

As further described below, Napa County has identified a "Preferred Plan" for the proposed General Plan Update that is based on components of the alternatives that were evaluated in the Draft EIR as well as the public draft of the General Plan Update released on February 16, 2007. Although this constitutes a modification to the project description of the General Plan Update, no new significant information or impacts were identified as a result of the development of the Preferred Plan. State CEQA Guidelines Section 15088.5 (Recirculation of an EIR Prior to Certification) states that "New information added to an EIR is not 'significant' unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect..." Significant new information includes:

- 1) A new significant environmental impact resulting from the project or from a new mitigation measure proposed to be implemented.
- 2) A substantial increase in the severity of an environmental impact unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- 3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.
- 4) The Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

As none of the above scenarios resulted from modifications of the project description, recirculation of the EIR is not necessary consistent with the provisions of CEQA Guidelines Section 15088.5. Evidence to support this conclusion is provided in the discussion and analysis provided in this section.

2.1 PREFERRED GENERAL PLAN UPDATE (PREFERRED PLAN)

As discussed in Section 3.4 of the Draft EIR, the proposed project being analyzed is adoption and implementation of an updated General Plan for unincorporated Napa County. A General Plan is a policy document that provides a vision, goals, policies, implementation actions, and various maps/diagrams to guide future County decisions regarding land use and development issues. Objectives of updating the Napa County General Plan include:

- Providing a legally adequate General Plan that reflects an updated vision for the County's future and provides a blueprint for future decisions regarding land use and development;
- Protecting the County's rural character and maintaining the total amount of land designated for agriculture in the County;
- Providing for the use and protection of the County's natural resources;
- Providing incentives to encourage good land stewardship such as a streamlined approval process for environmentally superior projects;
- Accommodating a reasonable amount of growth (i.e., housing and employment), principally within existing "urbanized" areas;

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- Identifying performance standards and desired improvements for roadways in the County, including areas that currently experience congestion;
- Increasing access to public open spaces and publicly owned recreational trails over the next 25 years;
- Addressing other issues of concern to the community such as the need for moderate priced “workforce” housing, the needs of an increasingly aging population, incentives for historic preservation, and the effects of global climate change; and
- Providing a set of goals and a policy framework with broad community support and acceptance.

The following additional objective has been added to the list contained on p. 3.0-12 of the Draft EIR:

- Providing a set of goals and a policy framework that has been developed with extensive community input and that enjoys political support.

The Draft EIR assessing the impacts of the General Plan Update (GPU) was circulated for public review concurrent with a draft of the GPU, and considered a number of alternatives developed specifically to assess potential impacts of the project. As explained in the Draft EIR (p. 3.0-11), the Draft EIR alternatives were designed to “bracket” possible outcomes of the planning process because the draft GPU was expected to evolve based on public comments received.

As expected, public comments received regarding the draft GPU and Draft EIR requested revisions to the draft GPU, and guided preparation of a revised Public Hearing Draft General Plan Update, which was published on December 3, 2007. This revised draft GPU is incorporated herein by reference and constitutes the Preferred General Plan Update (i.e., the Preferred Plan), which is described further below. Characteristics and impacts of the Preferred Plan are also compared to the alternatives presented in the Draft EIR.

2.2 PREFERRED PLAN – DESCRIPTION

The Preferred Plan would retain policy provisions of the 1983 General Plan with few exceptions, perpetuating Napa County’s long-standing commitments to agricultural preservation and urban-centered growth, maintaining the 1% growth limit established as Measure A in 1980, and maintaining existing 40-160 acre minimum parcel sizes in agricultural areas. The plan would also maintain the supremacy of agriculture as the primary land use in Napa County and maintain existing protections for watershed open space.

New policies related to water quality would acknowledge the Regional Water Quality Control Board’s regulatory (“TMDL”) process and aim to improve the health of the Napa River over time. Natural resources policies calling for public outreach, education, and inter-governmental cooperation would be complemented by those establishing incentives for environmental stewardship, clarifying requirements for discretionary projects, and embracing the principle of “adaptive management” whereby the effectiveness of policies will be monitored and adjusted as needed in the future.

The Plan's language would be updated and its content reorganized into the following chapters or elements: Agricultural Preservation and Land Use, Circulation, Community Character, Conservation, Economic Development, Housing, Recreation and Open Space, and Safety.¹ Readers should consult the Revised Draft General Plan Update for specific goals, policies, and implementation actions.

LAND USE MAP CHANGES

As shown in **Figure 2.0-1**, the plan would modify the County's current Land Use Map in the following ways:

- Approximately 230 acres at the Napa Pipe and Boca/Pacific Coast sites would be re-designated from "Industrial" to "Study Area," indicating the need to study these areas further to determine their potential for non-industrial uses such as housing.
- Approximately 300 acres at the Hess Vineyard north of American Canyon would be re-designated from "Industrial" to "Agriculture, Watershed & Open Space" to correlate with the existing Agricultural Watershed (AW) zoning and the existing land use.
- Approximately 135 acres in the Angwin area would be re-designated from "Urban Residential" to "Agriculture, Watershed & Open Space," to correspond with the existing AW zoning and the predominant land use. In addition, approximately 60 acres in Angwin would be re-designated from "Urban Residential" to "Rural Residential" to better reflect existing land uses in that area.
- Approximately 200 acres southwest of Berryessa Estates would be re-designated from "Rural Residential" to "Agriculture, Watershed & Open Space" to correlate with the existing Agricultural Watershed (AW) zoning and the existing use of the property.
- Approximately 140 acres north of the Pope Creek bridge on the west shore of Lake Berryessa would be re-designated from "Urban Residential" to "Rural Residential" given the limited availability of urban services in this area.

There would be no map changes in Pope Valley, although the Preferred Plan would permit property owners to seek approval for commercial uses in designated historic buildings that are rehabilitated and maintained according to strict historic preservation standards.

The net result of the proposed map changes would be to increase the amount of agriculturally designated land in unincorporated Napa County by 635 acres. In addition, these changes would decrease the amount of "Urban Residential" land by 335 acres, decrease the amount of "Industrial" designated land by 530 acres, and set aside about 230 acres in a "Study Area" designation for further study.

In addition, the Preferred Plan indicates that at some time in the future, the Board of Supervisors could consider placing a measure on the ballot to re-designate about 220 acres in the residential neighborhood of Angwin from "Agriculture, Watershed & Open Space" to "Rural Residential." If the voters approved this measure, the totals presented in the preceding paragraph would be adjusted accordingly.

¹ The Housing Element is the only element that is not being comprehensively updated at this time, since state law prescribes specific timelines and requirements for updating that element.

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The Preferred Plan would also include an action item calling for “a systematic effort to improve the correlation between zoning and the Urban Residential and Rural Residential land use designations shown on the Land Use Map, with the objective of preserving agricultural uses and eliminating areas agriculturally zoned and used for agriculture from these designations.” This future planning process could result in further changes to the Land Use Map in the future and would “consider the development potential of each area based on zoning and physical constraints such as topography, the proximity of each to the County’s true urban centers, and the desires of potentially affected property owners” (see the Agricultural Preservation and Land Use Element).

The Preferred Plan would retain the City of Napa’s existing Rural Urban Limit (RUL) and create a new growth boundary for the City of American Canyon (**Figure 2.0-2**). The proposed American Canyon growth boundary is the outcome of negotiations between the City and the County, and would allow the City to annex approximately 280 acres of industrial land north of the City limits if voters of the City approve a growth boundary that effectively limits other annexations outside the City’s current sphere of influence until the year 2030. The proposed growth boundary would also allow the City to annex approximately 460 acres of agriculturally designated land outside the current Sphere of Influence (SOI) at some time in the future to facilitate the planned extension of Flosden/Newell Road to Green Island Road, subject to pre-zoning, environmental review, and negotiation of a revenue sharing agreement. If the voters approve the growth boundary and annexation occurs, the amount of industrially and agriculturally designated land in the unincorporated County would be decreased accordingly.

DEVELOPMENT POTENTIAL

With the Land Use Map changes described above, the Preferred Plan would decrease development potential in the unincorporated County when compared to the current General Plan because it would increase the amount of land designated AWOS which carries with it a minimum parcel size of 160 acres (i.e., in most cases an existing parcel must be 320 acres or more before it can be split or subdivided).

Residential growth under the updated plan would principally consist of the incremental addition of individual single-family homes over time. The maximum number of new dwelling units permitted each year would continue to be limited by the growth management system originally put in place by the voters in 1980. (See the Agricultural Preservation and Land Use Element for details.) Multi-family housing could only occur in areas designated “Urban Residential” on the Land Use Map or areas specifically identified in the Housing Element. With policy changes proposed under the plan, the need for affordable workforce housing would be acknowledged by allowing second units in areas designated “Agricultural Resource” and allowing accessory dwellings on commercially-zoned parcels. Also, the County could consider development of housing on County-owned land that is no longer needed for County operations.²

Taking all of the proposed Land Use Map and policy changes into consideration, residential development under the plan is projected to result in 2,935 new dwelling units between the year 2005 and 2030, or 700 more than the No Project Alternative (and Alternative A) in the Draft EIR.

² Further details, further policy changes, and additional housing sites may be considered in the next regular update of the Housing Element.

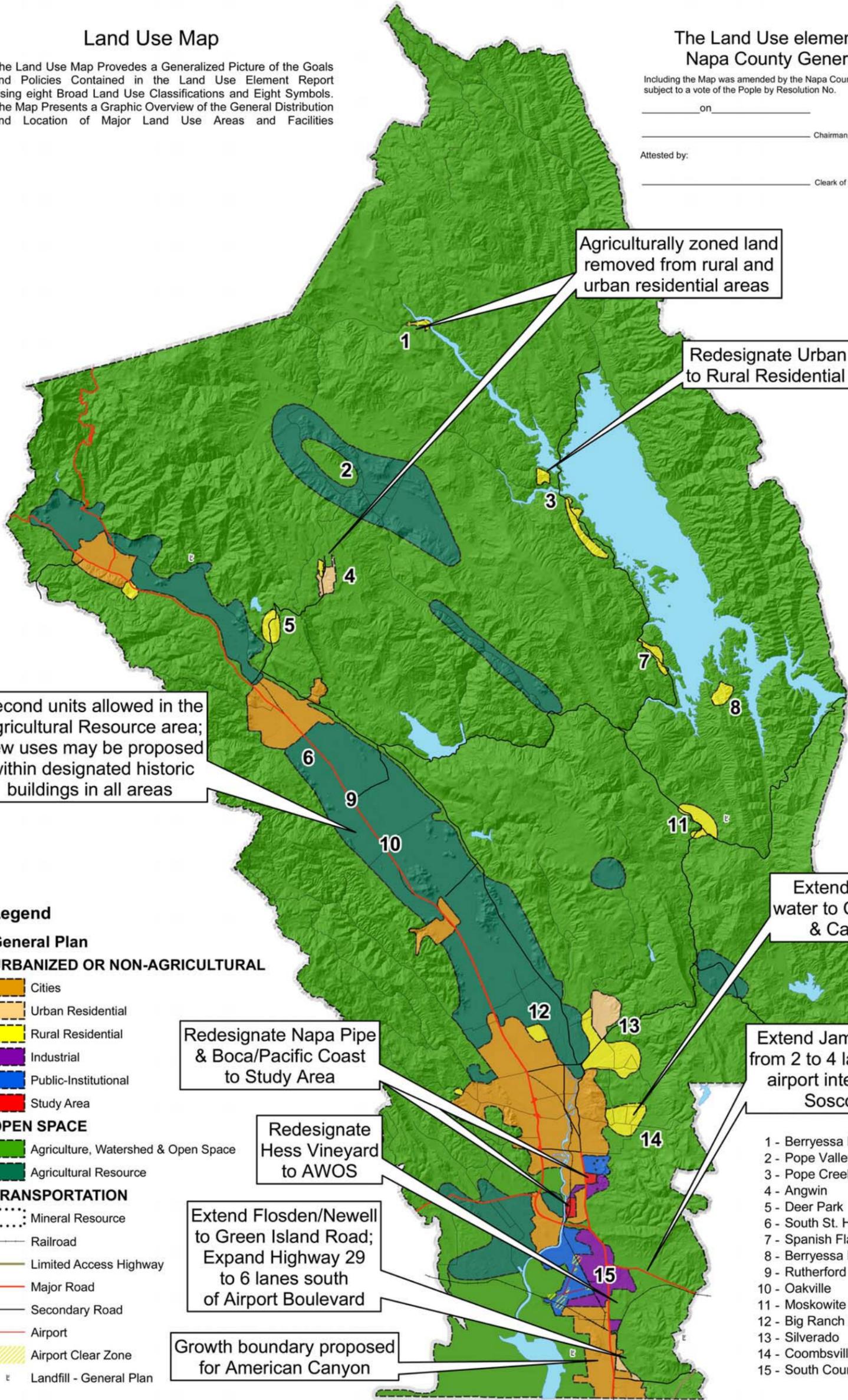
Land Use Map

The Land Use Map Provides a Generalized Picture of the Goals and Policies Contained in the Land Use Element Report Using eight Broad Land Use Classifications and Eight Symbols. The Map Presents a Graphic Overview of the General Distribution and Location of Major Land Use Areas and Facilities

The Land Use element of The Napa County General Plan

Including the Map was amended by the Napa County Board of Supervisors subject to a vote of the People by Resolution No.

_____ on _____
 _____ Chairman, Board of Supervisors
 Attested by: _____
 _____ Clerk of the Board



Agriculturally zoned land removed from rural and urban residential areas

Redesignate Urban to Rural Residential

Second units allowed in the Agricultural Resource area; new uses may be proposed within designated historic buildings in all areas

Extend recycled water to Coombsville & Carneros

Redesignate Napa Pipe & Boca/Pacific Coast to Study Area

Extend Jamieson Canyon from 2 to 4 lanes & improve airport interchange and Soscol flyover

Redesignate Hess Vineyard to AWOS

Extend Flodden/Newell to Green Island Road; Expand Highway 29 to 6 lanes south of Airport Boulevard

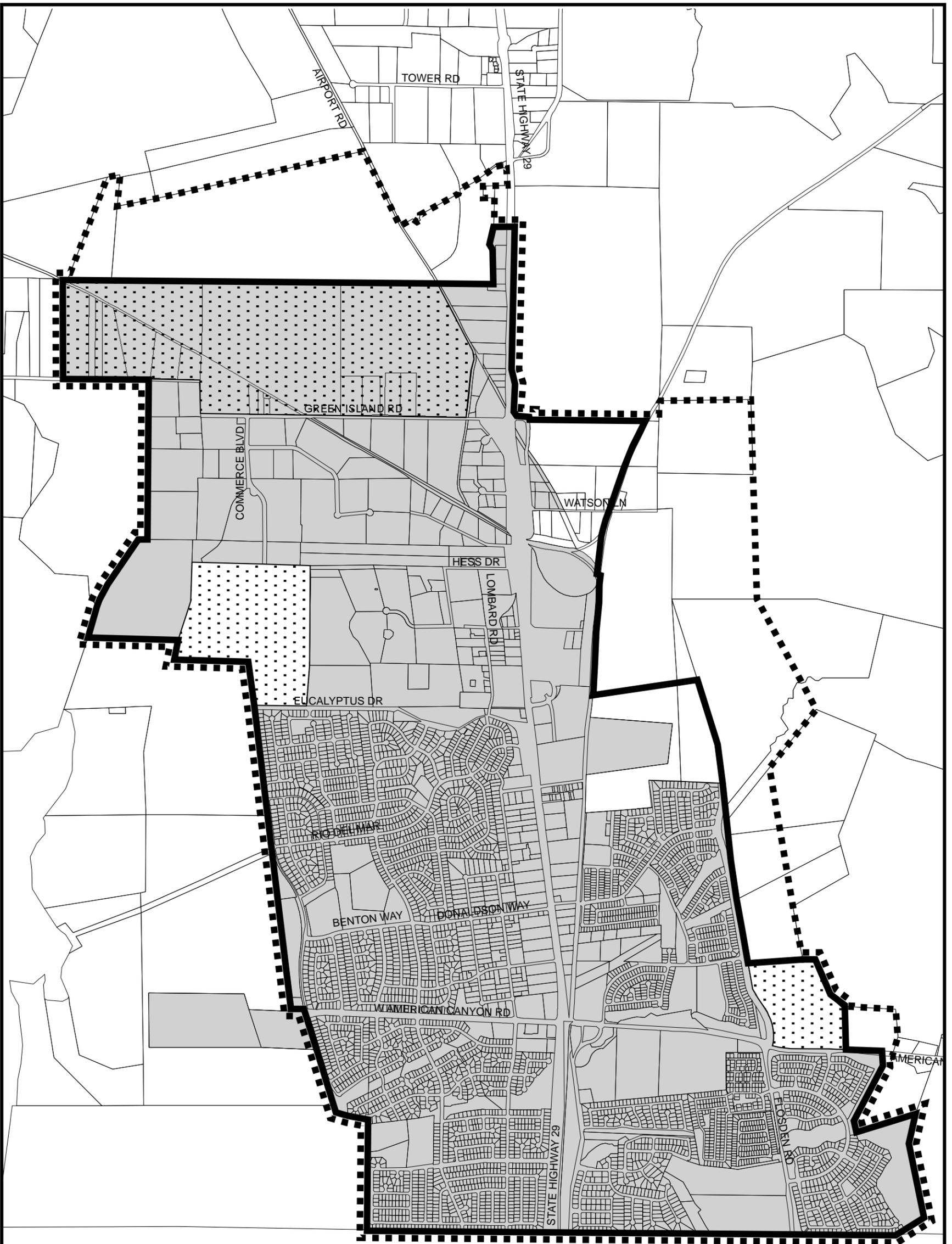
Growth boundary proposed for American Canyon

- 1 - Berryessa Estates
- 2 - Pope Valley
- 3 - Pope Creek
- 4 - Angwin
- 5 - Deer Park
- 6 - South St. Helena
- 7 - Spanish Flat
- 8 - Berryessa Highlands
- 9 - Rutherford
- 10 - Oakville
- 11 - Moskowite Corner
- 12 - Big Ranch Road
- 13 - Silverado
- 14 - Coombsville
- 15 - South County Industrial Areas

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Source: Napa County Planning Department





-  MOU Phase 1 Annexation
-  Current City Limits
-  Current SOI
-  Proposed City Growth Boundary

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Source: Napa County Planning Department

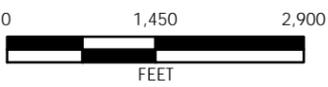


Figure 2.0-2
Proposed Growth Boundary for City of American Canyon

Non-residential (job) growth under the Preferred Plan would principally consist of new agricultural employment and new employment associated with development or re-development within the limited supply of commercially-zoned and industrially-designated parcels county-wide. The vast majority of new jobs would be located in the Airport Industrial Area where no policy changes are proposed and the 1986 specific plan would continue to govern. Based on the analysis contained in Appendix B of the Draft EIR, non-residential development under the plan is projected to result in 8,259 new jobs (about 11.2 million non-residential square feet) between the year 2005 and 2030, or 2,573 fewer jobs (and 4.8 million fewer square feet) than the No Project Alternative (and Alternative A) in the Draft EIR, assuming that about 280 acres of industrial land accommodating about 2,573 jobs (and 4.8 million square feet) are annexed to the City of American Canyon.³

VINEYARD DEVELOPMENT AND AGRICULTURAL PROCESSING

The Preferred Plan would allow continued development of vineyards and wineries in unincorporated Napa County, with few changes to existing County regulations or policy controls. "Agriculture" would be explicitly defined as the raising of crops, trees, and livestock; the production and processing of agricultural products; related marketing, sales, and other accessory uses; farm management businesses; and farm worker housing. This definition is consistent with existing ordinances and current practices.

While it is difficult to predict how much vineyard development would occur over the 25-year life of the plan, the amount has been estimated to be between 10,000 and 12,500 acres based on County staff review of pending applications, available land, and vineyard development trends. The geographic distribution of new vineyards is difficult to predict, and the Draft EIR assesses multiple possible (i.e., representative) scenarios for vineyard distribution (see Draft EIR Section 4.10, Hydrology and Water Quality, for more information). Based on this projection of new vineyard development, county-wide cumulative analysis and the mitigation regime were established by the Draft EIR and the Preferred Plan. Erosion control plans would continue to be required for projects on slopes of greater than 5%, although the plan calls for establishment of a program (details to be worked out later) that would offer streamlined permitting for "environmentally superior" projects.

The current trend in winery development suggests that there could be about 225 new wineries approved between 2005 and 2030, most of them relatively small (less than 50,000 gallons annual production). All of the new wineries would likely be restricted to tours and tasting by appointment only and could host only those marketing events that are consistent with the Winery Definition Ordinance and with their individual use permits. Policy language would reference retail sales of wine-related items and wine-food pairings. The Draft EIR uses projections of employment growth, water use, and other factors to assess vineyard and winery activities on a cumulative basis county-wide. As with vineyards, localized impacts – both project-specific and cumulative – would still require careful review when specific projects are proposed.

³ Specifically, Table VI-2 of Appendix B projects 6,860 new jobs and 12.7 million square feet in the Airport Industrial Area, assuming 800 acres are available for development in all Draft EIR Alternatives by the year 2030. Under the Preferred Plan, 200 of these 800 acres would be available for annexation to the City of American Canyon, and projected jobs and square footage attributed to the unincorporated County would be reduced proportionately, since these jobs and square footage would occur within the City.

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TRANSPORTATION AND INFRASTRUCTURE

The Preferred Plan calls for the expansion of Jamieson Canyon (State Route 12) from two to four lanes, extension of Newell/Flosden Road from its current terminus just north of American Canyon Road to the intersection of Highway 29 and Green Island Road, and expansion of Highway 29 from four to six lanes between SR 37 and SR 12. These and other transportation improvements would be constructed by the County and other agencies over time, as long as they continue to enjoy community support, and as funding becomes available.

Under the Preferred Plan, roadway capacity enhancements would be focused in the southern part of the County where the majority of the County's housing and job growth is anticipated. Other roads and "gateways" into the County would be maintained at their current capacities, with improvements as needed focused on safety and local access. Transportation policies would encourage the use of alternative modes of transportation, call for 40 additional miles of bicycle lanes, and discourage cut-through traffic between neighboring counties.

A new trail policy and a focus on recreation and open space would result in new access to public open space and a coordinated system of off-street trails. Eminent domain would not be used to acquire open space, and privacy and compatibility issues associated with trails would be addressed via appropriate placement, buffers, and management.

This Preferred Plan would call for extension of recycled water to the Coombsville and Carneros areas, and would include policies allowing infrastructure upgrades near Murphy Creek and Monticello Road to address water quality concerns, provided that new facilities are approved by the appropriate agencies and sized to prevent unplanned growth.

2.3 PREFERRED PLAN – RELATIONSHIP TO DRAFT EIR ALTERNATIVES

The Preferred Plan most closely resembles Draft EIR Alternative A in terms of the amount of development that is projected to occur during the 25-year life of the plan and most closely resembles Draft EIR Alternatives B and C in terms of proposed Land Use Map and policy changes.

Specifically, projected residential growth under the Preferred Plan would result in 2,935 new dwelling units, as opposed to 2,235 under Alternative A. Both alternatives would be consistent with the 1% cap imposed by the County's growth management system, which does not apply to second units.⁴ The differences between the residential development projected under the Preferred Plan and Alternative A can be attributed to policy changes allowing second units in the Agricultural Preserve (AP) zoning district, allowing accessory dwellings in commercial zones, and the assumption that surplus County property may be made available for housing. These policy changes were analyzed in the Draft EIR as components of Alternatives B and C.

Projected job growth under the Preferred Plan would be identical to that projected under Alternative A (10,832), except for an estimated 2,573 jobs that are projected to occur on industrial land proposed for annexation to the City of American Canyon if voters of the City

⁴ In general terms, the growth management system currently permits the County to issue 114 residential building permits each year, not counting second units. Over the 25-year life of the General Plan, this would constitute a maximum of 2,850 dwellings. The projected addition of 2,935 dwelling units would be consistent with this limit because it would include second units.

adopt an agreed-upon grown boundary.⁵ The growth boundary itself would be similar to one included in Draft EIR Alternative C, in that it would allow for future consideration of annexations east of the City, where residential development could occur.

Changes to the Land Use Map proposed in the Angwin area, and at Hess Vineyards, Berryessa Estates, and Pope Creek were each analyzed as components of Alternatives B or C in the Draft EIR. Similarly, proposed infrastructure changes such as the widening of Jamieson Canyon were considered in Alternatives B and C. Designation of the Napa Pipe and the Boca/Pacific Coast sites as a "study area" was not explicitly included in any of the Draft EIR alternatives, but would have the effect of keeping these sites in industrial use similar to Draft EIR Alternative A until further study (and a subsequent General Plan amendment) is completed.

2.4 PREFERRED PLAN – ENVIRONMENTAL IMPACTS

The following analysis is based on the environmental impacts identified in Sections 4.1 through 4.14 of the Draft EIR.

AGRICULTURE

Conversion of State-Designated Agricultural Lands to Non-Agricultural Uses

As noted in Table 4.1-7 in the Draft EIR, the County has gained 17,593 acres of farmlands of concern under CEQA since 1984, which would more than offset any potential conversions of farmland that could occur under the Preferred Plan. The County anticipates 10,000 to 12,500 additional acres of vineyard development by 2030 that would likely further increase the County's acreage of state-designated Prime Farmland, Unique Farmland, and Farmland of Statewide Importance.

By re-designating Industrial and Urban Residential areas at the Hess Vineyard and in Angwin for agriculture, the Preferred Plan would reduce the areas where conversion of state-designated farmlands could occur. Nonetheless, portions of the cities and remaining non-agricultural areas of the County contain farmlands of concern under CEQA (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance as mapped by the Farmland Mapping and Monitoring Program of the California Resources Agency). Conversion of these lands would not be precluded by the Preferred Plan, and the maximum possible conversion has been estimated at 6,961 acres (which includes farmland of local importance).⁶ This is compared with 6,291 acres under the No Project Alternative and Alternative A, 5,966 under Alternative B, 6,838 under Alternative C, Alternative E similar to Alternative C, and Alternative D less than all alternatives. Under the Preferred Plan and all of these alternatives, this impact would be considered **significant and mitigable** with the implementation of mitigation measures MM 4.1.1a and b. Both of these measures have been incorporated as policies in the Preferred Plan.

⁵ The Keyser Marston study included as Appendix B in the Draft EIR projects that 6,860 new jobs will be created in the Airport Industrial Area, assuming that about 800 acres are available for development and that some intensification of existing developed areas will occur. Proportionally, if 800 acres would result in 6,860 jobs, then the 300 acres proposed for future annexation would result in 2,573 jobs.

⁶ Acreage was provided by Napa County Conservation Department staff at the following breakdown: Local Importance = 3,266 acres, Prime Farmland = 2,399 acres, Statewide Importance = 1,296 acres.

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Loss of Current General Plan Designated Agricultural Lands

The plan would result in an increase in General Plan designated agricultural land by including re-designation of Rural Residential land in Berryessa Estates to AWOS (about 200 acres), re-designation of Industrial land at the Hess Vineyard to AWOS (about 300 acres), and re-designation of Urban Residential land in Angwin (about 135 acres). If a ballot measure were proposed for Angwin and approved by the voters, about 220 acres would be re-designated from Agriculture to Rural Residential. If a ballot measure establishing the proposed growth boundary in American Canyon is approved, about 460 acres of land designated AWOS could be subject to future annexation to the City of American Canyon following pre-zoning and environmental review. The net increase of 635 acres of agricultural land in the unincorporated County (if neither ballot measure is approved) would be considered a beneficial impact of the project. The net decrease of 45 acres (if both ballot measures are approved) would be considered a **significant and unavoidable** impact of the project.

This impact was identified as less than significant for the No Project Alternative and Alternatives A, B, and D. The impact was considered significant and unavoidable for Draft EIR Alternatives C and E because they included a growth boundary that would allow American Canyon to annex an even greater amount of agricultural land to the east of the City. (See February 2007 Draft General Plan Update Figure Ag/LU-4.)

Agricultural/Urban Interface Conflicts

The plan would not result in any new urban areas, and thus – while it might relocate rural-urban interfaces – there would be no new interfaces resulting in substantial land use conflicts. The plan would perpetuate the County’s “right to farm” policy with the aid of a more explicit definition of “agriculture.” For these reasons, this impact would be **less than significant**, similar to the No Project Alternative and Alternatives A, B, C, D, and E (though Alternative E would have similar conflicts to Alternative C).

Conflict with Agricultural Zoning and Williamson Act Contracts

As identified under Impact 4.1.4, virtually all of the so called “urban bubbles” or urbanized areas on the existing General Plan Land Use Map that are designated either “Urban Residential” or “Rural Residential” contain some land that is zoned for agricultural use. The Preferred Plan would remedy this situation in two of the “bubbles” (Angwin and Berryessa Estates), remedy the same situation at the Hess Vineyard, and commit the County to a future planning process addressing the remaining 10 “bubbles.”

Since the Preferred Plan would perpetuate the existence of agriculturally zoned land in areas designated for non-agricultural uses on the Land Use Map in some areas, it would not preclude rezoning and redevelopment of land that is zoned agricultural. However, the Preferred Plan would reduce this impact because of the Land Use Map changes and the future planning process committed to in the Preferred Plan, and because potential rezoning and redevelopment would occur only in those areas designated for non-agricultural uses under the current Napa County General Plan. However, designation of the growth boundary for the City of American Canyon would result in this conflict, which would make this impact **significant and unavoidable** for the Preferred Plan. This impact was conservatively identified as significant and unavoidable for the No Project Alternative and Alternatives A, B, C, and E. The reader is referred to Section 3.0 (Alternatives Master Response 3.4.2) and Section 4.0 for modifications to Alternative D to address this issue. In summary, Alternative D would shrink the “urban bubbles” to

eliminate agriculturally zoned land. This impact would be avoided by Alternative D with implementation of mitigation measures MM 4.1.1a and b.

LAND USE

Division of Established Communities and Land Use Conflicts

The Preferred Plan would maintain the County's general land use pattern and would not include policy changes or infrastructure improvements that would divide an existing community. The Napa Pipe site and the Boca/Pacific Coast site would remain in industrial use and industrial zoning, and would be subject to further study (and require further General Plan amendments) before any non-industrial uses could be introduced. Any development that occurs in other areas, such as Angwin or the Airport Industrial Area, would conform to long-standing land use and zoning designations. For these reasons, the plan's potential to divide existing communities or create substantial land use conflicts would be considered **less than significant**. This conclusion is identical to the one associated with the No Project Alternative, Alternative A, and Alternative D in the Draft EIR. Alternatives B, C, and E would have significant and mitigable impacts, because they would include re-designation of the Pacific Coast/Boca and Napa Pipe sites to mixed commercial use as explained in the Draft EIR. Neither Alternatives B, C, or E would introduce any new land use that would result in the division of any of the communities in the County; however locating residential uses on the Pacific Coast/Boca site and Napa Pipe site adjacent to industrial uses and operation of the Syar quarry could result in land use conflicts if residents were disturbed by truck traffic, noise, dust, or vibration similar to Alternative B.

Conflicts with Relevant Land Use Plans, Policies, or Regulations

The Preferred Plan would not conflict with any applicable land use plan and would not re-designate land in such a way as to increase the likelihood of development that is inconsistent with applicable airport land use compatibility plans. For this reason, the Preferred Plan would be considered to have a **less than significant** impact. This conclusion is identical to the one associated with the No Project Alternative, Alternative A, and Alternative D in the Draft EIR. Alternatives B, C, and E would have significant and mitigable impacts, because they would include redevelopment of the Napa Pipe site for non-industrial uses, and the southern third of that site lies within Airport Land Use Compatibility Plan Zone D. Thus, redevelopment of the Napa Pipe site could potentially conflict with the compatibility plan unless residential uses (and other incompatible uses) were prohibited in Zone D.

POPULATION/HOUSING/EMPLOYMENT

Population, Housing, and Employment Increases

As explained in the description, above, the Preferred Plan would include policy and map changes that would have little effect on the amount of development anticipated in the County during the planning period of 2005 to 2030. Specifically, development during the life of the plan is projected to result in 2,935 new dwelling units and 8,259 new jobs in the unincorporated County. This is 700 more new dwelling units and 2,573 fewer new jobs than under the No Project Alternative.

The projected increase in housing and population would be consistent with the County's growth management system, similar to the No Project Alternative, Alternative A, and Alternative D in the Draft EIR. However, similar to all of the Draft EIR alternatives, the plan's projected increase in housing, population, and employment would exceed regional projections prepared by the

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Association of Bay Area Governments (ABAG). The County's consultant, Keyser Marston Associates, using a finer grained understanding of local conditions than ABAG can use in their regional projections, determined that ABAG's projections were unrealistically low for use in an environmental analysis since – even if the County makes no substantive policy changes – it will likely add more housing and more jobs than ABAG anticipates.⁷ Thus, because projected growth under the Preferred Plan would exceed ABAG's regional projections, its population and employment increases would be considered **significant and unavoidable**, similar to all of the other Draft EIR alternatives.

For purposes of the current analysis, non-residential job growth attributed to the City of American Canyon within the proposed growth boundary is assumed to be equivalent to the job growth that would occur in the County if annexation did not occur (similar to Draft EIR Alternatives A, B, and C), since both the City and County have previously designated this area for industrial development. Residential growth attributed to the City of American Canyon is assumed to be equivalent to projections developed by ABAG for the City's current Sphere of Influence (SOI).⁸ This is because the area included within the proposed growth boundary on the east side of the City is a mix of agricultural, residential estate, and undesignated land in the City's general plan, and would require re-designation and rezoning (and annexation and environmental review) prior to any residential development. Further, any residential growth allowed in this area is likely to limit growth elsewhere in the City, based on the City's expressed concerns about water supply and other issues. (See Comment Letters J, K, L, and R in Section 3.0.)

Jobs Housing Balance

The Preferred Plan would permit continued development of new housing and new jobs, and at the end of the planning period (2030), there would be a projected 12,579 dwelling units in the unincorporated County and 31,309 jobs, for a ratio of about 2.5 to 1. This calculation is based on the analysis in Section 4.3 of the Draft EIR, which assumes the number of new jobs and dwelling units would be added to the numbers for 2005 included in ABAG Projections 2005.

The resulting ratio of jobs to housing, or "jobs housing balance" of 2.5 would be the same as ABAG reported for Napa County in 2005, and therefore the plan's impact would be considered **less than significant**. This is similar to Alternative B in the Draft EIR, which would also result in a jobs housing balance of around 2.5. Alternatives C and E would result in improvements to the existing ratio and would also be considered to have a less than significant impact. The No Project Alternative, and Alternatives A and D would all increase the ratio of jobs to housing, and therefore their impacts would be considered significant and unavoidable despite proposed mitigation (mitigation measure MM 4.3.2).

⁷ Just as one example, ABAG Projections 2005 suggests that unincorporated Napa County will add 890 new dwelling units between 2005 and 2030. This works out to be about 35 houses per year, or about 80 less than allowed under the County's annual building permit limit, and about 55 less than have been issued annually each year for the past 5-10 years. Alternative A by comparison would add about 90 new dwellings per year, which is more consistent with the number issued annually in recent years.

⁸ ABAG 2007 Projections for American Canyon household growth: 2005 = 4,870, 2030 = 7,040, for an increase of 2,170 from 2005-2030. For American Canyon's Sphere of Influence, ABAG 2007 projections are: 2005 = 14,600, 2030 = 20,200, for an increase of 5,600.

Displacement of Substantial Number of Persons or Housing

The Preferred Plan would retain the County’s land use pattern and would not involve other changes that could displace a large number of people. As a result, the Preferred Plan would be considered to have a **less than significant** impact, as would the No Project Alternative and other alternatives considered in the Draft EIR.

TRANSPORTATION

Travel Demand

The Preferred Plan would include all of the transportation improvements summarized on p. 4.4-30 and in Table 4.4-16 of the Draft EIR and included in Draft EIR Alternatives B and C. Specifically, the Preferred Plan calls for widening of Jamieson Canyon from two to four lanes and associated improvements at SR 29 and Airport Boulevard (i.e., “the interchange”) and SR 29 and SR 221 (“the flyover”). The Preferred Plan also calls for widening of SR 29 from four lanes to six lanes all the way from SR 37 to SR 12, and extension of Flosden/Newell from its current terminus to Green Island Road. All of these improvements would be constructed by the County and other agencies over time, as long as they continue to enjoy community support, and as funding becomes available. In recognition of the current lack of funding for many of these improvements, the Draft EIR considers potential impacts with and without them.

Traffic impacts of the Preferred Plan can be determined by examining the findings presented in Section 4.4 of the Draft EIR. Clearly, the growth in population and employment referred to above would combine with regional traffic that is projected to increase with or without the General Plan Update, and would result in additional traffic in the PM peak hour – the time of day when traffic is usually at its worst. Resulting vehicle trips would likely fall somewhere between the numbers projected for the No Project Alternative (and Draft EIR Alternative A), and Draft EIR Alternative B with proposed circulation improvements. (See below.) This is because the amount and location of residential and employment growth under the plan would be most similar to the No Project Alternative and Alternative A; however, the Preferred Plan would include road network improvements similar to Alternative B (if funding becomes available).

**TABLE 2.0-1
PM PEAK HOUR VEHICLE TRIP PATTERNS UNDER DRAFT EIR ALTERNATIVES A AND B
(TRIP PATTERNS WITH THE PREFERRED PLAN WOULD LIKELY FALL IN BETWEEN)**

Draft EIR Alternative & Network Scenario	Trips Within Unincorporated Napa County	Trips Within Cities of Napa County	Trips Between the County and Cities of Napa County	Trips Between All of Napa County and Other Counties	Trips Passing Through Napa County
Existing Conditions	2,746	15,768	5,527	7,289	5,284
No Project & Alternative A with Existing Road Network in 2030	3,940	17,388	7,850	14,493	14,292
Alternative B with Road Network Improvements in 2030	4,187	17,174	8,489	14,525	15,110

Source: Data from Draft EIR Table 4.4-10 developed by Dowling Associates, 2006 using the Napa-Solano County Travel Demand Model.

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Based on the totals of each row included in the table shown above, the Preferred Plan would result in an increase in PM peak hour vehicle trips of between 21,000 and 23,000 trips (an increase of between 37% and 39%). A 37% increase is projected to occur whether or not the General Plan Update proceeds (i.e., in the No Project Alternative), and a 37-39% increase would necessarily impact the vehicle miles traveled in 2030, the level of service on County roadways, and delay experienced by drivers when compared to existing conditions.⁹ In turn, it is anticipated that the Preferred Plan would result in 36 to 39 roadway segments operating with a deficient level of service (in combination with city and regional traffic growth) based on modeled traffic impacts of Alternatives A and B. This impact would be considered **significant and unavoidable** under the plan and all of the Draft EIR Alternatives. Mitigation measures 4.4.1a through 4.4.1j have been included as policies in the Preferred Plan and would reduce the impact, but not to a level of less than significant.

Roadway Safety and Emergency Access

The Preferred Plan includes policies emphasizing traffic safety and local access rather than roadway capacity enhancements in most parts of the County. Nonetheless, by allowing increases in traffic volumes and vehicle miles traveled, the Preferred Plan would increase the number of potential safety and emergency access conflicts when compared to existing conditions. This impact is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives, since implementation of mitigation measures MM 4.9.4 and MM 4.13.1.1a and b and compliance with applicable provisions of County Code (Chapters 15.32 and 18.84) would apply established fire safety standards and adequate emergency response and evacuation planning.

Conflicts with Existing Alternative Transportation Policies and Programs

The Preferred Plan includes policies emphasizing the use of alternative modes of transportation and addressing other strategies for reducing traffic in peak periods. These policies, combined with projected increases in traffic congestion, will place an increasing demand on transit services and other alternative transportation services and facilities. This increased demand would be considered a **significant and mitigable** impact under the plan and all Draft EIR alternatives, since implementation of mitigation measures MM 4.4.1d through g would ensure new development is appropriately located and provides transit amenities and incentives, and that the County takes other steps to support alternatives to the private automobile.

Create Additional Demand for Parking Facilities

The limited development projected to occur under the Preferred Plan would increase the demand for parking near housing and employment. Also, the roadway changes called for in the Preferred Plan could result in the loss of parking spaces in some areas. This increase in demand and potential displacement are collectively considered a **significant and mitigable** impact under the plan and all Draft EIR alternatives, since implementation of mitigation measures MM 4.4.4a and b would ensure the provision of adequate parking facilities.

⁹ The estimated vehicle miles traveled, travel times, and level of service on selected road segments can be determined by examining the results presented for Alternative A and Alternative B (with 2030 network improvements) in Tables 4.4-11, 4.4-12, 4.4-13, and 4.4-14 of the Draft EIR.

BIOLOGICAL RESOURCES

Disturbance or Loss of Special-Status Plant and Animal Species

The Preferred Plan contains a substantial number of policies related to protection of open space, wildlife habitat, and sensitive plant and animal species, although it would not prohibit continued vineyard development and development of rural residential homes. As discussed under the Vineyard Development sub-heading, above, the County estimates that an additional 10,000 to 12,500 acres of vineyards could be developed, resulting in additional conversions of forests, native and non-native grasslands, and other habitats to agricultural production.

Since the location of future vineyard development is uncertain, the scenarios presented in Table 4.5-4 of the Draft EIR provide a range of possible outcomes assuming different build-out locations and therefore different losses of habitat. The nature and quantity of habitats lost under the Preferred Plan is expected to fall somewhere within the range represented by scenarios 1, 2, and 3. In addition, the changes proposed to the land use map could result in the following conversions:

**TABLE 2.0-2
BIOTIC COMMUNITIES POTENTIALLY AFFECTED BY LAND USE MAP CHANGES
PROPOSED IN THE PREFERRED PLAN**

Biotic Community	Acres
Deciduous Oak Woodland	0
Douglas-fir/Redwood Forest	41
Evergreen Oak Woodland	96
Freshwater Wetlands	9
Mixed Willow Woodland	32
Pine Forest	0
Salt Marsh	141
Serpentine Grassland	0
Serpentine Shrubland	308
Total	627

Note: These biotic communities are not considered sensitive but may contain sensitive biotic communities.

This habitat conversion, as well as conversion and disturbances associated with rural residential uses in agriculturally designated areas, could result in the loss of special-status plant and animal species unless adequate protections are in place.

The potential impact to special-status species is considered **significant and mitigable** under the plan and all Draft EIR alternatives since implementation of mitigation measures MM 4.5.1a through c, MM 4.5.2a through c, MM 4.6.1b, and MM 4.6.5a through c, and implementation of the Napa County Conservation Regulations would avoid a "take" of special-status species. These mitigation measures address the analysis and mitigation of impacts associated with discretionary projects, development of a noxious weed ordinance, protections for sensitive

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biotic communities and wetlands, and protections for riparian corridors and waterways. All have been included as policies in the Preferred Plan.¹⁰

Loss of Sensitive Biotic Communities

As described above, the Preferred Plan would include substantial protections for significant natural resources, but could result in conversion of habitats that may contain sensitive biotic communities due to vineyard development, changes to the land use map, and rural residential development.

Specifically, the Preferred Plan could result in conversion of land cover types due to vineyard development similar to scenarios 1, 2, or 3 in Table 4.5-6 in the Draft EIR, and the following conversions due to changes to the land use map:

**TABLE 2.0-3
LAND COVER TYPES POTENTIALLY AFFECTED BY LAND USE MAP CHANGES
PROPOSED IN THE PREFERRED PLAN**

Land Cover Type	Source	Major Community Association	Acres
California Annual Grasslands Alliance	CNDDDB Sensitive Natural Communities	Grassland Communities	89
California Bay - Leather Oak - (Rhamnus spp.) Mesic Serpentine NFD Super Alliance	CNDDDB Sensitive Natural Communities	Chaparral/Scrub Communities	64
California Bay - Madrone - Coast Live Oak NFD Super Alliance	CNDDDB Sensitive Natural Communities	Oak Woodland Communities	104
Mixed Willow Super Alliance	CNDDDB Sensitive Natural Communities	Wetland Communities	27
Oregon White Oak Alliance	CNDDDB Sensitive Natural Communities	Oak Woodland Communities	6
Saltgrass - Pickleweed NFD Super Alliance	CNDDDB Sensitive Natural Communities	Wetland Communities	141
Upland Annual Grasslands & Forbs Formation	CNDDDB Sensitive Natural Communities	Grassland Communities	1,231

Note: Not all land cover types above are sensitive biotic communities but may contain unmapped sensitive biotic communities (see pp. 4.5-9 and -13).

¹⁰ MM 4.11.4 would mitigate impacts if a streamlined permitting process for environmentally superior vineyards is developed as called for in the Preferred Plan; however, the Preferred Plan defers development of this process to a future planning process.

This habitat conversion, as well as conversion and disturbances associated with rural residential uses in agriculturally designated areas, could result in the loss of sensitive biotic communities, which do not enjoy formal protection by the state or federal government.

Mitigation measure MM 4.5.2a would directly address this impact and has been included as policy in the Preferred Plan. Essentially, this mitigation measure would ensure that sensitive biotic communities and oak woodlands are avoided if feasible. If they cannot be avoided, the measure would ensure that either the sensitive communities would be recreated/restored to ensure “no net loss” of the habitat, or it would require that other comparable habitat of like quality be preserved and protected at a 2:1 ratio in perpetuity. Implementation of this measure, other policies in the Preferred Plan, and the County’s Conservation Regulations would protect the vast majority of the County’s sensitive biotic communities, but would not prevent some loss from occurring where avoidance and recreation are infeasible and protection of equivalent habitat is selected as the approach. Thus, while the mitigation measure and policies included in the Preferred Plan would reduce the overall county-wide impact such that it would be considered less than significant, it would not eliminate the possibility of disproportionate impacts in some localized areas of the County. For this reason, the Preferred Plan is considered to have a **significant and unavoidable** impact on sensitive biotic communities despite the mitigation measure provided, similar to all other Draft EIR alternatives except for Alternative D (as revised in Section 3.0 and 4.0 of this document).

Loss of Wildlife Movement and Plant Dispersal Opportunities

As described above, the Preferred Plan would include substantial protections for significant natural resources, but could result in loss of wildlife movement and plant dispersal due to vineyard development, changes to the land use map, and rural residential development (see Tables 2.0-2 and 2.0-3). This conversion could also result in loss of wildlife movement, which would limit plant dispersal opportunities.

Mitigation measure MM 4.5.3a would directly address this impact and has been included as both a policy and an action item in the Preferred Plan. This mitigation measure requires that individual projects retain movement corridor(s) adequate (both in size and habitat quality) to allow for continued wildlife use. Mitigation measure MM 4.5.3b has not been fully incorporated into the Preferred Plan to require fencing only of individual vineyard blocks for new vineyards and to reduce the existing vineyard fencing; however, the Preferred Plan does include a policy to reduce impacts on connectivity that includes encouraging property owners to use permeable fencing, preservation of critical habitat connectivity, and monitoring of biodiversity and habitat connectivity throughout the County. Implementation of the mitigation measure, policies in the Preferred Plan, and the County’s Conservation Regulations would protect the vast majority of wildlife and retain plant dispersal opportunities. Thus, the potential impact to wildlife movement and plant dispersal is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Conflict with Biological Resource Plans, Ordinances, or Policies

The Preferred Plan contains a number of policies that incorporate mitigation measures to protect natural resources, minimize erosion, and ensure water quality and flows to support special-status species plant and animal species and their associated habitat. In addition, Napa County includes stringent Conservation Regulations that must be adhered to with the Preferred Plan. Thus, the potential conflict with biological resource plans, ordinances, or policies is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

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FISHERIES

Sedimentation Impacts to Fisheries

The Preferred Plan contains a substantial number of policies related to the protection of fisheries and erosion control, although it would not prohibit continued vineyard development and development of rural residential homes as described above.

The potential impact to fisheries is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives since the implementation of mitigation measures MM 4.6.1a and MM 4.6.1b, MM 4.6.5a through 4.6.5c, MM 4.6.6, MM 4.11.2a and MM 4.11.2b, and implementation of the Napa County Conservation Regulations (Chapter 18.108 of the County Code) and the Stormwater Management and Discharge Control Ordinance (Section 16.28.100 of the County Code and Ordinance No. 1240) would address soil erosion, loss of riparian vegetation, gravel removal, water quality and flows, and impacts to fisheries.

Other Water Quality Impacts to Fisheries

As described above, the Preferred Plan would include substantial protections for significant streams and other drainage courses that may contain fisheries, but could result in water quality impacts that may affect fisheries due to vineyard development, changes to the land use map, and rural residential development.

The potential water quality impacts to fisheries is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives with the implementation of mitigation measures MM 4.11.3b which would work with MM 4.11.2a to ensure water quality in compliance with applicable Basin Plans and the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bay, and Estuaries of California and implementation of County Code (e.g., Conservation Regulations and Stormwater Management and Discharge Control Ordinance). Mitigation measure MM 4.11.4 (associated with the ministerial process) established performance standards that would ensure that fishery resources are not indirectly or directly impacted; however, the Preferred Plan policies and action items cover the basic intent of the measure.

Hydrology Alteration Impacts to Fisheries

The Preferred Plan contains a substantial number of policies related to protection of hydrology flows and water quality, although it would not prohibit continued vineyard and other agricultural development and development of rural residential homes. Implementation of mitigation measures MM 4.11.3a and MM 4.11.3b would ensure no increase in scour events along waterways by requiring retention of pre-development peak flow conditions when scour events occur, while implementation of mitigation measure MM 4.11.9 would ensure that subsequent land uses under the Preferred Plan would not result in new or increased flood impacts. Implementation of these measures and the Napa County Conservation Regulations would reduce hydrology alteration impacts to fisheries. Thus, the potential impact to fisheries is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives

Groundwater Interactions with Surface Water Flows

As described above, land use and development under the Preferred Plan, including vineyard and agricultural development, could result in the depletion of groundwater levels that could result in decreasing or eliminating baseflows. Implementation of mitigation measure MM 4.11.5e requires demonstration of no substantial reductions in groundwater discharge to surface waters

that would alter critical flows to sustain riparian habitat and fisheries. This measure and mitigation measure MM 4.11.4 are generally incorporated into the Preferred Plan policies and action items. Thus, the potential impact to groundwater interaction with surface water flows related to fisheries is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Direct Impacts to Habitat

The Preferred Plan would allow development that could result in construction crossing of streams or incursion into riparian habitats adjacent to streams. This could result in the loss or degradation of aquatic habitats and/or adjacent riparian vegetation as described in the Biological Resources section above. Implementation of mitigation measures MM 4.6.5a through 4.6.5c are incorporated into policies and action items in the Preferred Plan and would reduce the impacts to riparian habitat as well as to loss of instream rearing habitat features (see also biological resources riparian habitat loss above). Thus, potential direct impact to fisheries habitat is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives

Interfere Substantially with Movement or Migratory Corridors

Development allowed in the Preferred Plan could result in instream crossings as described above. Through several policies in the Preferred Plan, development activities and roadway improvements would not directly disturb the bed and bank of any waterway that could contain fishery resources. Implementation of mitigation measures MM 4.5.1b, MM 4.6.1a, and MM 4.6.6 are incorporated into Preferred Plan policies to ensure that water diversions, drainage improvements, and roadway crossing from new development do not impact fisheries. Implementation of these measures that require BMPs and/or habitat restoration (in consultation with California Department of Fish and Game, U.S. Fish and Wildlife Service, and National Oceanic and Atmospheric Administration National Marine Fisheries Service) and other Napa County Conservation Regulations would ensure no adverse impacts and allow for fish passage. Thus, the potential impact to movement or migratory corridors is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

NOISE

Noise and Land Use Compatibility

The Preferred Plan would allow for some development in rural residential areas, and the Napa Pipe site and the Boca/Pacific Coast sites would remain in industrial use and industrial zoning, and would be subject to further study (and require further General Plan amendments) before any non-industrial uses could be introduced. Implementation of mitigation measure MM 4.7.1a requires the retention of noise policies in the current General Plan to require land use decisions to conform to noise-related compatibility criteria and noise standards. This mitigation measure and MM 4.7.1c regarding siting of noise-sensitive uses in industrial areas and railroad corridors have been included in several policies in the Preferred Plan. The implementation of these policies and County standards for exterior and interior noise levels within the County Noise Ordinance would avoid conflict between noise and land use. Therefore, the potential noise impacts related to land use compatibility is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

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New Development Exposure to Groundborne Vibration

As described above, the Preferred Plan would allow for some development in rural residential areas; however, the development associated with the Napa Pipe site adjacent to the existing railroad line would be subject to further study before any non-industrial uses could be introduced. Implementation of mitigation measures MM 4.7.2a and MM 4.7.2b are generally incorporated into the Preferred Plan policies to require new vibration-sensitive development such as residences to conduct a vibration study. These mitigation measures, along with the County Noise Ordinance (County Code Section 8.16.070) which imposes noise limits for construction activities and limits the hours of construction, would also reduce the impacts of exposure to vibration. Thus, the potential noise impact related to exposure to groundborne vibration is considered **significant and mitigable** under the Preferred Plan and Draft EIR Alternatives B, C, and E and less than significant for Alternatives A and D.

Project-Generated Traffic Noise Volume Increases

Many projected traffic noise increases would occur whether or not the Preferred Plan for the Napa County General Plan is implemented, since they are attributable to increases in traffic volumes that would occur even if there are no substantive changes in General Plan policy (represented by Draft EIR Alternative A). All alternatives were determined to result in a traffic noise increase ranging from 1dB to 13 dB on County roadways over existing conditions and would likely exceed County noise standards on 27 to 29 roadway segments (based on noise modeling for Alternatives A and B). Implementation of mitigation measures MM 4.7.1a and MM 4.7.4 that are included in Preferred Plan policies would assist in reducing traffic noise exposure impacts. However, for the Preferred Plan, similar to all Draft EIR alternatives, the mitigation in all circumstances may not be reasonable or feasible due to considerations such as roadway access, cost, terrain, and the needs of the local property owner.

Therefore, despite implementation of mitigation measures and policies, potential project-generated traffic noise increase is considered **significant and unavoidable** under the Preferred Plan and all Draft EIR alternatives.

Roadway Improvement Impacts to Noise-Sensitive Uses

As discussed in the section on Transportation above, the Preferred Plan would include all of the transportation improvements summarized on p. 4.4-30 and in Table 4.4-16 of the Draft EIR and included in Draft EIR Alternatives B and C. These improvements, which include widening of Jamieson Canyon (State Route 12) to four lanes and the extension of Newell/Flosden Road, could result in additional noise increase as traffic is moved closer to existing noise-sensitive uses. Specifically, the Preferred Plan calls for widening of Jamieson Canyon from two to four lanes and associated improvements at SR 29 and Airport Boulevard (i.e., "the interchange") and SR 29 and SR 221 ("the flyover"). The Preferred Plan also calls for widening of SR 29 from four lanes to six lanes from SR 37 to SR 12 and completion of Devlin Road on the other side of SR 29.

The Preferred Plan would affect the seven residences noted for Alternative B that are in close proximity to State Route 12 (Jamieson Canyon) that would be exposed to further traffic noise increases from potential placement of the roadway (in addition to the traffic noise increases expected from year 2030 traffic volumes), as well as increased traffic.

Implementation of mitigation measure MM 4.7.4, which is incorporated as a Preferred Plan policy, would require that a detailed noise analysis be conducted as part of roadway improvement design where exposure of existing noise-sensitive land uses to traffic noise in excess

of County noise standards could result in a substantial increase in traffic noise levels. However, although implementation of the above mitigation measure would assist in reducing potentially significant noise impacts associated with planned roadway widenings and capacity increases, mitigation may not be reasonable or feasible in some areas due to considerations such as roadway access, cost, terrain, and the needs of the local property owner. Thus, the potential noise impact of roadway improvements related to noise-sensitive uses is considered **significant and unavoidable** under the Preferred Plan and Alternatives B, C, and E and less than significant under Alternatives A and D.

Project-Generated Non-Transportation Noise Sources

The Preferred Plan may result in new industrial, commercial, and agricultural uses that could expose existing residences to increased noise levels. This potential development could result in substantial new stationary noise sources and impact existing residential and other noise-sensitive land uses. However, normal agricultural activities are considered under the County's Right-to-Farm Ordinance, and the sounds produced are not considered undesirable as long as reasonable steps are taken to avoid conflicts. For the Preferred Plan as with all Draft EIR alternatives, potential noise impacts related to non-transportation noise sources is considered **less than significant**.

Project-Generated Construction Noise

The Preferred Plan would include development in the unincorporated portion of the County that could generate construction noise and temporarily increase noise levels at land uses adjacent to development. Noise impacts resulting from construction depend on the noise generated by construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise sensitive receptors. Compliance with the Napa County Noise Ordinance (County Code Section 8.16.070), which specifies noise limits for construction activities and limits construction within the hours of 7 a.m. to 7 p.m., would generally avoid temporary noise conflicts with noise-sensitive land uses. Thus, the potential noise impact related to temporary project-generated construction noise is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

Noise and Land Use Compatibility (Aircraft)

Under the Preferred Plan, 300 of the 800 acres available for development in the Airport Industrial Area would be available for annexation to the City of American Canyon as the Preferred Plan would create a new growth boundary for that City. The remaining 500 acres would not be allowed to develop residential uses within the land use compatibility zones or projected year 2022 noise contours. Near Angwin-Virgil O Parrett Field in Angwin, there are parcels within the proximity of the airport that would permit residential uses (one house per parcel plus a second unit), although they are within land use compatibility zones that would normally preclude residential use. Future residential uses could also be exposed to noise impacts from single event noise from individual aircraft.

Mitigation measure MM 4.7.7, as incorporated into the Preferred Plan policies, would require the use of avigation easements (or similar disclosure) to ensure that new development within any airport influence area are informed of the presence of the airport and the potential for related noise. Implementation of mitigation measures MM 4.7.7, MM 4.2.2, and MM 4.7.1 would ensure that future development near Angwin-Virgil O Parrett Field would either meet the noise restriction requirements of the airport and/or include noise attenuation features to meet current

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County noise standards. Thus, the potential conflict between aircraft noise and land use is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

AIR QUALITY

Consistency with Air Quality Regulations

As discussed in the Draft EIR, the San Francisco Area Air Basin (which includes Napa County) is in non-attainment for ozone under federal and state air quality standards. A key element in air quality planning is to make reasonably accurate projections of future human activities that are related to air pollutant emissions. As noted above under Development Potential, the Preferred Plan is projected to result in 2,935 new dwelling units between the year 2005 and 2030. Following the example in Table 4.8-6 in the Draft EIR, the Preferred Plan could result in a population increase of 7,514 persons in the unincorporated County (based on 2.56 persons per household in 2005). The Preferred Plan would then see a projected population of approximately 34,700, which is a 28% increase over the Existing Conditions population of 27,186, resulting in a VMT (vehicle miles traveled) increase similar to Alternative B of approximately 500,000 with proposed roadway improvements (or 129% - 150%). Under the Preferred Plan and all Draft EIR alternatives, population growth is projected to exceed ABAG forecasts, which indicate a county-wide population of 153,500 people in 2030.

The Preferred Plan would implement mitigation measures MM 4.8.1a through 4.8.1d as policies that would provide incentives for use of energy-efficient transportation, support efforts for stringent tailpipe emissions, evaluation of project-specific air quality impacts, and require County vehicles to conform to applicable emission standards at time of purchase. These measures would reduce the conflict with the Clean Air Plan (CAP) and Transportation Control Measure (TCM) support; however, the impact to air quality regulations consistency would remain **significant and unavoidable** under the Preferred Plan and all Draft EIR alternatives.

Conflicts with Particulate Matter Attainment Efforts

New residential construction under the Preferred Plan and all Draft EIR alternatives would lead to increased PM₁₀ and PM_{2.5} emissions as a result of wood burning devices installed in these new homes. Wood smoke emissions can be greatly reduced by prohibiting new open fireplaces or woodstoves that do not meet EPA standards or use natural gas. Emissions were calculated using the URBEMIS 2002 model based on the number of households for each alternative in Table 4.8-8 of the Draft EIR. The Preferred Plan would result in 2,935 new dwelling units by 2030, which would be a total of 12,579 dwelling units in the unincorporated County area. The PM₁₀ average annual emissions would be 0.21 tons/day, the same as Alternative A, and the average winter day emissions would be approximately 0.96 tons/day (U.S.) or 0.87 tons/day (metric), slightly more than Alternative A.

PM₁₀ exceedances in the County, however, are shown to occur primarily in the winter. These exceedances are generally attributed to use of wood burning devices. BAAQMD has targeted limiting wood burning as a way to lower wintertime particulate matter emissions as they are the easiest to control. Implementation of mitigation measure MM 4.8.2, which seeks to limit wood smoke emissions, has been incorporated into the Preferred Plan policies along with MM 4.8.1a and MM 4.8.1c to encourage energy-efficient transportation. While the mitigation measures identified could reduce the projected emissions, the potential increase would still be considered **significant and unavoidable** for the Preferred Plan and all Draft EIR alternatives.

Grading and Temporary Construction Emissions

With or without the General Plan Update, vineyard development is projected to continue in Napa County. For the Preferred Plan, the County expects approximately between 10,000 and 12,500 new acres of vineyards to be developed by year 2030. Construction activities, such as demolition, grading, construction worker travel to and from project sites, delivery and hauling of construction supplies and debris to and from development sites, and fuel combustion by on-site construction equipment, would generate pollutant emissions. These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants.

Under the Preferred Plan, new housing construction would be distributed throughout the County for a total of 2,935 units as well as nonresidential growth anticipated by year 2030. Continued development of vineyards (10,000 to 12,500 acres) could also occur with no change to existing County regulations or policies. In addition, the Preferred Plan includes the construction of roadway improvements in the southern portion of the County, extension of recycled water to Coombsville and Carneros, and policy provisions under the Preferred Plan that would involve the construction of new trails and potential passive recreation facilities (as proposed under the Recreation and Open Space Element). These activities under this alternative could result in temporary emissions of ozone, particulate matter, and toxic air pollutants (diesel, lead, asbestos). Implementation of mitigation measures MM 4.8.3a through 4.8.3d would reduce the impact to less than significant; therefore these measures have been incorporated into the Preferred Plan policies, and the potential impact related to emission from grading and construction is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Odors

Implementation of the Preferred Plan may involve the placement of sensitive receptors (e.g., new residences) near wastewater treatment ponds, composting facilities, sanitary landfills or transfer facilities, or similar uses. Localized sources of odors could include painting/coating operations or restaurants, including fast-food restaurants. BAAQMD (1999) provides project screening trigger levels for potential odor sources. The land use map for the Preferred Plan could result in new odor-sensitive land uses (e.g., residences) near sources of existing and future odors. The Preferred Plan would also not preclude establishment of new odor sources in proximity to existing residences. BAAQMD CEQA Guidelines recommends that buffer zones to avoid odors and adverse impacts should be reflected in local plan policies, land use maps, and implementing ordinances.

Implementation of the County's Right-to-Farm Ordinance (Chapter 2.94, County Code), which protects the routine operational activities required to conduct agricultural activities and which would include odor issues along with compliance with the BAAQMD recommendation of buffer zones, would reduce this impact to less than significant. In addition, mitigation measure MM 4.8.4 has been incorporated in the Preferred Plan to ensure that adequate buffer distances be included in any new development project near residences or sensitive receptors per the California Air Resources Board and BAAQMD. The potential impact related to odors is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

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Exposure to Toxic Air Contaminants

While it is anticipated that future land uses that could be sources of toxic air contaminants (TACs) would be located primarily in industrial designated areas adjacent to the Napa County Airport, the land use map for the Preferred Plan could result in sensitive land uses (e.g., residences) near future sources of TACs. This could especially occur in areas where the Preferred Plan proposes residential uses within existing developed areas as well as the expansion of state highways in the County (e.g., State Route 12 to four lanes in Jamieson Canyon). Under the Preferred Plan, the Napa Pipe site and the Boca/Pacific Coast site would remain in industrial use and industrial zoning subject to further study and therefore would not be included in the land use map for consideration of development.

Mitigation measure MM 4.8.5 would ensure that either adequate buffer distances shall be provided (based on recommendations and requirements of the California Air Resources Control Board and BAAQMD), or filters or other equipment shall be provided to reduce the potential exposure to acceptable levels. This mitigation measure has generally been incorporated into the Preferred Plan policies; however, the specification of filters or other equipment is not included within the policy. In any case, given that the exact alignment of proposed roadway improvements in relation to sensitive receptors is not known and the ability to meet recommended setbacks of the ARB (500 feet from high traffic roadways – California Air Resources Control Board Air Quality and Land Use Handbook, A Community Health Perspective 2005), this impact is considered **significant and unavoidable** for the Preferred Plan similar to Alternatives B, C, and E in the Draft EIR. Alternatives A and D would have been considered **significant and mitigable** with implementation of mitigation measure MM 4.8.5.

Carbon Monoxide Concentrations along Roadways

The Preferred Plan would include transportation improvements summarized on p. 4.4-30 and in Table 4.4-16 of the Draft EIR and included in Draft EIR Alternatives B and C. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of carbon monoxide. Since the early 1990s, carbon monoxide levels have been at healthy levels (i.e., below state and federal standards) in the Bay Area. As a result, the region has been designated as attainment for the standard. The Caline4 screening assessment used in the Draft EIR is a worst-case analysis, designed to over-predict carbon monoxide levels. Existing traffic volumes for selected roadway segments were used. Emission factors used were calculated using the EMFAC2002 model, developed by the California Air Resources Board, with default assumptions for Napa County during winter when carbon monoxide levels are highest. Based on the screening assessment performed for Draft EIR Alternatives B and C and shown in Table 4.8-9 of the Draft EIR, the Preferred Plan also would not exceed the 1-hour or 8-hour carbon monoxide standards of NAAQS or CAAQS. Therefore, the potential impact from carbon monoxide concentrations is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

Potential Increase to Long-Term Atmospheric Greenhouse Gas Emissions

The Preferred Plan would have a similar impact to Alternative A associated with greenhouse gas (GHG) emissions associated with agricultural activities and non-residential uses; however, the Preferred Plan would also result in increases in VMT as well as residential development potential.

Trip patterns with the Preferred Plan would likely fall in between Draft EIR Alternatives A and B as described in Table 2.0-1 in this section. It is estimated that transportation CO₂ emissions for the Preferred Plan would range from 642,329 to 674,822 metric tons annually (see calculations in

Section 3.0, Climate Change Master Response 3.4.4). The EPA's Personal Greenhouse Gas Calculator demonstrates the average household in Napa County emits approximately 19.4 metric tons (42,770 pounds) of GHG per year (primarily CO₂ emissions from energy use). Assuming anticipated residential growth of 2,935 dwelling units by 2030 under the Preferred Plan, the County could potentially increase its annual GHG emissions from households by 56,939 metric tons. Non-residential uses are projected to generate approximately 131,978 metric tons annually under the Preferred Plan as well (development between 2005 and 2030).

While implementation of mitigation measure MM 4.8.7 to conduct a greenhouse gas emission inventory and mitigation measures MM 4.8.1a through MM 4.8.1d included as Preferred Plan policies would assist in reducing these emissions, there are no feasible mitigation measures to fully offset existing and future GHG emissions. Thus, this impact is a **significant and unavoidable** impact for the Preferred Plan and all Draft EIR alternatives considered.

HUMAN HEALTH/RISK OF UPSET

Routine Transport of Hazardous Materials

The Preferred Plan would provide for additional residential, commercial, office, industrial, and agricultural development in the County by year 2030. As a result, more hazardous materials would be transported and used within the County. The Preferred Plan roadway improvements could increase the transport of hazardous materials, exposing more people. The transportation of hazardous materials on area roadways is regulated by the California Highway Patrol, U.S. Department of Transportation (Hazardous Materials Transportation Act), and Caltrans, and use of these materials is regulated by the DTSC (22 Cal. Code Regs §§ 66001, et seq.). All existing and future development in the unincorporated area of the County would be required to comply with federal, state, and local regulations regarding the handling, transportation, disposal, and clean-up of hazardous materials. The potential impact related to routine transport of hazardous materials is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

Release and Exposure to Hazardous Materials

The Preferred Plan could expose construction workers and future residents to hazardous materials/contamination (e.g., soil contamination from historic pesticide use or historic dump site) and this potential impact could also occur associated with the further development of other areas in the unincorporated area of the County (e.g., Angwin), construction of roadway improvements (proposed by Preferred Plan Circulation Element) in the southern portion of the County, extension of recycled water to Coombsville and Carneros, and policy provisions under the Preferred Plan that would involve the construction of new trails and potential passive recreation facilities (as proposed under the Recreation and Open Space Element). All existing and future development in the County would be required to comply with federal, state, and local regulations regarding the handling, transportation, disposal, and clean-up of hazardous materials.

Implementation of mitigation measure MM 4.9.2 as incorporated into the Preferred Plan policies and action items would ensure that potential hazardous materials/contamination from previous or current land uses on land areas within the County are remediated prior to development in order to protect public health. The Preferred Plan policies require all development projects that consist of sites that are suspected or known to contain hazardous materials (such as data contained in the BDR) and/or are identified in a hazardous material/waste search to be reviewed, tested, and remediated for potential hazardous materials in accordance with all local, state, and federal regulations. Thus, the potential impact from release and exposure to

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hazardous materials is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Airport Hazards

As noted under Impact 4.2.2 in Section 4.2, Land Use, of the Draft EIR, potential subsequent development is not expected to conflict with operations of the Napa County Airport, given the provisions and land use restrictions of the Napa County Airport Comprehensive Land Use Plan and associated provisions in the County Code (County Code Title 11 [Airport] and Chapter 18.80 [Airport Compatibility Combining District]). The land use restrictions associated with County Code Chapter 18.80 would also apply to Angwin-Parrett Field Airport. The Preferred Plan would only allow for the Napa Pipe site and Boca/Pacific Coast site to be re-designated from "Industrial" to "Study Area," to determine their potential for non-industrial uses such as housing. Therefore, the Preferred Plan does not include development within the Airport Combining District or Zone D of Napa County Airport.

The Preferred Plan would also create a new growth boundary for the City of American Canyon (**Figure 2.0-2**), which would allow the City to annex approximately 280 acres of industrial land north of the City limits if voters of the City approve a growth boundary that effectively limits other annexations outside the City's current sphere of influence until the year 2030. Urban development within the expanded City of American Canyon RUL could result in conflicts with the Napa County Airport; however, the potential extent of this impact is not known given the uncertainty of the future mix of land uses. The mix of land uses would ultimately be determined by the City of American Canyon and would be required to consider the requirements of the Airport Land Use Commission and Compatibility Plan.

Implementation of mitigation measure MM 4.2.2 as a Preferred Plan policy as described above would reduce the potential for conflicts and safety issues with the Napa County Airport by demonstrating that the site design would not conflict with Napa County Airport operations or represent a safety hazard. The potential airport hazard is considered **significant and mitigable** under the Preferred Plan and Draft EIR Alternatives B, C, and E, and less than significant for Alternatives A and D.

Interference with an Adopted Emergency Response or Evacuation Plan

Generally, the Preferred Plan would not alter the County's overall land use patterns or land use designations to such an extent that would conflict with the County emergency response and/or evacuation plans. In addition, the County has the Napa Operational Area Hazards Mitigation Plan (OAHMP) that includes mitigation for addressing the most significant hazards in the County (floods, earthquakes, wildland interface fires, and terrorism and technological hazards). The OAHMP's Mitigation Strategy includes goals, programs, objectives, and action items that help to ensure effective emergency response to significant hazards. Additional expansion of urban/rural development could also occur within the unincorporated community of Angwin. This intensification of growth could result in conflicts in emergency response at these locations.

The Preferred Plan includes all the potential development and proposed roadway improvements as described in the Transportation portion of this section, an increased development potential (e.g., 2,935 new dwelling units by year 2030), and the expansion of rural and urban uses in the unincorporated community of Angwin and establishment of a new RUL for the City of American Canyon. This intensification of growth could result in conflicts in emergency response at these locations.

Implementation of mitigation measure MM 4.9.4, incorporated as Preferred Plan policy, would ensure that new development proposals include provisions for adequate emergency access for evacuation and for access by emergency vehicles consistent with the County and Public Resources Code Section 4290. This measure along with the Napa County OAHMP would ensure that this impact would be less than significant. Thus, the potential impact to emergency response and evacuation plans is considered **significant and mitigable** for the Preferred Plan similar to Draft EIR Alternatives B, C, and E, and less than significant for Alternatives A and D.

Wildland Fire

The Preferred Plan could result in an increased development potential (e.g., 2,935 new dwelling units by year 2030) and additional expansion of urban/rural development within the unincorporated community of Angwin. The creation of new trails and open space areas for public access associated with the proposed General Plan Update (Recreation and Open Space Element ROS Objective ROS-1, -2, and -3 and associated policy provisions) could place people in areas prone to wildland fires. Subsequent development would be subject to County Code and Public Resources Code provisions that provide development standards and restrictions regarding structure design, fuel modification zone design, adequacy of emergency access, water for fire fighting, and other associated standards, as well as the "Napa Firewise" program. Thus the potential for wildland fire is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

GEOLOGY AND SOILS

Seismic Ground Shaking

Between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of non-residential uses in the unincorporated portion of the County as well as additional agricultural development (e.g., 10,000 to 12,500 acres of new vineyard development by year 2030 and associated wineries). In addition, the Preferred Plan includes potential expansion of the rural and urban uses in Angwin, establishment of a new RUL for the City of American Canyon, and construction of roadway improvements (proposed by Preferred Plan Circulation Element) in the southern portion of the County, extension of recycled water to Coombsville and Carneros, and policy provisions under the Preferred Plan that would involve the construction of new trails and potential passive recreation facilities (as proposed under the Recreation and Open Space Element). The Preferred Plan would have infrastructure provisions that could be damaged by seismic events. This increase in population, employment, and development could expose people, structures, and development to ground shaking as a result of seismic activity.

Implementation of mitigation measure MM 4.10.1 that includes a policy in the Preferred Plan to require all new development to provide a geotechnical study, in addition to the provisions of UBC and CBC and County Code Chapter 18.88, would reduce the potential hazards associated with seismic ground shaking. During small and moderate seismic events, the impacts of seismic ground shaking would be reduced to a less than significant impact for new development consistent with the Preferred Plan. However, implementation of these measures would not completely eliminate impacts resulting from seismic ground shaking from severe seismic events. In the event of severe seismic activity, impacts could be significant in some locations. Thus, the potential impact related to seismic ground shaking is considered **significant and unavoidable** under the Preferred Plan and all Draft EIR alternatives.

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Seismic-Related Ground Failure

The Preferred Plan would provide for additional growth within current General Plan designated areas for rural and urban development (such as within the unincorporated community of Angwin).

Between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses in the unincorporated portion of the County, as well as additional agricultural development (e.g., 10,000 to 12,500 acres of new vineyard development by year 2030 and associated wineries). In addition to the proposed land use map, the Preferred Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and the extension of recycled water to Coombsville and Carneros that could be damaged by seismic events. Trails and open space for public access provisions associated with the Preferred Plan Recreation and Open Space Element would also allow for new development that could increase use in areas not currently frequented by visitors that could be exposed to seismic hazards described above. This increase in population, employment, and development could expose people, structures, and development to seismic related ground failure.

Implementation of mitigation measure MM 4.10.2 that is incorporated as a policy in the Preferred Plan would ensure that the County would not accept dedication of roads (a) on or jeopardized by landslides, (b) in hilly areas, or (c) in areas subject to liquefaction, subsidence, or settlement, which, in the opinion of the Napa County Public Works Department, would require an excessive degree of maintenance and repair costs. During small and moderate seismic and rainfall events, the impacts of seismic-related ground failures would be reduced to a less than significant impact for new development consistent with the Preferred Plan. Implementation of these measures would not completely eliminate impacts resulting from seismic-related ground failures. In the event of severe seismic activity or unusually high rainfall over a short period of time, impacts would be significant in some locations. Thus, the potential impact from seismic-related ground failure is considered **significant and unavoidable** under the Preferred Plan and all Draft EIR alternatives.

Tsunamis and Seiches

The Preferred Plan does not propose any new rural or urban land uses at the southernmost portion of the County or adjacent to large reservoirs in the County, although more development potential would occur within rural and urban areas and expansion of rural and urban uses at the unincorporated community of Angwin and the City of American Canyon. Potential for damage caused by tsunamis is considered low given that the County is not directly exposed to the open ocean and due to its lack of bay front. Currently, risk analysis of tsunamis has been limited to the evaluation of the ocean sides of San Francisco and San Mateo counties. Seiches would be limited to the larger reservoirs in the County (e.g., Lake Berryessa, Bell Canyon Reservoir, Lake Hennessey, Rector Reservoir, and Milliken Reservoir). However, the potential for the loss of life and damage to structures is considered low given that development is largely restricted immediately along the shorelines of these reservoirs given their use as municipal water supply sources and because of County General Plan land use designations and zoning. The Preferred Plan would not expose a substantial number of people to the low potential of danger associated with tsunamis or seiches; therefore, the potential exposure to tsunamis and seiches is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

Landslides

The Preferred Plan would provide for additional development opportunities in the community of Angwin and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan). This increase in population, employment, and development (urban, rural, agricultural, and public facilities) could expose people, structures, and development to damage from landslides.

Implementation of mitigation measures MM 4.10.4a through MM 4.10.4c (in combination with the implementation of County Code Chapter 18.108 [Conservation Regulations]) would ensure some protection from landslide hazards and reduce the impact. However, implementation of these provisions would not completely eliminate impacts resulting from landsliding events. In the event of severe seismic activity or unusually high rainfall over a short period of time, impacts would be significant in some locations. The potential impact related to landslide events is considered **significant and unavoidable** under the Preferred Plan and all Draft EIR alternatives.

Subsidence and Settling

Subsidence may result in flooding as ground levels are lowered, including the freeboard of flood control levees. Subsidence can also cause damage to structures, utilities, and roadways from differential settlement. Foundations and walls can crack and the structure can tilt out of level. Gravity-based utilities and storm drains can become inoperable due to differential settlement that causes sag in the lines or slope reversal. The Preferred Plan would provide for additional development opportunities in the community of Angwin as well as within and adjacent to the City of Napa and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan). The increase in population, employment, and development (urban, rural, agricultural, and public facilities) could expose people, structures, and development to damage from subsidence and settling.

Implementation of mitigation measures MM 4.10.1 and MM 4.10.2 described above as well as compliance with current County Code provisions previously described would reduce the potential impacts associated with subsidence and settling for some seismic and rainfall events. During small and moderate seismic and rainfall events, the impacts of settlement and subsidence would be reduced to a less than significant impact. Implementation of these measures would not completely eliminate impacts resulting from severe seismic or maximum rainfall events. In the event of severe seismic activity or unusually high rainfall over a short period of time, impacts would be significant in some locations. Thus, the potential impact related to subsidence is considered **significant and unavoidable** under the Preferred Plan and all Draft EIR alternatives.

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Expansive Soils

The Preferred Plan would provide for additional development opportunities in the community of Angwin and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan). This growth and development would be exposed to expansive soil constraints. However, site-specific geotechnical investigations required by the County and adherence to the UBC and CBC would reduce the impacts of expansive soils on new development. Thus, the potential for impacts of expansive soils is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

Septic System Operation

The Preferred Plan would provide for additional development opportunities in the community of Angwin and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan). However, compliance with the provisions of Title 13, Division II of the County Code would ensure that septic systems are designed and operated adequately to avoid system failures. Thus, the potential for impacts due to septic system failure is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

Mineral Resources

The Preferred Plan would provide for additional development opportunities in the community of Angwin and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan). As noted in sub-section 4.10.1 (Existing Setting), the only large active quarry is the Syar quarry. Mining activities would be allowed to continue under the General Plan Update. However, geologic opportunities for resource extraction in the future at alternate locations are not clearly known. The Preferred Plan would largely retain the current land use patterns and would not result in the expansion of substantial new rural or urban land uses in the County that would preclude future mineral extraction. The potential impact to mineral resources is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

HYDROLOGY AND WATER QUALITY

Nonpoint Source Pollution from Urban Runoff

Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses in the unincorporated portion of the County, additional development opportunities in the community of Angwin, and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan).

This development would contribute to the nonpoint pollution sources identified above. However, as described above, subsequent development would be subject to existing County Code provisions (e.g., Section 16.28.100). Therefore, the potential for nonpoint source pollution from urban runoff is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

Construction-Related Soil Erosion and Sedimentation

Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses in the unincorporated portion of the County, additional development opportunities in the community of Angwin, and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan). This development could contribute to soil erosion from construction activities described above.

Mitigation measures MM 4.11.2a and 4.11.2b are incorporated into the Preferred Plan policies and would ensure the continued implementation of Napa County Conservation Regulations (Chapter 18.108 of the County Code) and the Stormwater Management and Discharge Control Ordinance (Chapter 16.28 of the County Code) to mitigate surface water quality impacts consistent with the Regional Water Quality Control Board Basin Plan. The measures would also ensure compliance with the RWQCB Total Maximum Daily Load (TMDL) process to improve water quality and monitoring to identify and correct any water quality issues. Therefore, the potential for construction-related soil erosion and sedimentation is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Agricultural and Resource Uses

New vineyard development by year 2030 for the Preferred Plan is anticipated to range from 10,000 and 12,500 acres, which does not include growth of other agricultural activities. In addition to agricultural operations, other resource extraction activities (e.g., timber harvesting and mineral extraction) could also occur in the County by 2030. As noted above, these activities would result in water quality impacts associated with soil erosion and other pollutants

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(e.g., nutrients, pesticides, and herbicides). Appendix I of the Draft EIR provides details on several technical studies that have been completed in the County for pre- and post-vineyard conditions that demonstrate the effectiveness of BMPs from implementation of the County Conservation Regulations to mitigate water quality impacts.

Mitigation measures MM 4.11.3a and 4.11.3b as incorporated into the Preferred Plan would ensure continued implementation of Napa County Conservation Regulations (Chapter 18.108 of the County Code) in order to mitigate surface water quality impacts from land use activities and require that post development conditions not increase 2-, 10-, 50-, and 100-year events above pre-development peak flow rates.

Implementation of these measures would ensure no increased scour events along waterways by requiring the retention of pre-development peak flow conditions when scour events occur. In addition, the Preferred Plan policies would demonstrate that BMPs would ensure protection of current water quality conditions in compliance with applicable Basin Plans and TMDLs. Thus, impacts to water quality and flows from agricultural and resource uses is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Water Quality Impacts Associated with Proposed Ministerial Process for Vineyard Development

Under the Preferred Plan, policies and action items are included as modifications to the County's Conservation Regulations (County Code Chapter 18.108) to provide a ministerial process for environmentally superior vineyard development projects that would not require environmental review under CEQA. This process has been proposed in order to meet the Preferred Plan policy provisions for the continued promotion of agricultural activities in the County that are protective of the environment. These projects would be required to go beyond current regulatory requirements and meet performance criteria demonstrating no significant adverse effects to the environment in order to qualify for the streamlined process.

Several policies in the Preferred Plan address the intent of mitigation measure MM 4.11.4, which provides detailed application requirements and conditions for participation in the ministerial permit process; however, not all the performance standards are specifically included in the policies. Instead, the action item under the related Conservation Element policy requires "amendment of the Conservation Regulations to offer incentives such as the streamlined review process for new vineyard development and other projects that incorporate environmentally sustainable practices that avoid or mitigate significant environmental impacts." With the provision that the County's Conservation Regulations (County Code Chapter 18.108) be amended, water quality impacts associated with the ministerial process are considered less than significant. Thus, this impact is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Groundwater Level Decline and Overdraft

Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses in the unincorporated portion of the County, additional development opportunities in the community of Angwin, and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include the extension of recycled water to Coombsville and Carneros, which would consist of approximately 2,000 acre-feet annually, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan). This development would contribute to further demand for groundwater supply.

Implementation of mitigation measures MM 4.11.5a through MM 4.11.5e would reduce the impact of demand for groundwater supply. These measures are included in the Preferred Plan as policies to protect groundwater and other water supplies by (a) requiring projects to demonstrate the availability of adequate water supply prior to approval, (b) curtailing the installation of new wells where hydrogeologic studies have shown significant adverse well interference and surface water impacts, (c) discouraging drilling or operation of any new wells in known areas of saltwater intrusion, (d) working with appropriate agencies to develop an understanding of potential groundwater deficiencies, (e) periodically reviewing groundwater policies and ordinances with new data, (f) disseminating available information on groundwater levels, (g) identifying and protecting groundwater recharge areas, (h) promoting cost-effective water conservation measures, and (i) identifying and supporting ways to utilize recycled water for irrigation and non-potable uses.

Due to uncertainty in the ability to achieve long-term sustainable groundwater supply for existing and new development, in the time required to establish and implement effective management actions, and in current knowledge regarding groundwater availability and sustainability of important aquifers, this would be a potentially significant impact. The measures and policies identified above and mitigation measure MM 4.11.4 would partially reduce the significance of this impact; however, due to the uncertainty that surrounds future groundwater availability and anticipated groundwater demands documented in the 2050 Napa Valley Water Resources Study in Napa County (see Appendix J of the Draft EIR) and the length of time needed to implement the programs needed to bring groundwater into hydrologic balance, this impact would still be considered **significant and unavoidable** under the Preferred Plan and all Draft EIR alternatives.

Well Competition and Adverse Well Interference

Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses in the unincorporated portion of the County, additional development opportunities in the community of Angwin, and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include the extension of recycled water to Coombsville and Carneros, which would consist of approximately 2,000 acre-feet annually, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan). This development would result in the development of new well facilities that could conflict with preexisting wells in operation.

Implementation of mitigation measure MM 4.11.5e under the Preferred Plan policies and action items would require pump tests or hydrogeologic studies to demonstrate no significant interference with existing wells. Thus, the potential noise impact related to well competition and adverse well interference is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Changes to Drainage Patterns Leading to Increased Runoff and Streambank Erosion

Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses in the unincorporated portion of the County, additional development opportunities in the community of Angwin, and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as

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well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and the extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan). These activities would result in drainage impacts from the alteration of drainage patterns and features.

Implementation of mitigation measures MM 4.11.3a and MM 4.11.3b, which are included as Preferred Plan policies as described above, would ensure no increase in scour events along waterways by requiring the retention of pre-development peak flow conditions when scour events occur. Thus, the potential impact related to drainage patterns leading to increased runoff and streambank erosion is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Changes to Drainage Patterns Leading to Increased Runoff and Hillside Erosion

Subsequent rural, urban, and vineyard development, other agricultural activities, and resource extraction activities in the County could result in alterations to existing drainage patterns, increasing runoff and hillside erosion. Agricultural land use practices can also alter the infiltration properties of surface soils (sometimes beneficially) and can also have similar, but more often smaller, effects on the hydrologic cycle. Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses in the unincorporated portion of the County, additional development opportunities in the community of Angwin, and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and the extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan). These activities would result in changes to drainage patterns and features from changes in overland flow conditions.

Implementation of mitigation measures MM 4.11.3a and MM 4.11.3b as described above in the Preferred Plan policies would ensure no increase in scour events along waterways by requiring the retention of pre-development peak flow conditions when scour events occur, while MM 4.11.2a, also incorporated into the Preferred Plan policies, would require demonstration that BMPs would mitigate soil erosion. Thus, the potential change to drainage patterns leading to increased runoff and hillside erosion is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Flood Risk from Drainage System Alteration

Land uses and development consistent with the Preferred Plan could increase runoff and result in adverse modifications to local and regional hydrology. While the majority of future urban development would be concentrated in the cities and existing urban and rural areas, growth of agricultural, rural, and urban uses in the unincorporated area of the County may necessitate the construction of new drainage facilities for stormwater conveyance and management systems on tributaries and watershed mainstems. In areas where drainage infrastructure already exists, drainage systems may need to be enlarged or expanded to accommodate future growth and provide suitable flood protection.

As identified **Table 4.11-5** of the Draft EIR, generally the most potentially significant flood risk impacts occurred under Scenario 1 within the Carneros evaluation area and at the gagging station at the City of Napa on the Napa River. Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses in the unincorporated portion of the County, additional development opportunities in the community of Angwin, and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and the extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan). These activities would result in the alteration of drainage conditions and features that could result in flooding impacts. Implementation of mitigation measure MM 4.11.9, which is incorporated in the Preferred Plan policies, would require review of new proposed projects in a floodway to ensure no new or increased flooding impacts on the Napa River in the area of the Napa River Flood Protection Project. Thus, the flood risk from drainage system alteration is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

100-Year Flood Hazard Areas

The Preferred Plan generally would continue to allow new development and redevelopment within unincorporated areas designated by FEMA as Special Flood Hazard Areas, consistent with the County Floodplain Management Ordinances and the Code of Federal Regulations for the National Flood Insurance Program. The current County Code does not allow development within a defined floodway (unless within footprint of existing structure or certified by a registered engineer or architect to not result in any increase in base flood elevation) and does not allow development in the floodplain if the project would increase the base flood elevation by more than one foot, except in special cases.

Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses in the unincorporated portion of the County, additional development opportunities in the community of Angwin, and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and the extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan).

As noted above, new development would be subject to the County Floodplain Management Ordinances and the Code of Federal Regulations for the National Flood Insurance Program that ensures structures placed within the designated 100-year floodplain are designed to avoid flooding impacts. Thus, the impact from development in 100-year flood hazard areas is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

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New Vineyard Development and 100-Year Flooding

As described in the drainage Impacts above, conversion of existing land uses to new vineyard development, due to drainage diversions, changes to cover crop, and removal of vegetation, can produce greater overland runoff to the channel network. A 100-year flood is the level of flood water that would result from a storm with a 1-in-100 chance of occurring in any given year.

Table 4.11-6 in the Draft EIR shows the gaging sites where flows and water surface elevations increased significantly – at two locations on the Napa River and at Canon Creek’s junction with Bell Creek, on the valley floor. Implementation of mitigation measure MM 4.11.9, as described above and incorporated in the Preferred Plan policies, would ensure that subsequent land uses under the Preferred Plan would not result in new or increased flood impacts, while mitigation measures MM 4.11.3a and MM 4.11.4 described above and also included in the Preferred Plan policies would ensure no increase scour events along waterways by requiring the retention of pre-development peak flow conditions.

This impact would be the same for the Preferred Plan and all alternatives in the Draft EIR, given that anticipated vineyard development would be the same under these alternatives. Thus, the potential impact from new vineyard development and 100-year flooding is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

CULTURAL AND PALEONTOLOGICAL RESOURCES

Archaeological (Prehistoric & Historic) Resources, Human Remains, and Paleontological Resources

Future development in the County could impact archaeological resources, human remains, and paleontological resources whether or not the General Plan is updated. Between the years 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of non-residential uses in the unincorporated portion of the County. In addition to the land use map, the Preferred Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (see the Recreation and Open Space Element in the Preferred Plan General Plan Update). This development (when compared to Figure 4.12-1 in the Draft EIR) could impact cultural and paleontological resources.

The Preferred Plan includes a policy that incorporates implementation of mitigation measure MM 4.12.1 that requires all discretionary projects involving ground-disturbing activity to comply with specific standards. The potential impact to archaeological, resources, human remains, and paleontological resources is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Historic Architectural Resources

As described above, the Preferred Plan would result in 2,935 dwelling units and approximately 11,200,000 square feet of non-residential uses in the unincorporated portion of the County, along with other development that may impact historic resources. Implementation of mitigation measure MM 4.12.2 as incorporated in the Preferred Plan policies would require an evaluation of the eligibility of potential architectural resources for inclusion in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR) by a qualified architectural historian.

Implementation of mitigation measure MM 4.12.2 would identify significant historic architectural resources prior to implementation of a project and would afford an opportunity to take appropriate action to protect a resource. However, it cannot be determined at this time whether all significant historic resources and structures could be feasibly avoided or fully mitigated in all circumstances. Therefore, this impact is considered **significant and unavoidable** for the Preferred Plan and all Draft EIR alternatives.

PUBLIC SERVICES AND UTILITIES

Fire Protection and Emergency Medical Response

Subsequent development and growth in the County would increase the demand of fire protection services in the County. The Preferred Plan would largely retain existing land use patterns and would focus development into and adjacent to existing cities and areas designated for rural and urban development. In addition, the County is projecting 10,000 to 12,500 acres of new vineyard development as well as associated winery development and other agricultural uses that would also add to the demand for fire protection.

The "Napa Firewise" program is currently, and would continue to be, implemented under Alternatives A, B, and C in the Preferred Plan as well as County Code provisions associated with building requirements (Chapter 15.32) and fire risk zones (Chapter 18.84), and Public Resources Code Sections 4290 and 4291. "Napa Firewise" is a community-based fire awareness program to educate the residents of Napa County on the dangers wildland fire poses to them and their community.

Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses in the unincorporated portion of the County, additional development opportunities in the community of Angwin, and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and the extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan). This development would increase demands for fire protection services county-wide as well as within the City of Napa and would potentially require the construction of new facilities that could trigger adverse environmental effects (as noted in Section 4.13.1.1 of the Draft EIR).

Implementation of mitigation measures MM 4.13.1.1a through MM 4.13.1.1c, which are incorporated into the Preferred Plan policies, would ensure that facilities constructed in caves conform to Napa County Fire Department requirements, all new development comply with fire safety standards, and water wells intended for emergency use be equipped with alternate power. Implementation of these measures, and continuation of the "Napa Firewise" program, as well as County Code provisions associated with building requirements (Chapter 15.32) and fire risk zones (Chapter 18.84) and Public Resources Code Sections 4290 and 4291 (e.g., provisions associated with development standards and restrictions regarding structure design, fuel modification zone design, adequacy of emergency access, water for fire fighting) would ensure that subsequent development under the Preferred Plan would not adversely impact fire protection services. Thus, the impact to fire protection services is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

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Law Enforcement Service and Standards

Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses in the unincorporated portion of the County, and the Preferred Plan would provide for additional development opportunities in the community of Angwin and the establishment of an RUL for the City of American Canyon. The Preferred Plan would also see anticipated new vineyard development of 10,000 to 12,500 acres by year 2030 as well as other vineyard-related and other agricultural operations. In addition to the Preferred Plan land use map, this Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) and the extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (Recreation and Open Space Element in the Preferred Plan).

The Preferred Plan is projected to result in up to 7,543 new residents in the unincorporated County. Based on the standard of 0.7 officers per 1,000 residents, the County would need to add an additional six (6) officers and related supporting equipment for the Preferred Plan to be implemented. All law enforcement services in the County are funded through the County's General Fund, individual city general funds, mutual aid agreements, and other sources (e.g., grants), which are generally anticipated to be adequate funding mechanism to meet the NCSO and local police department's projected staffing and service needs. However, it should be noted that funding levels of law enforcement services is ultimately decided by the Napa County Board of Supervisors and the local city and town councils for each incorporated city. Future growth within the County may require the construction or expansion of law enforcement facilities. The environmental effects of potential new or expanded law enforcement facilities have been programmatically addressed in the Draft EIR; however, additional site-specific analysis would be required.

Implementation of mitigation measure MM 4.13.2.1a is incorporated into the Preferred Plan policies to ensure that all new commercial and non-residential development is referred to the sheriff's department for review of public safety issues. No policy in the Preferred Plan relates to MM 4.13.2.1b; however, for the purposes of this EIR it is assumed any new law enforcement facilities would be placed within existing developed and urban areas of the County. Thus, the impact to law enforcement service and standards is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Water Supply Impacts

As noted in Section 4.0 of the Draft EIR, unincorporated land uses that would be subject to the Preferred Plan are not expected to reach full build-out by the year 2030 and utilizes growth projections for residential, commercial, industrial, and vineyard development anticipated by the year 2030. The 2050 Napa Valley Water Resources Study evaluated available water supplies versus current and projected demands under three different supply scenarios: normal year, multiple dry year, and single (critically) dry year for the unincorporated portion of the County and the cities within the Napa Valley. A summary of projected water supply and demand is found in Tables 4.13.3-35 through 4.13.3-37 of the Draft EIR.

Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses in the unincorporated portion of the County. Using water demand factors from Appendix J (see Technical Memorandum No. 2 for factors used for commercial and industrial uses from the City of American Canyon and Technical Memorandum No. 3 for unincorporated water demands for residential uses), this development would generate 1,106 acre-feet annually (0.3767AF/du) of

residential water demand and 1,943 (0.00017AF/SF) acre-feet annually for non-residential uses. Some of this development would occur within the cities' service areas.

As noted in the Draft EIR tables cited above, by year 2020, the County as a whole is anticipating water shortages in dry years and multiple dry years, and some unincorporated areas relying on groundwater may also experience shortages in normal years. Implementation of mitigation measures MM 4.13.3.1a and MM 4.13.3.1b, generally incorporated into the Preferred Plan policies, would ensure that the County reviews all discretionary projects proposing the use of groundwater and require verification of adequate water supply and distribution facilities for development projects prior to their approvals. While measures included in the Preferred Plan would minimize this impact, it is difficult to determine the specific feasibility of future water supply projects, and this impact would remain **significant and unavoidable** under the Preferred Plan and all Draft EIR alternatives.

Sewer Treatment and Conveyance

The prediction of sewage flows, projections, and estimates are determined by population-based information. For the purposes of this analysis, it is assumed that residential land uses could generate 300 gallons per day per residential unit (flow rate used by a several agencies for wastewater planning [e.g., Sacramento Regional Sanitation District and the City of Jackson]), while non-residential uses generation rates were 30 gallons per day per employee (factors used in the Napa County Airport Industrial Area Specific Plan). Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses (8,259 new jobs) in the unincorporated portion of the County (in addition to the 10,000 to 12,500 acres of new vineyard development anticipated by year 2030). Based on the sewer demand factors described above, the Preferred Plan could result in an increase in sewer service demand of 1.13 mgd by the year 2030, with some of this demand occurring in areas serviced by the cities of American Canyon and Napa (e.g., anticipated job growth in the Airport Industrial Area). This increase in sewer service demand could result in potentially significant service impacts.

Implementation of mitigation measure MM 4.13.4.1, included in the Preferred Plan, would require verification of adequate wastewater service for development projects prior to their approvals. This measure and adherence to the existing County Code requirements would ensure that the environmental effects of providing additional treatment capacity and conveyance facilities to accommodate the increase in demand associated with the Preferred Plan would reduce the impact of sewer treatment and conveyance. Thus, this impact is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Solid Waste Service

As described in the Draft EIR, the solid waste providers in the County consist of UVDS, BGS, NRWS, NCRWS, and ACRD, and the County is currently meeting the source reduction requirements of AB 939. As of January 2004, the Keller Canyon Landfill had 64.8 million cubic yards of remaining capacity and has enough permitted capacity to receive solid waste through 2030, which is its anticipated closure date (California Integrated Waste Management Board, April 2006). In addition, the County would continue to implement the Source Reduction and Recycling Element (SRRE), Non-disposal Facility Element (NDFE), and Household Hazardous Waste Element (HHWE) that are included in the County's Integrated Waste Management Plan, which would ensure continued compliance with AB 939 under the Preferred Plan.

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Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of nonresidential uses (8,259 new jobs) in the unincorporated portion of the County (in addition to the 10,000 to 12,500 acres of new vineyard development anticipated by year 2030). Based on the latest CIWMB estimates, per capita solid waste disposal in the County is approximately 1.97 tons of solid waste a year and 2.9 pounds per day per employee for businesses. Implementation of the Preferred Plan would increase solid waste generation by approximately 39,654 tons of solid waste generated annually by the year 2030 over current conditions. As noted above, there is adequate capacity at landfill facilities utilized by the County, and the County would continue to implement the Source Reduction and Recycling Element (SRRE), Non-disposal Facility Element (NDFE,) and Household Hazardous Waste Element (HHWE) that are included in the County's Integrated Waste Management Plan, which would ensure continued compliance with AB 939 under the proposed General Plan Update. Thus, the impact to solid waste service is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

Public School Facilities

Typical environmental effects as a result of the construction and operation of new school facilities include air quality (during construction and operation), noise (during construction and operation), biological and cultural resources (depending on location), public services (electric, water, and wastewater), and traffic (during construction and operation). Such school development would occur within the development areas evaluated in the technical analyses of this EIR. Because specific locations for public schools have not been identified, site-specific environmental impacts of constructing the facilities cannot be determined at this time. However, it is reasonable to assume that the construction of schools and related facilities would occur in areas designated for urban development or in immediate proximity where the environmental effects of generalized growth have been programmatically evaluated for the Preferred Plan. Additionally, new public school facilities must undergo rigorous site-specific CEQA and California Board of Education evaluation prior to construction to identify and lessen environmental related impacts.

Implementation of the Preferred Plan would include slow residential and employment growth with new development occurring only within existing urban areas and result in a population increase of approximately 7,543 people. Given that the growth under this alternative would occur in urbanized areas, the majority of new students would likely attend schools within the NVUSD, SHUSD, CJUSD, and HMESD. All new public school facilities must undergo rigorous site-specific CEQA and California Board of Education evaluation prior to construction to identify and lessen environmental related impacts. In addition, Government Code Section 65995(h) states that the payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code is deemed to be full and complete mitigation of the impacts for the planning, use, development, or the provision of adequate school facilities, and Section 65996 (b) states that the provisions of the Government Code provide full and complete school facilities mitigation. School districts in Napa County collect fees during the building permit process based on new building square footage and are entitled to adjust these fees as needed consistent with the Government Code. Thus, the impact to school facilities is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

Provision of Electric and Natural Gas Resources

The majority of electricity in Napa County is produced and delivered by PG&E. PG&E provides electrical energy to residences and commercial, industrial, mining, and agricultural customers, as well as to transportation, communication, and utility service providers (TCU) throughout the

County. Napa County does not have a natural gas producing facility and must purchase and import all natural gas consumed in the County. Natural gas consumption in Napa County has varied by as much as 25% over the past 13 years. The primary natural gas transmission pipelines are generally located in the southern and western portions of the County and consist of two 12-inch diameter pipelines that run northwest through the Napa Valley. Napa County's gasoline and diesel vehicle energy consumption has generally increased annually since 1993 as shown in Table 4.13.7-2 and 4.13.7-3 of the Draft EIR.

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The County's providers have sufficient electrical transmission capacity and natural gas resources to accommodate the demand associated the proposed General Plan Update through 2010 for the Preferred Plan. Subsequent development under the Preferred Plan would be required to comply with recently adopted changes to Title 24 of the California Code of Regulations regarding energy efficiency that were effective in September 2005.

The Preferred Plan would retain existing land use patterns of the County that emphasize the concentration of new urban and rural development into and adjacent to existing cities and unincorporated communities where services exist and thus reduce energy and resource usage from new growth (as opposed to substantial expansion of urban areas). However, it is acknowledged that vehicle miles traveled are anticipated to increase in the County by the year 2030 and that such growth (while efficient) would contribute to environmental effects including climate change. The reader is referred to Section 4.8, Air Quality, in the Draft EIR and Climate Change Master Response 3.4.4 in this Final EIR for further discussion regarding potential impacts associated with climate change.

The County's per capita natural gas consumption since 1995 has averaged approximately 5.22 BOEs (barrel of oil equivalent) per capita, and the County's electrical consumption for all sectors since 1995 has been 4.02 BOEs per capita. Implementation of the Preferred Plan would result in a population increase of approximately 7,543 new residents. Implementation of the Preferred Plan would result in an increased demand of approximately 39.22 BOEs of natural gas and other gas sources (e.g., propane) and require approximately 30.17 BOEs of electrical service by year 2030. Compliance with County Code requirements and the improvements discussed in the Public Services section (Section 4.13) of the Draft EIR would ensure adequate electrical natural gas and electrical service to implement the Preferred Plan, and given that no site-specific or other specific infrastructure improvements have been identified by service providers that would be necessitated by the implementation of this Plan, less than significant impacts are anticipated. Thus, the potential for impacts to electrical and natural gas resources is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

Increased Demand for Social Services

Continued growth in the unincorporated area of the County under the Preferred Plan would increase the demand for social services identified in Table 4.13.8-1 of the Draft EIR. As indicated in Table 4.13.8-1, Cal-Works and CPS would need to add additional staff members to meet any increase in demand, as these departments are currently understaffed. The only planned improvement that has the potential to result in physical impacts is the County's Public Assistance Program, which plans to add an express lane; however, this improvement would occur at the existing facility and little or no impacts on the physical environment are anticipated. Other improvements are administrative in nature and include, but are not limited to, establishing an

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Eligibility Program for the Calistoga School District, the creation of a supervisorial position for the In-Home Services Department, and the long-term state-wide effort to reform CPS over the next 5 to 10 years, including focus on prevention and an outcome-based system.

Under the Preferred Plan, between the year 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units, which would result in approximately 7,543 new residents. The Preferred Plan would provide for additional development opportunities in the community of Angwin as well as within and adjacent to the City of Napa and the establishment of an RUL for the City of American Canyon. As identified above, a limited amount of improvements is required to accommodate future growth and is not expected to result in adverse physical impacts to the environment. The potential for impact to social services is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

Increased Demand for Park and Recreational Facilities

Approximately 80 percent of the County's total population lives in incorporated cities that maintain urban park facilities, while recreation opportunities in the unincorporated area of the County consist of largely outdoor passive recreation (e.g., hiking, picnicking, mountain biking, equestrian, wildlife viewing, camping and recreation opportunities at Lake Berryessa). There are currently 5,456 acres of dedicated open space areas that are open to public access within 15 minutes of the County's cities. Growth under the Preferred Plan would increase the demand for recreation opportunities and facilities. Implementation of the Preferred Plan would increase the population by approximately 7,543 by year 2030. This increase in population would add to the demand for recreation opportunities in the County.

Implementation of mitigation measures MM 4.13.9.1a through MM 4.13.9.1c has been incorporated into the Preferred Plan to ensure an increase in trails, open space, and parks by 2030. Implementation of the above measures would ensure that recreational facilities are provided to meet demand of growth under the Preferred Plan and would result in a less than significant impact. The environmental effects of the provision of publicly accessible open space and trail expansion within the County has been programmatically evaluated in Sections 4.1 through 4.14 of this Final EIR. Thus, the potential impact to park and recreational facilities is considered **less than significant** under the Preferred Plan and all Draft EIR alternatives.

VISUAL RESOURCES/LIGHT AND GLARE

Degradation of the Quality of Visual Character Associated with Designated Scenic Resources within the County

Development projected under the Preferred Plan has the potential to result in significant impacts to designated scenic resources (ridgelines, etc.) identified in the current General Plan as well as in the Napa County Viewshed Program. New residences could be constructed on legal parcels (up to one per parcel plus a second unit), new wineries could be constructed on parcels greater than 10 acres, and new vineyards could be developed in areas that are not steeply sloped (generally in areas less than 30% slope). Areas designated for commercial or industrial use could be developed with those uses. The Preferred Plan would also include roadway improvements (associated with the proposed General Plan Update Circulation Element) and extension of recycled water to Coombsville and Carneros, as well as policy provisions for trails and public open space (proposed Recreation and Open Space Element in the General Plan Update) that could potentially impact ridgelines.

The Preferred Plan indicates that at some time, the Board of Supervisors could consider placing a measure on the ballot to re-designate approximately 220 acres in the residential neighborhood of Angwin from “Agriculture, Watershed & Open Space” to “Rural Residential.” The Preferred Plan would also include an action item calling for “a systematic effort to improve the correlation between zoning and the Urban Residential and Rural Residential land use designation shown on the Land Use Map (see **Figure 2.0-1**), with the objective of preserving agricultural uses and eliminating areas agriculturally zoned and used for agriculture from these designations.” All development activity would be subject to the applicable provisions of the Viewshed Protection Ordinance that are intended to protect the visual landscape characteristics of ridgelines and views from designated scenic corridors.

Implementation of mitigation measures MM 4.14.1a through MM 4.14.f, which have been largely incorporated as policies in the Preferred Plan, and continued implementation of Napa County Viewshed Protection Program (Chapter 18.106 of the County Code) would ensure protection of the visual landscape characteristics of ridgelines and views from designated scenic corridors. The inclusion of the development restriction on slopes greater than 15% within annexed lands to the American Canyon is not found in the Preferred Plan policies; however, the policy does indicate that the County will coordinate with the cities on land use policies within their respective spheres of influence.

The potential impact to visual character and scenic resources is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.

Daytime Glare and Nighttime Lighting

Implementation of the Preferred Plan may introduce new sources of daytime glare and may change nighttime lighting and illumination levels. Between the years 2005 and 2030, it is projected that there would be an additional 2,935 dwelling units and 11,200,000 square feet of non-residential uses in the unincorporated portion of the County. In addition to the Preferred Plan land use map, the Preferred Plan would include roadway improvements (associated with the Preferred Plan Circulation Element) that could generate street lighting and car headlights.

Implementation of mitigation measures MM 4.14.2a through MM 4.14.2d, which have been included as Preferred Plan policies, would ensure that subsequent development under the General Plan Update would include design features to avoid and minimize nighttime lighting and daytime glare impacts. The potential impact related to daytime glare and nighttime lighting is considered **significant and mitigable** under the Preferred Plan and all Draft EIR alternatives.