting visitation or 160 people would be reduced on days with larger marketing events.

Based on standard vehicle occupancy and trip rates, the events would be expected to generate the following trips:
200 people: 164 trips (82 in, 82 out) [200 visitors =142 trips: 8 staff=16 trips; 3 trucks = 6 trips]
125 people: I06 trips (53 in, 53 out) [125 visitors = 90 trips: 6 staff=12 trips; 2 trucks=4 trips]
I00 people: 86 trips (43 in. 43 out) [I00 visitors= 72 trips; 5 staff= I0 trips; 2 trucks= 4 trips]
50 people: 44 trips (22 in, 22 out) [50 visitors= 36 trips: 3 staff= 6 trips: I truck = 2 trips]

LEVEL-OF-SERVICE CRITERIA FOR INTERSECTIONS

LEVEL OF SERVICE	TYPE OF FLOW	DELAY	MANEUVERABILITY
A	Stable Flow	Very slight delay. Progression is very favorable, with most vehicles arriving during the green phase not stopping at all.	Turning movements are easily made, and nearly all drivers find freedom of operation.
B	Stable Flow	Good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted ¦ within groups of vehicles.
C	Stable Flow	Higher delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted
D	Approaching Unstable Flow	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles of stopping declines. Individual cycle failures are noticeable.	Maneuverability is severely limited during short periods due to temporary back-ups.
E	Unstable Flow	Generally considered to be the limit of acceptable delay. Indicative of poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.	There are typically long queues of vehicles waiting upstream of the intersection.
F	Forced Flow	Generally considered to be unacceptable to most drivers. Often occurs with over saturation. May also occur at high volume-to-capacity ratios. There are many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.

Planning Problems from the Residents' Perspective:

1. Most of the studies and research on traffic was taken from studies made 1 - 2 years ago without considering the surge in tourism and tasting rooms that is now driving an even worse traffic situation than is being used for this application. The studies are outdated.
2. There is no cumulative impact given which includes projects that have already been given approval such as the Crocker-Starr Winery, the Freidrich hotel and planned new complex in that location, the Grandview project which has a restaurant included and the proposed Doumani project which has a restaurant and spa included and has received tentative Council approval to proceed.
3. The traffic studies used factually state, even a year ago, that the degradation of one more traffic category would create a significant impact on Main St. and adjacent streets. It is reasonable to assume that with cumulative projects, the LOS on Main St. would be F, even with the signal at Grayson.
4. It is unlikely that a signal at Grayson would be enough of a single factor to mitigate all the cumulative effects of the degradation of traffic in the near future, let alone to 2030 when the buildout of the General Plan is anticipated.
5. The wastewater generated and the City water used is also based on a stand-alone assessment and does not identify the costs to the City and the residents of the cumulative use of all projects of the wastewater treatment capacity or the use of City water. Tourists are not disposed to grasp the importance of our lack of water and do not conserve. The luxury market also does not conserve. All of these projects are directed at the luxury tourism market.
6. There is no cost/benefit analysis for the residents here. Many logically anticipate having to endure greater and greater restrictions and higher costs while wine corporations, absentee owners and casual visitors use greater proportions of the diminishing supply of local resources without the return on investment (ROI) which is expected to leave town.