

In response to these concerns an effort was begun several years ago to develop a DWDO that would regulate winery development and expansion in a manner that avoided potential negative environmental effects. After initial efforts by County staff, a group of experts representing the vintners and grape growers of the County worked on the Ordinance.

The Board of Supervisors passed a moratorium on approval of wineries within the Napa Valley watershed which went into effect on August 9, 1988. During the period prior to implementation of the moratorium, approximately 59 applications for new and expanded wineries were received. During the moratorium, all but five of these applications have been acted upon.

On February 28th, 1989, The Board of Supervisors accepted a DWDO and determined the need for the preparation of an Environmental Impact Report (EIR) on the DWDO. Subsequently, the MEA format has been changed to a Wine Industry Growth Program EIR (WIGPEIR). The EIR is intended to evaluate the direct and cumulative significant effects of the DWDO on Napa County. The WIGPEIR, a separate document being prepared for the County, will evaluate the level of industry growth during the past 20 years and identify potential impacts and mitigation measures associated with growth of the wine industry for the next 20 years.

D. OBJECTIVES

The written intent of the DWDO is to provide the basis for future development and expansion of wineries to occur in an orderly and environmentally responsible manner. Because the wine industry is the single largest industry in Napa County, wineries have had a significant impact on the County's economic base. Unlimited growth could have a potentially negative effect on the overall quality of life that is an integral part of Napa County. To address this concern, the Napa County Board of Supervisors has under consideration the DWDO. The DWDO does not address industry growth.

The DWDO is intended to provide an improved definition of winery uses for Napa County. This improved definition is, in turn, intended to reduce potential secondary environmental impacts of winery development including traffic congestion, reduced air quality, visual impacts upon scenic highways, and a variety of more localized environmental effects.

The full text of the DWDO is provided in Appendix C.

E. TECHNICAL DESCRIPTION

The following text summarizes the key provisions of the DWDO (the following paragraphs on Findings and Intent are directly from the DWDO and are not conclusions reached in this document):

Findings

- The unique quality of the County's agricultural lands and the importance of wineries and vineyards to the County's economy are threatened by cumulative development and related loss of agricultural lands.
- Existing uses and activities at existing wineries are recognized as legal uses.
- Parcel size limitations are needed to limit the number of wineries and thereby reduce traffic and other environmental impacts.

Intent

The DWDO is intended to protect agriculture and open space.

Following is a list of provisions of the DWDO and an interpretation of their effects.

1. Small Winery Use Permit Exemption (SWE) Elimination

- Eliminates the current provision exempting "small wineries" (i.e., wineries with an annual production capacity of 20,000 gals/yr. or less) from the requirement to obtain a use permit prior to construction.

Under this provision, there would no longer be an incentive to start with a small winery and gradually increase production capacity.

It is predicted that loss of this incentive would increase the average production capacity, and therefore the size, of new wineries built in the future. This increase is anticipated, in turn, to reduce the total number of new wineries built. Fewer of these larger wineries would be required to meet the future demand for wine.

Implementation of this DWDO provision could also make expansions of existing small wineries more difficult, for all such expansions would come under use permit control. Wineries under the Small Winery Use Permit Exemption are permitted retail sales, but not permitted to operate visitor-serving facilities.

By eliminating this exemption, the DWDO allows for these uses at small wineries. Therefore, while in the future there will be fewer small wineries built, a larger percentage of them will have visitor-serving facilities. In fact, however, several wineries previously approved under this program have instituted tours, tastings, and visitor services without a permit. To the extent these non-permitted uses already exist, the impact of this clause of the DWDO will be less.

With this proposed change in the Zoning Ordinance, wineries established under this Use Permit exemption will become legal non-conforming uses. There are currently 69 approved SWE wineries, 15 of which are in the process of construction.

2. Seventy-five Percent (75%) Napa County Source Rule

- Requires that 75% the grapes processed at a new winery be grown in Napa County.
- Requires that 75% of the grapes used to make that portion of an existing wineries production produced as a result of an expansion outside of the Winery Development Area be grown in Napa County.

Because of the existing high level of utilization of Napa grapes (64%) the forecasted decrease in grape imports (from 36 to 31%), and the BATF (Bureau of Alcohol, Tobacco and Firearms) labeling regulations requiring 75% grapes grown within the appellation, this provision of the proposed DWDO is not expected to have a major impact on total Napa County wine production.

However, this action would discourage new wineries that produce primarily popular premium wine, such as Sutter Hill and Round Hill, from locating on agriculturally-zoned land. Typically these popular premium wineries¹ import higher percentages of out-of-County grapes than super/ultra premium wineries². To maximize economies, popular premium wineries would attempt to locate in commercially- or industrially-zoned areas, predominantly in the Airport Industrial Area and the cities of Napa and St. Helena. The remainder of the demand for this type of wine would be met by larger expansion of existing popular premium wineries.

The effect of this provision on wineries producing mainly super/ultra premium wines is expected to be minimal. The labeling laws and market

¹ Popular premium wine: premium wine with a retail sales price of between \$3.00 and \$7.00 per 750ml bottle.

² Super/ultra premium wine: premium wine with a retail sales price of over \$7.00 per 750ml bottle.

considerations already effectively make it a necessity that at least 75% Napa County grapes be used. The one exception is in the Carneros Subregion, where the use of grapes from the Sonoma County portions of the Carneros Appellation would be restricted. Quantification of this purely local effect was beyond the scope of the current study.

3. Visitor-Serving Use Expansion

- Allows with a use permit a variety of visitor serving uses at new and existing wineries that are not authorized under the existing zoning ordinance definition of a winery.
- Allows upon grant of an administrative permit up to four general public oriented promotional events per year at both existing and new wineries. Each event may last up to 3 days.

The predicted result will be the proliferation of "multi-use wineries". Multi-use wineries are wineries with substantial facilities or activity programs likely to attract visitors in general rather than just the wine-drinking public. Such facilities/activities include aerial tramways, art museums and outdoor art displays, cooking schools, concerts, etc. Legalizing the operation of what are essentially commercial facilities/activities within the agriculturally-zoned portions of the County will promote additional similar development. These uses are viewed by the industry as an important marketing tool. Under this Ordinance they also could serve as an important source of revenue. Once wineries recognize the potential financial benefits of these uses, more wineries will utilize them. Furthermore, competition will encourage other wineries to institute similar uses if they are to maintain their share of the visitor market.

Proliferation of multi-use wineries could, in turn, increase the total number of people visiting Napa County annually (see Growth Induction section for further discussion).

4. Grandfathering Clause

- Provides a "grace period" whereby existing wineries will have 18 months following adoption of the WDO to apply for a use permit for uses previously "not legally authorized".

The predicted result would be the submission of over one hundred applications from existing wineries to (1) allow for public tours and tasting, (2) hold an unlimited number of public/promotional events, (3) install picnic areas, and/or (4) sell wine-related items. On a short-term basis, this flood of applications would create serious administrative problems and slow down the processing of other land use applications.

In the long-term, this action would encourage the opening of more tasting rooms, the holding of more promotional events (see previous item), the creation of more picnic areas, and the selling of more souvenirs than would otherwise be the case. While the effects of this increased visitor activity are likely to be significant from the standpoint of an individual neighborhood, it would not be significant on a Countywide or even a sub-regional or sub-area basis, for the total number of people visiting Napa County and its various regions is not expected to change. However, the opportunities presented under the 18-month "grandfather" clause would be inconsistent with the intent of agricultural land use in the General Plan. The reader is referred to the Land Use section for a complete discussion.

5. Public Tours/Tasting Elimination

- Prohibits public tours/tasting at all new wineries.

The predicted result will be minimal, for the intensity of visitor use at new wineries is not expected to be substantially lessened by this provision. The proposed DWDO would allow wineries to continue holding private tours and tasting, as well as public and private promotional events. More importantly, private tours and tasting can, and often do, attract as many visitors as public tours and tasting.

6. Minimum Size Parcels

- Prohibits expansions of existing wineries on parcels less than 1 acre in size.
- Prohibits construction of new wineries on parcels less than 10 acres in size.

Imposition of the minimum parcel sizes would have a minimal effect on the wine industry. The minimum size restrictions for existing wineries apply only to about a dozen wineries. Moreover, in the case of most of these wineries, a simple administrative lot line adjustment can increase the acreage of the winery parcel involved to over one acre, thus allowing winery expansion.

The minimum parcel size for future wineries is not expected to have much effect either. There are thousands of parcels larger than 10 acres within Napa County. This restriction will not substantially limit the supply of potential winery parcels available, and thus will not impact the number of new wineries built.

7. Expansion Within Winery Development Area

- Provides a process for defining a "Winery Development area" and limiting the physical expansion of existing wineries within this area.

The predicted results will be minimal. While the over-building of certain parcels may be restricted somewhat, the limits in general allow substantial intensification of use above what is now typical. Moreover, because the expansion limit is based on the percentage of the parcel covered by impervious surface, the limit can be easily circumvented by creating temporary impervious surface (e.g. oil).

8. Production Expansion Limitations

- Limits production expansions at existing wineries on parcels less than 40 acres to a maximum of 2,400 gallons per net acre of parcel.
- Limits production at new wineries on parcels less than 40 acres to 2,400 gallons per net acre of parcel. Net acre is defined as the total size of the parcel less winery area and wastewater pond coverage.

This provision would severely limit or in some instances prohibit production expansions at existing wineries located on parcels smaller than 40 acres, which includes approximately 70% of all wineries in the County. This will result in an incentive for the wineries located on parcels less than 40 acres in size without production-limiting use permits to enlarge visitor-serving facilities, since it may be the only way they can add new revenue sources.

Wineries on parcels larger than 40 acres would have no expansion limit. Accordingly, these larger wineries will be the primary location for future production expansion under the DWDO.

9. Winery Building Setback Increases

- Increases winery setbacks for new wineries to 150 feet from roadway centerline plus 2 feet for each additional foot of height above 25 feet.
- Establishes the existing building setback as the minimum setback for expansions of existing wineries located closer than 150 feet from the roadway centerline.

The predicted result will be minimal. The current setback on most of the major roads in the County is already 90 feet. An additional setback of 60 feet will not significantly lessen the perceived height of a 25-foot-high building. Moreover, the visual impact of a building is as strongly related to the area of the face of the building fronting the road and the details of its design as it is to the building's height. The proposed DWDO has no provisions that deal with these factors. Finally, this provision does not address other important visual aspects of a winery such as the location of crush pads and other outdoor work areas, setback of signs and outdoor art displays, setback and landscaping of parking lots, etc.

10. Accessory Use Limitations

- Limits structures accessory to the production facility to a maximum of 40% of the size of the production facility.

The predicted result will be minimal. Currently, the largest visitor facilities being built in conjunction with new wineries are less than 15% of the size of the production facility involved. This provision would therefore be ineffective in limiting the gradual commercialization of Napa County wineries, for it would allow almost a three-fold increase of the current intensity of visitor use.

F. CONFORMANCE WITH RELEVANT PLANS AND POLICIES

The current Napa County General Plan was adopted by the Board of Supervisors June 7, 1983, with amendments through December, 1988. The 11 elements comprising the General Plan contain numerous goals and policies that become guidelines in implementation of long-range planning policies.

As outlined in the Introduction ".....The Napa County General Plan summarizes County Planning Goals and Objectives; and establishes a balance between diverse, and in some cases, conflicting programs. It helps maintain the compatibility of economic and environmental objectives and provides guidance for the allocation of resources and the preservation of important County values....."

A summary of the general goals contained in the Plan can be described as a Statement of Intent to:

PRESERVE AGRICULTURE, AND CONCENTRATE URBAN USES IN EXISTING URBAN AREAS....."

The General Plan goes on to state: ".....ensure the long term protection and integrity of those areas identified in the General Plan as agricultural, open space or undevelopable....(as well as to) stimulate the development of

those areas identified in the General Plan for residential, commercial and industrial (uses).....".

In closing, the Introduction states: ".....while the Plan is a flexible guide, it is nonetheless legally binding; development proposals such as land subdivisions and use permits must, by State law, be considered in the light of its contents....." In defining how the General Plan is implemented, Napa County has quoted from the State's administrative guidelines that ".....an action, program, or project is consistent with the general plan if it, considering all its aspects, will further the objectives and policies of the general plan and not obstruct their attainment.....".

Language in the DWDO which permits further expansion into the Agricultural Resource area or provides a mechanism to legalize illegal uses is inconsistent with the intent of the Napa County General Plan. To adopt the DWDO as proposed the County would be required to consider a General Plan Amendment that would modify the Goals and Policies contained in the Land Use Element.

Napa County Zoning Ordinance

The proposed project would replace current definitions and requirements of the zoning ordinance. Because it is a change to the existing ordinance, consistency is not an issue. However, as the DWDO itself becomes a vehicle to implement the General Plan, it would be inappropriate to adopt any amendment that would not implement the Goals and Policies of the General Plan.

G. RELATION TO POTENTIAL FUTURE PROJECTS

Because we are reviewing a proposed DWDO it is difficult to provide precise relationships to a project that will have physical impacts. The DWDO is intended to reduce cumulative impacts by suggesting limitations on future development. Implementing an effective DWDO will have a positive effect on future and other planned major projects.

H. REQUIRED RELATED ACTIONS

This EIR addresses the environmental effects of the proposed project (DWDO), and alternatives thereto. In order for the project as proposed to be approved, the following actions must occur:

- Certification of the DWDO EIR pursuant to the CEQA guidelines;
- Introduction of a General Plan Amendment to modify the goals and policies contained in the Land Use Element for Agricultural Resource-designated lands;

- Statement of Overriding Considerations;
- Adoption of a DWDO.

I. JURISDICTIONAL/PERMITTING AGENCIES

The County of Napa is the only agency that will exercise control over the project under consideration in this document.

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III. EFFECTS FOUND NOT TO BE SIGNIFICANT

A. EFFECTS NOT INVOLVED

1. Traffic Hazard Exposure

Employees and visitors of new wineries will not be exposed to significant hazards.

2. Inhabitant Displacement

The DWDO would not cause any existing inhabitants to be displaced or cause relocation.

3. Net Public Cost Increases

The DWDO would not cause any net increase to administrative or service costs. The DWDO would, in fact, provide an incremental increase in revenues that exceeds projected expenditures through the year 2010 (see Section IV, Beneficial Effects).

B. EFFECTS SAME UNDER EITHER SITUATION

1. Parking

Potential employee/operational parking constraints would remain relatively the same with or without the DWDO.

2. Micro-Climate Modification

a. The DWDO would not create a situation that would have adverse direct effects on either average rainfall or temperature.

b. The DWDO would not cause a situation that would block ground-level winds, nor cause a change in temperatures in the existing urban areas.

3. Traffic Noise

Increases in traffic-related noise would remain relatively the same with or without the DWDO.

4. Air Hazard

According to representative from the existing aviation facilities within Napa County, the DWDO would not change their anticipated levels of service.

5. Energy Use

According to utility providers for Napa County, the DWDO would not change the level or quality of service provided.

6. Flood Hazard

The total amount of ground coverage, with or without the DWDO, would be approximately the same, therefore flood hazard is not affected.

C. EFFECTS DEPENDENT ON SPECIFIC CHARACTERISTICS OF SITE AND DEVELOPMENT

1. Geologic Hazard Exposure

Dependent on specific site location of a development project permitted under the DWDO, individuals could be exposed to a known geologic hazard.

The effect could be completely mitigated with standard mitigation measures used by the County of Napa.

2. Geologic Hazard Intensification

Dependent on specific site location of a development project permitted under the DWDO, construction activities could influence a known geologic hazard.

The effect could be completely mitigated with standard mitigation measures used by the County of Napa.

3. Unique Geologic/Geomorphic Feature Damage

Dependent on specific site location of a development project permitted under the DWDO, construction activities could influence a known geologic or geomorphic hazard.

The effect could be completely mitigated with standard mitigation measures used by the County of Napa.

4. Construction Period Dust Exposure

Persons residing in the vicinity of new/expanded wineries developed in the future may experience annoyance from dust generated by winery construction.

This possible impact can be completely mitigated through imposition of the mitigation measures contained in Appendix D.

5. Permanent Operational Dust Problems

Persons residing in the vicinity of new/expanded wineries developed in the future may experience annoyance from dust generated by winery traffic and outdoor operations.

This possible impact can be completely mitigated through imposition of the mitigation measures contained in Appendix D.

6. Odor Exposure

Persons residing in the vicinity of new/expanded wineries developed in the future may experience annoyance from odors generated by fermentation, wastewater pond operation, and pomace disposal.

This possible impact can be completely mitigated through imposition of the mitigation measures contained in Appendix D.

7. Construction Period Noise Exposure

Persons residing in the vicinity of new/expanded wineries developed in the future may experience annoyance from noise generated by winery and related facility construction.

This possible impact can be completely mitigated through imposition of the mitigation measures contained in Appendix D.

8. Permanent Operational Noise Problems

Persons residing in the vicinity of new/expanded wineries developed in the future may experience annoyance from noise generated by wine production operations.

This possible impact can be completely mitigated through imposition of the mitigation measures contained in Appendix D.

9. Surface Water Quality Degradation

The quality of water in the streams in the vicinity of the new/expanded wineries developed in the future may be degraded through pollution with sediment.

This possible impact can be completely mitigated through imposition of the mitigation measures contained in Appendix D.

10. Groundwater Pollution

The potential for surface/groundwater pollution is specifically related to individual site constraints, and development practices utilized by the developer.

This effect could be completely mitigated by strict compliance with standard mitigation measures available to the County of Napa, and discharge requirements of the Regional Water Quality Control Board.

11. Habitat Destruction

Dependent on specific site location of a development project permitted under the DWDO, surface disturbance could alter or destroy valuable wildlife habitat.

The mitigation measures recommended in this report under Vegetation/Wildlife (Cumulative) would completely mitigate this effect.

12. Plant/Animal Diversity

Dependent on specific site location of a development project permitted under the DWDO, surface/subsurface disturbance could alter the existing plant/animal diversity or habitat.

The mitigation measures recommended in this report under Vegetation/Wildlife (Cumulative) would completely mitigate this effect.

13. Fish/Wildlife Movement Interference

Dependent on specific site location of a development project permitted under the DWDO, migratory movements of terrestrial or aquatic species could be impacted.

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The mitigation measures recommended in this report under Vegetation/Wildlife (Cumulative) would completely mitigate this effect.

14. Light Problems

Persons residing in the vicinity of new/expanded wineries developed in the future may experience annoyance from light associated with wine production operations.

This possible impact can be completely mitigated through imposition of the mitigation measures contained in Appendix D.

15. Fire Hazard Exposure

Owners, employees and visitors to new/expanded wineries developed in the future may be exposed to substantial life and property hazards from fire.

This possible impact can be completely mitigated through imposition of the mitigation measures contained in Appendix D.

16. Insect Exposure

Persons residing in the vicinity of new/expanded wineries developed in the future may be exposed to health risks and experience annoyance from the insects generated by solid waste disposal and pond/reservoir creation.

This possible impact can be completely mitigated through imposition of the mitigation measures contained in Appendix D.

17. Sewage Disposal

Development of facilities allowed under the DWDO could effect the service availability to residents of the incorporated communities of Calistoga, St. Helena, and the Town of Yountville, if permitted in their service areas.

This effect could be completely mitigated by standard measures available to all three communities.

18. Community Disruption

Siting of facilities permitted under the DWDO could cause a disruption or influence the quality of life of existing communities.

This effect could be completely mitigated with standard mitigation measures available to the County of Napa.

19. Recreational/Educational Use Elimination

Siting of facilities permitted under this ordinance on, or adjacent to, areas of known recreational or educational value could alter or eliminate their use.

This effect could be completely mitigated with standard mitigation measures available to the County of Napa.

20. Mineral Extraction

Siting of facilities permitted under this ordinance could interfere with, or jeopardize the removal of, viable minerals located in the County.

This effect could be completely mitigated with standard mitigation measures available to the County of Napa.

IV. LAND USE PROJECTIONS

A. WINE PRODUCTION AND VINEYARD FORECASTS

In order to analyze the impact of the DWDO upon land use and the environment in relation to the wine industry as a whole, Napa County contracted with Agland Investment Services, Inc. to prepare a Wine Industry Growth Economic Model. This document provides an estimate of winery capacity and vineyard acreage necessary to meet demand in 2010. The Forecast indicates that:

- Demand for premium wine will continue to grow. Recent growth rates in excess of 10% per year will moderate over the next 20 years, averaging 5% per year.
- The ratio of production between "popular premium" and "super/ultra premium" California wines will remain relatively constant, with "popular premium" comprising 75% of the California market.
- Napa County wines will capture a declining market share of all California wine. "Super/ultra premium" market will go from 70% to 60%; "popular premium" market will decline from 30% to 25%.
- Despite reduced market share, Napa County wine production will more than double from 26 million gallons (1988) to nearly 57 million gallons (2010).
- Adoption of the DWDO will not affect overall wine production or vineyard acreage.

B. WINERY AND VISITOR FACILITY FORECASTS

To convert the Agland Wine Production and Vineyard Forecast into the various physical and economic variables needed to "drive" the environmental impact analyses, a Winery and Visitor Facility Forecast was prepared by Economic Planning Systems (EPS). This forecast incorporates the results of a winery survey and a winery data base developed by the County. Copies of the Agland Forecast and EPS Forecast are available from the Napa County Conservation Development and Planning Department as technical background reports to this document. They were distributed with the Draft EIR as MEA, Part III.

Table 1 (Land Use Projection Summary) details the parameters calculated in the EPS Forecast. Basic assumptions from the Agland Forecast were that wine production and vineyard acreage are driven by the market, and will not be substantially affected by the DWDO.

TABLE 1. LAND USE PROJECTIONS SUMMARY

	EXISTING		YEAR 2010		IMPACT IN 2010			
	CURRENT	BASE CASE(1)	UNDER CURRENT REGULATIONS	UNDER WDO	WDO OVER CURRENT REGULATIONS "DIRECT"			WDO OVER BASE CASE: "CUMULATIVE"
					NUMBER	PERCENT	PERCENT OF FUTURE GROWTH	
WINERIES								
NUMBER	186	238	495	395	-100	-20%	-39%	157
PRODUCTION, MILLION GAL	41	45	75	75	0	0%	0%	30
TOTAL BUILDING AREA, ACRES	140	160	285	275	-10	-4%	-8%	115
PARKING/DRIVEWAY	180	205	410	355	-55	-13%	-27%	150
WASTE DISPOSAL PONDS	337	375	695	647	-48	-7%	-15%	272
TOTAL LAND CONSUMPTION	657	740	1,390	1,277	-113	-8%	-17%	537
BASE EMPLOYMENT	5,100	5,600	9,950	9,600	-350	-4%	-8%	4,000
SEASONAL EMPLOYMENT (ADDITIONAL)	1,300	1,450	2,550	2,450	-100	-4%	-9%	1,000
SOLID WASTE, 1000 TONS/YR	55	60	105	105	0	0%	0%	45
WATER USE, MILLION GAL/YR	275	295	505	505	0	0%	0%	210
WASTE WATER, MILLION GAL/MO (DURING CRUSH)	35	40	65	65	0	0%	0%	25
VISITOR FACILITIES(2)								
NUMBER	102	118	225	210	-15	-7%	-14%	92
TOTAL AREA, 1000 SQ FT	105	120	210	215	5	2%	6%	95
VISITORS, THOUSANDS	4,400	4,400	8,600	8,600	0	0%	0%	4,200
WINEYARDS, ACRES	32,900	32,900	51,700	51,700	0	0%	0%	18,800

1) INCLUDES DEVELOPMENT APPROVED BUT NOT YET BUILT

2) THE EFFECT OF ALLOWING "UNLIMITED" PROMOTIONAL EVENTS IS NOT INCLUDED IN THE NUMBER PRESENTED; SEE GROWTH INDUCTION SECTION.

NOTE: PROJECTED NUMBERS ARE ROUNDED AND DIFFER SLIGHTLY FROM EPS FIGURES
SOURCE: EPS, LSA

The EPS Forecast projects, as a direct impact of the DWDO, an increase in the percentage of large wineries, and hence fewer of them. This is due to deletion of the "small winery use permit exemption". Over the next 20 years, the forecast projects 100 fewer wineries than under current regulations, a 40% decrease.

The model describes the following three scenarios:

"Base case": Existing wineries plus those winery projects that have been approved but not constructed.

"Direct impact": Change resulting from the difference between winery development in 2010 with the DWDO and winery development in 2010 without the DWDO.

"Cumulative impact": Changes resulting from the difference between winery development in 2010 with the DWDO and winery development in 1989. Winery development in 1989 is the combination of existing legal wineries and approved wineries whether or not they have been built. It does not account for illegal wineries or visitor serving facilities.

Even though the average size of wineries increases, total development in the County, including buildings, parking and driveways, and waste disposal ponds, still decreases by 11%.

Visitor facilities follow the same trend as wineries, that is, there are fewer of them, by 8%, but on the average they are slightly larger.

Further direct impacts of the DWDO result from the economies of scale of larger wineries. Winery employees, both permanent and seasonal, are projected to decrease by 4%.

Because wine production stays the same in any case, the DWDO has no direct impact on parameters such as solid waste generation, water use, and waste water generation.

The clause of the DWDO requiring new wine production capacity to utilize 75% Napa grown grapes was analyzed by EPS and determined not to have a significant impact on either amount or location of winery development.

The 18-month "grandfather" clause in the DWDO uses was also analyzed. EPS has concluded that this opportunity for legalization of existing uses may result in condensing future growth into an accelerated pattern over the next one to two

years. However, this trend would be reversed over the following several years as development in Napa responds to market demand, and the effect has negligible economic consequences. However, the opportunities presented under the 18-month "grandfather" clause would be inconsistent with the intent of agricultural land use in the General Plan. The reader is referred to the Land Use section for a complete discussion.

The EPS Forecast also projects the location of new winery development based on the current location of wineries and new vineyards. Although there are changing trends in location of vineyards and wineries over the next 20 years, EPS has determined that the DWDO will not significantly affect this distribution.

EPS has advised that the conclusions of their Forecast be used within certain confidence levels: changes of less than 10% should not be considered significant; changes between 10% and 20% should be examined carefully and may be significant; changes over 20% indicate a predictable trend.

C. VISITOR AND SECONDARY GROWTH FORECASTS

EPS examined in detail the possibility that the DWDO might affect visitor and employment trends. Their conclusion is that there is no direct, nor cumulative, impact of the DWDO on either. The volume of visitors to Napa County is primarily a result of increasing Bay Area population, increasing Bay Area disposable income and desire for recreation, increasing visitors to the San Francisco region as a whole, and the advertising/marketing programs of individual Napa wineries and the wine industry.

The one exception to this conclusion is the visitor volume which may be generated by new promotional events allowed by the DWDO. See Section VI, Growth Induction, for a discussion of this possible effect.

Regarding employment, EPS determined that aside from winery employees already mentioned, there will be no direct, nor cumulative, impact of the DWDO. Increased employment in lodging, eating establishments, recreation, or visitor services is dependent on the growth of the visitor industry. Further winery development above the substantial level already existing is not considered a significant impetus toward increased employment in these fields.

V. ENVIRONMENTAL SETTING, POTENTIAL IMPACTS, AND MITIGATION MEASURES

A. LAND USE

Setting

Napa County covers 513,000 acres, one-third of which is level enough for conventional development, and only a small portion of this level land lies along the main highways and arterials. Thus, the County retains much of its rural, undeveloped character. Agriculture has always been the dominant land use in the County, being one of the primary sources of income and employment. In 1981, wine grapes and grapevine nursery stock constituted 80% of the agricultural production, and the percentage has increased since then due to conversion of agricultural uses to vineyard, and the increase in value of grapes.

Napa County is an irreplaceable viticultural resource area. The characteristics of climate, soils, and hydrology that make it one of the foremost grape growing and wine producing regions in the world would be impossible to duplicate if one or more of the characteristics were impaired or destroyed. The Land Use Map of the General Plan (Figure 4) provides an overview of the distribution and location of major land use areas and facilities in Napa County. The unincorporated area is dominated by agriculture, watershed, and open space, while urban uses are concentrated in and around the incorporated communities.

The General Plan has the following Agricultural Policies that are pertinent to the issues:

- 3.2 " . . . The County will initiate studies to evaluate means, methods, advantages and disadvantages of placing the existing agricultural preserve plus potential agricultural acreage under permanent land use protective controls . . . "
- 3.5 " . . . The County will develop planning concepts and zoning standards designed to minimize conflicts arising from encroachment of urban uses into agricultural areas . . . "
- 3.6 " . . . The County will establish minimum agricultural parcel sizes which reflect the availability of natural resources in order to assure that agricultural areas can be maintained as economic units . . . "
- 3.10 " . . . The County will reserve prime agricultural lands for agricultural uses . . . "

- 3.11 " . . Agriculture will be considered the production of food and fiber, the growing of crops, produce and feed and the raising of livestock and animals. The processing of agricultural products often takes on an industrial character which will be subject, in general, to the same kinds of regulations as other industrial uses . . "
- 3.13 " . . . Wineries and related activities will where practical, be located on sites off prime soils areas and should be designed to convey the attractiveness associated with existing Napa Valley Wineries. . . "

See also the Grand Jury's report on implementation of General Plan policies in Appendix E.

Impacts

Direct. Adoption of the proposed DWDO would alter the intent of the Agricultural Resource and Agricultural Watershed Land Use designation.

Adoption of the proposed DWDO would have a significant adverse impact on land use in Napa County. Specifically, the proposed DWDO would:

1. Undermine the intent of the 40-acre minimum parcel size for agricultural land as specified in the Napa County General Plan by encouraging creation of 10-acre parcels for minimum building sites for wineries.
2. Provide of a mechanism for legalization of existing illegal uses, contrary to the County General Plan (see County Counsel's memo regarding "grandfather" clause in Appendix F).
3. Expand in the number, scope, and intensity of non-agricultural uses in the agriculturally-zoned portions of Napa County in conflict with the provisions of the Napa County General Plan.

The intent of the General Plan regarding densities for Agriculture, Watershed and Open Space and Agricultural Resource areas is clearly 40 acres. The language in the DWDO does not preclude lot line adjustments, combining parcels, or other recognized non-discretionary mechanisms that would create 10 acre parcels and then, by definition, be permitted to locate and operate a winery.

Because agricultural lands are in jeopardy from growth of wineries, and because the General Plan has mandated that these lands be preserved and protected, our recommendation is the County use the 40-acre minimum to reduce

density and meet the policies of the General Plan. These directives are valid for both direct and cumulative impacts associated with the DWDO. Each individual project that comes before County decision makers for the purpose of securing a conditional use permit must be evaluated in terms of this criteria. Acknowledging this inconsistency with General Plan policies as a direct impact of the project will reduce the burden on agricultural areas and thereby lessen cumulative impacts.

As the three impacts are in direct conflict with the intent of the General Plan, and would create a situation that jeopardizes the integrity of the Agricultural Resource and Agricultural Watershed areas, the proposed DWDO has a significant adverse land use impact.

Cumulative. None additional.

Mitigation

Direct.

1. Land Use

a. Impact. Undermining the intent of the 40-acre minimum parcel size for agricultural land as specified in the Napa County General Plan by encouraging creation of 10-acre parcels for minimum building sites for wineries.

Mitigation. Implementation of the following measure would completely mitigate the preceding impact:

1. Amend the DWDO to require a minimum winery building site of 40 rather than 10 acres.

b. Impact. Provision of a mechanism for legalization of existing illegal uses, contrary to the County General Plan.

Mitigation. Implementation of the following 2 measures would completely mitigate the preceding impact:

1. Establish a schedule for abating those non-agricultural uses taking place at existing wineries that were not legally established.
2. Amend the DWDO to eliminate the 18-month grace period or grandfathering clause.

c. Impact: Expansion in the number, scope, and intensity of non-agricultural uses in the agriculturally-zoned portions of Napa County in conflict with the provisions of the Napa County General Plan.

Mitigation. Implementation of the following 8 measures would completely mitigate the preceding impact:

1. Amend the DWDO to prohibit the establishment of new, or expansion of existing, commercial and other non-agricultural uses in the agriculturally-zoned portions of the County. Such uses include, but are not necessarily limited to, retail sales except for wine and wine-related items (e.g., wine glasses, cork screws, etc.), display of art (i.e., museums); catering; classes; and public and private promotional events.
2. Amend the DWDO to prohibit new, or expansion of existing public and private tours and tasting facilities in the Agricultural Preserve (AP)-zoned portions of the County.
3. Amend the DWDO to allow, upon grant of a use permit, public and private tours and tasting facilities on 40-acre and larger parcels in the Agricultural Watershed (AW)-zoned portions of the County.
4. Encourage visitor serving facilities and activities to locate in appropriate commercially-zoned areas.
5. Retain the provision of the DWDO eliminating the Small Winery Use Permit Exemption, so that all wineries and winery uses shall be subject to a conditional use permit approval.
6. Amend the current provisions (outdoor festival permit and Planning Department event permit) regarding promotional events to prohibit such public or private events on agriculturally-zoned lands.
7. Encourage new/expanded wineries which are of a scale and character similar to industrial processing plants to locate in industrially-zoned areas.
8. See Mitigation Measures B1(b)(2).

Cumulative. None additional.

Implementation of the preceding measures would completely mitigate the impact as identified.

B. TRAFFIC

Setting

Daily traffic volumes along the major state routes in Napa County are currently approaching capacity levels. It is also expected that with continued growth in the County, traffic impacts and congestions are likely to increase. The proposed DWDO is expected to regulate the growth in the winery-related facilities with the intent of reducing the traffic-related congestion and impacts from this use.

The analysis presented in this study focuses on winery-related trip ends for the existing 1989 condition and the forecast 2010 condition under the provisions of the proposed DWDO.

Daily traffic volumes have been separated into winery- and non-winery-related trip ends. Winery-related trip ends are comprised of winery-based employee trip ends and truck trip ends. Two forms of truck trips have been identified in this analysis: trucks that carry the grapes from the vineyards to the wineries, and trucks that transport supplies to the wineries and bottled wine from the wineries.

Existing 1989 Traffic Volumes. Table 2 indicates that there are approximately 87,200 daily trip ends in north Napa County and 257,600 trip ends in south Napa County. The large number of trip ends associated in south Napa County is accounted for by the large residential and employment base located around the City of Napa. Winery-related trip ends in south Napa County account for a very small portion of the total trip ends, while winery-related trip ends in north Napa County, where the majority of the wineries are located, account for approximately 21.1% of the total trip ends in that region. See Appendix G for travel patterns into and out of Napa County.

Impacts

Direct. None.

Cumulative. Under existing conditions Highway 29 between the Highway 12 interchange and Lincoln Avenue is the most heavily impacted roadway section in the County. Highway 29 is also currently experiencing high daily traffic volumes along the Mid Valley region between the Highway 128 interchange and Pratt Avenue in St. Helena. Other major routes are also experiencing volumes close to capacity, especially Highway 12 at Kelly Road, and Highway 121 west of the Highway 29 interchange. See Table 3, Daily Traffic Volumes and Volume/Capacity Ratios.

TABLE 2: WINERY & NON-WINERY RELATED TRIP ENDS

PARAMETER	EXISTING		YEAR 2010			IMPACT IN 2010	
	BASE CASE(1)	PERCENT	UNDER CURRENT REGULATIONS	NUMBER	PERCENT	WDO OVER CURRENT REGULATIONS "DIRECT"	WDO OVER BASE CASE: "CUMULATIVE"
NORTH NAPA COUNTY							
DELIVERY TRUCK TRIP ENDS	1,850	2.1%	2,650	2,650	2.2%	0	800
WINERY EMPLOYEE TRIP ENDS	16,600	19.0%	26,770	25,700	21.3%	(1,070)	9,100
TOTAL WINERY TRIP ENDS	18,450	21.1%	29,420	28,350	23.5%	(1,070)	9,900
NON-WINERY RELATED TRIP ENDS	68,750	78.8%	92,350	92,350	76.5%	0	23,600
TOTAL TRIP ENDS	87,200	99.9%	121,770	120,700	100.0%	(1,070)	33,500
SOUTH NAPA COUNTY							
DELIVERY TRUCK TRIP ENDS	350	0.1%	750	750	0.2%	0	400
WINERY EMPLOYEE TRIP ENDS	1,000	0.4%	4,580	4,400	1.2%	(180)	3,400
TOTAL WINERY TRIP ENDS	1,350	0.5%	5,330	5,150	1.4%	(180)	3,800
NON-WINERY RELATED TRIP ENDS	256,250	99.5%	364,650	364,650	98.6%	0	108,400
TOTAL TRIP ENDS	257,600	100.0%	369,980	369,800	100.0%	(180)	112,200
TOTAL NAPA COUNTY							
DELIVERY TRUCK TRIP ENDS	2,200	0.6%	3,400	3,400	0.7%	0	1,200
WINERY EMPLOYEE TRIP ENDS	17,600	5.1%	31,350	30,100	6.1%	(1,250)	12,500
TOTAL WINERY TRIP ENDS	19,800	5.7%	34,750	33,500	6.8%	(1,250)	13,700
NON-WINERY RELATED TRIP ENDS	325,000	94.3%	457,000	457,000	93.2%	0	132,000
TOTAL TRIP ENDS	344,800	100.0%	491,750	490,500	100.0%	(1,250)	145,700

(1) INCLUDES DEVELOPMENT APPROVED BUT NOT YET BUILT
SOURCE: LSA, ABAG AND MTC TRAVEL PATTERN PROJECTIONS

TABLE 3. DAILY TRAFFIC VOLUMES AND VOLUME/CAPACITY RATIOS (1)

	EXISTING BASE CASE			YEAR 2010 TOTALS UNDER WDO		
	DAILY VOLUMES	CAPACITY VEHICLES PER DAY(2)	VOLUME/ CAPACITY RATIO	DAILY VOLUMES	CAPACITY VEHICLES PER DAY(2)	VOLUME/ CAPACITY RATIO
SR-29 (SR-12 INTERCHANGE TO SOSCOL AVE)	40700	30-40	1.4	60300	30-40	2.0
SR-29 (OAK KNOLL AVE TO RUTHERFORD CROSS RD)	16800	15-20	1.1	23900	20-25	1.2
SR-29 (RUTHERFORD CROSS RD TO ST. HELENA)	17100	15-20	1.1	24200	20-25	1.2
SR-29 (ST. HELENA TO CALISTOGA)	10400	15-20	0.7	14700	20-25	0.7
SILVERADO TRAIL (OAK KNOLL AVE TO RUTHERFORD CROSS RD)	4800	15-20	0.3	6900	15-20	0.5
SILVERADO TRAIL (RUTHERFORD CROSS RD TO ZINFANDEL LANE)	6400	15-20	0.4	9100	15-20	0.6
SR-12 (SOLANO COUNTY LINE TO SR-29 INTERCHANGE)	13200	15-20	0.9	16700	15-20	1.1
SR-121 (SONOMA COUNTY LINE TO SR-29 INTERCHANGE)	18200	15-20	1.2	19200	15-20	1.3

(1) TOTAL TRAFFIC, INCLUDING WINERY RELATED TRAFFIC

(2) IN THOUSANDS

SOURCE: LSA, 1987 CALTRANS REPORT, MTC AND ABAG TRAVEL PATTERN PROJECTIONS

Daily traffic volumes for the 2010 condition are likely to further degrade the levels of service of these roadways. The volume/capacity ratio for Highway 29 Napa to Rutherford is projected to change from 1.1 to 1.2; from Rutherford to St. Helena it changes from 1.1 to 1.2; and from St. Helena to Calistoga it will remain at .7. Average daily traffic volumes on Silverado are not expected to exceed capacity even in 2010. The volume to capacity ratio on Highway 12 is estimated to increase from .9 to 1.1 and on Highway 121 from 1.2 to 1.3.

Since volumes on the major State routes are well in excess of the upper range of the standard roadway capacities, roadway conditions with continued growth are anticipated to result in prolonged congestion and delays beyond the traditional peak hours. The volume/capacity analysis verifies that this substantial increase in traffic will not be accommodated by the roadways.

Of the total trip ends expected in northern Napa County in 2010, 9,900 trip ends or 8.2% are due to winery growth. Of the trip ends projected in southern Napa County in 2010, 3,800 trip ends or 1.0% are due to winery growth. It is not possible to relate these trip end calculations to the daily traffic volumes or volume/capacity ratios mentioned above, since trip ends may traverse several road segments and employee destinations (other than the winery) are unknown. It is evident, however, that an additional 9,900 trip ends per day in the north are a significant increase for roads already heavily congested.

The reader is directed to the section on Cumulative Impacts for a further discussion of these impacts.

Mitigation

Direct. None required.

Cumulative. See Cumulative Impact section.

C. AIR QUALITY

Setting

Air quality in the Napa Valley section of the San Francisco Bay Area is dominated by vehicular traffic. Traffic accounts for 83% of the ambient concentrations of carbon monoxide (CO), 43% of the reactive organic compounds which are precursors of ozone, and 46% of the airborne particulates. The pattern in Napa County, which is part of the Bay Area Air Quality Management District (BAAQMD), is similar. Traffic accounts for 82% of the ambient concentrations of CO, 50% of the reactive organic compounds which are precursors of ozone, and 53% of the airborne particulates. Construction contributes 40% of particulates.

Measurements of air quality for the last ten years by the BAAQMD on Jefferson Street have shown excesses of the Federal and State Ambient Air Quality Standards (AAQS) have occurred at the station for ozone, total suspended particulates (TSP), and for particulates less than 10 microns in diameter (PM10) since 1978.

Impacts

Direct. None.

Cumulative. Cumulative winery development may increase dust, that is, particulates, from driveways and construction. The reader is directed to the section on Cumulative Impacts for a further discussion on impacts.

Mitigation

Direct. None required.

Cumulative. See Cumulative Impact section.

D. NOISE

Setting

There are four major noise sources in Napa County 1) surface traffic noise consisting of noise emanating from major Highways and primary arterial in the unincorporated areas of the County, and from major streets in the cities and towns; 2) two Southern Pacific branch lines: the Schellville branch, which parallels Highways 12 and 29 in the southern portion of the County, and the Vallejo-St. Helena Branch, which parallels Route 29; 3) aircraft noise generated by activity at the Napa County and Calistoga Airports and at the PUC Flight Center, and 4) noise generated by large industries (primarily Basalt Products and Kaiser Steel) and by wineries and their associated agricultural activities.

As stated in the Noise Element of the County General Plan, the unincorporated portions of Napa County are fairly quiet. Ambient noise levels range from 20-25 dBA at 3 AM in isolated areas to about 50 dBA near roadways during the day in the south County. Occasionally, noises occur in rural areas which register far above ambient for short time periods. These can be disturbing to the population even though they do not raise the annual average Ldn. Examples of such noise events include the passage of small aircraft, the operation of vineyard frost fans and pumps, and heavy vehicle traffic around vineyards and wineries. Napa County also uses Ldn as the basis of its Noise Compatibility Guidelines. Although differing somewhat in terminology, the Guidelines are similar to State standards in the noise level ranges they allow, except for residential uses, which are 5 to 10 dBA more restrictive. As industrial/

agricultural uses, Ldn's less than 70 dBA would be completely compatible with winery or vineyard uses, Ldn's between 70 and 80 dBA would be tentatively compatible, Ldn's between 80 and 85 dBA would be normally incompatible, and Ldn's greater than 85 dBA would be completely incompatible.

Impacts

Direct. None.

Cumulative. Comments on the DEIR indicate that residents who live near a winery are more disturbed from noise from promotional events and outdoor visitor activities than by winery operational noise, which is apparently perceived as appropriate for the area.

The majority of noise-related impacts will result from processing, or other operational activities. The potential for noise intrusion would increase during the "crush", when the work effort escalates dramatically. Noise will continue to be a nuisance factor when agricultural uses compete with urban sprawl.

The reader is directed to the section on Cumulative Impacts for a further discussion on impacts.

Mitigation

Direct. None required.

Cumulative. See Cumulative Impact section.

E. WATER QUALITY

Setting

Water quality data for the County were obtained from the United States Geological Survey (USGS) and the California Department of Water Resources (DWR). The USGS maintains a stream gaging station on the Napa River near Napa, which is part of the National Stream-Quality Accounting Network. USGS and DWR data were combined to assess water quality of the Napa River at St. Helena and near Napa. Data also were obtained from numerous other sources to supplement the database. These sources include reports of special studies which will be discussed throughout this report. Unfortunately, there are insufficient data for tributaries or other water bodies in Napa County.

Quality of the Napa River is generally considered suitable for beneficial uses as specified by the Regional Water Quality Control Board. Based upon the predominant cation and anion, the water can be classified as a calcium bicarbonate type water.

Groundwater Quality. Groundwater quality in Napa County was characterized using limited existing data. In 1973, the USGS published a series of open-file reports presenting data for selected wells in Napa County. These data were obtained in a period of time between the early 1950s and 1973. Each of these reports focuses upon wells within the area covered by USGS topographic quadrangle maps: Napa (Bader and Svitek, 1973), Yountville (Svitek, 1973), Rutherford (Bader and Svitek, 1973), St. Helena (Bader and Svitek, 1973), and Calistoga (Svitek and Bader, 1973). The water quality data presented in these reports then were interpreted by Faye (1973), whose work represents the most quantified discussion of groundwater quality in Napa County available. Unfortunately, there were no available data representing more recently obtained samples. However, these data are suitable to characterize the general quality of Napa County groundwater resources. The general character of water in the County is good; however, there are commonly high levels of boron, sodium, chloride and iron. In general, groundwater from the alluvial aquifer and Sonoma volcanics in the vicinity of Calistoga contains highest mean levels of boron, iron and chloride. Boron concentrations also can be high in the vicinities of Rutherford and Yountville.

Impacts

Direct. None.

Cumulative. Growth in the number of wineries in Napa County and subsequent increases in winery wastewater could adversely affect the quality of the county's water. Due to the treatment systems used, these impacts would be primarily to the region's groundwater resources. Although the County enforces strict regulations pertaining to treatment systems in order to protect water quality, the groundwater is still affected, although impacts are presently insignificant. Projected increases in wastewater generation are significant and the increased pollutant loads pose a very real threat to groundwater quality.

The reader is directed to the Cumulative Impact section for a further discussion of these impacts.

Mitigation

Direct. None required.

Cumulative. See Cumulative Impact section.

F. VEGETATION AND WILDLIFE

Setting

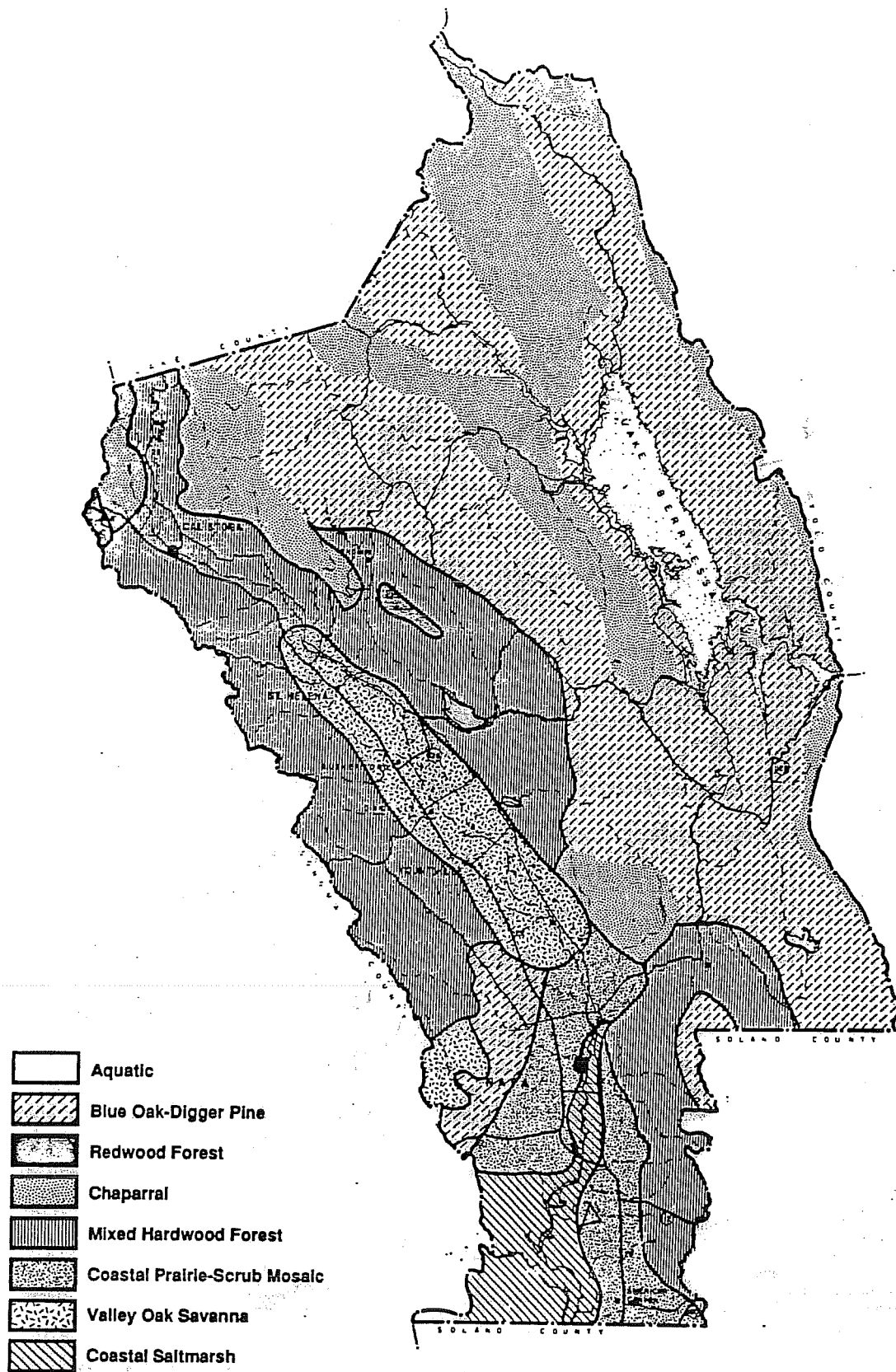
Napa County is a relatively small County but due to the variety of soils, topography, and microclimates present encompasses a diversity of vegetation types. Included are redwood forest, mixed hardwood forest, blue oak/digger pine forest, chaparral, coastal prairie scrub mosaic, valley oak savannah, and coastal saltmarsh. Their distribution is shown in Figure 5. This distribution has been modified significantly by past agricultural and urban development. Some of these communities such as the valley oak savannah have been reduced to a few remnant trees. Moreover, large portions of others, including the coastal prairie scrub and coastal saltmarsh have been reduced.

Sensitive Plant Communities. Several unique plant communities and areas of special concern have been identified within Napa County outside of publicly-owned lands where they are protected. Included are riparian woodland, oak woodland, vernal pools, seasonal and tidal wetlands, geothermal hot spring fields, and areas of serpentine soil. The general locations for some of these communities are shown in Figure 6. It should be noted that the riparian woodland present along the Napa River is the third most valuable in California.

Special Status Species. Special status species have either been formally or informally listed by government agencies, conservation organizations, or other entities because of concern for their continued survival due to naturally limited occurrence and/or loss of habitat. Formally listed species are classified by the state and federal governments as "threatened" or "endangered". These species are afforded legal protection through state and/or federal legislation. Informally listed species include those identified as being of special concern but for which specific legal status is lacking. Included are species being considered for listing by a state or federal agency (i.e., the so-called state and federal "candidate" species). See Appendix H for explanation of federal laws regarding "take" of endangered species.

Known occurrences of species are mapped here, but it should be noted that the locations mapped are not precise and are meant to show general locations and distribution only. Species that are highly sensitive to human disturbances are not shown for their protection. Moreover, current and past locations may have disappeared, and new locations may be discovered.

Special Status Plants. There are 73 special status plants currently identified by the California Native Plant Society (CNPS) as present in Napa County. One plant (showy Indian clover) is thought to be extinct. Three more (soft-haired bird's beak, mud flat quill plant, and Napa bluegrass) are listed by the State as either rare or endangered. These three plants plus 22 more are



Source: A.W. KUCHLER 1977 IN: BARBOUR AND MAJOR (1988).

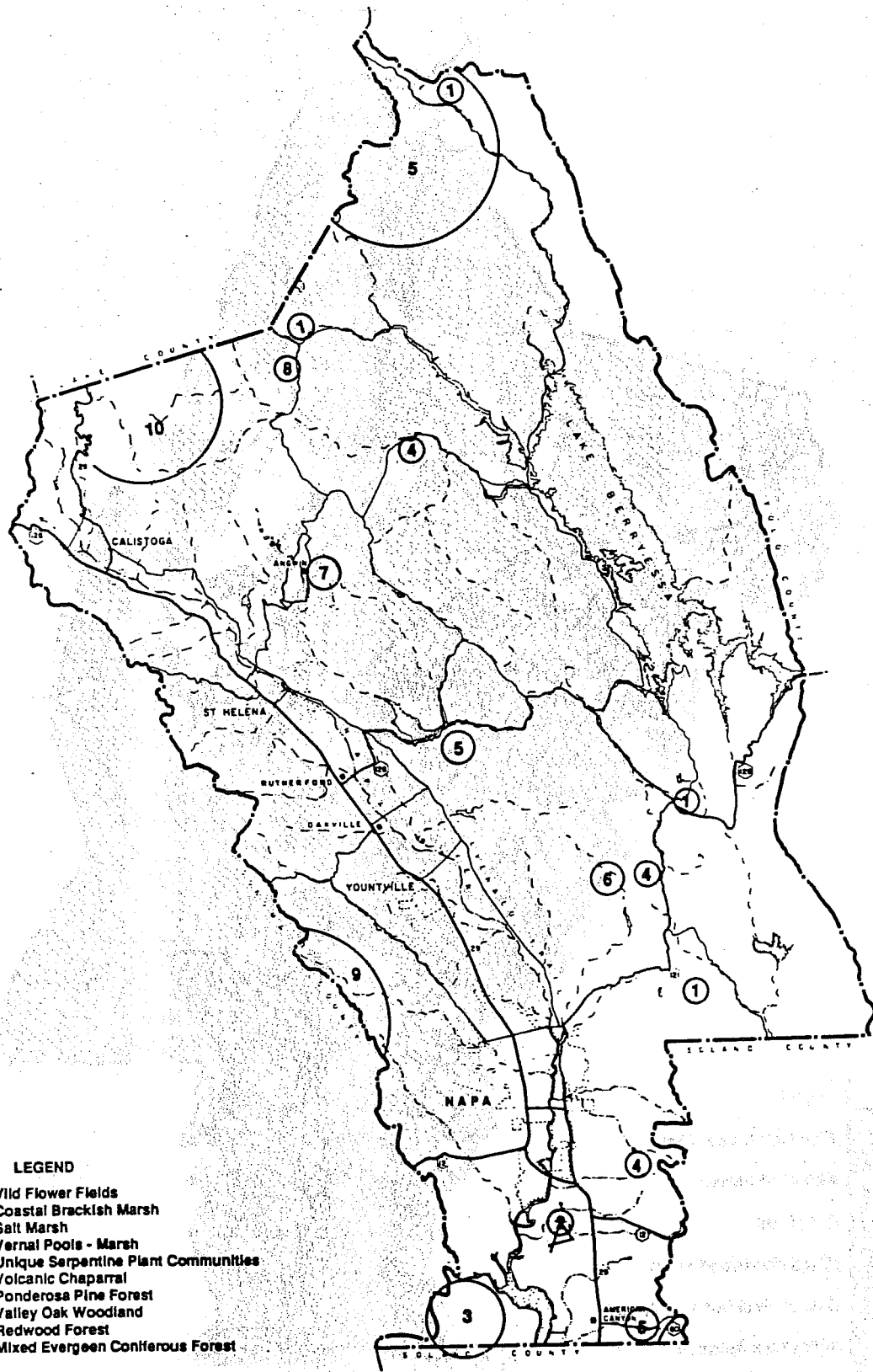
FIGURE 5

SCALE IN MILES

0 7



VEGETATION OF NAPA COUNTY



Sources: CALIFORNIA NATIVE PLANT SOCIETY (CNPS) NAPA COUNTY CHAPTER - JOE CALLIZO & JAKE RUYGT (1989);
CALIFORNIA NATURAL DIVERSITY DATA BASE (CNDDB) 1989.

FIGURE 6

SCALE IN MILES
0 7



LOCATIONS OF SENSITIVE PLANT COMMUNITIES IN NAPA COUNTY

listed by CNPS as endangered. The currently known general distribution of these latter two groups of plants is depicted in Figure 7. Note that most of these plants occur in the unique sensitive communities previously listed. The distribution of the remaining 47 plants listed by CNPS are not plotted here for they lie on this organization's "candidate" and "watch" lists.

Special Status Wildlife. There are currently 28 special status animals that are thought to reside in Napa County. Nineteen of these animals are birds, two are rodents, two are other mammals, two are amphibians, one is a reptile, and one is a shrimp. Five (i.e., the peregrine falcon, California clapper rail, California black rail, saltmarsh harvest mouse, and California freshwater shrimp) are listed by the state and/or federal government as "endangered" or "threatened". A partial distribution of these animals is shown in Figure 8. Many of these species are closely tied to, and dependent on, the sensitive habitat types described in the vegetation section, especially marsh and riparian areas. The tidal marshes of the lower Napa River support several special status species. The riparian vegetation along the Napa River and its tributaries provides habitat for many resident special status birds. Moreover, a number of bird species of special concern (not included in the list of special status animals because they do not breed in the County) use the riparian corridors along the Napa River during winter and during the spring and/or fall migrations. The California freshwater shrimp lives in this river and also inhabits the creeks in the Carneros area. Figure 8 is Locations of Sensitive Animal Species.

Impacts

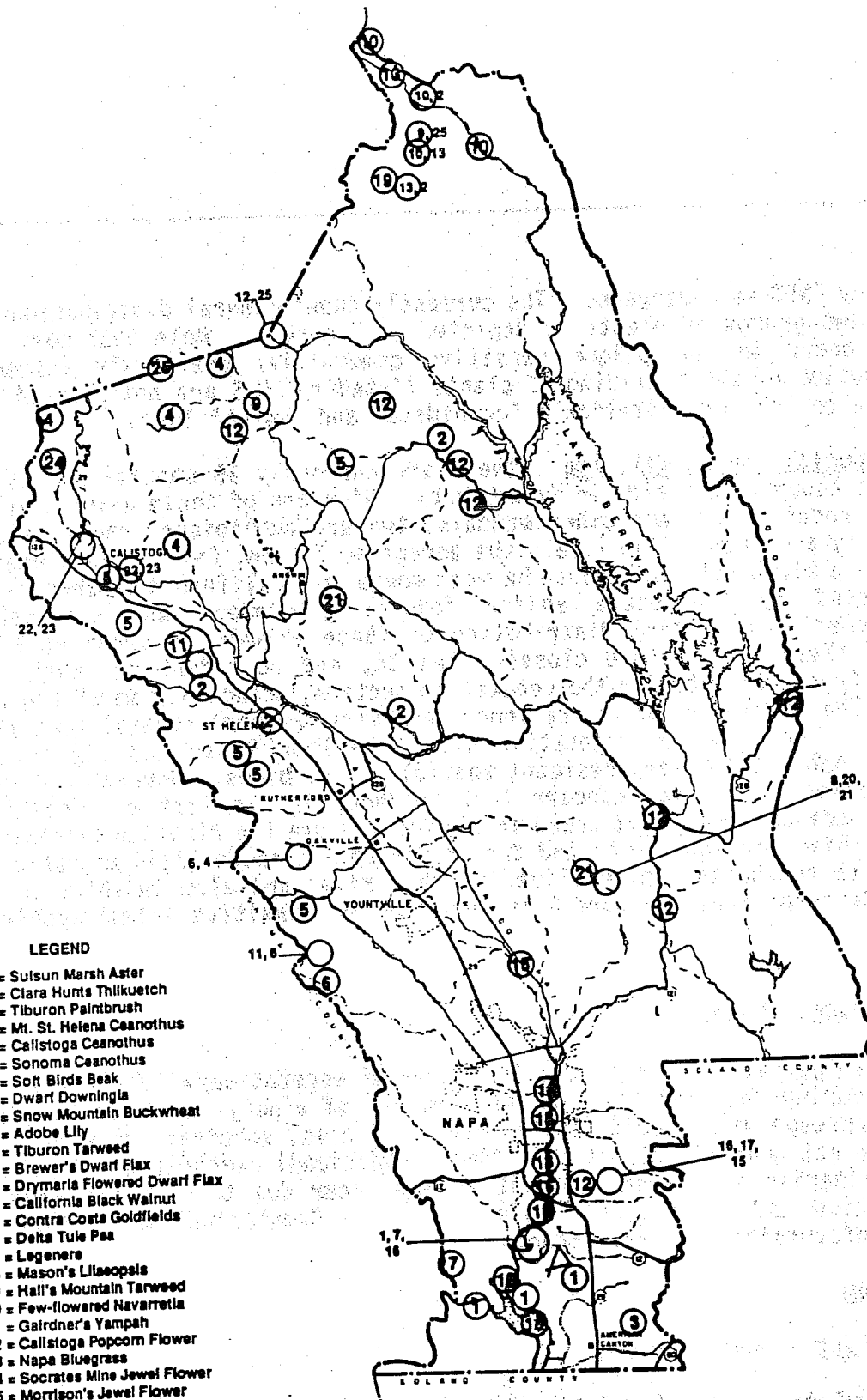
Direct. None.

Cumulative. At a minimum, 600 acres of vegetation/wildlife habitat will be lost during the next 20 years as a result of winery development. This may include acreage with special status plant or animal species; the extent of this impact is not quantifiable at this time. Additional degradation of the quality of the riparian and marsh communities may occur due to sediment from winery construction and urban-type runoff. See the Cumulative Impact Section for further discussion of these impacts.

Mitigation

Direct. None required.

Cumulative. See Cumulative Impact section.



Sources: CALIFORNIA NATIVE PLANT SOCIETY (CNPS) NAPA COUNTY CHAPTER - JOE CALLIZO & JAKE RUYGT (1989);
CALIFORNIA NATURAL DIVERSITY DATA BASE (CNDDB) 1989.

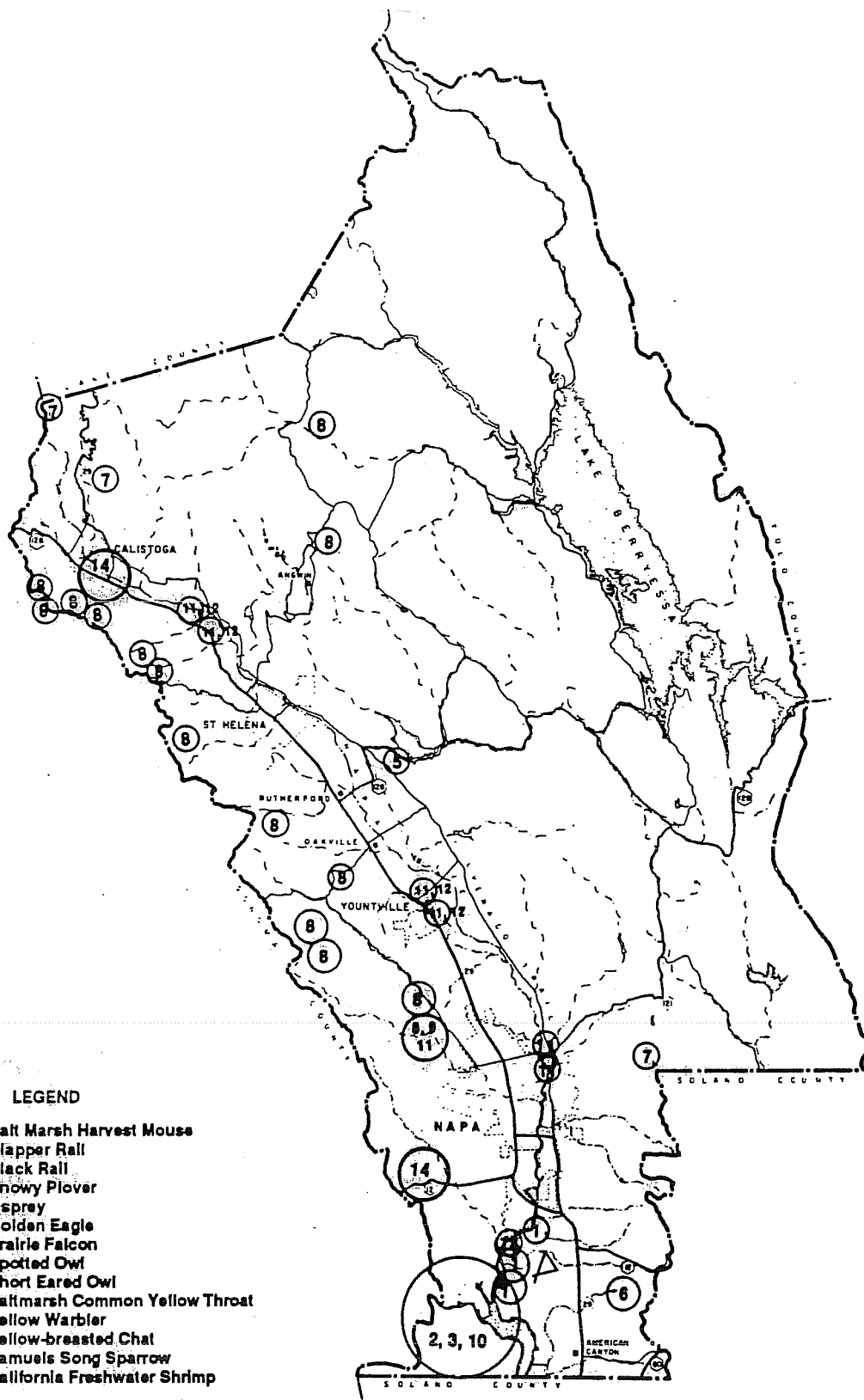
FIGURE 7

SCALE IN MILES
0 7

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LOCATIONS OF SENSITIVE PLANT SPECIES IN NAPA COUNTY



Sources: NAPA-SOLANO CHAPTER OF THE NATIONAL AUDUBON SOCIETY - MIKE RIPPEY (1989); CALIFORNIA NATURAL DIVERSITY DATA BASE (CNDDB) 1989.

FIGURE 8

SCALE IN MILES
0 7



LOCATIONS OF SENSITIVE ANIMAL SPECIES IN NAPA COUNTY

G. CULTURAL RESOURCES

Setting

Napa County is considered to have one of the densest concentrations of archaeological sites in the Northwest Coast area. According to the California Archaeological Inventory (CAI) Napa County has conducted approximately 397 archaeological studies in relation to 763 recorded sites. This equates to a ratio of approximately one archaeological study for every two recorded sites. As a matter of record the majority of counties in the Northwest Information Service area have a ratio of twice as many archaeological studies as sites.

Current practices to determine the presence of cultural resources are controlled by the following criteria:

- Surveys are required if a project is within 1000 feet of a known archaeological site as depicted on the 1978 sensitivity maps;
- Surveys are required if the project is situated in a similar environment to those areas where sites are recorded;
- Surveys are required if, during the field check, the project planner observes something that would indicate the presence of either prehistoric or historic materials;
- Historic research is required for those areas identified either by the Historic Resources Inventory prepared in 1978, by the Napa County Landmarks Inc., or if during the site visit by the project planner a historical structure or materials are observed.

The DWDO would not alter or influence the County's ability to protect cultural or historical sites.

Impacts

Direct. None required.

Cumulative. Without proper field investigation, any future project would have the potential to damage or destroy cultural or historical artifacts. If current practices continue and archaeological research is not required prior to project approval, there would be unquantifiable damage to the County's remaining cultural or historic resources.

The reader is directed to the section on Cumulative Impacts for a further discussion on impacts.

Mitigation

Direct. None.

Cumulative. See Cumulative Impact section.

H. VISUAL/AESTHETIC CONSIDERATIONS

Setting

Napa County has one of the most attractive and economically important visual and aesthetic resources in California. The combination of vistas of rolling hills and the historic presence of vineyards and wineries has produced an attraction which enriches the lives of residents and brings thousands of visitors to Napa County each year.

Wineries in the County have increased eight fold since 1968 from 22 to approximately 185. An additional 52 wineries have been approved and are in various stages of planning or construction. During the same time period, overall population has increased about 40%, at least partially due to the growth in the wine industry. These changes, plus the emergence of retail, eating and lodging services supporting a growing number of visitors, have changed the visual character of the central County from rural agricultural to a more commercial, higher activity, winery and visitor-oriented character.

The existing wineries and associated buildings in the Napa Valley range from attractive old historic buildings with deep setbacks well shielded by mature trees to modern warehouses set alongside the highway with no landscaping. From Yountville to St. Helena, a distance of only ten miles, there are 64 approved wineries, all of which are visible from major arterials to some extent. Ten of these are more than 20 years old, 43 are of recent vintage, and 11 are in various stages of construction. The visual character of the region is changing rapidly.

The County currently has no specific regulations regarding visual quality of development, although use permit conditions sometimes address this issue and zoning regulations controlling densities and setbacks have an indirect effect on visual quality.

At present, Napa County has chosen not to adopt any official Scenic Highways, however, the County's General Plan identified several County and State roads as appropriate candidates. Figures 9 through 16 are photographs depicting the visual quality of Napa County as seen from the proposed County Scenic Highways. These photographs show both scenic quality and constraints such as telephone poles, signs, and development.

Impacts

Direct. None.

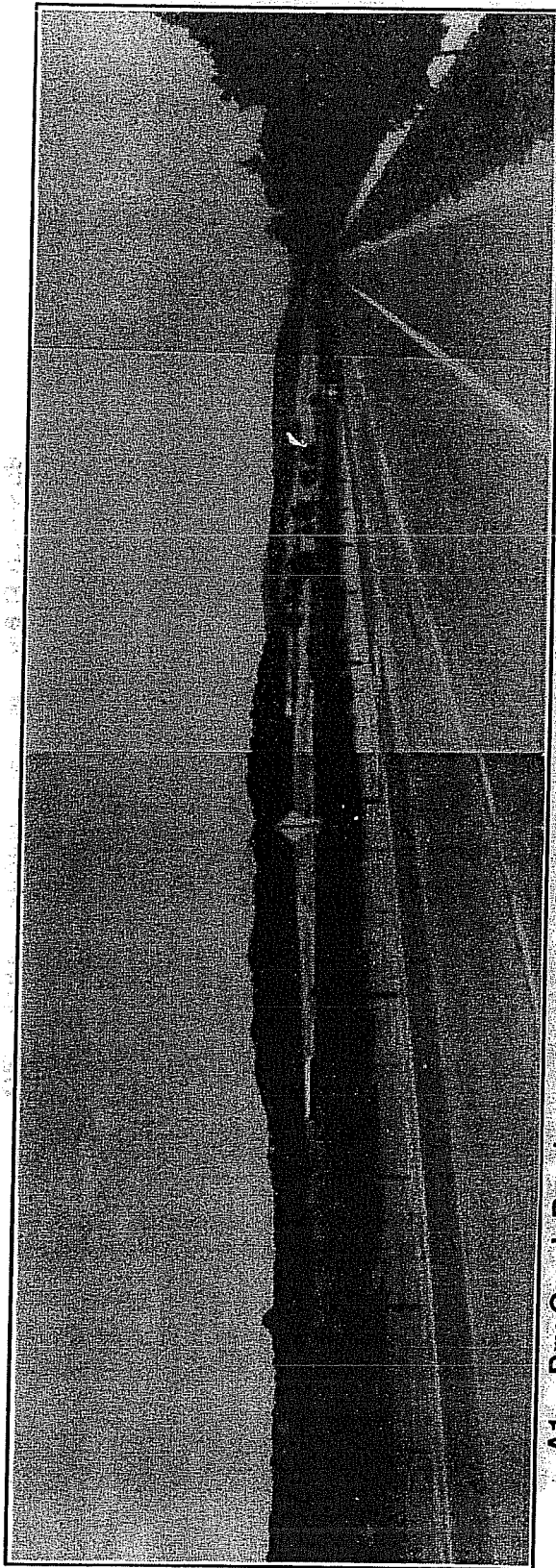
Cumulative. The projected addition of 155 new wineries, 90 new tasting rooms, numerous expansions, and around 600 acres of winery development (as projected in the EPS Forecast) will have an extensive impact on the visual quality of Napa County and on the quality of Napa's proposed scenic highways.

Regardless of the intent of the DWDO, the growth and expansion of wineries will continue to have an adverse effect on visual quality of the County and visual quality from the County's proposed Scenic Highways. Loss of vegetation, topographical alteration, blockage of views from scenic highways, glare from building materials and machinery, and structures that are more a statement of marketing strategy than a "visual fit" with the surrounding landscape will continue to have a negative effect.

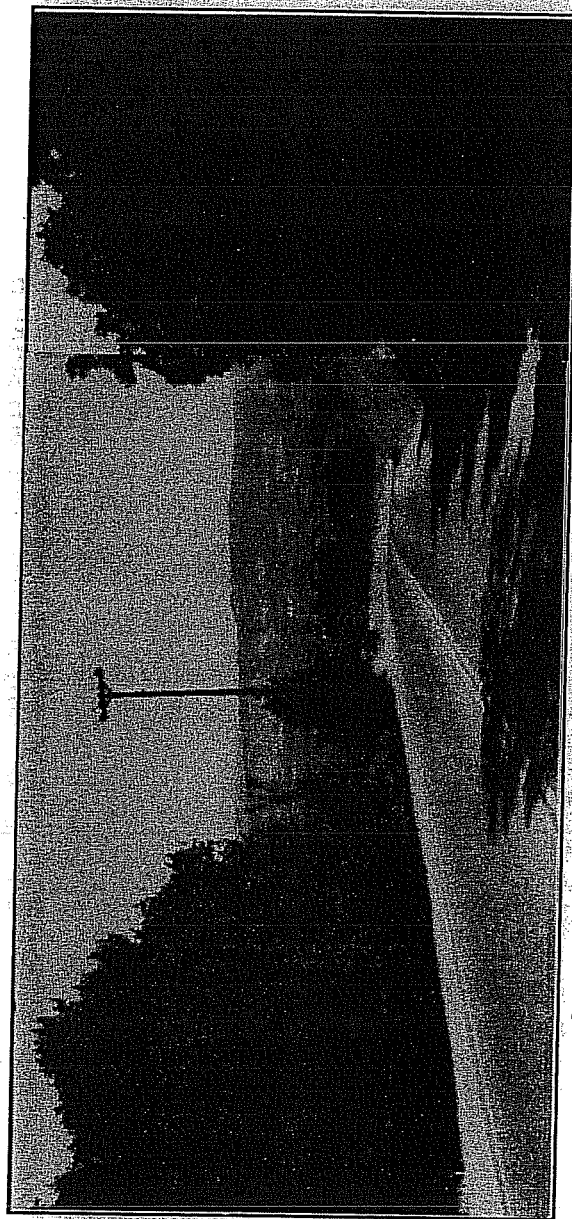
Winery growth, accompanied by increases in competition, promotional events, visitors and visitor-serving uses, will result in a cumulative degradation of visual resources. It is important that general limitations, such as setbacks and densities, are not confused with regulation of visual impact. Such general limitation will not be effective in protecting the aesthetic qualities of Napa County during the expected growth over the next twenty years. This is evident in several of the existing wineries whose plans were approved because they met all of the existing general limitations of setbacks, landscaping, densities, etc., but which, after construction, are found to block views, remove native vegetation, conflict with surrounding views, or otherwise degrade the quality of the neighborhood's visual resources. See Figures 17 and 18 for a matrix and map of Priority Recommendations for Official Scenic Highway Definition. The reader is directed to the section on Cumulative Impacts for a further discussion of impacts.

Mitigation

Direct. None required.



A1. Dry Creek Road, southern section, subdivision on right, grazing and vineyard on left

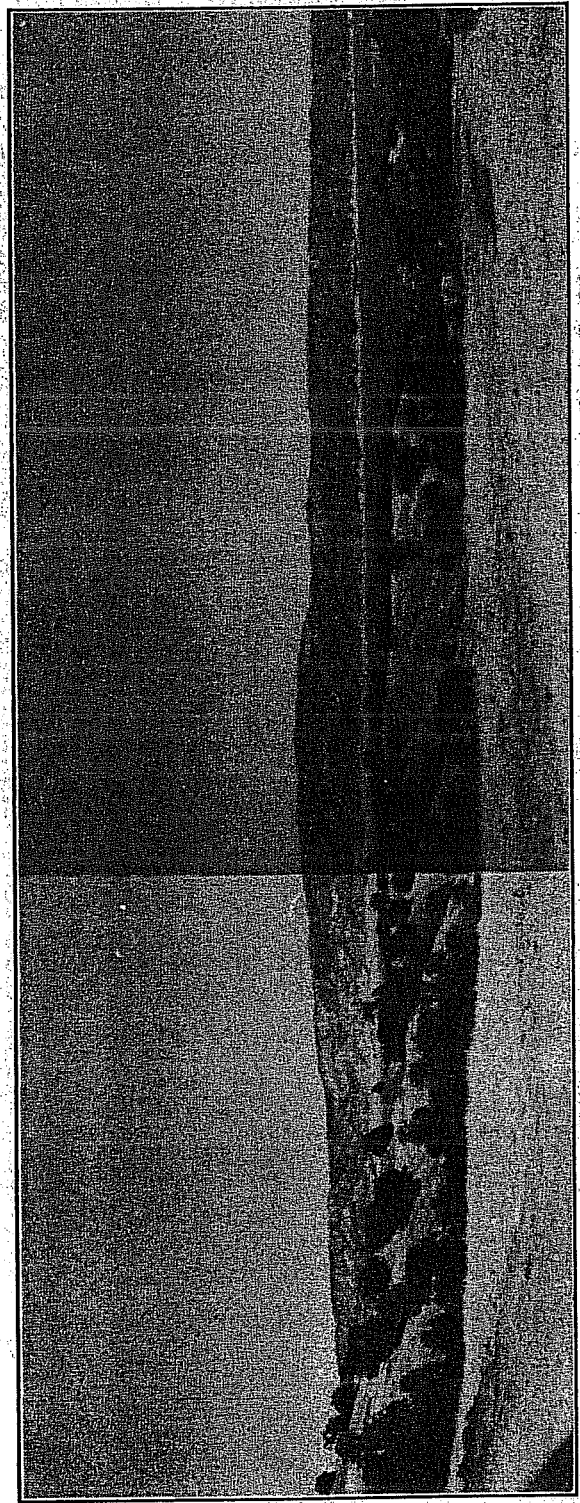


A2. Oakville Grade, looking east toward Napa Valley

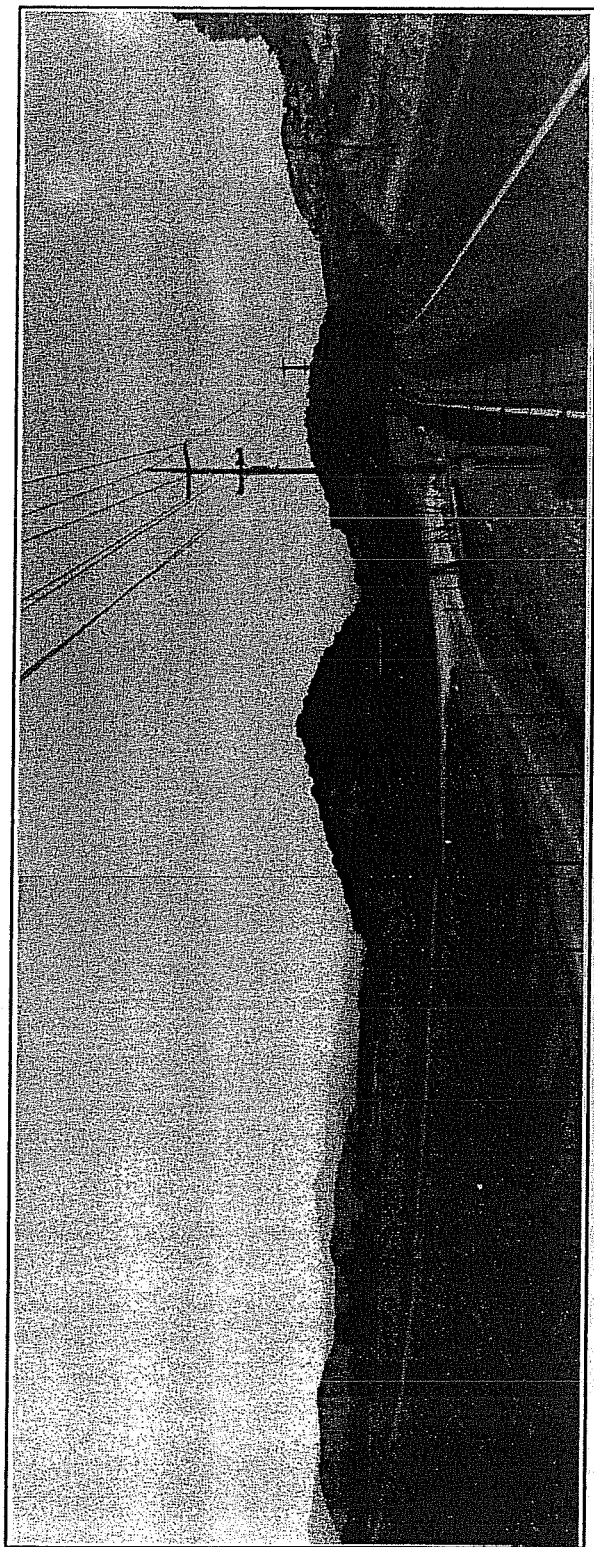
LSA



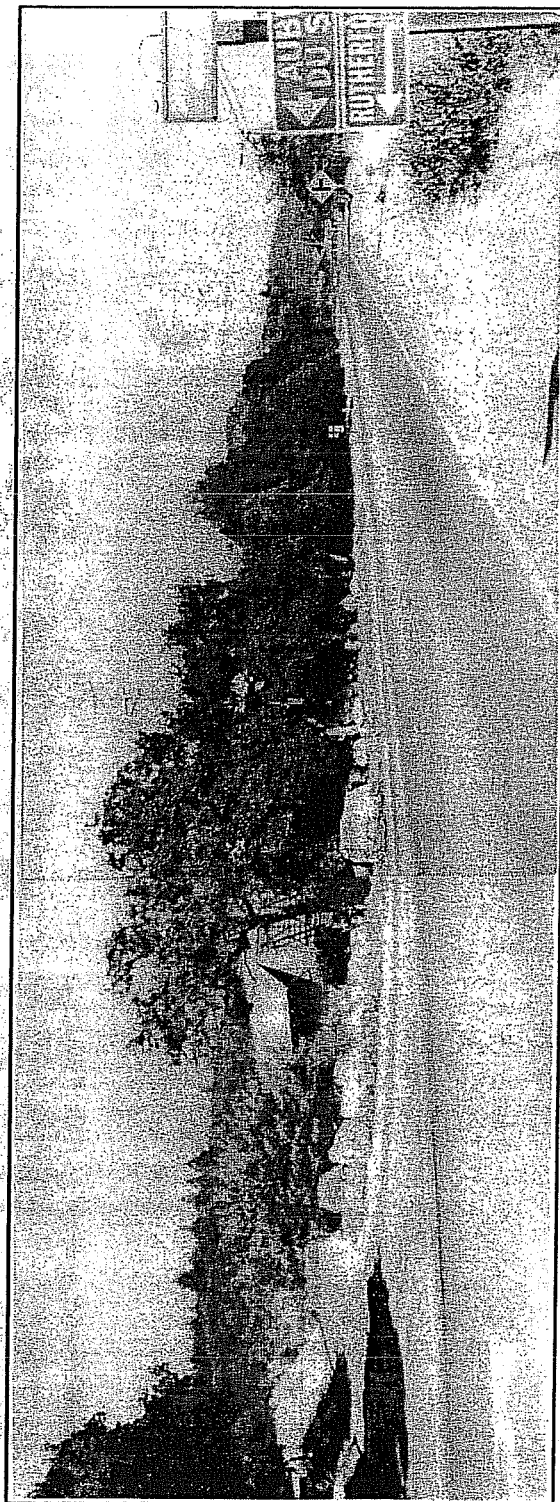
B1. Pope Canyon Road, western section



B2. Pope Canyon Road, at Lake Berryessa



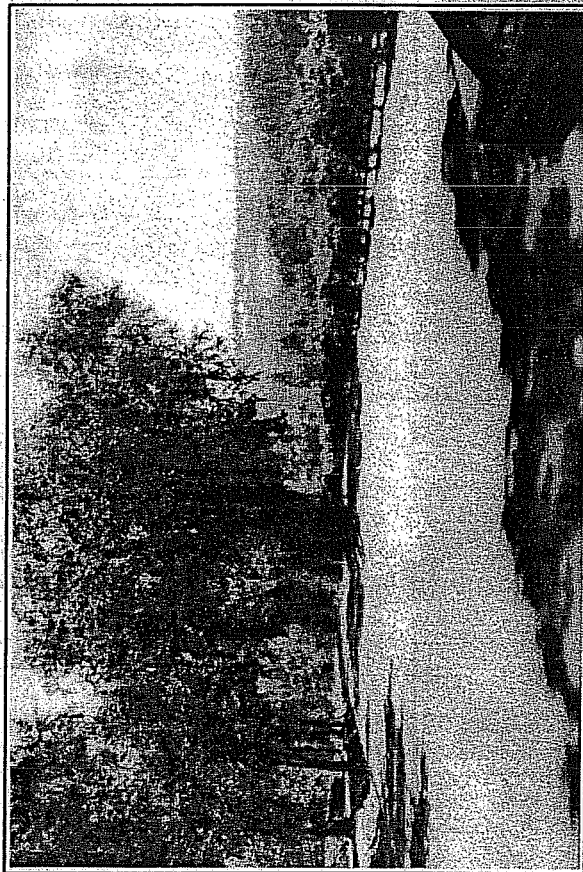
C1. Silverado Trail, looking south at Deer Park Road



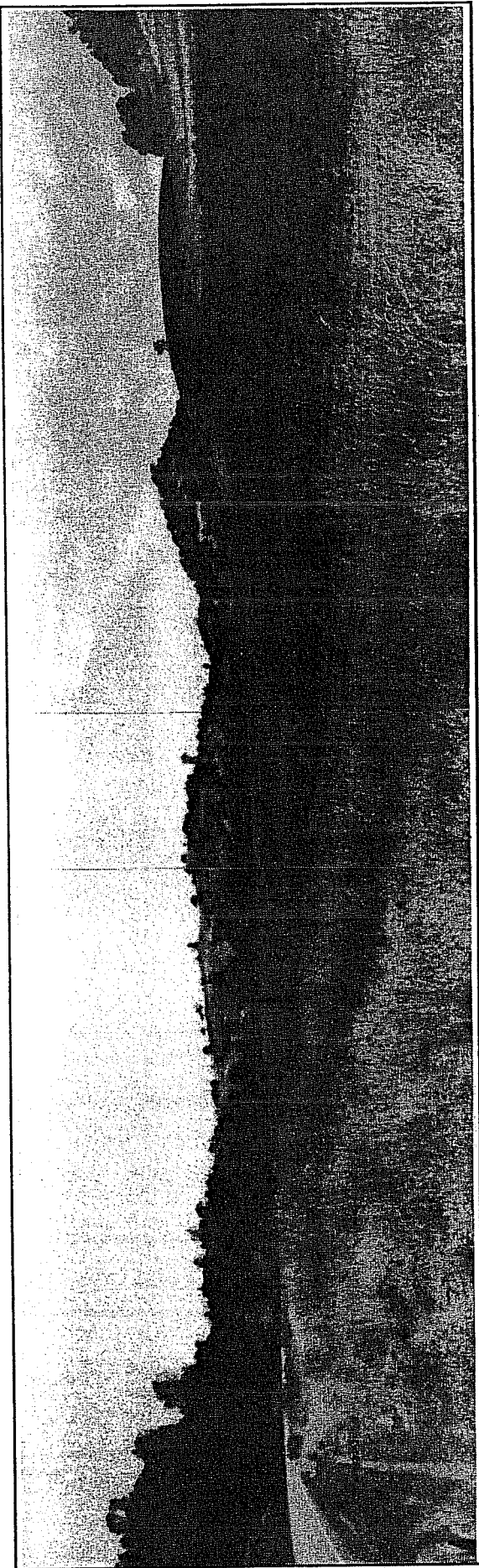
D. Silverado Trail, looking south near Zinfandel Lane



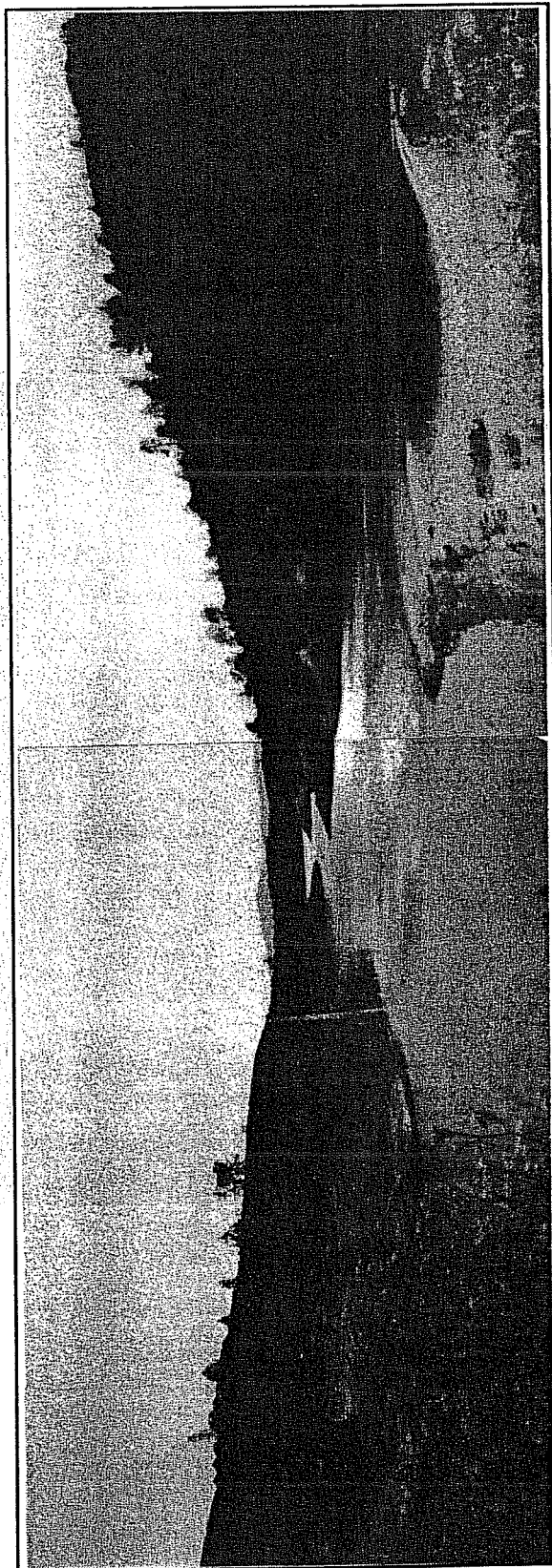
E. Lodi Lane, looking north toward hotel



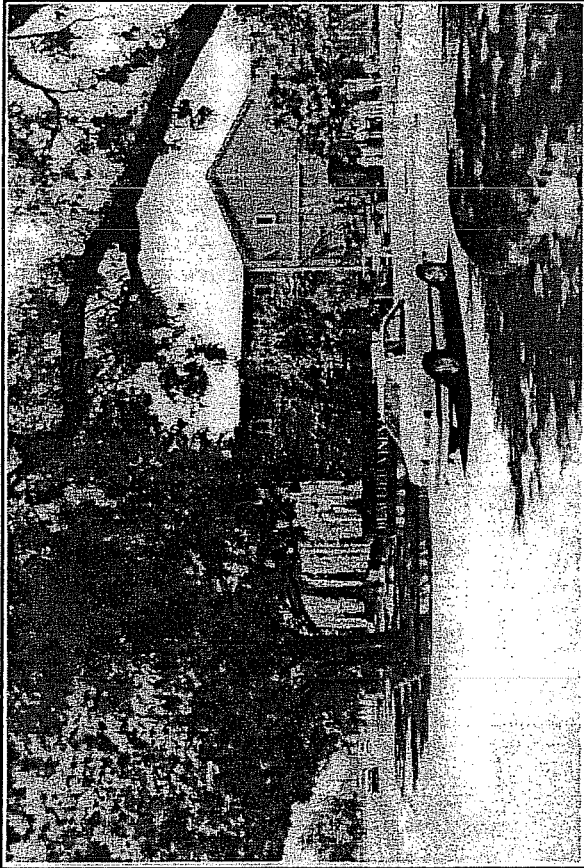
F. Bale Lane, looking east



G1. Highway 128, vineyard development near Chiles Valley



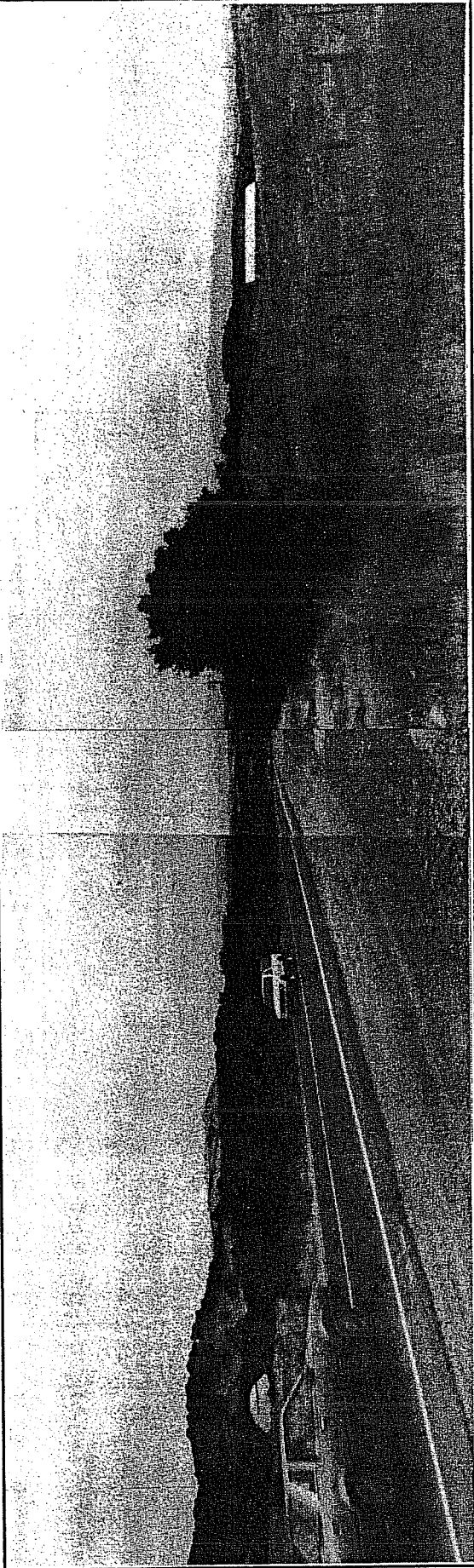
G2. Highway 128, at Lake Hennesy



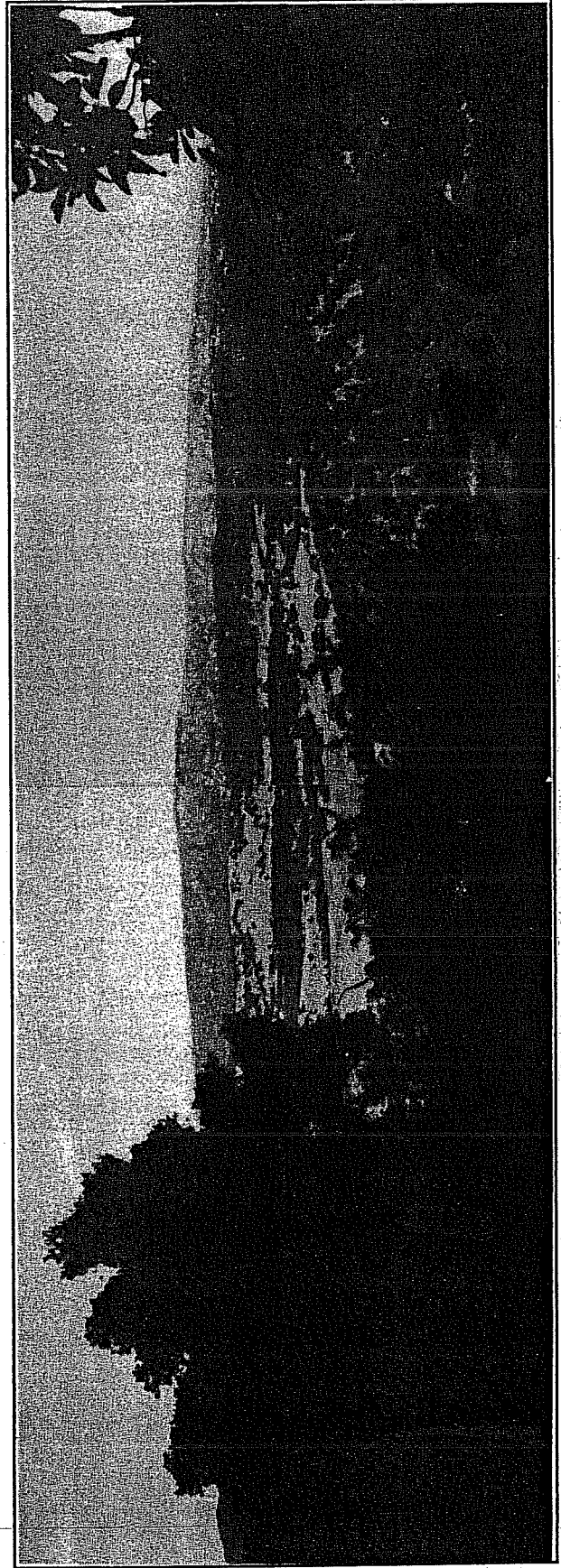
H1. Highway 29, near Oakville Grade looking north



H2. Highway 29, tree canopy in St. Helena



11. Highway 121/12, near Sonoma County line looking east



12. Highway 121, east of Highway 29 looking east toward Wooden Valley

<u>COUNTY ROADS</u>	<u>QUALITY</u>	<u>ACCESSIBILITY</u>	<u>SAFETY</u>	<u>ADAPTABILITY TO DEVELOPMENT</u>	<u>COMPATABILITY</u>
Silverado Trail	●	●	●	●	●
Dry Creek Road - Oakville Grade	●	●	●	●	●
Pope Canyon Road	●	●	●	●	●
Zinfandel Lane	●	●	●	●	●
Lodi Lane	●	●	●	●	●
Bale Lane	●	●	●	●	●
Butts Canyon, Pope Valley Road and Chilies Valley Roads	●	●	●	●	●
Berryessa Knoxville Road	●	●	●	●	●
Oakknoll Avenue	●	●	●	●	●
Yountville Cross Road	●	●	●	●	●
Oakville Cross Road	●	●	●	●	●
<u>STATE HIGHWAY ROUTES (S.R.)</u>					
S.R. 128 (from Rutherford to Monticello Dam; S.R. 29 to Sonoma County Line)	●	●	●	●	●
S.R. 29 (from Yountville to Lake County Line)	●	●	●	●	●
S.R. 121 (from Sonoma County to Napa; from Napa to S.R. 128)	●	●	●	●	●
S.R. 12 (from Solano County to Napa)	●	●	●	●	●

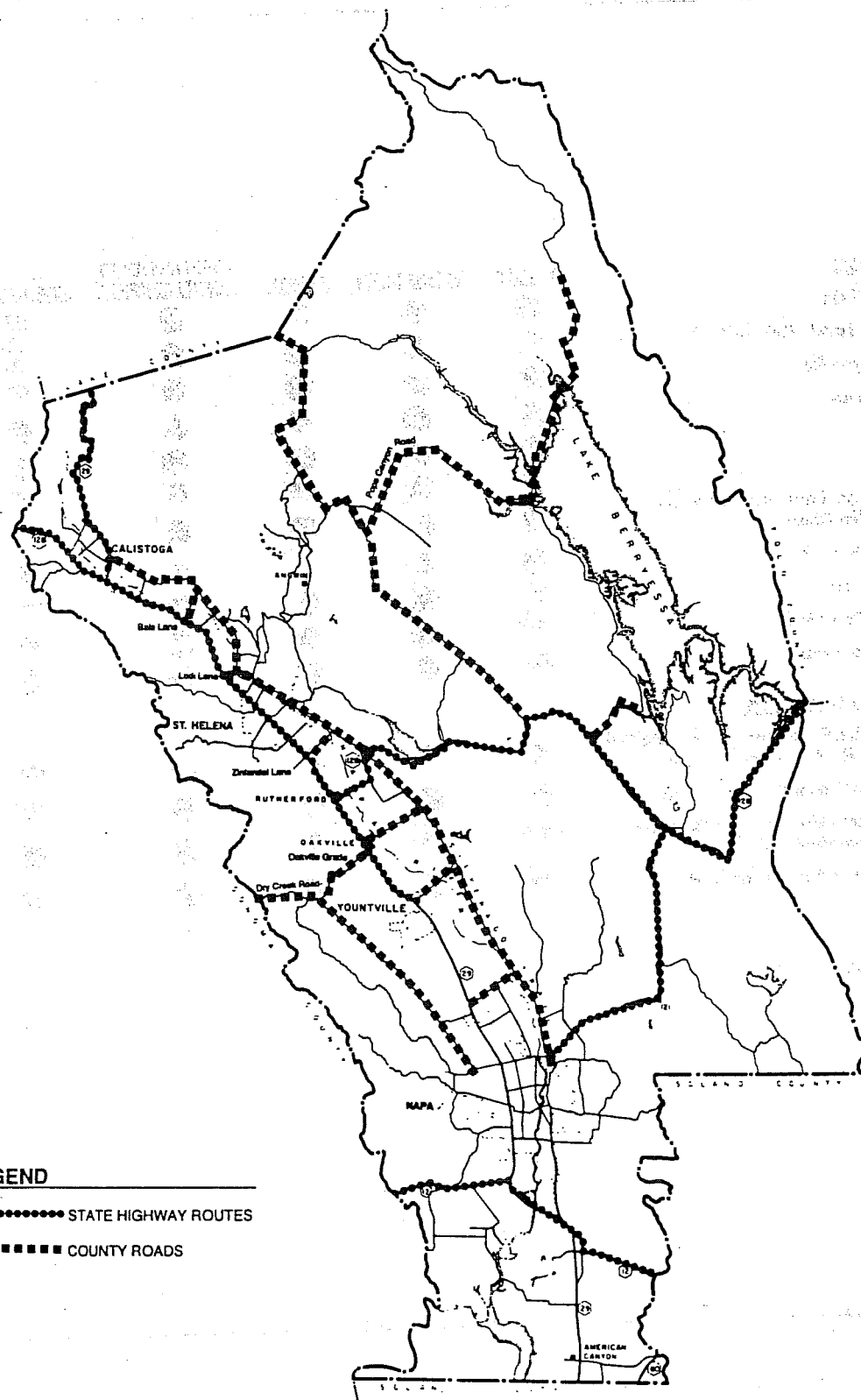
LEGEND

- Excellent
- Good
- Fair
- Poor

Source: LSA

FIGURE 17

**PRIORITY RECOMMENDATIONS FOR OFFICIAL
SCENIC HIGHWAY DESIGNATION**



LEGEND

- STATE HIGHWAY ROUTES
- COUNTY ROADS

Source: LSA

SCALE IN MILES
0 7



FIGURE 18

LOCATION OF PRIORITY RECOMMENDATIONS
FOR OFFICIAL SCENIC HIGHWAY DESIGNATION

Cumulative. See Cumulative Impact section.

I. PUBLIC HEALTH AND SAFETY

Traffic Hazards

Setting. Several roadways in Napa County experience ongoing traffic congestion with daily volumes exceeding their recommended capacity (see Table 3).

Impacts

Direct. None.

Cumulative. In addition to traffic congestion, cumulative impacts of winery employee and operational traffic will increase roadway hazards, particularly along Highway 29 and Silverado Trail. Increased volumes and turning movements, especially left hand turns, on Highway 29 will tend to slow traffic further, and increase opportunities for accidents. Increased volumes, turning movements, and winery access on Silverado Trail may decrease safety. This road already experiences hazard problems due to motorists tending to travel above the speed limit since they are avoiding the congestion on Highway 29, and the roadway has limited sight distances along certain portions due to slight curves and vegetation.

Mitigation

Direct. None required.

Cumulative. See Cumulative Impact section.

J. COMMUNITY SERVICES

Fire Protection/Emergency Services

Setting. The California Department of Forestry provides fire protection services to the County of Napa. Under contract with the Board of Supervisors, the Department of Forestry, located in St. Helena, works in conjunction with the nine, volunteer-staffed, fire districts of Napa County. Full-time Forest Ranger staffing increases from 125 during the rainy season to 250 during peak fire season. This staff provides services not only to Napa County, but four additional counties as well (Ernie Loveless, Battalion Chief, Napa County Fire Department, personal communication, 1989).

The Countywide fire protection service responds to approximately 4,000 emergency calls per year. Of those, nearly 80 percent are non-fire related. Visitor-related incidents including auto accidents, vehicle fires, and medical

service calls at wineries, represent a major portion of the total emergency calls serviced by the County fire protection services (Byron Carniglia, Ranger-in-Charge, County Fire Warden, Director of Emergency Services, personal communication, 1989).

Impacts.

Direct. None.

Cumulative. The addition of wineries, tasting rooms and visitor-generating activities, such as tours and special events may result in additional auto accidents, vehicle fires, and personal injuries both at and enroute to such facilities, which would create the need for additional fire protection and emergency services. Any increased demand in service caused by new wineries or expanded uses may adversely affect the ability of Countywide fire protection services to provide adequate response. The reader is directed to the section on Cumulative Impacts for a further discussion on impacts.

Mitigation.

Direct. None required.

Cumulative. See Cumulative Impact section.

Sewage Disposal

Setting. Few wineries in the County are connected to a city's sewer system. Approximately 180 of the 212 wineries in Napa county are small enough to use septic systems, while approximately 30 larger wineries use evaporation ponds and/or percolation ponds to dispose of waste. Twenty-seven of the 30 wineries with above-ground winery wastewater systems have subsurface domestic septic systems as well. Countywide, existing and approved wineries are estimated to generate 38 million gallons of wastewater per month during the crush.

Secondary sewage treatment is provided for by the Napa Sanitation District. The District generally runs the treatment facilities during the winter and spring months, when treated sewage can be safely released into the Napa River. In addition, treated water is used to irrigate a 540-acre parcel of pasture land. When in operation, the treatment plant has the capacity to operate at 15.4 million gallons per day (mgd) and currently runs near 8 mgd. During the summer months, when discharge into the river is not in progress, the sewage is stored in ponds, which have a starting summer storage capacity of approximately 560 million gallons. This water is sprayed on land by the beginning of November, when the district can safely discharge into the Napa River (Ernie Erskine, Napa Sanitation District, personal communication, 1989).

Few direct sewer lines are connected to wineries in the Napa Sanitation District. Sewage is treated from the wineries in the form of septic tank pumpage, herein called septage, and the Napa Sanitation District is the only agency in the County that accepts septage.

Impacts.

Direct. None.

Cumulative. Due to the amount of septage delivered, additional waste material generated by new wineries is expected to have negligible impacts on the existing sewage treatment facilities.

Mitigation.

Direct. None required.

Cumulative. See Cumulative Impact section.

Solid Waste

Setting. Solid waste disposal for Napa County is provided by the Upper Valley Disposal Service, American Canyon Development Company and the Berryessa Garbage Service. Of the three, the Upper Valley Disposal Service is the only one significantly affected by winery solid waste.

The Upper Valley Disposal Service, located near St. Helena, receives approximately 100-110 tons of solid waste per day from the upper valley communities. The life expectancy for the landfill is six years under existing permit. A request for an expansion permit has been submitted and will be subject to CEQA. Wineries are viewed by the Upper Valley Disposal Service as high volume generators, and create a substantial portion of the solid waste disposed at the landfill (Robert Pestone, owner, Upper Valley Disposal Service, personal communication, 1989).

The American Canyon Development Company receives 450 tons of solid waste daily and serves the American Canyon community, Napa City, and Vallejo. The closure date of the landfill is 1996. The American Canyon Development Company is in the process of permit review for a new landfill site in the American Canyon general area. Currently, only minimal solid waste from wineries is disposed at the American Canyon landfill (Bruce Gondry, American Canyon Development Company, pers. comm., 1989).

The Berryessa Garbage Service and landfill has an estimated useful life of 20 years. Although open to the wine industry, the Berryessa Garbage Service

does not at this time receive solid waste from any wineries (Carl Price, Berryessa Garbage Service, personal communication, 1989).

Producing wineries and approved wineries are projected to generate 60,000 tons of pomace annually.

Impacts.

Direct. None.

Cumulative. The total amount of pomace for wineries in Napa County is projected to be 103,000 tons per year by the year 2010.

Mitigation.

Direct. None required.

Cumulative. See Cumulative Impact section.

Housing

Setting. Napa County has approximately 52,000 employed residents occupying 43,000 households currently (Projections-87, ABAG).

Impacts.

Direct. None.

Cumulative. By 2010, EPS forecasts that winery development will add approximately 4,000 jobs and 1,750 households to the County's employment base. Because many jobs in the wine industry are relatively low-paying jobs, it is highly unlikely these workers will be able to afford to buy a house. Rental opportunities in the County are scarce, and commuting from outside the County will tend to increase.

Mitigation.

Direct. None

Cumulative. See Cumulative Impact section.

K. WATER RESOURCES

Setting

Groundwater Availability. Groundwater in Napa County occurs primarily in the older and younger alluviums of the Napa Valley and the Sonoma Volcanics of the Valley fringes. A small amount of groundwater is contained in the alluvium of Pope Valley and Capell Valley. Much more groundwater may be obtained from the alluvium than from the Sonoma Volcanics. The thickness of the alluvium, and correspondingly, the hydraulic conductivity, increase from north to south, and from the edges of the valley toward the Napa River. Most of the water in the alluvium is unconfined (Faye, 1973). Useable storage capacity is limited to the area between St. Helena and Napa due to shallow, low-yielding sediments in the north and salt-water intrusion in the south (USGS, 1972 and USGS, 1960). The estimated gross storage capacity of this area is 234,000 acre-feet (AF) (an acre-foot is the quantity of water required to cover an acre of land to a depth of one foot) to a depth of 200 feet (USGS, 1972). However, because it is not feasible to extract water to a depth of 200 feet, the amount of water available for use is slightly less than the storage capacity (USGS, 1972). The storage capacity is usually fully recharged every spring (Napa County Flood Control and Water Conservation District, 1973).

Recharge to the alluvium occurs primarily from infiltration of rainfall and percolation from streams. Discharge from the alluvium occurs via flow to the Napa River, evapotranspiration, and pumpage from wells. The Napa River is a gaining river which does not recharge groundwater supplies even during drought years (Faye, 1973). Due to considerably greater rainfall in the winter and spring, groundwater levels and stream flows are highest in the spring and decrease throughout the summer and fall until the winter rains (Faye, 1973).

The Franciscan Formation, the dominant geologic formation in eastern Napa County, may yield small quantities of water from fractures and deeply weathered zones, but is generally non-water-bearing (USGS, 1963 and USGS, 1970). Very little alluvium, the major source of groundwater in Napa County, occurs in the east. Exceptions are the Pope Valley and Capell Valley aquifers. Pope Valley is approximately 8 miles east of the northern end of Lake Berryessa. Its alluvial aquifer has an estimated storage capacity of approximately 7,000 AF. However, pumping is not economical because of the impermeability of the alluvium in the area. Capell Valley lies about 4 miles south of the southern end of Lake Berryessa. The alluvium in Capell Valley has an estimated storage capacity of 700 AF. Pumping is also not economical in this area since the storage capacity is so small (Napa County Flood Control and Water Conservation District, 1977.)

Surface Water Conditions. Rainfall in western Napa County averages about 600,000 AF annually. The Napa River and other streams receive about one-third of this water, and the other two-thirds percolates into groundwater aquifers,

is stored in man-made reservoirs, evaporates, or is used by vegetation (Napa County Flood Control and Water Conservation District, 1973). Average rainfall in the Napa Valley ranges from 20-22 inches at the City of Napa to 33 inches at the City of St. Helena (State Water Contractors, 1989). The Carneros region receives approximately one-half to one-third the annual average rainfall of St. Helena (USGS, Basic Data Contribution 25, 1971).

Eastern Napa County receives about 500,000 AF of rainfall each year. Most of the approximately 170,000 AF of annual runoff drains into Lake Berryessa (Napa County Flood Control and Water Conservation District, 1973).

Napa County relies primarily on surface water storage for municipal, industrial, and agricultural uses. Kimball Reservoir supplies water to the City of Calistoga. Bell Canyon Reservoir supplies water to the City of St. Helena. The State facility of Rector Dam Reservoir supplies water to the Town of Yountville. Lakes Hennessey and Milliken as well as the North Bay Aqueduct provide water for the City of Napa. In addition, small communities in the Berryessa Region receive municipal and industrial water from Lake Berryessa.

All of the eastern half of the County, except Gordon and Wooden Valley areas, drains into Lake Berryessa, the largest body of water in the County. Lake Berryessa drains to the east into Solano County which receives all water rights to the Lake (Napa County Flood Control and Water Conservation District). Tributary streams and waterways in the County take on a dendritic pattern. Smaller intermittent and perennial streams exist throughout the County.

Impacts

Direct. None.

Cumulative. Future wineries may have a significant adverse cumulative effect on groundwater resources. Lack of groundwater availability is already an issue in the Carneros region.

Adequacy of water supplies should be determined using standard requirements considering the potential effects on existing and proposed neighbors using the same aquifer/water supply. Presently the County's well ordinance does not have a minimum yield for commercial, industrial or agricultural operations. The effect on the community and existing water users is very important and must be more thoroughly addressed outside of this report.

Increased development of wineries during the next 20 years may result in a shortfall of groundwater supplies. The reader is directed to the Cumulative Impacts section for a further discussion of this impact.

Mitigation

Direct. None required.

Cumulative. See Cumulative Impact section.

VI. TOPICAL ISSUES AND IMPACT OVERVIEW

A. UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Adoption of the proposed DWDO with the inclusion of the mitigation measures recommended in this report will still have significant effects in the area of cumulative traffic and noise. Should the County wish to proceed with the proposed DWDO, it may adopt a statement of Overriding Considerations. Pursuant to Section 15093(a) of the CEQA Guidelines "... CEQA requires the decision makers to balance the benefits of the proposed project against its unavoidable environmental risks in determining whether to approve the project. If the benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered acceptable...". Such a statement would require specific findings pursuant to Section 15093 (b).

B. SIGNIFICANT BENEFICIAL EFFECTS

The continued growth of the wine industry, with or without adoption of the DWDO, will have a substantially positive impact on County government. The economic model developed by EPS projects that winery capacity, wine production, and visitor-serving facilities will be substantially the same whether current zoning regulations continue or the Winery Definition Ordinance is adopted as proposed. Therefore, the impacts of the ordinance on revenue are insignificant in comparison to the effects of the wine industry as a whole.

Anticipated revenues will far exceed operating costs, even considering the "people-related" expenditures.

The principal source of revenue will be the high assessed value of new wineries and vineyards and the transient occupancy and sales taxes generated by visitors. Incremental revenues to the County through the year 2010 are projected to be \$7,972,683, while expenditures will amount to \$2,552,000. This will result in a net gain to the County of \$5,420,683. The incorporated communities will also benefit with an estimated incremental increase in revenues through the year 2010 of \$3,982,322.

It is clear that the industry has, and will continue to have, a positive impact on County government as well as other governmental agencies. All aspects of the industry contribute significant taxes and/or fees to the County, while generating a minimal demand on services.

C. IRREVERSIBLE ENVIRONMENTAL CHANGES

Winery development under the DWDO as proposed, or with mitigation, would cause irreversible and irretrievable environmental effects. Changes in existing land use, topographical alterations, and other development related impacts will occur, and will, in all likelihood, commit future generations to similar uses. This should be considered an accepted consequence of planned development.

D. GROWTH INDUCTION

The DWDO would, among other changes, amend the County Zoning Ordinance to allow through an administrative permit process a variety of promotional events at wineries, a direct, growth-inducing result. At the present time promotional events are limited to those that benefit non-profit entities. Adoption of the DWDO would remove this restriction and allow promotional events for profit. During the past year permits were issued for events covering 39 days that were attended by a total of nearly 23,000 people. The average number of attendees was 575. Events for which no permits were obtained may have drawn an equal number of visitors.

The DWDO, by incorporating a broad definition of visitor serving uses into the Zoning Ordinance, would legitimize the range of existing uses and allow additional visitor-serving uses and promotional events. Furthermore, as visitor-serving uses at wineries proliferate, the need to cover investment costs and the need to meet increased competition between wineries would lead to increased marketing by individual wineries. This activity could cause more rapid, and/or more overall, growth than anticipated in the baseline visitor forecast.

Large scale promotional events such as musical concerts and art shows would be the most problematic form of visitor-serving activity since they would tend to increase general traffic congestion and create localized traffic problems. The DWDO would, in essence, create an unlimited capacity for promotional events. For-profit events would be permitted, with existing wineries having no limit to the number or size of promotional events that could sponsor. New wineries would be limited to four events per year of no more than three days each, again with no limit on size.

For purposes of analysis a forecast of promotional events can be constructed as follows. If only two percent of all wineries had promotional events on any given weekend, this would equal about 10 events per weekend. The tourist season runs six months, with approximately 30 weekend periods of three days in length. If 10 promotional events occur simultaneously at wineries within the County on these weekends, and each one lasted three days, a total of 900 event days would be created. With an average size of 575 participants, a total of over 500,000 event-person-days would be generated.

At the present time it appears that less than three percent of visitors to Napa County attend promotional events (50,000/1,830,000). In the future this ratio would climb to nearly 15 percent if the event forecast presented above occurs simultaneously with the year 2010 visitor forecast (500,000/3,580,000). The additional promotional events may change the mix of activities visitors engage in or the average length of stay. It is entirely possible that the additional events would actually cause an increase in the baseline visitor forecast.

Traffic congestion and limits on lodging facilities will tend to moderate overall increases in the baseline visitor forecast; however, the expected visitor growth may be accelerated, and pressure may increase to improve capacity of the road system, particularly on the critical segments and intersections along Highway 29. Additionally, there may be a shift in the location of wineries and associated promotional events to the southernmost producing areas (e.g., Carneros). The baseline forecast indicated 13% of the new wineries (52) would locate in these areas.

The reader is directed to the Cumulative Impact section (Traffic & Land Use) for mitigation measures that would reduce these effects.

E. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The DWDO would permit non-agricultural uses to expand or develop on Agricultural Resource lands, and may cause recognized agricultural uses to compete for prime agricultural land with non-agricultural uses. This provision of the DWDO is inconsistent with Land Use and Agricultural Policies of the Napa County General Plan.

F. CUMULATIVE IMPACTS

CEQA defines cumulative impacts as "...two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts..." (Section 15355). Cumulative impacts only need be discussed when they are significant. This discussion must indicate their severity and likelihood of occurrence. The analysis need not be as in-depth as the project alone, "...but be guided by the standards of practicality and reasonableness..." (Section 15130).

With some projects, the only feasible mitigation of cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis.

As previously stated the "Project" is focused on regulating wineries, not the entire wine industry of Napa County.

The following discussion evaluates cumulative effects and proposed mitigation to either avoid or reduce project-related impacts to a level of insignificance:

1. Land Use

As previously discussed, elements of the proposed DWDO are inconsistent with the Napa County General Plan Land Use Element. Unless this is corrected, cumulative development by the year 2010 would exacerbate a significant adverse impact.

The mitigation measures proposed under Land Use in the Environmental Setting would completely mitigate this cumulative effect.

2. Traffic

Daily traffic volumes throughout Napa County will significantly increase between 1989 and 2010. Volumes along the major routes in north Napa County will increase by approximately 33,500 daily trip ends, 30% of which are attributed to wineries, while volume along the major routes in south Napa County will increase by an estimated 112,200 daily trip ends, 3% of which are winery-related.

The following measures would partially mitigate cumulative impacts:

a. Impact: Provision of 30% of the additional traffic growth along major state routes in north Napa County over the next 20 years leading to increased traffic congestion.

Mitigation:

Implementation of the following 31 measures would partially mitigate the preceding impact:

Measures Typically Imposed by the County

1. Install/expand the right turn lanes and left turn pockets as necessary that exist on the arterials and/or collector roads used to access all new and henceforth expanded wineries where they intersect with State Highway 29, Silverado Trail, State Highway 128 north of 29, and Jameson Canyon Rd. Said installations/expansions shall be completed prior to

the commencement of wine making operations at the winery involved or 120 days after use permit approval, whichever comes latter.

2. Install left-turn lanes with associated acceleration and deceleration tapers at the entrances to all new and henceforth expanded wineries generating more than 25 trips/day on roadways carrying more than 2000 trips per day. Said left-turn lanes shall be installed prior to the commencement of wine making operations at the winery involved or within 120 days of use permit approval, whichever comes latter. Their design shall be acceptable to and approved by the Napa County Public Works Department and/or the State Department of Transportation.
3. Limit the number of visitor-carrying vehicles going to and from all new and henceforth expanded wineries per day and per week.
4. Prohibit promotion of all new and henceforth expanded wineries as open for tours, tastings, or retail sales or as available for events hosted by entities other than the winery itself.
5. Prohibit installation or maintenance of off-site signs for all new and henceforth expanded wineries, except for one(1) standard 1 foot high by 3 foot long directional sign. Said sign shall be located on the nearest state highway or arterial county road.
6. Close the visitor facilities at all new and henceforth expanded wineries to the general public by 2:30 PM on Fridays, Saturdays, and Sundays and by 3:30 PM on all other days.
7. Prohibit the scheduling of appointments for tours, tasting, and/or retail sales at all new and henceforth expanded wineries between 2:30 and 5:30 PM on Fridays, Saturdays, and Sundays and between 3:30 and 6:30 PM on all other days.
8. Prohibit the scheduling of dinners, festivals, or other promotional events held at all new and henceforth expanded wineries to begin or end during peak travel periods(ie, between 3:00 and 5:00 PM on Fridays, Saturdays, and Sundays and between 4:00 and 6:00 PM on all other days).
9. Encourage visitors calling for appointments or attending dinners, festivals, or other promotional events at all new and henceforth expanded wineries to car pool, ride share, or use buses where possible to reduce vehicle traffic and turning movements.
10. Schedule employee work hours to avoid peak travel periods(ie, between 3:00 and 5:00 PM on Fridays, Saturdays, and Sundays and between 4:00

and 6:00 PM on all other days). This restriction shall be enforced year-round and, to the greatest extent feasible, shall apply during the crush.

11. Schedule all pickups and delivery of supplies and products on weekdays between 7:00 a.m. and 2:30 p.m. except during the crush.

Additional Needed Measures Identified By This Report

- 12-18. See Mitigation Measures B 1 (b) (1), (2) and (c)(1),(2),(4),(6), and (7).
19. Amend the DWDO to establish a minimum separation between new and existing wineries of 2,500 feet.
20. Limit the access to new wineries along State Highway 29, Silverado Trail, State Highway 121 west of Highway 29, State Highway 128 north of 29, and Jameson Canyon Rd (ie, State Highway 12) to Coombsville Rd, Hardman Ave, Old Sonoma Rd, Tubbs Lane, Zinfandel Ln, and existing collector roads.
21. Install flared intersection improvements including free right turn lanes and left turn pockets at the junction of these roads with the above-listed highways.
22. Amend the DWDO to include within the definition of the term "Private Tours and Tasting" a requirement that a sign be installed reading "No Public Tours, or Tasting". Said sign shall be designed in such a manner as to be readily and easily readable by the passing motoring public.
23. Require that any directional sign henceforth installed for a winery without public tours/tasting shall, besides the name of the winery, carry the message "No Public Tours, or Tasting". The sign shall be designed in such a manner as to make the required message readily and easily readable by the passing motoring public.
24. Encourage ride sharing, shuttle busses, train service and other means of public/group transportation, including provision of park and ride lots.
25. Encourage new/expanded wineries to establish case goods storage and wine distribution operations in the City of Napa and the Airport Industrial Area.

26. Appoint a citizens committee to research and propose programs for adoption by the County which encourage public/group transportation of visitors within the County.
27. Limit parking at new/expanded wineries to that required for employees, deliveries, and a minimum number of visitors as established during the use permit process in order to encourage participation in public/group transportation options identified. Said facilities shall be completed prior to the commencement of wine making operations on-site or 120 days of use permit approval, whichever comes latter. None of the parking spaces installed shall directly access on, or require vehicles to back out onto, a public or common private roadway.
28. Prohibit the parking of vehicles along any roadway off-site. "No Parking" signs shall be installed where necessary and maintained.
29. Prohibit the parking of vehicles along the driveway to all new/expanded wineries unless the roadway has specifically been widened to provide on-street parking. Appropriate signs shall be installed and maintained.
30. Deny access to the property at the entry gate or street/driveway intersection when the improved parking area(s) provided on-site are full.
31. Require winery employees to carpool to the greatest extent practical. New/expanded wineries shall consider implementing vanpools, particularly during the crush.

3. Air Quality

a. Impact. Exposure of local residents to annoyance from dust generated by wine marketing and promotional activities.

Mitigation. Implementation of the following measure would completely mitigate the preceding impact:

Measures Typically Imposed by the County.

1. Surface all driveways providing access to all new/expanded wineries, all travelways around said wineries, and all parking areas at these wineries with pavement or sealed rolled rock.

Additional Needed Measures Identified by this Report.

None.

4. Noise

Increased development of wineries may adversely affect ambient noise conditions in Napa Valley.

The following measure would partially mitigate cumulative impacts:

a. Impact. Exposure of local residents to annoyance from noise generated by wine marketing and promotional activities.

Mitigation. Implementation of the following 8 measures would partially mitigate the preceding impact:

Measures Typically Imposed by the County

1. Cease all outdoor activities for visitors to all new and henceforth expanded wineries within 3500 ft(direct view)/2000 ft(shielded view) of any pre-existing off-site residence by 5:30 PM on weekdays and 2 PM on Saturdays. No outdoor activities for visitors shall be undertaken on Sundays.
2. Locate access driveways to all new and henceforth expanded wineries at least 750 feet from any pre-existing residence. Where attainment of such a separation is impossible, bus and truck traffic shall be limited to between 7:30 in the morning and 5:30 at night; OR noise walls/berms and/or vegetative screens of sufficient height, length, and density to reduce peak outdoor noise levels from traffic on the driveway at the nearest point on any residence to under 62 dBA shall be installed prior to commencement of marketing or promotional activities on-site, whichever comes first. The design of any noise wall/barrier or vegetative screen proposed shall be evaluated by a qualified acoustical engineer and a report of his findings submitted to the Napa County Conservation Development and Planning Department for review and approval at least thirty(30) days prior to the start of wall/berm/vegetative screen installation.
3. Limit bus(3 axle, 10 wheel) traffic to and from all new and henceforth expanded wineries located on a roadway carrying less than 5000 vehicles per day to 2 round trips/day. Said trips shall take place between 8:30 AM and 5 PM.
4. Prohibit the use of sound amplification equipment outdoors at any new/expanded winery.

Additional Needed Measures Identified by this Report

5. See Mitigation Measure B 1(c)(6).
6. Maintain existing residential densities in those areas designated as "Agricultural Resource" and "Agricultural Watershed" in the Napa County General Plan.
7. Prohibit outdoor visitor activities at all new and henceforth expanded wineries in any area within 400 ft of an pre-existing off-site residence.

5. Water Quality

Any additional wineries constructed could add incrementally to the degradation of surface and groundwaters in Napa County. Impacts would be generated by waste ponds, associated waste products, and urban runoff.

The following mitigation measures would reduce the effects of future development to a level of insignificance:

a. Impact. Small, but cumulatively significant, degradation of surface and groundwater quality in Napa County.

Mitigation. Implementation of the following measure would completely mitigate the preceding impact:

Measures Typically Imposed By County

None.

Additional Needed Measures Identified By This Report

1. Require that all driveways, parking lots and other the paved areas at wineries be swept with a vacuum-type street sweeper in October just prior to the first winter rains.

6. Vegetation and Wildlife

The future construction of wineries and support facilities has the potential to damage or destroy rare animal/plant species, or critical habitat. This potential loss would add incrementally to past destruction, and constitute a significant adverse cumulative impact.

The following mitigation measures would reduce the effect of future development to a level of insignificance:

a. Impact. Small but cumulatively significant loss in number of and habitat for rare/endangered plant and animal species.

Mitigation. Implementation of the following 6 measures would completely mitigate the preceding impact:

Measures Typically Imposed by the County

1. Require preparation by a qualified professional biologist and/or botanist of a detailed biologic and/or botanic field survey of all areas to be disturbed by implementation of all discretionary winery development/expansion projects that involves ground disturbance within 1000 feet of a rare/endangered plant or animal habitat site or in an area that is determined to be biologically sensitive from a rare/endangered plant/animal standpoint by the Director of the Napa County Conservation Development & Planning Department. A report a) detailing the findings of this survey; b) determining whether the project as proposed would have a significant effect on a rare/endangered plant or animal species; and c) identifying any mitigation measures needed shall be submitted to the State Department of Fish & Game and the local chapter of the California Native Plant Society for review and approval prior to the application either being found complete or being deemed filed. Said approval shall be evidenced by a signed certifications from Fish & Game and the Native Plant Society on the report submitted. Require that all winery development/expansion projects for which a survey is proposed be modified to include all the mitigation measures identified in the survey report. Said measures may include project redesign and/or relocation to accommodate preservation of the rare/endangered plant and/or animal species present. All lessees of, and contractors doing work on, the property involved shall be informed of, and bound by contract to honor, the restrictions imposed.

Additional Needed Measures Identified By This Report

3. Prohibit, prior to the receipt of all necessary winery-related permits, the destruction of or damage to the habitat for any rare/endangered plants or animals as a preliminary step to construction/expansion of a winery or winery-related facility on the site involved.

4. Direct the Napa County Conservation Development & Planning Department to complete their long-term project to up-date the County's Rare and Endangered Species Maps and to henceforth maintain them in an up-to-date state.
5. Direct the Napa County Conservation Development & Planning Department to prepare an initial rare/endangered plant and animal habitat evaluation for all winery development/expansion projects. Said evaluation shall be based on a review of the Napa County Environmental Sensitivity Maps. The evaluation shall be completed prior to a) acceptance of any application for a discretionary permit as complete; OR b) deeming any other winery-related permit or certificate as filed. This latter group of non-discretionary permits include, but shall not necessarily be limited to, all building, grading, and environmental health permits that involve ground disturbance.
6. Extend the requirement enumerated under 1 above that a qualified professional biologist and/or botanist prepare a detailed biologic and/or botanic field survey of all areas to be disturbed by implementation of all discretionary winery development/expansion projects to all winery development/expansion projects involving ground disturbance within 1000 feet of a rare/endangered plant or animal habitat site or in an area that is determined to be biologically sensitive from a rare/endangered plant/animal standpoint by the Director of the Napa County Conservation Development & Planning Department.

Impact. Small but cumulatively significant loss in critical habitat (i.e., riparian galleries, visual pools, fresh, brackish, and salt marshes, etc.).

Implementation of the following 16 measures would completely mitigate the preceding impact:

Measures Typically Imposed by the County

1. Limit all winery-related ground disturbing activities within 300 feet of the top of the bank of any stream or drainageway to the dry season (ie, April 15 to October 1).
2. Prohibit all work within the channel of any stream or waterway prior to May 15th and require that all work within the channel including temporary sediment control measure removal and channel restoration be completed by October 15th of the year in which the work was started.

3. Install temporary diversion dams, settlement pools, or other measures prior to the start of any work within the channel of any stream or waterway. At least ten(10) working days prior to installation of these facilities, approval of their design shall be obtained from the State Dept of Fish & Game. Immediately following completion of the work involved, all sediment caught will be removed from the channel and spread on the ground at least 100 feet from the top of the bank of any waterway. Immediately thereafter all temporary sediment control measures shall be removed from the channel and the channel shall be returned to its pre-construction state.
4. Reseed with rye or equivalent grass acceptable to the Napa County Resource Conservation District prior to October 15 of each construction year all areas disturbed by project construction that year.
5. Install those improvements needed to keep any concentrated run-off discharged from eroding the banks and bed of the drainageway involved. Their design shall be acceptable to and approved by both the Napa County Public Works Department and the Napa County Resource Conservation District. Said improvements shall be inspected each year before the first winter rains and properly maintained.
6. Prohibit the installation of any new on-site improvements within 50 feet of the top of the banks of the main on-site drainageways present except for bridges, bridge approaches & utility lines running perpendicular to the channel, drainage facilities, and pumps. No more than two crossings of any stream shall be allowed.
7. Install all new road and/or utility crossings of the streams involved at right angles to the channel in a manner acceptable to and approved by the Napa County Flood Control and Water Conservation District and the State Department of Fish & Game. Plans for said crossings shall be submitted to both these agencies for their review and approval at least twenty(20) working days prior to the start of construction. All work done within 50 feet of the tops of the bank of these waterways shall be carried out in strict conformance with the plans approved and directions of the State Department of Fish & Game.
8. Install the inverts of all bridges/culverts henceforth installed below the current bottom elevation of the channel at the location in question.
9. Limit the removal of any existing riparian vegetation along the drainageway involved to the absolute minimum necessary to install the crossings, bridge approaches, utility lines and pumps involved. All

areas disturbed by installation of these facilities shall be replanted within 1 year of project completion in a manner acceptable to the State Department of Fish & Game. A detailed replanting plan shall be submitted to Fish and Game for their review and approval at least ten(10) working days prior to commencement of removal of any riparian vegetation.

10. Replant with trees, grasses, and shrubs the 10 foot(20-feet for the Napa River) strip of land along the top of both banks of the stream(s) involved. Said plants shall be acceptable to and approved by the State Department of Fish & Game. No actions shall henceforth be undertaken within this area or on adjoining lands that would destroy or affect the viability of the riparian galleries thereby re-established
11. Prohibit the deposition of any spoils generated by construction of all new and henceforth expanded wineries or winery-related facilities in the riparian zone along any drainageway, in any marsh or wetland, in any vernal pool, or in any other biologically sensitive area as determined by the Director of the Napa County Conservation Development and Planning Department. The location of the spoils disposal area selected for each project shall be submitted to the Planning Department for review and approval at least ten(10) working days prior to the commencement of grading or excavation work on-site.

Additional Needed Measures Identified By This Report

12. Prohibit, prior to the issuance of all necessary winery-related permits, the destruction of or damage to any critical habitat as a preliminary step to construction/expansion of a winery or winery-related facility on the site involved.
13. Direct the Napa County Conservation Development & Planning Department to complete their long-term project to up-date the County's Critical Habitat Maps and to henceforth maintain them in an up-to-date state.
14. Direct the Napa County Conservation Development & Planning Department to prepare an initial critical habitat evaluation for all winery development/expansion projects. Said evaluation shall be based on a review of the Napa County Environmental Sensitivity Maps. The evaluation shall be completed prior to a) acceptance of any application for a discretionary permit as complete; OR b) deeming any other winery-related permit or certificate as filed. This latter group of non-discretionary permits include, but will shall not necessarily be

limited to, all building, grading, and environmental health permits that involve ground disturbance.

15. Require preparation by a qualified professional biologist and/or botanist of a detailed habitat survey of all areas to be disturbed by implementation of all discretionary winery development/expansion projects that involve ground disturbance within 100 feet of a critical habitat area or in an area that is determined to be biologically sensitive by the Director of the Napa County Conservation Development & Planning Department. A report a) detailing the findings of this survey; b) determining whether the project as proposed would have a significant effect on critical habitat; and c) identifying any mitigation measures needed shall be submitted to the State Department of Fish & Game for review and approval prior to the application either being found complete or being deemed filed. Said approval shall be evidenced by a signed certification from Fish & Game on the report submitted.
16. Require development by a qualified professional biologist and/or botanist of a comprehensive critical habitat preservation plan acceptable to and approved by the State Dept of Fish & Game for every winery-related project approved within 100 feet of a critical habitat area. Evidence of said approval shall be provided by a signed certification by Fish & Game on the plan submitted. At a minimum said program shall include the following provisions:
 - a) protection from encroachment all areas defined in the Napa County General Plan as biologically important along with all remaining riparian corridors, vernal pools, marshes and other wetlands, significant springs and seeps, and stands of valley oaks;
 - b) establishment of riparian protection zones along all streams and drainageways present that included at a minimum all lands within 50 feet of the top of the high banks of the stream involved (100 feet in the case of the Napa River);
 - c) establishment of critical habitat protection zones around all other critical habitat areas identified; AND
 - d) provision to the State Department of Fish & Game of riparian and critical habitat protection easements prohibiting any ground or vegetation disturbance in these zones that would significantly effect their habitat value.

The project shall be modified to include all the mitigation measures identified in the survey report plus all the measures included in the critical habitat preservation plan. These measures may necessitate project redesign and/or relocation to accommodate preservation of the

critical habitat present. All lessees of, and contractors doing work on, the property involved shall be informed of, and bound by contract to honor, the restrictions so imposed.

7. Cultural Resources

Any additional disturbance of undeveloped land may jeopardize a cultural or historic site.

The following measures would completely mitigate cumulative impacts:

a. Impact. Additional damage to, and possible destruction of, the numerous archaeological sites, both recorded and unrecorded, that are present in the agriculturally-zoned portions of Napa County.

Mitigation. Implementation of the following 7 measures would completely mitigate the preceding impact:

Measures Typically Imposed by the County

1. Require that a qualified professional archaeologist on the Society of Professional Archaeologists(SOPA) List prepare a detailed archaeological field survey of all areas to be disturbed by implementation of all discretionary winery development/expansion projects that involve ground disturbance within 1000 feet of a recognized archaeological site or in an area that is determined to be archaeologically sensitive by the Director of the Napa County Conservation Development & Planning Department. A report a) detailing the findings of this survey; b) determining whether the project as proposed would have a significant effect on archaeological resources; and c) identifying any mitigation measures needed shall be submitted to the Napa County Conservation Development and Planning Department for review and approval prior to the application either being found complete or being deemed filed.
2. Require that all winery development/expansion projects for which a survey is prepared be modified to include all the mitigation measures identified in the survey report. Said measures may include project redesign and/or relocation. All lessees of, and contractors doing work on, the property involved shall be informed of, and bound by contract to honor, the restrictions imposed.
3. Require that the applicant/property owner for all winery development/expansion projects and their successors-in-interest see

that all work in any area not monitored full-time by a qualified professional SOPA-listed archaeologist is halted within 35 feet if concentrated artifactual materials (ie, worked stone, bone, charcoal, human remains, etc) are encountered. Said work shall remain stopped until a qualified SOPA-listed archaeologist has evaluated the find, developed any mitigation measures needed, prepared a report of his findings, and filed said report with the Napa County Conservation Development and Planning Department. All mitigation measures suggested shall, with the concurrence of the Director of said department, be implemented. All lessees of, and contractors doing work on, the property involved shall be informed of, and bound by contract to honor, the requirement to stop work immediately if artifactual materials are encountered.

Additional Needed Measures Identified By This Report

4. Prohibit, prior to the receipt of all necessary winery-related permits, the destruction of or damage to any archaeological site as a preliminary step to construction/expansion of a winery or a winery-related facility on the property involved.
5. Direct the Napa County Conservation Development & Planning Department to complete their long-term project to up-date the County's Archaeological Sensitivity Maps and to henceforth maintain them in an up-to-date state.
6. Direct the Napa County Conservation Development & Planning Department to prepare an initial archaeological resource evaluation for all winery development/expansion projects. Said evaluation shall be based on a review of the Napa County Environmental Sensitivity Maps and consultation with the regional archaeological clearinghouse, the State Office of Historic Preservation, and the Native American Heritage Commission. The evaluation shall be completed prior to a) acceptance of any application for a discretionary permit as complete; OR b) deeming any other winery-related permit or certificate as filed. This latter group of non-discretionary permits shall include, but will not necessarily be limited to, all building, grading, and environmental health permits that involve ground disturbance.
7. Extend the requirement enumerated under 1 above that a qualified professional archaeologist prepare a detailed archaeological field survey of all areas to be disturbed by implementation of all discretionary winery development/expansion projects to all winery development/expansion projects involving ground disturbance within 1000 feet of a recognized archaeological site or in an area that is

determined to be archaeologically sensitive by the Director of the Napa County Conservation Development & Planning Department.

b. Impact. Additional damage to, if not destruction of, the numerous historic features, both recorded and unrecorded, that are present in the agriculturally-zoned portions of Napa County.

Mitigation. Implementation of the following 7 measures would completely mitigate the preceding impact:

Measures Typically Imposed by the County

1. Require that a qualified professional historical archaeologist and/or architect prepare a detailed historical field survey of all areas to be disturbed by implementation of all discretionary winery development/expansion projects that involve a recognized historic structure or feature or an area determined as historically sensitive by the Director of the Napa County Conservation Development & Planning Department. A report a) detailing the findings of this survey; b) determining whether the project as proposed would have a significant effect on historical resources; and c) identifying any mitigation measures needed shall be submitted to the Napa County Conservation Development and Planning Department for review and approval prior to the application either being found complete or being deemed filed.
2. Require that all winery development/expansion projects for which a survey is prepared be modified to include all the mitigation measures identified in the survey report. Said measures may include project redesign and/or relocation. All lessees of, and contractors doing work on, the property involved shall be informed of, and bound by contract to honor, the restrictions imposed.
3. Require that the applicant/property owner for all winery development/expansion projects and their successors-in-interest see that all work in any area is halted within 35 feet if concentrated historical materials (ie, worked stone, glass, bottles, buried foundations, etc) are encountered. Said work shall remain stopped until a qualified historical archaeologist has evaluated the find, developed any mitigation measures needed, prepared a report of his findings, and filed said report with the Napa County Conservation Development and Planning Department. All mitigation measures suggested shall, with the concurrence of the Director of said department, be implemented. All lessees of, and contractors doing work on, the property involved shall be informed of, and bound by contract to honor,

the requirement to stop work immediately if historic materials are encountered.

Additional Needed Measures Identified By This Report

4. Prohibit, prior to the obtaining of all necessary winery-related permits, the destruction of or damage to any historic structure/feature as a preliminary step to construction/expansion of a winery or winery-related facilities on the site involved.
5. Direct the Napa County Conservation Development & Planning Department to complete their long-term project to up-date the County's Historical Sensitivity Maps and to henceforth maintain them in an up-to-date state.
6. Require that the Napa County Conservation Development & Planning Department prepare an initial historic resource evaluation for all winery development/expansion projects. Said evaluation shall be based on a review of the Napa County Environmental Sensitivity Maps and any other pertinent data along with consultation with the regional archaeological clearinghouse and the State Office of Historic Preservation. The evaluation shall be completed prior to a) acceptance of any application for a discretionary permit as complete; OR b) deeming any other winery-related permit or certificate as filed. This latter group of non-discretionary permits shall include, but will not necessarily be limited to, all building, grading, and environmental health permits that involve ground disturbance.
7. Extend the requirement enumerated under 1 above that a qualified professional historical archaeologist/architect prepare a detailed historical field survey of all areas to be disturbed by implementation of all discretionary winery development/expansion project to all winery development/expansion projects that involve a recognized historic structure/feature or an area determined to be historically sensitive by the Director of the Napa County Conservation Development & Planning Department.
8. Adopt a Historic Preservation Ordinance that provides conditions and guidelines for the demolition and rehabilitation of historic structures. Said conditions shall include a requirement that any work undertaken on, or changes made to, a historic structure shall be done either a) in strict conformance with the Secretary of Interior's Standards for Rehabilitation of Historic Structures and associated guidelines dated March 24, 1977 or b) the requirements of a historic architect.

8. Visual/Aesthetic Considerations

The following mitigation measures are recommended, and if incorporated, would reduce the impact to a level of insignificance:

a. Impact. Degradation of the visual quality of Napa County through loss of vegetation, alteration of topography, blockage of views, and construction of structures that are more a statement of marketing strategy than a "visual fit" with the surrounding landscape.

Mitigation. Implementation of the following 13 measures would completely mitigate the preceding impact:

Measures Typically Imposed by the County

1. Limit all exterior building and roofing materials used in any new and henceforth expanded wineries including window surface and framing materials to non-glary ones.
2. Screen from public and local private view all external mechanical/electrical equipment and utility hardware on roofs, buildings, and grounds.
3. Screen from public and local private view all unwalled equipment storage, aging, & warehousing areas, service yards, production areas, and distribution facilities.
4. Contour all new and expanded cut and/or fill slopes created that are visible from off-site in such a manner as to blend them into the adjoining natural hillsides.
5. Revegetate all new and expanded cut and/or fill slopes created with the same plants that are present on the adjoining hillsides. If this is not possible, trees shall be planted prior to commencement of wine making operations and henceforth permanently maintained at strategic locations on-site to break-up the outline of the cut slope involved. Tree species and locations shall be acceptable to and approved by the Napa County Public Works and Conservation, Development and Planning departments.
6. Prohibit placement of spoils piles within 300 feet of any public roadway or off-site residence.

7. Remove within one(1) year of grading commencement all spoils piles that are readily visible from a public road or off-site residence.

Additional Needed Measures Identified by This Report

8. Adopt a Design Review Ordinance applicable to all new wineries and winery expansions. The design review evaluation mandated shall include, but will not necessarily be limited to, review of size, design, color, style, historic nature, layout, location on site, screening, disturbance of existing vegetation and terrain, and effect on adjoining property owners. The objective of the design review process adopted shall be to reduce to a minimum the visual effect of the facility involved and produce a winery that is a "visual fit" with the surrounding area.
9. Appoint, in conjunction with adoption of the needed Winery Design Review Ordinance, a 5-7 member Design Review Board made up of design professionals (architects, landscape architects, planners, & engineers), representatives from the wine industry, agriculture, conservationist, and historical groups, and individuals with a general interest and background. Adjacent property owners shall be notified of meetings of this board and their decisions shall be subject to Napa County's standard appeal process.
10. Adopt, in conjunction with the needed Winery Design Review Ordinance design guidelines for all new and henceforth expanded wineries and winery-related facilities. Said standards may recognize regional differences within the County. They shall reflect the fact that wineries located at gateways to areas are of particular importance in setting the tone for that region. The guidelines adopted shall include, but will not necessarily be limited to, the following:
 - a) selection of a site layout and architectural design that is harmonious with that used on surrounding properties and with the style and character of the region("statement buildings" with features intended as marketing devices shall not be allowed);
 - b) use of a facility layout that makes the winery rather than the visitor facilities the primary visual element;
 - c) maintenance of, and incorporation to the greatest extent possible into the design of the proposed facility, existing natural features outside the building footprint including but not limited to mature native or naturalized vegetation;
 - d) use of compatible architectural and site design in any winery expansion/renovation projects to preserve and enhance the historic

- value of both the winery itself and any historic buildings involved;
- e) placement of landscaped perimeters around all parking areas of sufficient height and density to screen them from view from public streets and nearby residences; AND
 - f) imposition of Measures 1-5 above.
11. Amend the DWDO to adopt the design guidelines outlined in 10 above as interim standards until a Winery Design Review Ordinance with related Winery Design Guidelines is adopted and becomes effective.
 12. Designate sections of 4 state highways and 14 county roads as County Scenic Highways and impose specific conditions on development along them to protect visual quality within their view corridors. The specific roads involved include portions of Highways 12, 29, 121, and 128 plus Bale Ln, Berryessa-Knoxville Rd, Butts Canyon Rd, Chiles Valley Rd, Dry Creek Rd, Lodi Ln, Oak Knoll Ave, Oakville Cross Rd, Oakville Grade, Pope Canyon Rd, Pope Valley Rd, Silverado Trail, Yountville Cross Rd, and Zinfandel Ln.
 13. Amend the DWDO to impose an interim winery roadway centerline setback of 1000 feet and a interim winery separation requirement of 2500 ft. Said requirements shall remain in effect until a) a Winery Design Review Ordinance with related Winery Design Standards and Guidelines is adopted and becomes effective, AND b) designation of County Scenic Highways is complete.

9. Public Health and Safety

The following measure would completely mitigate the effects of cumulative impacts:

a. Impact. Exposure of new and existing users of roadways within Napa County to increased life and property hazards from traffic accidents.

Mitigation. Implementation of the following 13 measures would completely mitigate the preceding impact.

Measures Typically Imposed by the County

1. See Mitigation Measure D 2(a)(1).
2. See Mitigation Measures D 2 (a)(1) & (2).

3. Place/relocate the driveway to all new and henceforth expanded wineries at a location where at least 450 feet of unobstructed sight distance exists in both directions along the public or common private roadway involved. Where this is impossible install left-turn lanes with associated acceleration/deceleration tapers.
4. Require that the driveway installed be at least 20 feet wide along its entire length and that it be completed prior to commencement of wine making operations on-site or 120 days of use permit approval, whichever comes latter. A lesser width roadway may be permitted where peak traffic volumes are less than 20 vehicles per day or visitor and service vehicle traffic are separated. In no case, however, shall the width of the driveway(s) involved be less than 10 feet.
5. Require that the first 300 feet of driveway off the public or common private roadway involved be paved.
6. Set back all gated entranceways henceforth installed at all new and henceforth expanded wineries far enough to provide adequate stacking distance outside the public right-of-way for at least three(3) cars. The entryway design selected shall permit a Mobile Home Design Vehicle upon coming to the gate when it is closed to turn around without backing up.
7. Modify the design of existing gated entranceways at present wineries that are henceforth expanded to provide adequate stacking distance for at least three(3) cars off the paved portion of the road and turn around room for at least one (1) car. Said modifications shall be completed within 120 days of use permit approval.
8. Prohibit the parking of vehicles along any roadway off-site. "No Parking" signs shall be installed where necessary and maintained.
9. Prohibit the parking of vehicles along the driveway to all new and henceforth expanded wineries unless the roadway has been widened to provide on-street parking. Appropriate signs shall be installed and maintained.
10. Deny access to the property at the entry gate or street/driveway intersection when the improved parking area(s) provided on-site are full.
11. Provide adequate facilities on-site for the loading, unloading, and turn-around of all delivery trucks serving all new and henceforth expanded wineries. Said facilities shall be completed prior to the

commencement of wine-making operations on-site or 120 days of use permit approval, whichever comes latter. These loading and turn-around areas shall neither have direct access off a public or common private road nor shall they use any part of such a road.

12. Schedule, to the greatest extent feasible, the pickup and delivery of grapes, supplies, and wines outside the hours the new/expanded winery is open to the general public.

Additional Needed Measures Identified by the Report

13. see Mitigation Measure D 2(a) (16).

10. Community Services

The following measures would completely mitigate the effects of cumulative impacts:

a. Impact: Increase in demand for fire protection and emergency medical services as a result of the increased amount of building space present and the increased number of people involved.

Mitigation: Implementation of the following 6 measures would completely mitigate the preceding impact:

Measures Typically Imposed by the County

1. Install at all new and henceforth expanded wineries a water supply system acceptable to and approved by the Napa County Fire Chief. Said system, which must be completed prior to building occupancy or within 120 days of use permit approval, whichever occurs latter, shall provide adequate fire flows at 20 psi dynamic to serve at least one steamer fire hydrant (additional hydrants and larger flows may be required in the case of larger facilities). Included shall be facilities to store exclusively for fire protection the amount of water that the fire flow calculations indicate is necessary.
2. Install at all new and henceforth expanded wineries at least one(1) steamer fire hydrant capable of supplying 200 gpm. Said hydrant shall be operational prior to building occupancy or within 120 days of use permit approval, whichever occurs latter (additional hydrants with greater flows may be required in the case of larger facilities). The location of said hydrant(s) shall be acceptable to and approved by the Napa County Fire Chief.

3. Install at all new and henceforth expanded wineries monitored smoke detector systems acceptable to and approved by the Napa County Fire Chief. Said systems shall be operational prior to building occupancy or within 120 days of use permit approval, whichever occurs latter. In processing areas, monitored heat detectors may be substituted for the smoke detectors required.

Additional Needed Measures Identified by this Report

4. Adopt a "Fire Protection Impact Fee" in accordance with AB 1600. The fee shall be charged to new wineries, expanded wineries, and other commercial and residential development within the County. Revenue from the fee shall be returned to the local fire protection agency for the purpose of purchasing needed facilities and equipment.
5. Increase the Special District Augmentation Fund monies provided to the Napa County Fire Department and to any other fire protection agencies who have their operations substantially impacted by future winery development.
6. Adopt a annual winery fire service fee applicable for all new and henceforth expanded wineries.

b. Impact. Increase in the demand for disposal at the Napa Sanitation District facility of the waste pumped from winery septic tanks (i.e., septage).

Mitigation. Implementation of the following 2 measures would completely mitigate the preceding impact:

Measures Typically Imposed by the County

None

Additional needed Measures Identified by this Report

1. Limit the delivery of winery septage to the winter months when NSD's treatment facility is operational. Facilities for storing septage safely on the winery site until such time as it can be transferred shall be installed.
2. Require testing of winery septage disposed of at the NSD's plant for regulated materials and provision of a data sheet with each load of the waste delivered specifying the materials used at that winery.

c. Impact: Increase in the demand for solid waste disposal at the County's three sanitary landfill sites.

Mitigation: Implementation of the following 3 measures would partially mitigate the proceeding impact:

Measures Typically Imposed by the County

None

Additional needed Measures Identified by this Report

1. Require that all new and henceforth expanded wineries develop and implement prior to commencement of operation a re-cycling plan acceptable and approved by the Director of the Napa County Environmental Management Department. Said plan shall include programs for cardboard, glass and other waste materials.
2. Require that all new and henceforth expanded wineries separate waste materials by ability to degrade prior to deliver to a landfill.
3. Require that to the greatest extent feasible all new and henceforth expanded wineries dispose of their pomace through vineyard or soil application.

d. Impact. Increased demand for affordable housing.

Mitigation. Implementation of the following measure would partially mitigate the proceeding impact:

Measures Typically Imposed by the County.

None.

Additional Needed Measures Identified by this Report.

1. All new wineries and winery expansions, including accessory structures, should pay an in-lieu housing fee to the Napa County Housing Authority to assist the County and cities to provide affordable housing. This fee should be based on a job creation/housing demand ratio and be charged on a building square foot basis.

11. Water Resources

The following mitigation measures would reduce the effects of future development to a level of insignificance:

a. Impact: Small but cumulatively significant depletion of local groundwater supplies.

Mitigation. Implementation of the following 4 measures would completely mitigate the preceding impact:

Measures Typically Imposed by the County

None

Additional needed Measures Identified by this Report

1. Prohibit construction of new or the expansion of existing wineries in "groundwater-overdraft" areas and are "critical groundwater-short" areas unless a water source not drawing on groundwater supplies is found that is acceptable to the Director of the Napa County Environmental Management Department. "Groundwater -overdraft areas" shall include, areas recognized as such by the Director of Environmental Management. "Critical groundwater-short site" shall be a site where a well with an approved yield of 5 gals/minute for each 20,000 gals of annual wine production cannot be attained. An acceptable water source not drawing on groundwater supplies does not include any water source that employs water that would otherwise be available for groundwater recharge.
2. Require that water conservation programs acceptable to the Napa County Environmental Management Department be developed and implemented for all new and henceforth expanded wineries.
3. Require that to the greatest extent feasible new and henceforth expanded wineries implement water reclamation/re-use programs. Said programs shall, were possible, include use of reclaimed water for landscape irrigation and vineyard frost protection/irrigation.
4. Require that to the greatest extent feasible new and henceforth expanded wineries must use drought-resistant native plants in their landscaping if reclaimed wastewater is not used for landscape irrigation.

VII. ALTERNATIVES COMPARISON

Pursuant to CEQA, a range of reasonable alternatives to the project, or to the location of the project, must be described [Section 15126(d)]. The discussion must focus on opportunities of eliminating any significant adverse environmental effects, or reducing to a level of insignificance, ".....even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly....." [Section 15126(d)(3)]. The EIR must identify an environmentally superior alternative among other alternatives. As with cumulative impacts, the discussion of alternative is governed by "rule of reason". The EIR need not consider an alternative that is not reasonable, or does not contribute to an informed decision-making process.

The following is a discussion of five alternatives to the proposed project. Alternative A (No-Project) and Alternative D (No-Growth) are included by CEQA mandate. Alternative B (DWDO With Mitigation) is the Environmentally Superior Alternative. Alternatives C and E look at prohibiting wineries and visitor facilities from agriculturally zoned lands, respectively.

A. NO-PROJECT ALTERNATIVE (BASELINE PROJECTION)

This alternative would parallel the Baseline Case as defined in the analysis prepared by Economic Planning Systems (see MEA, Part III). Adopting the DWDO as proposed would not significantly alter adverse impacts and, in some instances, would exacerbate existing conditions. The following are key elements of the DWDO that have the potential to increase adverse impacts:

- Expansion of uses allowed pursuant to a use permit.
- 18-month "grace period" that would permit existing wineries to apply for a use permit for uses previously not legal.
- Reduce the County's General Plan Land Use Intent from 40 acres to 10 acres.
- Remove the restriction on promotional events of "for charity only", and allow them to become a major marketing opportunity.

The DWDO would provide the following features:

- The small winery exemption would be eliminated.
- Public tours and tastings would not be permitted for new wineries.

Our analysis has concluded that neither feature would, over time, be a significant benefit to the County.

It is assumed that the DWDO would, by the year 2010, generate fewer wineries. However, it is not structured to create fewer impacts. Best case, the No-Project Alternative and the DWDO would parallel each other by the year 2010. Worst case, the DWDO would increase impacts during the same planning horizon.

In lieu of adopting the DWDO as proposed, the County would benefit from accepting the No-Project Alternative. However, the preferred alternative would be to adopt the DWDO with mitigation (Environmentally Superior Alternative).

B. NO-GROWTH ALTERNATIVE

Under this alternative the County would prohibit new wineries, expansion of existing wineries, and new or expanded visitor serving facilities anywhere in the County. All winery development would be shunted to the cities and out of the County.

Of the incorporated areas of Napa County, only the City of Napa is currently capable of supporting a winery with water and wastewater treatment facilities. The projected demand for development of wineries in Napa County over the next 20 years cannot be accommodated within the City of Napa, so a large portion of the demand would be moved to Sonoma and possibly Solano or Lake Counties. This would substantially increase pressure on Calistoga and St. Helena to upgrade their water and waste treatment facilities as quickly as possible. We expect that this alternative has not been seriously considered, and we expect that it is not economically feasible for the County to adopt it.

Because this alternative would adversely affect the viability of the wine industry, it is inconsistent with the County's General Plan. It is, however, the only alternative presented here which would not, to some degree, exacerbate the already over-capacity roadway system of Napa County.

C. PROHIBITION OF ALL VISITOR FACILITIES AND PROMOTIONAL EVENTS ON AGRICULTURALLY-ZONED LAND

This alternative would amend the DWDO to prohibit new or expanded visitor facilities or promotional events in the agricultural zones of the County, both AP and AW, and allow them only in Commercial Neighborhood (CN) and Commercial Limited (CL) zones. This alternative is similar to "C" above, but allows wineries remain in agriculture zones.

This alternatives require visitor facilities to be located in Commercial zones or in the cities. Since visitor facilities and promotional events are by their very nature commercial activities, and not agricultural activities, this placement is appropriate and would be consistent with the County's General Plan.

We would expect, if this alternative were adopted, the County would receive increased applications for rezoning of land to Commercial. It would be important for the County to develop a program in advance of such applications designating areas which they feel would be appropriate for Commercial zoning. If new areas were extensive, it is possible that a General Plan amendment would be required.

Impacts on variables which are not site specific, for example revenues to the County, will not be affected by this alternative. Concentration of visitor serving facilities and promotional events in one location, will concentrate impacts in that location, thereby freeing the agricultural areas from these impacts. The commercial, more urban uses will be located near in areas appropriate for such concentrated uses. The success of this alternative in decreasing environmental impacts is dependent upon the care taken in possible future Rezonings.

D. ESTABLISHMENT OF NEW WINERY OVERLAY ZONE

This alternative would amend the DWDO to prohibit new or expanded wineries, visitor facilities, or promotional events in the agricultural zones of the County, both AP and AW, and allow them only in the Industrial and Winery Zones of the County and cities. In addition to the current parcels zoned Industrial or Winery, we propose that the County establish a Winery Overlay Zone, which would allow groups of wineries and/or visitor serving facilities to be located in areas where infrastructure could adequately support them.

Existing zoning is located as follows:

Industrial Zones in the County are limited to about 3,000 acres near the Napa Airport. Infrastructure adequate.

The City of Napa's Zoning Ordinance does not specifically provide for wineries; however, they may be permitted under the Industrial or Heavy Commerical Zones with Use Permit. Infrastructure possibly adequate.

The Town of Yountville does not permit wineries.

St. Helena's Zoning Ordinance establishes a Winery (W) Zone located at the City Limits in the South from Highway 29 to Silverado Trail, and in the North at the Beringer and Christian Brothers properties. Wineries located more than 400' from a residence and 200' from roads are permitted without

a Use Permit. Wineries within these setbacks require a Use Permit. Current lack of water supply and road capacity.

The Calistoga Zoning Ordinance does not address wineries specifically, but their Planning Department considers wineries to be industrial uses, and they may be allowed only in Planned Unit Industrial (PM) Zone with a Use Permit. Current lack of water supply, waste water treatment capability, and road capacity.

In addition to these existing zones, it would be necessary for the County to set aside, or allow applications for, new parcels to be zoned "Winery Overlay". The intent of this overlay zone would be to concentrate the wineries and visitor serving facilities in approved locations, allow a full range of sales and visitor uses, and prevent dispersing them throughout the County on agricultural land.

Allowed uses would be wine production facilities, distribution and storage facilities, public tours and tastings, and promotional events. The most important caveat of this alternative is: the new Winery Overlay Zone must be allowed only on parcels with:

- Adequate water supply
- Waste water treatment capacity
- Access roads with available capacity
- Adequate buffers from residential/urban uses.

Existing wineries could apply for a "Winery Overlay Zone", subject to the same requirements listed above, and if granted, could subsequently apply to expand their use.

We are not aware of the different alternatives which the Joint Winery Definition Committee considered when they were drawing up the DWDO, therefore we do not know if this alternative was rejected or why. Possible considerations are that wineries would prefer to be located next to their vineyard, however, many wineries do grow or buy grapes from vineyards not contiguous to their processing facility. Another consideration is that some marketing strategies may discourage locating wineries or tasting facilities in groups, thereby decreasing the "exclusivity" of their wines. Such strategies, however, do not preclude the feasibility of this alternative. This alternative would not preclude the use of the term "Estate Bottled" under the appellation rules.

With this alternative, the DWDO would become consistent with the General Plan policies regarding allowed uses on agricultural lands, but the General Plan would require amendment to designate specific areas for the "Winery Overlay" zone. Winery uses under this alternative would have the same needs and generate

the same traffic and waste materials as under the proposed DWDO, however, restricting wineries to geographical areas where constraints are substantially less will reduce negative impacts on water quality, water supply, vegetation and wildlife, traffic, noise, air quality, some community services, and other site specific variables.

Impacts on variables which are not site specific, for example revenues to the County, will not be affected by this alternative. Concentration of wineries, visitor serving facilities and promotional events in one location, will concentrate impacts in that location. It will be a larger, more urban type use. The success of this alternative in decreasing environmental impacts is dependent upon the care taken in locating parcels suitable for Winery Overlay Zoning.

E. MITIGATED DWDO ALTERNATIVE

(Environmentally Superior Alternative)

Under this alternative, the DWDO (the "Project") would be approved but would include all the Project-related mitigation contained in the EIR, and the recommendations contained under the Interim Measure. Acceptance of the Interim Measures is vital to complete mitigation, as it provides the bridge between the DWDO EIR and the opportunity to mitigate the effects of industry growth. The following are key elements of this alternative:

- Amend the DWDO to prohibit any non-agricultural use to be permitted in the Agricultural Preserve or Agricultural Watershed zones.
- Amend the DWDO to eliminate the 18-month grace period, or "grandfathering clause".
- Cause all future development or expansion of existing facilities to be subject to a County Use permit.
- Cause all illegal uses to be abated, or consider legalization through a determination of General Plan consistency, and issuance of a County Use Permit.
- Adopt the Interim Measure.

Adoption of the Environmentally Superior Alternative would bring the DWDO into compliance with the Napa County General Plan, and provide a basic framework to mitigate the significant adverse effects of future industry growth. The language contained in the Findings of Fact to the DWDO specifically acknowledges the severity of the issues confronting the County, and the uniqueness of the Napa Valley. However, the DWDO as submitted, although necessary, does not include adequate mitigation to either avoid, or reduce to a level of insignificance, the

effects of the Project. Even in this Alternative, impacts described in the Traffic and Noise sections will not be mitigated completely. However, the DWDO with Mitigation must be viewed as the Environmentally Superior Alternative.

Interim Measure

- Until all mitigation measures are fully developed and adopted, the County shall adopt an interim growth policy of no more than nine new wineries, or expansion of existing facilities, per year. Expansion for the purpose of increasing wine production capacity is not limited under this policy.
- During this time, no new or expanded non-agricultural uses shall be approved.
- During this time, setbacks along major arterials shall be 1,000 feet and separation between new and existing wineries shall be 2,500 feet.

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