NEVADA COUNTY GENERAL PLAN

FINAL
ENVIRONMENTAL IMPACT REPORT

VOLUME I

Prepared for

County of Nevada

March 1995

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VOLUME II

INTRODUCTION

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RESOLUTION No. 95385

OF THE BOARD OF SUPERVISORS OF THE COUNTY OF NEVADA

A RESOLUTION OF THE NEVADA COUNTY BOARD OF SUPERVISORS DENYING THE APPEAL OF AND AFFIRMING THE NEVADA COUNTY PLANNING COMMISSION'S CERTIFICATION OF THE FINAL ENVIRONMENTAL IMPACT REPORT, AS MODIFIED, PREPARED FOR THE FINAL DRAFT NEVADA COUNTY GENERAL PLAN, MARCH 1994

WHEREAS, a Draft Environmental Impact Report (EIR) was prepared on the Final Draft Nevada County General Plan, March 1994; and

WHEREAS, the Draft EIR was duly and properly noticed and circulated among Federal, State and local agencies as well as all organizations and individuals who requested such notice in accordance with Section 15072 of the State California Environmental Quality Act (CEQA) Guidelines.

WHEREAS, all substantive comments were considered, reviewed, and responded to in the form of "Response to Comments" in the Final EIR, as amended, pursuant to Section 15132 of the State CEQA Guidelines.

WHEREAS, in light of what is reasonably feasible, the Final EIR, as amended, provides a good faith, full-disclosure effort of the environmental impacts and consequences of the proposed project, sufficient to make an intelligent decision on the project according to Section 15151 of the State CEQA Guidelines.

WHEREAS, the Nevada County Planning Commission certified that the Final EIR on the Final Draft Nevada County General Plan, March 1994, as modified, is adequate for the project, finding that the Final EIR, as modified, is complete and has been prepared in accordance with the requirements of the California Environmental Quality Act.

WHEREAS, the Final EIR, as modified, has been prepared and completed in compliance with the requirements of the California Environmental Quality Act;

WHEREAS, the Final EIR, as modified, has identified and adequately discussed all significant environmental effects in a detail appropriate to a Program EIR;

WHEREAS, the Final EIR, as modified, has adequately developed sufficient feasible mitigation measures to minimize the effects to the required degree of specificity, adequately discussing alternative measures proposed and the reason they were not selected;

WHEREAS, the Final EIR, as modified, properly evaluated the level of the environmental effects identified, with and without mitigation;

WHEREAS, the Final EIR, as modified, described an adequate range of reasonable alternatives when evaluated by the "rule of reason";

WHEREAS, the Final EIR, as modified, responded adequately to comments;

WHEREAS, the Final EIR, as modified, and these findings reflect the independent judgment of this Board; and

WHEREAS, the Final EIR, as modified, is a complete, comprehensible and adequate document.

WHEREAS, the Board made determinations and findings for each specific appellant point, as shown in Exhibit "B" of this resolution,

WHEREAS, modifications made to the Final EIR do not constitute the addition of new information requiring recirculation.

NOW, THEREFORE, BE IT RESOLVED that the Nevada County Board of Supervisors does hereby:

a. Modify, as shown in Exhibit "A", as amended, the decision of the Nevada County Planning Commission to certify as adequate the Final Environmental Impact Report prepared on the Final Draft Nevada County General Plan.

b. Deny the appeal of and affirm the Commission's certification of the Final EIR, as modified, in all other respects.

PASSED AND ADOPTED by the Board of Supervisors of the County of Nevada at a regular meeting of said Board, held on the 15th day of August, 1995, by the following vote of said Board:

Ayes: Supervisors Karen Knecht, Fran Grattan, Rene Antonson.
Noes: Sam Dardick.
Absent: None.
Abstain: None.

ATTEST;
CATHY R. THOMPSON
Clerk of the Board of Supervisors
By Cathy R. Thompson

Karen Knecht
Chairman

DATE	COPIES SENT TO
8-30-95	Planning (3)
	Atty. Ellers
	Counsel

EXHIBIT "A"

The following reflects modifications by the Nevada County Board of Supervisors to the Final Environmental Impact Report of the Final Draft Nevada County General Plan 1994, as certified by the Nevada County Planning Commission:

ISSUE: FINAL DRAFT GENERAL PLAN BUILDOUT POPULATION

Board Determination: The Draft Plan buildout population shall not exceed that number provided in Alternative #4: Environmentally Superior Alternative.
Findings: The Board determined that the Final Draft Plan's buildout population shall not exceed the number provided in Alternative #4: Environmentally Superior Alternative (150,000 persons). Specifically, the Board concurred with the Commission's decision to reduce the "New Town Reserve" to "SDA-255 DU" would reduce the buildout population by approximately 12,000 people. The Board further determined that other land use changes, or density changes in the General Plan text, would be more appropriately addressed during the General Plan adoption process because of the program nature of the FEIR to insure attainment of the 150,000 buildout population. This general density reduction will assist in reducing County-wide environmental impacts as a result of Final Draft Plan adoption to that generally consistent with Alternative #4 and will reduce numerous County-wide impacts mentioned in the appeal. Examples of reduced levels of impact as a result of this determination include traffic impacts, noise impacts, erosion, wildlife habitat reduction, and reduced demand for numerous public facilities and services.

Such changes are more effectively and appropriately made during adoption of the General Plan than during certification of the Final EIR.

IMPACT #2: OPEN SPACE LOSS

Board Determination: Add an additional mitigation measure, as follows:

> **The County shall consider forming an Open Space District to acquire and manage open space lands.**

Finding: This additional mitigation measure may assist in reducing the level of this impact, though not to a level of less-than-significant.

IMPACT #34A: INCREASED TRAFFIC SAFETY CONCERNS

Board Determination: Sustain Commission decision in certified FEIR, Volume 1, page 4.7-30. In addition, the Board determined to include policy 4.11, mandating a road development fee, as a mitigation measure.
Findings: Sustain Commission findings in certified FEIR, Volume 1, page 4.7-30, and find that the addition of policy 4.11 will ensure that funding from new development may be used for road safety improvements. The Board also reviewed and considered the County's current process and procedures for rectifying or otherwise addressing roadway safety issues and determined that these processes and procedures adequately addressed this issue and that furthermore, those processes and procedures are embodied in the General Plan Goals and Policies.

VOLUME I
FINAL
ENVIRONMENTAL IMPACT REPORT

Nevada County General Plan

SCH #94042073

Prepared for
County of Nevada

March 1995

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1. INTRODUCTION

PURPOSE

This Environmental Impact Report (EIR) addresses the potential environmental effects of: 1) buildout under the proposed Nevada County General Plan land uses and goals, objectives, policies, and implementation measures; 2) the Regional Transportation Plan (RTP); and 3) amended zoning regulations and revised zoning district maps. A full description of the General Plan as proposed is presented in the Project Description section of this document.

This EIR has been prepared for Nevada County which is the lead agency for the project. The County is responsible for certification of this EIR and approval of the proposed General Plan. The EIR evaluates the impacts of implementation of the General Plan with respect to the following issues: land use, geology and soils, hydrology and water quality, biotic resources, cultural and historic resources, traffic, air quality, noise, and public services and utilities. Public health and safety issues are discussed throughout the document in relevant topical sections. For example, fire hazards are discussed in the Fire Protection portion of the Public Services section. Visual and aesthetic resources are not evaluated in this EIR.

This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) as amended and State CEQA Guidelines. As stated in the CEQA Guidelines, an EIR is an "informational document" with the intended purpose to: "inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project." Although the EIR does not control the ultimate decision on the project, the County must consider the information in the EIR and respond to each significant effect identified in the EIR. As defined in the CEQA Guidelines, a "significant effect on the environment" is:

> ... a substantial or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

Social, economic, or beneficial impacts are therefore not considered adverse impacts under CEQA and are not considered in this EIR.

In accordance with the CEQA Guidelines, an EIR on a program action, such as the adoption and implementation of a local general plan, contains a less detailed assessment of impacts than would be provided by an EIR on a specific development project. CEQA Guidelines (Section 15146[b]) state that an EIR on the adoption or amendment of a general plan should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow. The EIR for the proposed Nevada County General Plan is intended to provide the level of analysis necessary to comply with this provision of the CEQA Guidelines.

EIR PROCESS

A Notice of Preparation (NOP) for this EIR was circulated on April 25, 1994 to state, regional, and local agencies and to several community organizations and individuals. A 30-day comment period on the NOP provided agencies the opportunity to identify issues and/or concerns that should be addressed during the preparation of the Draft EIR. Responses received during this period are contained in Appendix B. This Draft EIR will be published and circulated for review and comment by the public and other interested parties, agencies, and organizations for a 45-day period. The public review period will be from _____ to _____, 1994. A public hearing on the DEIR will be held on _____, beginning at _____ at _____. The public is invited to attend the hearing and to offer comments on the DEIR. All comments or questions about the DEIR should be addressed to:

Nevada County Planning Department
Eric Rood Administrative Building
950 Maidu Avenue
P.O. Box 6100
Nevada City, CA 95959-8617
(916) 265-1440
Attention: Pat Norman

Following the public review, a Final EIR (FEIR) will be prepared that includes responses to comments received during the public review period. The Final EIR will then be presented to the County Planning Commission and Board of Supervisors. The Board of Supervisors must ultimately certify that it has reviewed and considered the information in the EIR and that the EIR has been completed in conformity with the requirements of

CEQA. Pursuant to the policy stated in Sections 21002 and 21002.1 of CEQA, no public agency shall approve or carry out a project for which an EIR has been completed which identifies one or more significant effects thereof, unless such public agency makes one or more of the following findings:

A. Changes or alterations have been required in, or incorporated into, such project which mitigate or avoid the significant environmental effects thereof as identified in the completed environmental impact report.

B. Such changes or alterations are within the responsibility and jurisdiction of another public agency and such changes have been adopted by such other agency, or can and should be adopted by such other agency.

C. Specific economic, social or other considerations make infeasible the mitigation measures or project alternatives identified in the environmental impact report (EIR).

REPORT ORGANIZATION

Each topical section in this EIR presents information in four parts. An introductory paragraph describes the scope of the issue under consideration. The *Environmental Setting* section provides a general overview of the conditions in the County. Local, State, and federal regulations are also identified and discussed, when relevant. The Environmental Setting information contained in this document is based on Volumes 2 and 3 of the Proposed General Plan. Volume 2 consists of background data and analysis that was developed to support the preparation of the proposed General Plan. Volume 3 includes specific reports prepared during the General Plan update process, including the following documents:

- The Nevada County Master Environmental Inventory (MEI), prepared by Harland Bartholomew & Associates, Inc. (December 1991).
- Public and Private Sewerage Systems, prepared by HBA (December 1992).
- Public and Private Water Systems, prepared by HBA (December 1992).

MEI information was not updated unless specifically stated in the Introduction subsection of each topical section. Both Volume 2 and Volume 3 of the proposed General Plan are hereby incorporated by reference.

A *Relevant Plan Policies* section includes relevant policies of the proposed General Plan and RTP used in the evaluation of impacts for a particular topic. All proposed General Plan and RTP policies are contained in Appendix A of this EIR.

The *Environmental Impacts and Mitigation Measures* section provides a brief description of standards used to evaluate whether an impact is considered significant based on standards identified in the California Environmental Quality Act (CEQA) and State CEQA Guidelines. Specifically, standards of significance are derived from various sections of the CEQA Guidelines, as well as from Appendix G and Appendix I of the Guidelines. Agency policy or regulations and/or professional judgement are also used to further define what actions may cause significant effects. This section focuses on the identification and analysis of significant impacts of the proposed General Plan, as compared to existing conditions. The impacts analysis assumes that proposed policies would be implemented by the County. The level of significance for each impact is clearly identified within a statement which summarizes the nature of the impact. (See the Plan Alternatives section for environmental impacts that would occur under the existing General Plan.) Mitigation measures that would reduce significant impacts are then identified. The significance of the impact after mitigation is also identified. For impacts found to be less-than-significant, mitigation measures are not required. Mitigation measures consist of revised policies, additional policies, land use map changes, and other mitigation measures. Revisions to policies are indicated as follows: policy language that is added is <u>underlined</u> in the text and language that is deleted is ~~struck out~~.

A Mitigation Monitoring Program (MMP) will be prepared as part of the Final EIR. State law requires that a public agency adopt a monitoring program to ensure that mitigation measures that are identified in an EIR are appropriately implemented.

The following documents and maps are available for review at the Nevada County Planning Department:

- Volumes 1, 2, and 3 of the General Plan
- General Plan Land Use Maps and Zoning District Maps
- Regional Transportation Plan
- Amended Zoning Regulations

OVERVIEW OF IMPACT ANALYSES

While Nevada County, located in the Sierra Nevada foothills, has experience substantial growth in the last 10 to 15 years, the rural quality of the County persists. The rural characteristics of the County relate to: the relatively low level of development and

associated population; and the abundance of remaining open space in the County which provides for wildlife habitat, visual quality, and agriculture, mining, and timber activities.

Buildout of the proposed General Plan would more than double the existing population, employment, and housing that occurs in the County. As discussed throughout this section, this level of development would result in significant environmental impacts for various topics. The proposed General Plan relies on two primary policy concepts as a means to address the physical effects of proposed General Plan growth on the environment. These include: the development of Comprehensive Site Development Standards (policy 1.17 and other associated policies); and the voluntary use of clustering when significant environmental features or environmental constraints are present (policy 1.18 and associated policies). As discussed throughout this section, these two policies taken together would not necessarily ensure that significant environmental impacts of proposed General Plan buildout are mitigated to less-than-significant levels. Each of these policies is further discussed below.

The preparation and implementation of Comprehensive Site Development Standards (SDS), as stipulated in policy 1.17 would be prepared once the proposed General Plan is adopted. Therefore, the SDS cannot be evaluated within the confines of this EIR for their effectiveness in mitigating impacts on a site-by-site basis. Further, a program for the preparation and implementation of these SDS is not presented. Therefore, it is unknown whether or not adequate standards would be developed; how these standards would be implemented; and the types of land use, siting, and design mechanisms (including clustering) that would be employed to achieve the intent of the standards.

Additionally, policy 1.18 encourages clustering on sites where significant environmental features and/or environmental constraints are present. As clustering is only "encouraged," implementation of this policy would not necessarily mitigate significant environmental impacts that could result from site development. Policy 1.18 further stipulates that where the entire site is affected by significant environmental features, clustered development shall occur on the least sensitive habitat or resource area, thereby allowing for development in areas of significant natural features.

Based on the outcome of the environmental impacts analyses preformed in this EIR, policies 1.17 and 1.18 have been combined into one policy and revised (see revised policy 1.17 presented in Mitigation Measure #1, in the Land Use section). Revised policy 1.17 provides a program for the preparation and implementation of the SDS. This program would ensure that: effective standards are prepared; appropriate land use, siting (including clustering), and design tools are applied on a site-by-site basis; and project approval occurs in accordance with defined conditions. This revised policy would allow for development while providing for adequate mitigation of significant environmental impacts that could

occur on a site-by-site basis. While, revised policy 1.17 (Mitigation Measure #1) is presented in the Land Use subsection, it applies to most of the natural resource subsections and is therefore referred to throughout the document.

While this revised policy addresses proposed General Plan buildout on a site-by-site basis, it does not fully address significant environmental impacts that could occur as a result of overall buildout of proposed General Plan land uses at the densities identified on the land use map. This is the case for overall loss/disruption of wildlife habitat (including loss/disturbance of deer winter range) and habitat fragmentation that would occur with buildout of proposed General Plan land uses. These impacts would occur primarily in Rural Regions of the western portion of the County. Therefore, several land use map changes have been recommended (see Mitigation Measures #4 through #6 in the Biotic Resource subsection) as a means to mitigate these impacts.

2. SUMMARY OF ENVIRONMENTAL IMPACTS

GENERAL PLAN OVERVIEW

The project under consideration is the proposed General Plan update for Nevada County. The proposed General Plan would provide a basis to guide future development decision-making, via land use designations, goals, objectives, policies, and implementation measures. The proposed General Plan addresses buildout of the County, based on the proposed land use map. Buildout would occur at some unspecified time in the future, depending upon the rate at which growth proceeds.

Based on a series of central and supporting themes used to develop the proposed General Plan, the Plan divides the County into Community Regions and Rural Regions. Within Community Regions, land use designations are identified that would allow for a higher density and greater range of development than allowed in Rural Regions. Within Rural Regions, growth is limited to those types and densities of development which are consistent with the open and rural characteristics of these areas. All portions of the County not included within a Community Region are considered to be within Rural Regions.

Buildout of proposed General Plan land uses would result in approximately 81,745 dwelling units, a population of 175,760 people, and 95,445 employees. Table 2-1 provides a summary of growth that would occur as a result of buildout of the proposed General Plan.

Table 2-1
Summary of Buildout of the Proposed Nevada County General Plan

Community/Rural Regions	Dwelling Units	Population	Employment
Community Regions Total	49,759	107,530	82,653
Rural Regions Total	31,986	68,230	12,792
BUILDOUT TOTAL	81,745	175,760	95,445
EXISTING TOTAL[1]	**37,352** ~~30,758~~	78,510	30,475
NET INCREASE	**44,393** ~~50,987~~	97,250	64,970

1. Existing dwelling units, population and employment are based on 1990 U.S. Census data.

SOURCE: Nevada County General Plan, Volume 2 (Final Draft, March 1994).

In conjunction with the proposed General Plan, the proposed project under evaluation in this EIR also consists of the proposed Regional Transportation Plan, and amended zoning regulations and revised zoning district maps. A detailed description of the project is contained in the "Project Description" section of this EIR.

AREAS OF CONTROVERSY

The following areas of controversy were identified in response to the Notice of Preparation that was circulated in early 1994: 1) protection of the County's rural quality; 2) impacts associated with a proposed New Town in all undeveloped, rural portions of the County; 3) the potential buildout population of the proposed General Plan; 4) potential loss of wildlife resources; 5) traffic and road impacts; 6) maintenance of neighborhood integrity; 7) water quality impacts; 8) loss of agricultural land; 9) loss of habitat; 10) impacts to the hardwood resource; 11) impacts to deer winter and migratory areas; 12) visual impacts; 13) construction within stream environment zones; and 14) potential air quality impacts.

SUMMARY OF ALTERNATIVES

The State CEQA Guidelines (Section 15126) require that an EIR describe and evaluate alternatives to the project, or to the location of the project, which could eliminate significant adverse impacts of the project, or reduce them to a level of insignificance. The following alternatives are evaluated in the CEQA Considerations Section of this EIR.

- *Alternative 1A: No Project.* This "No Project" alternative would allow for no additional development to occur in the County.

- *Alternative 1B: Buildout Under Existing General Plan.* This "No Project" alternative would allow for development consistent with existing General Plan land use designations for the County. Buildout under this alternative would result in 91,630 dwelling units, a population of 204,750 people, and 109,928 employees in the County. This level of growth is approximately 10 to 15 percent greater than would occur under the proposed General Plan. In general, buildout under the existing General Plan would allow for a greater intensity of development in rural areas and a lesser intensity of development in more developed areas, as compared to the proposed General Plan. Additionally, growth would be more broadly distributed throughout the County under this Alternative.

- *Alternative 2: Preliminary Draft General Plan.* This alternative would result in buildout of the County under the Preliminary Draft General Plan, prepared by Harland Bartholomew & Associates (August 1993). This would result in 82,175 dwelling units, a population of 176,005 people, and 98,430 employees in the County. This level of growth is approximately 1 to 3 percent greater than would occur under the proposed General Plan.

This Preliminary Draft Plan provided for a somewhat greater level of development in Community Regions and a somewhat lesser level of development in Rural Regions than is provided for in the proposed General Plan. In Community Regions, the Preliminary Draft Plan would result in approximately 58,035 dwelling units, 127,365 population, and 85,423 employees. This represents a level of growth in Community Regions approximately 15 percent greater than provided for in the proposed General Plan.

- *Alternative 3: Planning Commission Alternative.* This alternative would result in buildout of the County under the Planning Commission Alternative, developed in late 1993 by the Nevada County Planning Commission, as their recommendation to the County Board of Supervisors. This alternative would result in approximately 84,612 dwelling units, a population of 181,916 people, and 104,224 employees in the County. This level of growth is approximately 3 percent greater, with regards to the number of dwelling units and associated population, and 9 percent greater, with regards to employment generation, than would occur under the proposed General Plan.

  This alternative was developed through the Planning Commission review and recommendation on GPD applications and other recommended land use map changes. The increased growth relates to Planning Commission recommendations on GPD applications that would result in greater density of development in various locations throughout the County. The major difference between the proposed General Plan and the Planning Commission Alternative with regards to the land use map, relates to three Special Development Areas (SDAs), recommended by the Commission. These SDAs included: Stonebrook, in the southern part of the County, adjacent to Lake of the Pines; Osceola Ridge (Deadman's Flat), in the central part of the County, westerly to the City of Grass Valley; and Northstar, located in the central part of the County. These areas taken together would result in 5,270 dwelling units, a population of 11,691, and 13,072 employees. Whereas, the proposed General Plan land use map for these areas contemplates 2,060 dwelling units, a population of 4,429, and 2,429 employees for these three areas.

- *Alternative 4: Mitigated General Plan.* This alternative constitutes the proposed General Plan as modified in accordance with mitigation measures identified throughout this EIR. This alternative assumes full implementation of all identified mitigation measures. The following description identifies the significant impacts of the project and discusses the implications of the mitigation measures proposed in terms of land use map and policy changes.

  Significant impacts that require mitigation relating to changes in the land use map, include: loss/disruption of wildlife habitat; and loss/disruption of deer range and migration corridors. Mitigation contained in this EIR indicates that the proposed General Plan land use map should be revised to provide for 20- to 40-acre minimum parcel sizes, in **some** Rural Regions of the western portion of the County,

where existing parcelization would allow for such designations (see Mitigation Measures #14 through #18). Implementation of Mitigation Measures #14 through #18 would serve to accommodate growth while minimizing loss to wildlife habitat.

Other significant impacts identified throughout the EIR could be mitigated through implementation of proposed General Plan policies as revised in Mitigation Measures #1 (policy 1.17), #2 (policy 10.13), #24 (policy 19.6), #36 (policy 9.10), and #37 (9.11). Specifically, Mitigation Measure #1 (revised policy 1.17) stipulates a program for the preparation and implementation of Comprehensive Site Development Standards, which would ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions. Implementation of this revised policy would allow for growth to occur throughout the County, while providing for adequate standards and implementation procedures to minimize impacts related to land use, geologic, hydrologic, biologic, and cultural resources on a site-by-site basis.

Implementation of both land use map changes and revised policy as identified above and recommended throughout this EIR would result in a **reduced** ~~lesser~~ level of development throughout the County, especially in Rural Regions. For example, implementation of Mitigation Measure #14 **and #16** could result in the redesignation of the New Town Reserve to 20-acre minimum parcel sizes. This change would result in the elimination of approximately 4,935 dwelling units, 11,932 people, and 10,960 employees from the buildout totals identified in Table 3-3 in the Project Description section of this EIR. Other land use map changes that could occur as a result of the implementation of Mitigation Measures #14, #18, and #39 would further decrease the level of development that would occur.

- *Environmentally Superior Alternative.* CEQA requires that an environmentally superior alternative to the proposed project be identified. In general, the environmentally superior alternative as defined by CEQA is supposed to minimize adverse impacts that could result from the project. The alternatives discussed above may be considered environmentally superior in some respects, but generally involve other trade-offs. Of the alternatives considered, the no project alternative **(Alternative 1A - No Project - No New Development)** does not create any new impacts. Therefore, it is environmentally superior to a project which proposes to change existing conditions. However, in accordance with the CEQA Guidelines, if the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

None of the alternatives presented above, including Alternative 4, the Mitigated General Plan, would reduce all significant impacts to less-than-significant levels. However, if should be noted that these significant unavoidable impacts would occur under all alternatives presented above and that under the Mitigated General Plan

(Alternative 4), the degree of impact would be less than for other alternatives. Therefore, Alternative 4 is considered to be the environmentally superior alternative.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

All impacts identified during the course of this environmental analysis on the proposed General Plan are summarized in this section. This summary groups impacts of similar ranking together, beginning with significant unavoidable impacts, followed by significant impacts that can be mitigated, followed by impacts found to be not significant. This summary should be used in conjunction with a thorough reading of the EIR. The summary is intended as an overview; the EIR serves as the basis for the summary. A summary of impacts that would occur with buildout under plan alternatives is contained at the end of this section.

Significant Unavoidable Impacts

The following impacts have been identified as significant and unavoidable. Although mitigation measures are recommended to help reduce the impacts, they cannot be reduced to a less-than-significant level.

Land Use

Impact #2. *Buildout of proposed General Plan land uses and RTP road improvements would result in the conversion of open space areas to urban/suburban uses. This is considered to be a* ***significant, unavoidable*** *impact as proposed General Plan policies would not prevent the significant conversion of existing open space to developed uses.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.1, 1.5(r), 1.14, 1.16, 1.17, 1.18, 5.1 through 5.23, and 6.1 through 6.9 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of proposed policies identified above, Mitigation Measure #1, above, Mitigation Measures #16 and #18 in the Biotic Resources Section, and Mitigation Measure #2 below would serve to further reduce the impact, but *not* to a *less-than-significant* level. Therefore, this impact is considered to be *significant and unavoidable.*

2. The following policy should be added to the Open Space Element of the proposed General Plan.

> The County shall consider forming an Open Space District to acquire and manage open space lands. Such a District would be able to

acquire open space through dedication, or voluntary purchase from willing sellers of property of easements; the use of eminent domain would not be allowed.

The District would be able to acquire land or other real property interests which could focus on lands which contain unique, valuable or sensitive resources reflecting environmental or biological sensitivity; scenic landscape units; community separators; historic, cultural, and archaeological content; and low intensity recreational potential. **The District could also serve as a mitigation bank to provide funds for the restoration and enhancement of wetlands and watersheds in coordination with mitigation for new development allowed under the General Plan.**

The County may also consider formation of an Open Space Authority under applicable State legislation to finance the acquisition of open space in the County through a transaction and use tax over a 20 year period; the Authority would enter into an agreement with the District for use of the funds generated by the tax in accordance with an expenditure plan adopted by the Authority.

Impact #3. *Buildout of proposed General Plan land uses and RTP road improvements would result in the conversion of farmland to urban- or suburban-scale uses. This is considered to be a* ***significant, unavoidable*** *impact as proposed General Plan policies do not necessarily protect farmland from conversion to urban uses.*

Development under the proposed General Plan land use map would result in the direct conversion of most of the remaining 349 acres of prime agricultural farmland in the County. **In addition, farmland that has been mapped as unique farmland, farmland of local importance, and grazing lands in ownership patterns of 40(+) acres would be converted to urban or suburban-scale uses.** As noted in the Environmental Setting section, prime farmland is located in Chicago Park, near Grass Valley and Penn Valley, north of Alta Sierra, and in other scattered locations. Most of this prime farmland acreage occurs in small pockets on lands designated for Rural 5 or denser development. As stated in the California Government Code, Section 51222, agricultural land shall be presumed to be in parcels large enough to sustain their agricultural use if the land is: (1) at least 10 acres in size in the case of prime agricultural land; or (2) at least 40 acres in size in the case of land which is not prime agricultural land. Therefore, if these prime farmland areas were subdivided as allowed under these proposed land use designations, it can be assumed that the prime agricultural land would ultimately be converted as a result of development in these areas.

Likewise, development under the proposed General Plan land use map would result in the direct conversion of other important farmlands in the County (including farmland of statewide importance, unique farmland, farmland of local importance, and grazing land).

These farmlands would be converted as a result of development under Rural 5 and denser land use designations.

Additionally, land use compatibility issues can arise when residential and related development occurs near agricultural operations, which can impact the continued viability of agriculture. Compatibility issues occur as residential development comes into areas where active agricultural activities are taking place. Exposure to dust, noise, odors, and pesticide spraying can cause residents to complain and put pressure on local officials to require modification of standard farming practices. Many farmers attempt to modify their farming practices to appease their neighbors, but the costs of such modifications can make their operations less competitive. Special practices are sometimes mandated by state or local restriction on farming operations. As discussed in *The Impacts of Farmland Conversion in California* (Department of Conservation, Office of Land Conservation, 1991) in extreme cases, farmers may cease farming altogether and sell their land to developers, which in turn increases urban pressures on remaining farmers in the area.

As discussed in the Environmental Setting section, with the occurrence of increased land values in Nevada County over the past 20 years, there has been a trend towards subdivision of large historical farmland areas, resulting in greater numbers of smaller farms. There is no reason to expect that this trend would change in the future. Land normally has greater economic value in urban/suburban use than in farm use. As development proceeds in an area, land prices increase above their value for agricultural production. Higher land prices can constitute barriers to entry into farming and to expansion of existing farms. Farmers also have an incentive to sell the land. Therefore, a trend towards higher land prices could reduce the sustainability of agriculture over the long term.

Proposed General Plan policies 16.1 and 16.4 encourage agriculture in Rural Regions and maintenance of existing agricultural zoning on lands designated as Rural on the General Plan land use map, including lands in the Residential Agriculture (RA), General Agriculture (A1), Exclusive Agriculture (AE), Forest and Recreation (FR), and Timber Production Zone (TPZ) districts. While these districts would allow for continued agricultural activities, provisions of these districts would not prohibit subdivision and development of rural residential uses. Subdivision of farmlands to Rural 5 or less would make continuation of agricultural activities difficult, if not infeasible.

Policies 16.5 through 16.9 are intended to reduce potential land use conflicts between residents and farmers, and provide for: (1) minimum 100-foot setback between new residential and important agricultural lands; (2) amendment to the Right-to-Farm Ordinance to provide for notice to buyers of land in the RA, A1, AE, and FR zoning districts describing normal agricultural practices and informing buyers of the right to continue such practices; and (3) clustering of new ~~residential~~ **residences** in accordance with policy 1.18, to reduce potential conflicts with agricultural operations. It should be noted, however, that clustering of development is only "encouraged." It is not "required" as a condition of development. Further, policy 1.17 stipulates that site development standards will be implemented to provide for transitions between uses and for buffering/screening to mitigate

adverse effects. However, as these site development standards have not yet been prepared, it is difficult to assess their effectiveness. Revised policy 1.17 (see Mitigation Measure #1, **below** ~~above~~) provides a program for the preparation and implementation of site development standards related to minimizing conflicts between agricultural land and surrounding uses. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions.

Implementation of these policies would not necessarily prevent the conversion of farmland to urban/suburban uses, nor would they affect the trend towards increasing land values in the County which could put pressure on farmers to subdivide and/or sell their land. Implementation of these policies will help to minimize potential conflicts, but will not eliminate them. As stated in *The Impacts of Farmland Conversion in California*, right-to-farm ordinances do not prevent people from complaining about farming practices. Additionally, right-to-farm ordinances do not grant farmers immunity against enforcement of health and safety laws, such as those concerning pesticide drift. However, local authorities are likely to be sensitive to such complaints, especially if complaints begin to mount.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.18, 16.1, and 16.4 through 16.9 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

The following text should be added to the end of Policy 16.17:

Parcels eligible for Williamson Act contracts shall be 5 or more acres in size.

Implementation of proposed policies identified above and Mitigation Measure #1 would serve to further reduce the impact but *not* to a *less-than-significant* level. This impact is therefore considered to be *significant and unavoidable*.

Traffic and Circulation

Impact #31. *Buildout of proposed General Plan land uses and associated population growth may result in State roadways* ***and roads within incorporated areas (not under the jurisdiction of the County)*** *operating at unacceptable levels of service, until needed roadway improvements can be funded and constructed. This is considered to be a* ***significant and unavoidable*** *impact, as proposed General Plan and RTP policies would not necessarily ensure that funding would be available to construct improvements needed to maintain acceptable LOS on State roadways.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 4.6, 4.7, 4.8, 4.9, 4.11, and 4.20, and RTP policies 3.1 through 3.12 would serve to reduce the impact to a *less-than-significant* level on local roads under the jurisdiction of the County. However, *significant, unavoidable* impacts would occur on State roads **and roads within incorporated areas** if needed roadway improvements are not funded and constructed as necessary to provide for minimally acceptable LOS.

Other Mitigation Measures

~~None available.~~ **Implementation of the proposed policies identified above along with Mitigation Measures #31A and 31B below, would serve to reduce the impact but not to a less-than-significant level.**

31A. The following new action policy should be added under Objective 3.2 of the General Plan as a new Policy 3.9(a): To ensure adequate timing of major development projects in the Martis Valley with the availability of adequate transportation facilities, the County shall conditionally restrict or otherwise prohibit development of all discretionary projects within the Martis Valley and with access to State Highway 267 until the bypass with Interstate Freeway 80 is completed.

31B. The following new text should be added to the end of Policy 1.42:

The coordinated development impact fee program shall include coordination with incorporated cities and possibly a Memorandum of Understanding between the County and cities regarding facilitation and implementation of this program.

Public Services and Utilities

Impact #42. *Buildout of proposed General Plan land uses and associated population growth will result in increased demand for surface water and groundwater supplies. This is considered to be a* ***significant, unavoidable*** *impact.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.1, 3.2, 3.4, 3.5, and 3.13 through 3.15 would serve to reduce the impact but not to a *less-than-significant* level.

Other Mitigation Measures

Mitigations Measured #16 and #39, which would reduce overall land use intensity in the Rural Regions and Community Regions, respectively, would reduce the impact. In addition, Mitigation Measure #38, below, would address impacts on groundwater supply.

38. The County shall undertake a Countywide **groundwater** ~~aquifer~~ study to assess groundwater supplies, quality, demand, and use. If the results of the evaluation indicate that overdrafting is occurring, alternate water sources should be provided. Rural development may be required to tie into a surface water supply system versus a groundwater system. **The County should work closely with Placer County and the Lahontan RWQCB to ensure that groundwater demands from the Martis Valley aquifer do not violate Public Law 101-618.**

    If the expense of rural development tying into a surface water supply system is found to be unreasonable, the County may need to consider reducing densities in certain portions of the County where this occurs.

    The recommended groundwater study should be coordinated with the recommended septic tank/leachfield study identified under Mitigation Measure No. 10 to allow costs savings for the County and to incorporate relevant data from both studies.

Impact #43. *Buildout of proposed General Plan land uses would result in increased wastewater flows which would require expansion of wastewater collection and treatment facilities. This is considered to be a* ***significant, unavoidable*** *impact.*

Buildout of proposed General Plan land uses and associated population growth will result in an increased wastewater flows and demand for wastewater treatment. Wastewater flows associated with future growth can be estimated using representative flow factors which correspond to categories of land use. In general, wastewater flows tend to be approximately two-thirds of water flows. Therefore, wastewater generation rates identified in Table 4.10-7 below were estimated at two-thirds of the water rates identified in Table 4.10-4, above.

Buildout of proposed General Plan land uses and associated population growth, as identified in Table 3-3 of the Project Description section, would result in an average daily wastewater generation of 31.4 mgd and a maximum wastewater generation of 78.9 mgd (see Table 4.10-7). This buildout wastewater generation also includes existing wastewater flows in the County. As shown in Table 4.10-8, the majority of these wastewater flows will be associated with development in Community Regions, and therefore such flows will be handled via public sewer systems, as indicated in policies 3.1 and 3.5. Approximately 87 percent of employees will work in Community Regions (71 percent in the western portion of the County) and 61 percent of the population will live in Community Regions (41 percent in the western portion of the County).

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.1 through 3.9 and 3.12 through 3.14 would serve to reduce the impact but not to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measure #39, below, would serve to further reduce the impact, and by limiting future development to that which is consistent with existing zoning, would limit the need for future expansion of existing systems. However, due to the expansion of facilities required to support even a reduced level of growth, the impact would be significant and unavoidable.

39. Revise the land use map within the unincorporated portions of the Community Regions to be consistent with existing County zoning.

Impact #46. *Buildout of proposed General Plan land uses could result in the generation of 25,769 school-aged children. Existing facilities would not have the capacity to serve these children, and this is considered to be a* ***significant, unavoidable impact****.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.12 through 3.14, 7.3, and 7.5 through 7.7 would serve to reduce the impact but not to a *less-than-significant* level.

Other Mitigation Measures

None available.

Impact #48. *Buildout of proposed General Plan land uses and associated population growth would result in an increased exposure of persons and property to wildland fire. This is considered to be a* ***significant, unavoidable*** *impact. While proposed Plan policy and State standards would serve to reduce wildland fire hazards and associated need for increased fire protection services, these would not reduce the impact to a less-than-significant level.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 10.1, 10.4, 10.5, 10.6, 10.8, and 10.9 would serve to reduce the impact but not to a *less-than-significant* level.

Other Mitigation Measures

Mitigation measures #16 (see the Biotics section of this EIR) and #1 (see the Land Use section of this EIR), which respectively would reduce densities in portions of the Rural Regions and require clustering of development **in** ~~an all~~ Rural Regions, would serve to further mitigate the effects of exposure to wildland fire hazard, but not to a *less-than-significant* level.

Significant Impacts

The following impacts have been identified as being significant which can be mitigated to a less-than-significant level with implementation of recommended mitigation measures.

Land Use

Impact #1. *Buildout of proposed General Plan land uses and RTP road improvements would result in incompatible land uses in proximity to one another. This is considered to be a* ***significant*** *impact as proposed plan policies would not necessarily minimize land use conflicts that could occur.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.20, 1.21, 17.6, 17.14, 17.15, 17.24 and Regional Transportation Plan policies 1.1 and 2.2 would serve to reduce this impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of proposed policies identified above and Mitigation Measure #1, below, would serve to reduce the impact to a *less-than-significant* level.

1. Replace proposed General Plan policies 1.17 and 1.18 in their entirety, as follows, in order to provide for: a program for preparing adequate development standards; implementing these standards via the use of appropriate land use, siting, and design tools (including mandatory clustering); and determination of project approval.

   Policy 1.17 - The County shall prepare and adopt Comprehensive Site Development Standards. These standards shall be used during the "project site review process" to provide a consistent approach for addressing: the presence of sensitive environmental features and/or natural constraints; clustering and provision of open space as part of site development; the potential for land use conflicts between uses; and the potential for public health hazards.

The County shall prepare and adopt specific Comprehensive Site Development Standards which shall be applicable to all development projects in *Community Regions* and *Rural Regions* and protective of the County's unique character, providing guidance for:

a. Protection of environmentally sensitive resources;
b. Provision of open space as part of site development;
c. Prevention and elimination of fire hazards;
d. Maintenance and enhancement of vegetation and landscaping;
e. Prevention and elimination of flood hazards;
f. Transitions between uses and multiple-use site development;
g. Community design;
h. Buffering and screening to mitigate adverse effects;
i. Incentives to provide for access to public resources and open space values; and
j. Protection of important agricultural mineral and timber resources.

The standards shall identify the basic requirements for site development in the County, including, at a minimum, standards to mitigate the impact of development on environmentally sensitive resources as defined in the following criteria:

- Wetlands (as delineated in the National Wetlands Inventory (NWI);
- Important deer habitats, as defined by Fish and Game's Migratory Deer Range Maps;
- Landmark oaks, defined as any oak 35+" at dbh;
- Landmark groves, defined as areas with 10+% canopy closure based on CDF's Hardwoods Map;
- Rare and endangered species, as found in NDDB and Inventory of Rare and Endangered Vascular Plants of California, 1994;
- Riparian corridors within 100 feet of intermittent or perennial water courses, as shown on USGS quad maps;
- Significant cultural resources, as defined by Appendix K of CEQA;
- Floodplains, as defined by FEMA, precluding development and land disturbance within floodways and restricting development within the floodway fringe, through the establishment of floodplain setbacks and associated development regulations;
- Important timberlands, as defined by Site Class 1 through 4, or a moderately high to very high site index (85+) using soils survey maps;
- Important agricultural lands, as defined by State Important Farmland map;
- Significant mineral areas, defined by State DM&G's MRZ-2 classification maps;
- Earthquake faults, as defined by State Fault Map of California, 1975, or as determined by the State DB&G;
- Avalanche hazard, as defined by Avalanche Hazard Study;
- Steep slopes (30+%);
- Areas with high erosion potential, as delineated in Figure 3.3 of the Nevada County Master Environmental Inventory;

- **Areas subject to fire hazards, as defined by the State Department of Forestry's Fire Hazard Zone Mapping;**
- **Visually important ridgelines and viewsheds, as defined by standards developed by Policy 18.3 of the General Plan.**

Where such resources are present, the standards shall require that professional field inventory and review shall be undertaken to delineate the extent of the resource and determine the impact of the proposed development. **The following siting and design measures shall be implemented as appropriate to meet the performance criteria**:

- Identification of building envelopes;
- Conservation easements/deed restrictions;
- Use of common vs. individual driveways;
- Specification of location and type of fencing;
- Identification of setbacks and/or buffers;
- Development restrictions;
- Use of Transfer of Development Rights; and
- Offsite mitigation/mitigation banking.

The County shall approve a project for a discretionary permit only if it can be demonstrated that the project as designed and sited meets the intent of the SDS performance criteria.

Policy 1.18 - Clustering of development is an effective and direct means to provide for the maintenance of the rural quality of life and protection of environmental resources which are important to Nevada County. Therefore, clustering of all land divisions shall be required within the Estate, Rural, and Forest General Plan land use designations in order to maintain the open, pastoral character of development which gives definition to the *Rural Regions*, and to protect environmental features by preserving areas containing **such features as Open Space.**

In all other residential use designations (including Residential, Urban Single-Family, Urban Medium Density, and Urban High Density), clustering of development shall be strongly encouraged to maintain viable open space onsite to contribute to open space linkages through and between land use areas. In addition, clustering in these land use designations shall be mandatory for all discretionary projects where environmentally sensitive resources, as defined in Policy 1.17, are present.

Clustering may be achieved by building site clustering with creation of permanent open space; restriction of buildable area on individual lots; or other means which are consistent with the protection of the natural resources and environmental characteristics on the site.

No specific amount or ratio of open space shall be required; however, the amount of open space shall not be less than the amount of land area on the site subject to significant environmental features, as defined in Policy 1.17. Where the entire site is affected by

significant environmental features, clustered development shall occur on the least sensitive habitat or resource area, as defined by an environmental analysis. Within such defined areas, maximum subdivision parcel size shall be limited to that needed to meet water and sewage disposal standards, as determined by the Department of Environmental Health.

Open space created through clustering shall be assured of permanent maintenance as open space by mechanisms such as, but not limited to, dedication, permanent easement, irrevocable trust, deed restrictions, or other mechanism assuring its permanent status.

The allowable number of dwelling units for any clustered development shall not exceed the number of units determined by dividing the total acreage of a parcel by the maximum permitted density specified in Policy 1.22 for the land use designation in which the parcel is located.

1A. Additional mitigation could include changes to the land use map to reduce densities to the RES designation for the Sunset, Squirrel Creek, Alta Hill, and Ridge Road areas in response to the Resolution Committee recommendations. Densities should be reduced in the Penn Valley area, the Mystic Mine Road area, the Rough and Ready area, and the Lake Vera/Round Mountain Neighborhood Association area in response to the Resolution Committee recommendations.

1B. Revise Policies 1.5j and 1.5k as follows:

Policy 1.5.j.: Highway Commercial (HC) is intended to provide for the retail service needs of both highway-related and tourist populations, including automotive and travel-related services, recreation, dining, and lodging. Development within this designation shall ~~should~~ be grouped as a contiguous center to preclude strip development, and with convenient, controlled access to Interstate, freeway or primary arterial routes.

Policy 1.5.k.: Rural Commercial (RC) is intended to provide for limited day-to-day retail and service needs for local residents, or for uses of limited scale and intensity providing goods and services to support local agricultural, natural resource or recreational operations. Such designations should have not more than 5 ~~10~~ acres in a single location, and a convenient, controlled access to an arterial or major collector roadway.

Size may be increased to not more than 10 acres where it is determined that a local market need clearly exists for this size development based upon a professionally-prepared market study, and a Design Master Plan is adopted providing for development in keeping with the rural character of the area.

1C. Policy 3.19 should be amended as follows:

Policy 3.19 ~~**Maintain the existing requirement for minimum lot sizes for single family residential uses based upon type of water and sewer facilities as follows:**~~

~~**a. Public domestic treated water and public sewage system – 10,000 square feet.**~~

~~**b. Public domestic treated water and individual sewage disposal system – 1.5 acres.**~~

~~**c. Groundwater well and public sewerage system – 1.5 acres.**~~

~~**d. Groundwater well and individual sewage disposal system – 3 acres.**~~

~~**These minimum requirements may be increased where other considerations, including adverse soil, geologic or topographic conditions may warrant larger parcel sizes.**~~

Maintain minimum lot size standards sufficient to maintain adequate area for the appropriation of water and disposal of sewage and ensure the continued protection of the public health, safety, and welfare.

Geology and Soils

Impact #6. *Buildout of proposed General Plan land uses, associated population growth, and RTP road improvements, may expose future residents and structures to seismic hazards related to ground rupture and ground shaking from a large magnitude earthquake. This is considered to be a* ***significant*** *impact as proposed plan policies would not necessarily ensure that seismic hazards are minimized.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 10.8, 10.9, 10.13, 10.16, 10.17, and 10.18 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of policies identified above, Mitigation Measure #1 (see Land Use section of this EIR), and Mitigation Measure #3, below, would serve to reduce the impact to a *less-than-significant* level.

3. Revise policy 10.13 as follows:

   As part of the project site review process, require sufficient soils and geologic investigations to identify and evaluate the various geologic and seismic hazards that may exist for all proposed development including subdivisions. Such investigations shall be required within an area determined to be seismically active by the State Division of Mines and Geology or within an area having potential geologic hazards, including slope instability and excessive erosion.

   Approve the final density of a development proposal only if it is consistent with the recommendations and/or risks identified in soils/geologic investigations, prepared in accordance with the Site Development Standards.

Impact #7. *Buildout of the proposed General Plan land uses and RTP road improvements may result in exposure of future residents and structures to landslide hazards. This is considered a* ***significant*** *impact as plan policies would not necessary protect future structures and residents from landslide hazards.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18 and 10.13 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measures #1 (see Land Use section) and #3, above, would serve to reduce the impact to a *less-than-significant* level.

Impact #8. *Buildout of proposed General Plan land uses and RTP road improvements may result in increased erosion associated with development in areas of steep slope and/or improper development practices. This is considered a* ***significant*** *impact, as the proposed General Plan policies would not necessarily include site plan and excavation procedures to reduce the impact.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18, 10.13, 12.1, 12.2, 12.4 and 13.2 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measures #1 (see Land Use section) and #3, above, would serve to reduce the impact to a *less-than-significant* level.

Impact #9. *Buildout of General Plan land uses and RTP road improvements may result in development over known deposits of valuable mineral resources. Incompatible land uses may conflict with active mining or preclude future mining. This is considered a* ***significant*** *impact as proposed Plan policies would not ensure that all mineral resources would remain accessible.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 17.4 through 17.7, 17.9, 17.15, 17.17, 17.18, 17.20, and 17.24 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

Implementation of proposed policies identified above and Mitigation Measure #4, below would serve to reduce the impact to a *less-than-significant* level.

4. Add the following policy to Chapter 17 of the proposed General Plan.

The County shall zone lands identified as MRZ-2 areas in the "ME" Mineral Extraction Combining District as a means to provide for the public awareness of the potential for surface mining to occur where it has been established that important minerals are present. The "ME" District shall be used only on those lands which are within a compatible general Plan designation and which are not residentially zoned.

Hydrology and Water Quality

Impact #11. *Buildout of proposed General Plan land uses and associated population could result in increased development in floodplains resulting in periodic damage to structures and possible loss of life if flooding occurs. This is considered to be a* ***significant*** *impact, as plan policies do not necessarily provide for avoidance of development in floodplain areas.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18, 10.14, 10.15, and 11.8 would serve to mitigate the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of the policies above, Mitigation Measure #1 (see Land Use section of this EIR), and the following mitigation measure would serve to reduce the impact to a *less-than-significant level.*

5. Add the following policies to the Water **Chapter** ~~Element~~ of the proposed General Plan.

- Approve only those grading applications and development proposals that are adequately protected from flood hazards and which do not add flood damage potential. This may include the requirement for foundation design which minimizes displacement of flood waters, as well as other mitigation measures.

- Require new utilities, critical facilities and non-essential public structures to be located outside the 100-year flood plain unless such facilities are necessary to serve existing uses, there is no other feasible location, and construction of these structures will not increase hazards to life or property within or adjacent to the flood plain ~~or coastal inundation areas.~~

- When constructed within a floodplain, require elevation of the habitable portions of residential structures to be above the 100-year flood level. Require flood-proofing or elevation of non-residential structures. Require that foundations do not cause floodwater displacement except where necessary for flood-proofing.

Impact #12. *Buildout of proposed General Plan land uses will result in increased impervious surfacing and associated stormwater runoff. This would be considered a* ***significant*** *impact if the capacity of natural drainage and/or constructed stormwater drainage systems would not have the capacity to handle increased flows.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.23, 3.8 and 10.12 would serve to reduce the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of the policies above, Mitigation Measures #6, #7, and #8, and Mitigation Measure #1 (see Land Use section of this EIR) would serve to reduce the impact to a *less-than-significant level.* **The following policies should be added to Chapter 3 (Public Facilities and Services) of the General Plan:**

6. For all discretionary development, the County shall require full onsite retention/detention of stormwater flow **(for 100-year storms)** so that the rate of runoff from the developed site is not greater than that from the site prior to development.

7. The County shall strongly encourage the formation of independent or dependent entities (Community Service Area, County Service Area, special district or equivalent entities) for the purpose of maintaining drainage facilities to handle stormwater runoff.

8. For all discretionary projects, the County shall require that maintenance of all onsite drainage facilities and all offsite facilities constructed as part of the project is assured through a permanent, legally-enforceable mechanism.

Impact #13. *Buildout of proposed General Plan land uses and RTP road improvements may result in an overall decrease in surface water quality in County streams, lakes, and reservoirs due to increases in erosion and sedimentation due to improper development practices, urban pollutants carried in stormwater, and septic system failure. This is considered a* ***significant*** *impact, as implementation of proposed plan policies will not necessarily protect surface water quality.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 11.2 through 11.7, 11.9, 12.1, 17.11, 17.12 and 17.15 would serve to reduce the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of the above policies and Mitigation Measures #1 (see the Land Use section of this EIR) and #9, below, would reduce the impact to a *less-than-significant level.* The following recommended measure is for consideration during the development of the Comprehensive Site Development Standards related to protection of water quality.

9. New development shall minimize the discharge of pollutants into surface water drainages by providing the following improvements or similar methods which provide equal or greater runoff control: (a) include curbs and gutters on arterials, collectors, and locals **roads** consistent with adopted **road standards** ~~urban street designs~~; and (b) oil, grease, and silt traps for parking lots, land divisions, or commercial and industrial development. **Maintenance of such facilities shall be assured through a legally-enforceable mechanism.**

9A. Policy No. 12.3 should be revised to read: Cooperate with and encourage the activities of the Nevada County Resource Conservation District, including provision of educational materials for the general public regarding techniques and practices to minimize erosion from construction activities.

Impact #14. *Buildout of proposed General Plan land uses and associated population may result in an overall decrease in ground water quality as a result of increased use of septic systems. This is considered a* ***significant*** *impact as proposed plan policies would not necessarily serve to minimize impact.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 11.2, 11.4, 11.5, 11.6, 3.1 and 3.5 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measures #10, #11, and #12, below, would serve to reduce the impact to a *less-than-significant* level. The following recommended measures are for consideration during development of the Comprehensive Development Standards related to groundwater quality.

10. In order to determine the potential long-term effects of the continued use of septic tank/leachfield systems on groundwater quality, a survey of existing system conditions and failures within the County should be undertaken to supplement the limited existing information. Based upon the documentation of existing failures and problems resulting from the study, this proposed survey should recommend specific courses of action to take to mitigate groundwater impacts. Such actions may include more stringent requirements for new development, using septic systems, protections of aquifer recharge areas, and new requirements regarding protection of wells. The survey should include consideration of the variables listed in Table 4.3-2. This table presents an outline of study components and variables as identified in the *Public and Private Sewerage Systems Report* (HBA, 1992), which should be considered in developing a scope for such a survey. **This study should be coordinated with the recommended groundwater study addressed under Mitigation Measure No. 38. Table 4.3-2 should be amended to include "eastern Nevada County" in the first sentence (A).**

11. ~~Prohibit installation of septic tanks or leachfields within 100 feet of all natural waterways including perennial or intermittent streams, seasonal water channels, and natural bodies of standing water. An exception may be made for the repair of existing systems if the 100 foot setback cannot be maintained, and adequate provisions are made for quality protection.~~ **Restrict septic tank and leachfields from all waterways, including perennial or intermittent streams, seasonal water channels, natural bodies of water, and 100-year floodplains consistent with the State Regional Water Quality Control Board Basin Plan Guidelines.**

12. Prohibit the location of septic systems and leachfields within the 100-year flood plain. ~~Allow the placement of fill within the 100-year flood plain in the minimum amount necessary not to exceed 50 cubic yards and only as part of a permitted development and only if it can be demonstrated that the fill will not have adverse impacts on or off site.~~ **However, for the western portion of the County, sewage systems should be set back 100 feet from the 100-year floodplain to be consistent with requirements of the Central Valley Regional Water Quality Control Board.**

Biotic Resources

Impact #15. *Buildout of proposed General Plan land uses and RTP road improvements would result in the direct loss of wildlife habitat and/or habitat fragmentation. This is considered to be a* ***significant*** *impact as proposed plan policies would not necessarily prevent this loss/fragmentation.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18, 13.1, and 13.2 would serve to reduce the impacts but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measures #1 (see the Land Use section of this EIR), and #14, #15, and #16, below, would reduce the impact to a *less-than-significant* level.

14. The following policies should be added to the Wildlife and Vegetation Element of the proposed General Plan.

- No net loss of habitat functions or values shall be caused by development where significant environmental features or significant habitat, as defined in Policy 1.18, are identified during the review of proposed projects. No net loss shall be achieved through avoidance of the resource, or through creation or restoration of habitat of superior or comparable quality, in accordance with guidelines of the U.S. Fish and Wildlife Service and the California Department of Fish and Game.

- Habitat that is required to be protected, restored, or created as mitigation for a project's impacts shall be monitored and maintained in accord with a County-approved Habitat Management Plan.

- The land use designations and associated acreages identified on the proposed General Plan land use maps for Special Development Areas should be modified as necessary at the Specific Plan stage to protect sensitive natural communities and other important biotic resources.

- The County shall prepare and implement a Habitat Management Plan for the western **and eastern** portions of the County. This plan shall include ~~result in~~ a descriptive and mapped inventory of habitat types and associated characteristic plant and wildlife species. This plan shall also describe special status species known to occur within the County or typically associated with habitats found in the County. This information shall be used as the basis for developing and adopting a program for the management of habitat and associated species in the western portion of the County. This program shall include but not be limited

to recommendations related to site development standards, habitat protection/restoration programs, and General Plan land use map changes. General Plan land use map changes could include the identification of favorable sites for future ecological reserves. The County should redesignate the ecological reserve areas as Open Space/Resource Conservation on the land use map. Identified areas suitable as reserves could serve as the possible "mitigation banking" sites where future development projects could contribute to the purchase and maintenance of selected reserves through contribution to a conservation impact fee.

- The County shall investigate establishing interagency agreements with adjoining counties where new developments could impact significant natural resource areas shared by adjoining counties. The agreements shall require notification of development projects within one mile of the County's borders and provide for review and comment by affected counties.

15. Revise proposed General Plan policy 13.3 as follows:

As part of the Comprehensive Site Development Standards, require ~~at least~~ the maximum feasible use of drought tolerant native ~~and/or site appropriate~~ plant species for landscaping of all new multi-family residential, commercial, ~~and~~ industrial, and public projects. Invasive, non-native plants that may displace native vegetation on adjoining undeveloped lands shall not be used. Landscaping with native trees and shrubs shall be encouraged to provide suitable habitat for native wildlife, particularly in proposed open space uses of future development.

16. Revise proposed General Plan Land Use Maps to redesignate lots of less than 20 acres to provide for designations with a minimum parcel size of 20 acres or larger in Rural Regions (outside of Rural Centers) within the western portion of the County, except as indicated in Mitigation Measure #10 below. This redesignation would primarily affect lots in the San Juan Ridge, around the Penn Valley area, and in the southwestern portion of the County. This redesignation would also result in the elimination of the New Town SDA in the southwestern portion of the County.

An impact associated with the elimination of the New Town SDA would be an associated removal of potential affordable housing. Thus, this mitigation measure could affect the County's ability to have a desirable jobs/housing balance and to meet goals for affordable housing.

16A. Revise Policy 1.5.r as follows:

Policy 1.5.r.: Open Space (OS) is intended to provide for land, primarily in public ownership, which is dedicated to recreation, resource and habitat preservation, and protection of environmental resources, and which typically allows only recreation or very low-intensity limited uses, such as, but not

limited to, visual corridor preservation, interconnecting wildlife corridors, slope protection, preservation of ditches, railroad rights-of-way, and historic trails. This designation shall also provide for the designation of land in private ownership which is permanently devoted to open space through clustering or other open space requirements.

Impact #16. *Buildout of the General Plan would result in the loss or disturbance of habitat used by deer for movement, as winter and summer range, and for fawning. This is considered to be a* ***significant*** *impact, as proposed General Plan policies would not necessarily protect habitat used by deer.*

Plan Policies that Serve as Mitigation

Implementation of policies 1.17, 1.18, 13.1, and 13.2, of the proposed General Plan would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measures #1 (see the Land Use section), #16 above, and #17 **and #18**, below, would reduce the impact to a *less-than-significant* level.

17. The following policy should be added to the Wildlife and Vegetation Element of the proposed General Plan.

    Non-development buffers shall be maintained adjacent to stream corridors through the use of clustering, the designation of a Planned Development, or the implementation of other siting and design tools. Buffers shall be sufficient in size to protect the stream corridor for movement, as well as provide some adjacent upland habitat for foraging.

18. Revise General Plan land use map to provide for a 40-acre minimum parcel size in critical migratory deer winter ranges in Rural Regions within the western portion of the County (see Figure 4.4-4).

Impact #17. *Buildout of proposed General Plan land uses and RTP road improvements would result in the loss or degradation of oak trees in the western portion of the County. This is considered to be a* ***significant*** *impact, as proposed plan policies would not necessarily serve to minimize this loss.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18, 13.1, 13.2, and 13.8 would serve to reduce impacts but *not* to a *less-than-significant* level.

Other Mitigations

Implementation of the proposed policies above and Mitigation Measure #1 (see the Land Use section of this EIR) and #19, below, would reduce the impact to a *less-than significant* level.

19. The following policy should be added to the Wildlife and Vegetation Element of the proposed General Plan.

> Development in the vicinity of significant oak groves **of all oak species** shall be designed and sited to maximize the long-term preservation of the trees and the integrity of their natural setting. **The County should adopt a Tree Protection Ordinance specifically geared towards the protection of oaks.**

Impact #18. *Buildout of proposed General Plan land uses and RTP road improvements may result in the elimination, interruption or disturbance of special status species or their habitat as a result of development and associated loss or degradation of habitat. This is considered to be a* ***significant*** *impact, as proposed plan policies would not necessarily minimize impacts to such species.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18, 13.1, and 13.2 and RTP policy 2.2 would serve to reduce impacts but *not* to a *less-than-significant* level.

Other Mitigations

Implementation of proposed policies above, Mitigation Measures #1 (see the Land Use section of this EIR), #14, #16 above, and #20 below, would reduce the impact to a *less-than significant* level.

20. The following policies should be added to the Wildlife and Vegetation Element of the proposed General Plan.

> Project review standards shall include a requirement to conduct a site-specific biological inventory to determine the presence of special status species or habitat for such species that may be affected by a proposed project. The results of the biological inventory shall be used as the basis for establishing land use siting and design tools required to achieve the objective of no net loss of habitat function or value for special status species
>
> The Habitat Management Plan shall be prepared to comply with the requirements of the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA). The plan shall provide the background data, impact analysis, and mitigation programs necessary to obtain a FESA Section 10(a) and CESA

Section 2081 permit authorizing incidental take of federal and state listed threatened and endangered species that occur in areas proposed for future development. Prior to implementation of an adopted Habitat Management Plan, project applicants proposing the development of a project that would impact a federal or state listed species, or a species that is proposed for listing, shall be individually responsible for obtaining federal and state incidental take permits on a project-by-project basis.

Impact #19. *Buildout of proposed General Plan land uses and RTP road improvements may result in the loss of wetlands due to filling as a result of development, interruption of drainage to wetlands, and/or degradation of wetland water quality associated with increased urban runoff and sedimentation. This is considered to be a* ***significant*** *impact.*

Plan Policies that Serve as Mitigation

Implementation of existing state and federal regulations and policies, the local zoning ordinance, and proposed plan policies 1.17, 1.18, 13.1, and 13.2 of the proposed General Plan and RTP policy 2.2 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measure #1 (see the Land Use section of this EIR), and #21 and #22 below would serve to reduce the impact to a *less-than-significant* level.

21. The following policies should be added to the Wildlife and Vegetation Element of the proposed General Plan.

- No net loss of riparian or wetland habitat functions or values shall be caused by development.
- Development projects which have the potential to remove riparian or wetland habitat shall not be permitted unless:

  (a) No suitable alternative site or design exists for the land use;

  (b) There is no degradation of the habitat or reduction in the numbers of any rare, threatened, or endangered plant or animal species as a result of the project;

  (c) Habitat of superior quantity and superior or comparable quality will be created or restored to compensate for the loss; and

  (d) The project conforms with regulations and guidelines of the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, California Department of Fish and Game, and other relevant agencies.

- Future development shall be set back a minimum of 100-feet from all significant wetlands.

Impact #20. *Buildout of proposed General Plan land uses and RTP road improvements may result in the loss or degradation of riparian habitats as a result of adjacent development and/or activities such as agricultural and timber production/harvesting, mineral extraction, etc. Fisheries could be impacted by the loss or degradation of riparian habitats. This is considered to be a* ***significant*** *impact as proposed plan policies would not necessarily minimize impacts.*

Plan Policies that Serve as Mitigation

Implementation of policies 1.17, 1.18, 13.1, and 13.2 of the proposed General Plan and RTP policy 2.2 would serve to reduce the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of Mitigation Measure #1 (see Land Use section of this EIR), #14, #17, above, and #22 below would reduce the impact to a *less-than-significant* level.

22. The following policy should be added to the Wildlife and Vegetation Element of the proposed General Plan.

- Setback future development a minimum of 100-feet from top of bank, or the width of riparian vegetation if greater, from all **intermittent and perennial creeks, streams and rivers** ~~water bodies~~.

22A. Revise Policy 5.20 of the General Plan as follows:

Policy 5.20: Recognize and protect the South Yuba River canyon as an important resource in terms of recreation, tourism, aesthetics, water resource, mineral resource, water quality, and wildlife habitat through the following actions:

a. Designate publicly-owned lands physically adjoining the river as open space in the General Plan land use maps.

b. Encourage the recreation master planning and development activities by the State Department of Parks and Recreation.

c. Encourage the protection of the South Yuba River from dams.

Cultural Resources

Impact #22. *Buildout of proposed General Plan land uses and construction of RTP road improvements may result in disturbance to known or undiscovered cultural resource sites related to development as well as increased vandalism. This is considered to be a* ***significant*** *impact, as implementation of proposed plan policies would not necessarily result in the identification and protection of cultural resources.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies, 4.39 and 19.1 through 19.7 would serve to reduce the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of the policies identified above, and Mitigation Measures # 1 (see the Land Use section of this EIR), #23, and #27, below, would serve to reduce the impact to a *less-than-significant* level.

23. Revise Cultural and Historic Resource Element policy 19.6 as follows:

....Where review indicates significant archaeological or historical sites or artifacts are, or are likely, present, an on-site field review ~~by a registered archaeologist~~ shall be required. If a site or artifacts are discovered, the find shall be evaluated and potential significance determined. If significant cultural resources may be directly or indirectly impacted by proposed development, appropriate mitigation shall be developed and implemented in accordance with California Environmental Quality Act standards, including Appendix K, prior to onset of ground disturbance. Avoidance of significant cultural resources shall be considered the mitigation priority. Excavation of such resources shall be considered only as a last resort when sufficient planning flexibility does not permit avoidance. On-site field review, evaluation of site significance, and development of mitigation measures, as identified above, shall be performed by a qualified professional archaeologist.

24. Site development standards for cultural and historic resources, as stipulated in revised policy 1.17 (see Mitigation Measure #1) and policy 19.5, shall be developed in accordance with revised policy 19.6 (see Mitigation Measure #23), above, and shall incorporate the use of the Cultural Sensitivity Modelling contained in Appendix D.

24A. Revise Cultural and Historic Resource Element Policy 19.1 as follows:

Policy 19.1 Enact a Cultural Resources Ordinance to ensure effective preservation, protection, and management of cultural resources. Such an ordinance might include the identification and preservation of historical,

cultural, and architecturally significant sites and resources within Nevada County. The establishment of a county listing of significant cultural resources may be part of a Cultural Resources Ordinance. The identified cultural resources could be evaluated as to their potential significance in relation to the criteria used for both the National Register of Historic Places and the California Register of Historic Places. These four criteria for evaluation are the same for both registers. The resource must either be:

A. associated with events that made a significant contribution to local, state, or national history;

B. associated with the lives of persons significant in our past (local, state, or national);

C. embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose component may lack individual distinction; or

D. yields, or may be likely to yield information important in prehistory or history.

In addition, the identified cultural resource must be evaluated as to its integrity of location, design, setting, materials, workmanship, feeling, and association. All of these same criteria may be used to designate significant resources for a local, county-wide listing of significant sites and/or resources.

The Cultural Resources Ordinance could also specify the mitigation procedures to be followed once a resource has been identified and determined to be significant. The preferred measure would be avoidance and/or protection of a site by project redesign or fencing, etc. If the resource is or will be impacted, a professional archaeologist/historian/architectural historian should be contacted to set up a research design to deal with the resource.

Visual Quality

Impact #24. *Buildout of proposed General Plan land uses may impact the significant stands of oak trees in the western portion of the County. This is considered to be a* ***significant*** *impact, as plan policies do not necessarily provide for avoidance of development in areas of oak woodlands.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18, 10.14, 10.15, and 11.8 would serve to mitigate the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of the proposed policies identified above along with Mitigation Measure #1 (see Land Use section of this EIR), **Mitigation Measure #19 (see Biotic Resources section of this EIR),** and Mitigation Measure #25 below, would serve to reduce the impact to a *less-than-significant* level.

25. The County shall adopt a regulation to protect heritage trees, native oak trees, and significant oak groves. All native tree species with a trunk diameter of 36 inches or greater should be protected.

Impact #25. *Buildout of proposed General Plan land uses in close proximity to the County's river corridors could adversely affect the scenic value of the waterways, especially if vegetation adjoining the waterways were removed for new development. This would be considered a* ***significant*** *impact as plan policies do not necessarily provide for projection of visual quality along river corridors.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.23, 3.8 and 10.12 would serve to reduce the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of the policies above, and Mitigation Measures # 1 (see Land Use section of this EIR) #21, ~~and~~ #22 (see Biotic Resources section of this EIR), **and #25B** would serve to reduce the impact to a *less-than-significant level.*

25B. The following new policy should be added under Objective 18.2 of the General Plan:

To provide for scenic stream corridor protection along designated streams, the County shall prepare standards and procedures whereby local groups, associations, or similar organizations can apply for designation of a segment of any stream as a local scenic stream corridor. If approved, a Scenic Stream Corridor Plan shall be prepared.

Impact #26. *Buildout of proposed General Plan land uses and RTP road improvements within the viewshed of designated scenic routes could diminish the aesthetic value of the roadside scenery. This is considered a* ***significant*** *impact, as implementation of proposed plan policies will not necessarily protect visual quality.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 18.3, 18.4, 18.5, 18.6, 18.7, 18.8, and 18.9 would serve to reduce the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of the proposed policies identified above along with Mitigation Measures #26 and #27 below, would serve to reduce the impact to a *less-than-significant* level.

26. The County should designate scenic corridors along the following routes: Interstate 80 and Highways 49, 89, 174, and 267 for their entire length in the County; **all of** Highway 20 ~~from Highway 49 to Interstate 80~~; Donner Pass Road (Old Highway 40), from the Interstate 80 intersection at Soda Springs to Donner State Memorial Park. These corridors should be placed within the SC "Scenic Corridor" Combining District, with boundaries based upon adopted studies.

27. The following policies shall be added to the Aesthetics chapter of the General Plan:

The County shall ~~request that the State Department of Transportation~~ prepare Scenic Highway Reports for all those highways in the County as shown on the State Scenic Highways Master Plan for which such reports have not been prepared. The County shall **prepare** ~~request the preparation of~~ such reports within one year of the adoption of the General Plan, and shall implement these studies by zoning **and other applicable regulations** ~~specified areas~~ along such routes within the SC "Scenic Corridor" Combining District within **two** ~~five~~ years of the **approval of the Scenic Highway Resolution Package by the Caltrans Departmental Transportation Advisory Committee** ~~acceptance of a report.~~

In addition to the designation of visual corridors within the SC "Scenic Corridor" Combining District zoning, mandatory clustering shall be required for all residential development along designated visual corridors.

27A. The following changes should be made to Policy 18.9 of the General Plan:

Policy 18.9 To encourage a system of scenic County roads, the County shall prepare ~~adopt~~ standards and procedures whereby local groups, associations, or similar organizations can apply for designation of County roadways. If approved, a County Scenic Corridor Plan shall be prepared. ~~for protection of scenic corridors and shall prepare a Scenic Corridor Plan which may include, but not be limited to, State Scenic Highways.~~

Impact #27. *Buildout of proposed General Plan land uses within the Community Commercial, Highway Commercial, Business Park, Industrial, and Recreation designations could result in buildings as tall as 60 feet. Depending on their location, such buildings*

could create a dominant visual feature, contrasting significantly with adjoining agricultural lands and limiting the view of motorists. ***This is considered a significant impact, as implementation of proposed plan policies will not necessarily prevent such visual contrast.***

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 18.1 and 18.2 would serve to reduce the impact, but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of the proposed policies identified above along with Mitigation Measure #28 below, would serve to reduce the impact to a *less-than-significant* level.

28. The maximum allowable height limit for Community Commercial, Highway Commercial, Business Park, Industrial and Recreation designations should be 45 feet. Discretionary permits could be required for special uses that would need to exceed the allowable height.

Impact #29. *Buildout of General Plan land uses could result in a linear "sprawl" along the major transportation routes linking the communities.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 18.1 and 18.2 would serve to reduce this impact, but *not* to a *less-than significant* level.

Other Mitigation Measures

Implementation of the proposed policies above along with Mitigation Measure #29 below, would serve to reduce the impact to a *less-than-significant* level.

29. The following policy shall be added to the Aesthetics chapter of the proposed General Plan:

    The County shall promote a compact development pattern to protect open space buffers between communities and to maintain a geographic distinction between communities.

Traffic and Circulation

Impact #33. *Buildout of proposed General Plan land uses and associated population and employment growth will increase the demand for bicycle,* ~~*and*~~ *pedestrian* ***and equestrian*** *facilities. This is considered to be a* ***less-than-significant*** *impact as the proposed General Plan has policies that would provide for facilities to meet this demand.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 4.27, 4.28, and 4.32 through 4.36 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of the proposed policies identified above along with Mitigation Measure #32 below, would serve to reduce the impact to a *less-than-significant* level.

32. Replace General Plan Policy 4.33 in its entirety to provide for inclusion of bicycle and pedestrian facilities as follows:

The County shall impose comprehensive development fees in amounts sufficient to offset the costs identified as the appropriate share of the bicycle and pedestrian improvements under the approved Bicycle and Pedestrian Master Plans **and Non-Motorized Multi-Purpose Trails Master Plan** which are necessary to serve future development. The comprehensive development fee structure shall ensure that future growth fully mitigates its direct and cumulative impacts on the County.

and revise Policy 4.27 and 4.28 as follows; by adding

4.27 New development adjacent to or including any designated **bicycle** ~~pedestrian~~ facility shall be coordinated with provision of such facility under Policy 4.33.

4.28 New development adjacent to or including any designated pedestrian facility shall be coordinated with provision of such facility under Policy 4.33.

Impact #34B. If residential development in the County outpaces job-generating development (or vice versa), an imbalance in the jobs/housing ratio may result in either out-commuting or in-commuting and associated traffic, air quality and noise-related impacts. This impact would be less-than-significant with the adoption of existing policies and other recommended mitigation measures.

Policies That Serve as Mitigation

Policies 2.5, 2.6, and 4.30 would serve to partially mitigate the above impact.

Other Mitigation Measures

The following policy should be added to the Circulation section of the General Plan:

4.30(c). Approval of future residential building permits should be tied to job growth within the County. The County should monitor both residential building permits and job generation within the County to ensure that a job/housing balance is maintained. Should an imbalance occur, the County should adopt an ordinance restricting either residential building permits or job-generating building permits (depending on the type of imbalance) until a specified balance is achieved.

Noise

Impact #38. *Buildout of General Plan land uses and RTP road improvements would result in increases in noise levels along roadways. This is considered to be a* ***significant*** *impact as proposed General Plan policies would not necessarily ensure that siting of plan-related land uses would not result in conflicts with noise regulations.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 9.1, 9.4, 9.5, 9.8, 9.10 through 9.13, and 9.15, and Regional Transportation Plan policies 1.1 and 2.2 would serve to reduce the impact of future land uses and roadway improvements but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of policies above, and Mitigation Measures #1 (see the Land Use section of this EIR), and #36 and #37, below, would serve to reduce the impact to a *less-than-significant* level.

36. Revise Noise Element policy 9.10 as follows:

Require the preparation of a comprehensive noise study for all land use projects determined to have ~~to~~ a potential to create noise levels inconsistent with those standards found in Policy 9.1, and in accordance with the methodology identified in the Noise Element Manual contained in General Plan Volume 2, Section 3-Noise Analysis, Appendix A.

37. Revise Noise Element policy 9.11 as follows:

Provide for adequate design controls to ~~assist in minimizing~~ fully mitigate the significant adverse impacts of future noise generating land uses through increased setbacks, landscaping, earthen berms, and solid fencing.

Impact #39. *Buildout of proposed General Plan land uses may expose noise-sensitive land uses to unacceptable industrial and other fixed noise sources. This is considered to be a* ***significant*** *impact as proposed General Plan policies would not necessarily ensure that siting of plan-related land uses would not result in conflicts with noise regulations.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.20, 1.21, 9.1, 9.4, 9.7 through 9.12, 17.6, 17.14, 17.17, and 17.24 would serve to reduce impacts but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of policies above, and Mitigation Measures #1 (see Land Use section of this EIR) and Mitigation Measures #36 and #37, above, would serve to reduce the impact to a *less-than-significant* level.

Impact: #41. *Buildout of General Plan land uses may expose noise-sensitive land uses to unacceptable railroad noise. This is considered to be a* ***significant*** *impact as proposed General Plan policies would not necessarily ensure that siting of plan-related land uses would not result in conflicts with noise regulations.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 9.1, 9.4, 9.8 and 9.12 would serve to reduce impacts to a *less-than-significant* level.

Other Mitigation Measures

Implementation of policies above, and Mitigation Measures #1 (see Land Use section of this EIR) and Mitigation Measures #36 and #37, above, would serve to reduce the impact to a *less-than-significant* level.

Public Services and Utilities

Impact #49. *Buildout of proposed General Plan land uses and associated population increase would result in an increase in demand for law enforcement services in Nevada County. This is considered to be a* ~~***less-than-significant***~~ *impact, as proposed General Plan policies would* ***not necessarily*** *provide for needed facilities and equipment to serve new growth.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.1, 3.6, 3.7, 3.8, 3.10, 10.10, 10.11, and 10.20 **as well as Mitigation Measure 40A below** would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

~~None warranted.~~

40A. Policy 3.10 should be amended to include the following standard for law enforcement service levels: County Sheriff - e. For Community and Rural Regions: 1.5 officers for increase of 1,000 persons in countywide population.

Impact #52. *Assuming that each new residence would require about 6,150 kilowatt hours (kwh) of electricity per year (California Energy Commission, 1988), new residences would require about 314 million kwh per year (for 51,000 new residences). In addition, 24 million therms of natural gas for space and water heating per year would be required, assuming an average of 470 therms per unit per year. This impact would be a potentially significant impact. Implementation of proposed General Plan policies would serve to potentially mitigate the impact.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.2, 1.9, 1.15, 1.18, 1.25, and 1.26 would serve to reduce this impact to a less-than-significant level.

Other Mitigation Measures

The following Mitigation Measures (#40, #41 and #42) would further reduce the impact of future development on energy demand.

40. The County should adopt a Solar Access ordinance requiring the dedication of easements for solar access as a condition of subdivision map approval (as allowed by the 1978 Solar Rights Act of California).

41. The County should adopt a Retrofit Ordinance requiring specific energy conservation measures such as attic insulation before resale of residential units, which would have the greatest effect on older units.

42. During project approval and review, the County should evaluate and critique a project's attempt to promote alternative energy sources (e.g. passive solar design) and the incorporation of adequate tree cover on the west side of dwellings and along streets to help reduce the cooling demand during summer months.

43. Revise Policy 8.21 of the General Plan as follows:

Policy 8.21 Review all existing and future building codes to ensure the maintenance of those standards that reasonably provide for the public health, welfare, safety, and energy efficiency, and to eliminate those standards that do not accomplish said goals.

The County should develop prescriptive building standards that supplement existing building codes for such items as alternative energy systems, building materials, and alternative sewage systems.

Impacts Not Found to be Significant

The EIR identified the following impacts, which are considered to be less-than-significant impacts on the environment. Mitigation measures are not required.

Land Use

Impact #4. *Buildout of proposed General Plan land uses could result in conflicts with environmental plans and goals identified in the Nevada City and Grass Valley General Plans. This is considered to be a* ***less-than-significant*** *impact as proposed plan policies would minimize conflicts.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.38 through 1.40 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #5. *Buildout of proposed General Plan land uses could result in conflicts with airport master plans related to potential public safety concerns. This is considered to be a* ***less-than-significant*** *impact as proposed plan policies would minimize conflicts.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policy 10.7 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Hydrology and Water Quality

Impact #10. *Buildout of the General Plan may expose future residents and structures to flood hazards related to dam failure and earthquake-related seiches. This is considered to be a* ***less-than-significant*** *impact as existing regulations, local plans, and proposed plan policies would minimize the hazards.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 10.8, 10.9, 10.13, and 10.17 would reduce this impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Biotic Resources

Impact #21. *Buildout of proposed General Plan land uses and RTP road improvements may result in the loss or degradation of timberlands. This is considered to be a* ***less-than-significant*** *impact as proposed General Plan policies would serve to minimize the loss.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 15.1, 15.3, 15.5, and 15.6 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigations

None warranted.

Visual Quality

Impact #23. *Buildout of the General Plan may result in scattered rural development on hillsides and ridgelines which could result in degradation of the aesthetic quality of views. This is considered to be a* ***less-than-significant*** *impact as existing regulations and proposed plan policies would minimize this impact.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 18.3, 18.6, 18.7, 18.8, 1.17, and 1.18 would reduce this impact to a *less-than-significant level.*

Other Mitigation Measures

~~None warranted.~~

25A. The following revisions should be made to Policy 18.2 of the General Plan:

Policy 18.2 The County may adopt Specific Design Guidelines for areas within *Community Regions*, *Rural Places, and Rural Centers* to provide for the maintenance of community identity, scenic resources and historic sites and areas. The Specific Design Guidelines may include, but not be limited to, standards which:...

Impact #28. *Buildout of proposed General Plan land uses* ***and RTP improvements*** *could generate light and glare that would be visible from major roads and from residences. Light and glare could be created throughout the areas proposed for development by lighting of* ***roads,*** *parking lots, playing fields, industrial/business park areas, interior building lighting, and the use of exterior building materials that could be reflective.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 18.10 and 18.11 would serve to reduce this impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Traffic and Circulation

Impact #30. *Buildout of proposed General Plan land uses and associated population growth will result in a net increase of approximately 887,400 daily trips in the County which would contribute to roadways currently operating at unacceptable levels of service and/or would cause operation of some* ***County*** *roadways to drop to unacceptable levels. This is considered to be a* ***less-than-significant*** *impact, as RTP improvements and proposed General Plan policies would ensure that* ***County*** ~~*area*~~ *roadways continue to operate at acceptable levels of service.*

Plan Policies that Serve as Mitigation

Implementation of proposed RTP road improvements and General Plan policies 4.1, 4.3, 4.5, 4.6, 4.17, 4.26 through 4.36 would serve to reduce the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Reduction of the intensity of use in the Northstar area to levels allowed under existing zoning (which are consistent with the 1980 Nevada County General Plan) along with the reduction in intensity of use to levels allowed in the Penn Valley and New Town areas under Mitigation Measure #16 (see the Biotics section of this EIR) and #39 (see the Public Services and Utilities section of this EIR) would result in reduction of the traffic volumes at the SR 20/SR 49 interchange, allowing the minimum acceptable LOS to be achieved. Also, these reductions in intensity of use would be likely to similarly reduce the volume of traffic on surface streets in the vicinity, as indicated by the reduction in volumes on McCourtney Road from as high as 11,000 ADT under the proposed General Plan to 6,500 ADT with the reduced land use intensities based upon the existing zoning. Additionally, the following Mitigation Measure #31 would address the impacts of development on the future LOS for Alta Sierra Drive.

31. Amend the circulation chapter of the proposed General Plan to include the improvement of East Lime Kiln Road as a 2-lane minor collector from SR 49 to Shana Drive.

Impact #32. *Buildout of proposed RTP improvements and other improvements that could result from implementation of proposed General Plan and/or RTP policy will have physical impacts on the environment and surrounding land uses. This is considered to be a* ***less-than-significant*** *impact as proposed plan policies would ensure that such impacts are fully mitigated.*

Plan Policies that Serve as Mitigation

Implementation of proposed RTP policies 1.1 and 2.2 and proposed General Plan policy 4.37, as well as other policies as identified throughout this EIR would serve to reduce the impacts to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #34. *Buildout of proposed General Plan land uses and associated population and employment growth will increase the demand for transit services and facilities. This is considered to be a* ***less-than-significant*** *impact as the proposed General Plan has policies that would provide for adequate facilities to meet this demand.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 4.17, 4.29, 4.31, and 14.7 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #34A. Increased traffic from growth associated with the General Plan could result in safety concerns, especially on narrow rural roads where sight distance may be limited and winter conditions such as ice and snow may affect travel safety. This is considered to be a less-than-significant impact, as RTP and General Plan policies would ensure that roadways operate safely.

Many of the roads in the County are winding roads that cross varied terrain. Sight distance can be limited which can create unsafe conditions, especially when numerous driveways access principal and minor arterials where the average speeds are significantly higher than on collectors and local streets. Such unsafe conditions can be exacerbated in the winter months due to snow and ice.

Plan Policies that Serve as Mitigation

Policy 1.2 of the Regional Transportation Plan and Policies 4.2, 4.5, 4.6, 4.7, 4.19, 4.25 would serve to reduce the impact to a less-than-significant level.

Other Mitigation Measures

None warranted.

Air Quality

Impact #35. *Buildout of proposed General Plan land uses and associated population growth may expose future residents and structures to severe weather conditions or weather hazards if development would be located in areas with such hazards. This is considered to be a* ***less-than-significant*** *impact, as proposed plan policies would minimize these hazards.*

Plan Policies that Serve as Mitigation Measures

Implementation of proposed General Plan policies 4.23, 4.24, 10.7 through 10.9 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #36. *Buildout of proposed General Plan land uses and associated population growth will incrementally increase air emissions from mobile sources. This is considered to be a* ***less-than-significant*** *impact as ~~air quality in the region will be improving over~~*

~~*time. Additionally,*~~ *proposed plan policies would* ~~*further*~~ *ensure that air emissions from future County growth are minimized.*

Plan Policies that Serve as Mitigation

Implementation of the proposed General Plan policies 4.17, 4.26 through 4.36, 14.1, and 14.5 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #37. *Buildout of proposed General Plan land uses and associated population growth will incrementally increase PM-10 emissions associated with woodsmoke and other sources of suspended particulates. This is considered to be a* ***less-than-significant*** *impact as proposed plan policies would ensure that PM-10 emissions from future County growth are minimized.*

Plan Policies that Serve as Mitigation

Implementation of the proposed General Plan policies 14.2, 14.4, and 14.6 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

The following mitigation measures (#33, #34, and #35) would serve to further reduce the impact of development on air quality.

#33 The County shall, as part of its development review process, ensure that proposed discretionary developments address the requirements of NSAQMD Rule 226.

#34 The County shall, as part of its Road Improvement Program, consider the benefits to air quality from the paving of unpaved roads.

#35 The County shall revise proposed General Plan Policy 14.4 to include all types of biomassing options (e.g., composting, mulching, grinding, cogeneration, feedstocks, etc., in addition to clipping).

Noise

Impact #40. *Buildout of General Plan land uses may expose future land uses to aircraft noise. This is considered to be a* ***less-than-significant*** *impact as proposed General Plan policies would ensure that siting of plan-related land uses would not result in conflicts with noise regulations.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 9.1, 9.17, 9.18, and 9.19 would serve to reduce impacts to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Public Services and Utilities

Impact #43A. Meeting the increased water demands for residential and non-residential uses may be a priority for water purveyors if water supplies are limited. Consequently, water supplies for agricultural irrigation (both hobby and commercial agriculture) may be restricted or may increase in cost which would affect such operations. This impact is considered to be a less-than-significant impact due to policies contained in the General Plan.

As demands for treated water increase, water purveyors could be required to establish priorities if water supplies are limited, either from surface water or groundwater. Untreated water currently used for agricultural operations may be tapped for treatment and delivery to residential and commercial/industrial uses, possibly limiting raw water available for agricultural operations. In addition, if existing raw water supplies are treated, water costs may rise, making water costs too high for continued agricultural operations, especially for the small farmer. Indirectly, such water demands may result in eliminating agricultural operations currently in the County. Agricultural operations may be pressured to go out of business and to convert their lands to non-agricultural uses.

Plan Policies That Serve as Mitigation

Implementation of proposed General Plan policies 16.15 and 16.16 would serve to reduce the impact to a less-than-significant level.

Other Mitigation Measures

None warranted.

Impact #44. *Buildout under proposed General Plan land uses would result in increased generation of solid waste. This is considered to be a* ***less-than-significant*** *impact as proposed Plan policies would provide for this increased waste.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.25 and 3.24 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #45. *Buildout of proposed General Plan land uses could result in conflicts with provisions of the Nevada County Hazardous Waste Management Plan related to potential public safety concerns. This is considered to be a* ***less-than-significant*** *impact as proposed plan policies would minimize such concerns.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 10.8, 10.9 and 10.10 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #47. *Buildout of proposed General Plan land uses and associated population would result in an increased demand for structural fire protection services. This is considered to be a* ***less-than-significant*** *impact as proposed plan policies and local fire district programs shall ensure that adequate services are provided to serve new growth.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.12 through 3.15, 10.1, and 10.4 through 10.6 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #50. *Buildout of proposed General Plan land uses and associated population growth would result in the need for 292 acres of additional parkland and associated recreation facilities and services to meet the needs of the new growth. This is considered to be a* ***less-than-significant*** *impact as implementation of proposed General Plan policies would provide for development of this parkland acreage.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.10, 3.12 through 3.15, 5.1, 5.2, 5.3, 5.5, and 5.7 through 5.15 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #51. *Buildout of proposed General Plan land uses and associated population growth would incrementally increase the demand for library services. This is considered to be a* ***less-than-significant*** *impact as implementation of proposed General Plan policies would ensure that adequate library facilities are provided to adequately serve the new population.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.6 through 3.8, 3.10, and 3.14 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #53. *Increased residential, commercial, and industrial development throughout the County would increase transportation energy demand, especially that associated with daily commutes and everyday commercial needs. This impact would be a less-than-significant impact.*

Plan Policies that Serve as Mitigation

Implementation of policies 4.26, 4.27, 4.28, 4.29, 4.30, 4.31, 4.34, and 4.35 would reduce this impact to a less-than-significant impact.

Other Mitigation Measures

None warranted.

SUMMARY OF IMPACTS OF ALTERNATIVES

As discussed earlier in Chapter 2, a total of five alternatives were evaluated. Two of these five alternatives were the "No Project" alternative, one of which considered no additional development within the County (Alternative 1A), and the second, which considered buildout under the existing General Plan (Alternative 1B). No environmental impacts would occur under Alternative 1A. Under all the proposed alternatives, traffic impacts on State highways, loss of open space, and conversion of agricultural land would be significant and unavoidable. Under Alternative 1B, impacts would be greater than identified for the proposed General Plan in the following areas (primarily due to the greater amount of growth allowed and the distribution of this growth over a larger area of the County): land use (loss of open space, conversion of agricultural land, land use compatibility); geology (seismicity, landslides, and erosion hazards); hydrology (flooding hazards, surface water quality); biology (loss of habitat, impacts to special status species); cultural/historic resources; traffic; air quality; noise; public services/utilities.

Alternative 2 would result in a level of growth approximately one to three percent greater than would occur under the proposed General Plan. Land use impacts would be less than the proposed project due to a greater concentration of growth in Community Regions (vs. Rural Regions). This more clustered growth pattern would also result in fewer impacts in the following areas: 1) geology, 2) hydrology, 3) biology, 4) cultural/historic resources, and 5) traffic. Impacts related to noise (along some roadways) and public services/utilities, would be greater than the proposed project. Air quality and climatology impacts would be similar to the proposed project.

Alternative 3 would result in a level of growth about three percent greater than the proposed project in terms of population, and nine percent greater in terms of employment. In comparison to the proposed project, impacts of this alternative would be greater in the following areas: 1) land use, 2) geology, 3) hydrology, 4) biology, 5) cultural/historic resources, 6) traffic, 7) air quality, 8) noise, and 9) public services/utilities.

Alternative 4 assumes full implementation of recommended mitigation measures for the proposed project. As with the other alternatives, loss of open space, conversion of agricultural land, and traffic impacts to State highways would be significant and unavoidable. Overall, this alternative would result in far fewer impacts than the proposed project and other alternatives, and is considered the Environmentally Superior Alternative (in addition to the "No Project" alternative).

Figure 3-1 Regional Location

3. PROJECT DESCRIPTION

LOCATION AND PHYSICAL SETTING

Nevada County is located in the Sierra Nevada foothills and spans a 978 square mile area from the Sacramento Valley on the west to the Sierra Nevada Mountains (at the California/Nevada state line) on the east (see Figure 3-1). Nevada County is bordered by Sierra County on the north, Yuba County on the northwest, and Placer County on the south. Access into and through the County is provided primarily by Interstate 80 and State Routes 49, 20, 89, 174, and 267.

Elevations in the County range from a low of 200 feet in the southwesternmost portion of the County to a high of 9,143 feet in the easternmost portion of the County (Mount Lola peak). Three major watersheds in the County include the Truckee River basin, the Yuba River basin, and the Bear River basin. These watersheds are the primary areas for surface water drainage. Due to the level of snow and water accumulation, these watersheds provide recreational resources for winter and summer activities, such as skiing, boating, fishing, and swimming. **In addition, the watersheds are important for providing drinking and irrigation water for several counties and two states (Nevada and California).**

Important natural resources include timber, minerals, and agriculture. Soils, primarily in the western portion of the County, support agricultural uses including cropland, orchards, and grazing. The timber (and hardwood) resources are primarily located on Tahoe and Toiyabe National Forest lands which account for 28 percent of Nevada County's land area. Mineral resources in the County include lode gold, placer gold, chromite, barite and sand and gravel. It was these resources which first attracted the Euroamerican settlers to the region in the 1800s.

A wide variety of vegetation and habitat types are found in the County, including conifer, mixed conifer, mixed conifer-hardwood, hardwood, shrub, grassland, riparian, and aquatic. These habitat types support many wildlife species including the following special status species: wolverine, pacific fisher, northern goshawk, black swift, willow flycatcher, yellow warbler, foothill yellow-legged frog, and Lahontan cutthroat trout.

PROJECT BACKGROUND

California State Law requires each County to adopt a General Plan "for the physical development of the County and any land outside its boundaries which ... bears relation to its planning" (Government Code Section 65300). The role of the General Plan is to act as the County's constitution for the physical use of the County's resources, the foundation upon which all land use decisions are made. The General Plan expresses the community's development goals and embodies public policy relative to the distribution of future public and private land use.

The existing General Plan for Nevada County was adopted in 1980. The Martis Valley General Plan, adopted in 1975, is also a component of the County's General Plan. ~~Rapid growth in the past decade has resulted in strains on the County's infrastructure, with ever increasing demands for highways, water, schools, and other public facilities. It is because of this growth and the threat of losing the resources of the County that the General Plan update process was initiated in 1990.~~ **In 1990, Nevada County determined to prepare a comprehensive update to the two plans for the following reasons:**

- **The existing plans did not anticipate the level of growth that occurred between 1980 and 1990. In turn, this growth burdened existing infrastructure; there was inadequate funding of infrastructure improvements and maintenance; there was a lack of affordable housing; and land use balance needs were uncertain;**

- **The existing plans were based on old, and, in some instances, out-of-date data, particularly as they related to water and sewer needs;**

- **The State Office of Planning and Research recommends that a comprehensive Plan update be completed every five years;**

- **The goals and objectives of the existing plans may not reflect those of the more recent residents;**

- **Many indicators (i.e., State guidelines, continued growth projections, analysis of the existing plan) support the suggestion that the existing plan was in need of a review and update in order to meet the needs for the long-term future of the County.**

Two seventeen-person Steering Committees (one for western County and one for eastern County), appointed by interest groups in the County, have been involved in the preparation of goals and objectives and the development of a preferred alternative as the basis for the Preliminary Draft General Plan. Additionally, local and technical subcommittees were involved in the process of identifying issues that should be addressed in the General Plan and providing recommendations.

PROJECT SPONSOR OBJECTIVES

Nevada County is the lead agency for the project under consideration in this EIR, which includes the proposed General Plan, the Regional Transportation Plan (RTP), and revised zoning districts and zoning district maps. The primary objectives of the County are to: certify an EIR on the project under consideration; and to approve and adopt the proposed General Plan, RTP, and amended zoning districts and zoning district maps.

The primary objective of the proposed General Plan is to provide a long-term policy guide for the physical, economic and environmental future of the County, which meets State requirements. The proposed General Plan provides a basis to guide future decisions by County officials. It is intended to be used by County decision makers to review new development in order to ensure that such development will contribute to achieving the vision for Nevada County which is inherent in the General Plan. The amended zoning districts and zoning district maps will serve as tools for the County in implementing the General Plan. The RTP will assist the County in identifying and documenting the regional transportation needs and setting forth an effective, cost-feasible action plan to meet these needs.

PROJECT CHARACTERISTICS

As stated above, the project under consideration in this EIR consists of the proposed General Plan, the Regional Transportation Plan (RTP), and amended zoning regulations and revised zoning district maps. This subsection provides an overview of each of these project elements.

Proposed General Plan

Overview

The Nevada County General Plan is the long-term policy guide for the physical, economic and environmental future of the County. It is comprised of goals, objectives, policies, and implementation measures which are based upon assessments of current and future needs and available resources.

The General Plan provides a basis to guide future decisions by County officials and other governmental agencies, as well as for residents, property owners, building developers, business establishments, and industries. It expresses long term community development goals and embodies public policy related to the distribution of future land use, both public and private. Because it embodies public policy, it is intended to be used by County decision makers to review new development in order to ensure that such development will contribute to achieving the vision for Nevada County which is inherent in the General Plan.

Central Themes and Supporting Themes, identified in Table 3-1, provide the basis for development of all components of the Plan. Based upon these themes and supporting planning principles, the proposed General Plan divides the County into Community Regions and Rural Regions. Development within these regions is further discussed below.

Table 3-1
Central Themes and Supporting Themes

CENTRAL THEMES

- Fostering a rural quality of life
- Sustaining a quality environment
- Development of a strong diversified, sustainable local economy
- Planned land use patterns will determine the level of public services appropriate to the character, economy, and environment of each region

SUPPORTING THEMES

- Reduce dependence on the automobile by clustering future growth
- Encourage the creation and enhancement of communities by providing for diverse and viable centers for those areas
- Provide urban services only in areas with sufficient land use intensities or population densities
- Ensure that intensive growth will only be allowed concurrent with the provision of needed services, to include participation in financing, public studies and programs, phased construction projects, or phased construction projects that enhance public benefit
- Ensure the long term quality of natural resource values at the same time ensuring the sustainability of agriculture, logging and mining activities
- Minimize conflicts due to incompatible land uses

SOURCE: Nevada County General Plan, Volume 1 (Final Draft, March 1994).

Community Regions. The Community Regions contain higher residential densities and provide for a broad range of residential, commercial, cultural, public, and quasi-public uses, located for convenience, efficiency, and affordability. These Community Regions should be compact, self-sustaining areas of more intensive development where such development can be served most efficiently and effectively with a full range of urban services and

facilities, such as public sewer and water. The range of land uses within the Community Regions would be more extensive and would include a full range of residential uses, including single family and multiple family, commercial, industrial, public, educational, cultural, and recreational facilities. Residential densities would range from 1.5 acre lots to four dwelling units per acre. Multiple family residential base densities would have a maximum of twenty dwelling units (du) per acre with bonuses for lower income households allowing up to 30 du/acre.

Community Regions are established for Grass Valley, Nevada City, Lake Wildwood, Penn Valley, and Higgins Corner. Lake of the Pines and the Town of Truckee (see Figure 3-2). Community Region boundaries are generally defined by the spheres of influence of the cities (Grass Valley, Nevada City, and Truckee). Additionally, a Special Development Area (SDA) is identified in the southwestern part of the County. This SDA is designated for the purpose of establishing a New Town Reserve. Development within this New Town Reserve shall require implementation of a Specific Plan in accordance with proposed General Plan policy 1.16. A specific Community Region boundary shall be established as part of this Specific Plan process. The Community Region boundary for this New Town Reserve identified in Figure 3-2 approximates the ultimate location of this boundary.

Village Centers are intended to provide for the development of new centers to provide a focus within Community Regions. Such centers would have a mix of uses grouped together to form a functional and cultural center. Village Centers are established within the Higgins Corner/Lake of the Pines and Penn Valley Community Regions.

Rural Regions. All portions of the County not included within a Community Region are considered to be within the Rural Regions of the County (See Figure 3-2). Within these Rural Regions, growth is provided for only those types and densities of development which are consistent with the open, rural lifestyle, pastoral character, and natural setting which exists in these areas. Minimum parcel sizes range from ~~5 to 160~~ **3 to 640** acres. **However, in selected areas there exist commercial, industrial, research and development, multi-family, planned development, and special development area designations, though to a much smaller extent than within Community Regions.**

Within Rural Regions, Rural Places are established to define centers of activity for the surrounding rural areas. Rural Places are established for Alta Sierra, Cascade Shores, Cedar Ridge, Chicago Park, Red Dog/You Bet, Rough and Ready, North San Juan, Washington, Soda Springs, and Hirschdale.

Rural Centers are intended to provide for focused development within Rural Places. Such centers would have a mix of uses grouped together to form a functional and cultural center. Two Rural Centers are established for Alta Sierra and Rural Centers are established for Cedar Ridge, Chicago Park, Rough and Ready, North San Juan, Washington, and Soda Springs.

Figure 3-2 Community Regions and Rural Regions

Figure 3-2 Community Regions and Rural Regions (continued)

Land Use Types

To provide for an appropriate range of land use types and densities within both Community and Rural Regions of the County a range of land use designations and densities were identified in the General Plan (see Table 3-2). The General Plan land use map identifies the location and orientation of these land uses.

Buildout Under Proposed General Plan

The Nevada County General Plan, Volume 2: Background Data and Analysis, provides an estimate of County population at buildout, based upon the land use designations identified above, and shown on the General Plan land use map. At buildout, the projected population of the County would be 175,760 persons in 81,745 dwelling units (see Table 3-3). This represents a net increase over the existing population of 97,250 persons and 50,987 dwelling units (existing population and housing based on 1990 U.S. Census data). Approximately 30 percent of the total proposed dwelling units would be in the Urban High Density and Urban Medium Density designations, which allow for multiple-family housing. Employment would total 95,445 jobs with the largest job-generating land use designations being business park and industrial. This represents a net increase over existing employment of 64,970 (existing employment based on 1990 U.S. Census data. Table 3.3 provides a summary of the buildout population, housing, and employment, in comparison to existing conditions in the County.

General Plan Components

Government Code Section 65302 requires that a General Plan contain seven mandatory elements (including land use, circulation, housing, conservation, open space, noise, and safety), while Government Code Section 65303 allows the General Plan to "include any other elements or address any other subjects which, in the judgement of the legislative body, relate to the physical development of the county or city."

The proposed Nevada County General Plan provides for the seven mandatory elements as well as elective elements within the framework of 19 topical chapters, including Land Use, Economic Development, Public Facilities and Services, Circulation, Recreation, Open Space, Education, Housing, Noise, Safety, Water, Soils, Wildlife and Vegetation, Air Quality, Forest, Agriculture, Minerals Management, Aesthetics, and Cultural Resources. Additionally, a 20th chapter includes Implementation Measures for the Plan.

Table 3-2
Proposed General Plan Land Use Designations

Designator	Designation	Minimum Parcel Size	Maximum Density (Units per Acre)
UHD	Urban High Density	2,200 sq.ft.	20
UMD	Urban Medium Density	7,300 sq.ft.	6
USF	Urban Single Family	10,000 sq.ft.	4
RES	Residential	1.5 acres	0.66
EST	Estate	3 acres	0.33
RUR-5	Rural-5	5 acres	0.2
RUR-10	Rural-10	10 acres	0.1
RUR-20	Rural-20	20 acres	0.05
RUR-30	Rural-30	30 acres	0.033
RUR-40	Rural-40	40 acres	0.025
RUR-160	Rural-160	160 acres	0.00625
NC	Neighborhood Commercial		4
CC	Community Commercial		4
HC	Highway Commercial		4
SC	Service Commercial		4
RC	Rural Commercial		4
OP	Office-Professional		4
BP	Business Park		4
IND	Industrial		4
REC	Recreation		4
FOR	Forest		0.025
PUB	Public and Institutional		NA
OS	Open Space		NA
WA	Water		NA
SDA	Special Development Area		(1)
PD	Planned Development		(1)
PRC	Planned Residential Community		4

NA - Not applicable.

(1) Density within Special Development Areas (SDA) and Planned Developments (PD) shall conform to the densities for the land use designations shown on the General Plan land use maps for each specific SDA or PD.

SOURCE: Nevada County General Plan, Volume 1 (Final Draft, March 1994).

Table 3-3
Buildout of the Proposed Nevada County General Plan

County Community Regions	Dwelling Units	Population	Employment
Grass Valley	12,770	30,650	44,835
Nevada City	2,825	6,785	8,480
Lake Wildwood	3,414	8,190	245
Penn Valley	2,515	6,035	1,885
Higgins Corner/Lake of the Pines	3,150	7,555	2,183
New Town - Future Community Region	5,655	13,572	10,960
Truckee	19,800	35,630	14,065
Community Regions Total	50,129	108,417	82,653
Rural Regions Total	31,616	67,343	12,792
BUILDOUT TOTAL	81,745	175,760	95,445
EXISTING TOTAL[1]	~~30,758~~ **37,352**	78,510	30,475
NET INCREASE	~~50,987~~ **44,393**	97,250	64,970

1. Existing dwelling units and population are based on 1990 U.S. Census data. Existing employment information is based on 1990 State Department of Finance data.

SOURCE: Nevada County General Plan, Volume 2 (Final Draft, March 1994).

Within each topical chapter goals, objectives, and policies are provided. Goals and objectives are statements of aims and desired future conditions relating to land use in the County. The policies identify the direction and actions which the County will pursue to achieve the goals and objectives. Policies are identified as Action Policies or as Directive Policies. Action policies are those which require a specific action or actions to implement the policy, such as adoption of an ordinance. Directive policies provide direction or guidance for decisions relating to future growth and development within the County. Each chapter of the proposed General Plan is briefly described below.

Land Use. The Land Use Element of the proposed General Plan provides goals, objectives, and policies to guide future development in Community Regions and Rural Regions. These goals, objectives, and policies focus on appropriate types and densities of land uses and level of public services to be provided in Community Regions and Rural Regions. This element also identifies and describes the land use types and densities identified above, and shown on the land use map.

Comprehensive site development standards would be prepared to address requirements for site development with regards to sensitive environmental resources, provision of open space, elimination of fire hazards, protection of vegetation, prevention of flood hazards, and transitions between uses. Additionally, other elements throughout the General Plan provide more specific information about site development standards. Clustering of development is encouraged as the primary response to the presence of a significant environmental feature or natural constraint. Other policies address land use compatibility issues associated with the siting of various types of land uses in proximity to one another.

Economic Development. The Economic Development Element of the proposed General Plan includes policies that would provide, when implemented, a strong economic base. Such policies focus primarily on establishing an economic advisory body to assist the County in the development of an economic development strategy for the County and in the development and implementation of a County Economic Policy. The County Economic Policy will provide for the retention and expansion of existing businesses and attraction of new business. Elements of the County Economic Policy include primarily: preparation of a five-year strategic plan; dissemination of information to existing and prospective businesses regarding demographics, labor force characteristics, transportation, etc.; development of a business retention program; development of a business recruitment and marketing program; development of a program that analyzes public services available to job-generating land uses; provision for affordable housing for local wage earners; increase in the efficiency of the development review process; and establishment of a mechanism for monitoring and reporting on net increases in jobs and housing in the County.

Public Facilities and Services. The Public Facilities and Services Element of the proposed General Plan provides polices that would, when implemented, provide services commensurate with development type and intensity. Within Community Regions, the capacity of public services and facilities will be improved to serve areas where development will be directed. In Rural Regions, development will be limited to ensure that adequate public services and facilities are available.

Specific level of service standards are identified as applicable to Community Regions and Rural Regions for various public services. Based upon these level of service standards, the County shall adopt a comprehensive development fee impact program to provide funds for provision of facilities and public services necessary to serve new development. The County will develop a long-range Capital Facilities Plan (CFP) for all facilities to be included in the development impact fee program, as well as those to solve existing deficiencies. Based upon this CFP, the County shall adopt a Five-Year Capital Improvement Program (CIP) for facilities for which it is responsible.

Circulation. The Circulation Element provides policies that define acceptable levels of service (LOS) in both Community and Rural Regions. An annual road system monitoring program will be used to identify road improvements if and when road systems are at or approaching unacceptable LOS. The County Road Improvement Program establishes a schedule for improvement projects and funding as the basis for determining the roadway

capacity available to support new development. Provision of funding for local and non-local roadways includes local funds (primarily development impact fees) and State funds. Additionally, policies provide for improving the capacity of the transportation system by providing for alternative modes of transportation (bicycle and pedestrian) and more efficient modes of transportation (ride sharing, transit, and use of transportation system management measures).

Recreation. The Recreation Element of the proposed general plan includes policies to provide a variety of active and passive recreation opportunities. Development of parks and recreational facilities in the County park system will focus upon regional facilities, using a level of service standard of 3 acres per 1,000 persons. The County will also encourage formation of local park districts to provide neighborhood community and district parks. District parks will be encouraged to develop and regularly update Master Plans; the County will prepare an updated Master Parks and Recreation Plan to reflect General Plan buildout. Any future and existing deficiencies will be identified in the County's long-range Capital Facilities Plan and Five-Year Capital Improvement Plan. Park and recreation facilities will be included in the County's comprehensive impact fee program.

Open Space. The Open Space Element of the proposed General Plan provides policies which seek to maintain open space in the County. The Open Space land use designation is intended to provide for: 1) preservation of natural resources; 2) conservation of open spaces for the managed production of resources (such as timber and mining); 3) maintenance of areas with importance for outdoor recreation; 4) delineation of open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions; and 5) provision of open spaces to create a buffer which may be landscaped to minimize the adverse impact of one land use on another.

Further, the Rural, Forest and Recreation designations of the proposed General Plan also provide visual and functional open space. Clustering could be used to preserve open space. Development of urban open space would occur in conjunction with development in Community Regions, Villages, and Rural Centers. Site development standards will be prepared to determine the open space requirements of each discretionary project. Policies also provide for the protection of and access to open space.

Education. The Education Element of the Nevada County General Plan provides policies to facilitate the development and maintenance of schools and educational facilities. All school districts serving the County will be encouraged to develop and regularly update a Facilities Master Plan. The County will cooperate with districts and municipalities to explore methods for securing adequate funding of new school facilities. Those districts impacted by growth will be encouraged to do appropriate studies and develop an impact fee program, if necessary. Nevada County will continue to place high priority on establishing higher education facilities and programs in the County.

Housing. The Housing Element of the proposed General Plan provides polices which seek to provide adequate housing opportunities for all segments of the community. Specifically, quantified objectives for provision of housing within various income groups are defined. A variety of housing, including mobile homes, factory-built homes, granny units, multi-family residential, and housing accessible to disabled persons is encouraged. An adequate supply of land would be provided to meet the County's fair share of regional lower-income housing need. Additionally, governmental constraints associated with housing development will be decreased. Exceptions from building standards will be allowed for development of very-low and low income housing. Further, the Nevada County Housing Authority will be established to address the housing affordability issue in the County.

Homelessness is addressed in policies which provide for immediate short-term and transitional housing.

Noise. The Noise Element of the proposed General Plan includes policies which identify noise standards and noise compatibility criteria. The noise standards and criteria would be applied in a situation where a proposed project could generate noise that would affect noise-sensitive uses, including schools, residences, hospitals, etc., or if a sensitive use would be located in proximity to a source of noise. Noise sensitive land uses will strongly be encouraged to locate in areas of the County where the impact of noise is limited. Additionally, regardless of location, all new construction would be subject to the noise insulation requirements of Title 24 of the California Administrative Code.

Comprehensive noise studies would be prepared for proposed projects having the potential to create noise levels inconsistent with identified standards. Additionally, a Noise Prediction Methodology Manual shall be the basis for preparation of any noise analysis and identification of appropriate mitigation measures. Design controls including increased setbacks, landscaping, and barriers (berms or walls) would be provided to minimize impacts of future noise. Additionally, new or expanded transportation facilities shall incorporate feasible measures necessary to mitigate increases in noise levels.

Safety. The Safety Element of the proposed General Plan provides policies which seek to address public health and safety concerns in the County associated with the following hazards: wildland fire; flooding; seismic and geologic events/conditions; airport safety; avalanches; and hazardous materials. Fire protection agencies will determine the appropriate levels of fire protection facilities and services. The development of one uniform county-wide fire protection ordinance will be encouraged to guide provision of services. The office of the County Fire Marshall shall be established to centralize fire-safe reviews. Additionally, site development standards will be prepared to minimize wildland fire, seismic, and other geologic hazards. Adequate evacuation routes will be identified via the Office of Emergency Services and through the Nevada County Emergency Operational Plan. **The General Plan Circulation Map includes potential supplementary emergency access and evacuation routes to supplement the routes necessary for general day-to-day circulation.**

Water. The Water Element of the proposed General Plan provides policies which seek to address conservation of domestic and agricultural water via adoption of water conservation standards and protection of water resources. Water quality is addressed by: 1) continuing to enforce County regulations concerning the installation and operation of private sanitary disposal systems; 2) site development standards which will establish setbacks from water sources; and 3) continued cooperation with state and local agencies in their efforts to identify and reduce sources of existing and potential point- and non-point source pollution to ground and surface water.

Soils. The Soils Element of the proposed General Plan provides policies which seek to address soil erosion control via enforcement of the County's existing Grading Ordinance which stipulates proper development practices. Erosion control measures will be required for all projects. Additionally, the efforts of the Resources Conservation District will be encouraged to educate and assist the general public about techniques and practices to minimize erosion.

Wildlife and Vegetation. The Wildlife and Vegetation Element of the proposed General Plan provides policies which seek to address protection of biological resources. When significant environmental features are identified during the review of a project, all portions of the project site that contain or influence said areas are to be retained as non-disturbance open space through clustered development or other means. The intent of this policy is to promote continued viability of contiguous or interdependent habitats by avoiding fragmentation of existing habitat areas and preserving movement corridors between related habitats. Site development standards will be developed to: protect environmentally sensitive resources; provide for open space as part of site development; require use of drought tolerant native species; minimize disturbance to heritage and landmark trees and groves; and minimize the removal of existing vegetation.

The condition of sensitive wildlife and habitat resources would be monitored via input from other agencies to ensure the continued effectiveness of proposed policies.

Air Quality. The Air Quality Element of the proposed General Plan provides policies which seek to address protection of air quality. Provision will be made to cooperate with the Northern Sierra Air Quality Management District for assessment of cumulative and long-term air quality impacts and to develop and implement a long-term monitoring program to quantify air quality in the County. Where a proposed project may generate more than 25 tons per year of non-attainment pollutants, on-site monitoring will be conducted. Additionally, programs will be developed to maximize participation of employer-operated van pools, ride sharing, and other transit services for employees, via interagency cooperation.

Forest. The Forest Element of the proposed General Plan provides policies which seek to address protection of timber resources and to minimize land use conflicts. Low density development is identified in the Forest land use designation in order to protect the major areas of potential timber resources from conversion to more intensive uses. The use of

Timberland Preserve Zones (TPZs) will be encouraged on lands which have significant commercial timber value in the Estate, Rural and Forest designations, in accordance with County zoning regulations. The use of clustering development is encouraged in Rural and Forest designations to preserve timber resources. Additionally, site development standards shall be prepared and implemented within the Forest land use designation to ensure that development does not adversely impact resource management or timber production/harvesting activities.

Agriculture. The Agriculture Element of the proposed General Plan provides policies to encourage the protection of significant agricultural lands and operations in *Rural Regions*. All new residential land divisions adjacent to important agricultural land will require a minimum setback of 100 feet. The Right to Farm Ordinance will be amended to provide notice to buyers describing normal agricultural practices which may occur and the right to continue such practices in conformance with the applicable district regulations. New development in *Rural Regions* will be allowed only for land use types which are consistent and compatible with the rural agricultural character of these areas and clustering of development will be encouraged. The County will also facilitate efforts to retain and promote local agricultural operations and products (policies 16.10 and 16.11).

Minerals Management. The Minerals Management Element of the proposed General Plan provides policies which seek to address protection of valuable mineral resources and provision of resource extraction, while minimizing conflicts with surrounding uses. Specific policies are identified which stipulate the process and criteria for conditionally permitting exploration, as well as surface and subsurface mining operations. Provisions for reclamation of mined sites are identified and required. Additionally, proposed mining activities would have to be reviewed to ensure that impacts on the environment and on nearby land uses are adequately assessed in accordance with the California Environmental Quality Act.

Aesthetics. The Aesthetic Element of the proposed General Plan provides policies which seek to address protection of the County's existing rural character and aesthetic values. Community Design Guidelines applicable to the various land use designations will be prepared as part of the Comprehensive Site Development Standards, to be used during the site review process. These standards will also seek to protect large-scale views and viewsheds. The County will amend the Scenic Corridor Combining District Regulations to require design review of all proposed development within this District. The County will prepare a Scenic Corridor Plan which will identify standards and protection of scenic corridors.

Cultural Resources. The Cultural and Historic Resource Element of the proposed Nevada County General Plan provides policies which would serve to identify and protect significant archaeological and historic resources. Specifically, policies provide for: 1) development of a Cultural Resources Ordinance to ensure preservation, protection, and management of cultural resources; 2) inclusion of significant sites in the Federal or State Historical Register based on recommendation from local historical societies; 3) incorporation of cultural and

historic resource management standards in the Comprehensive Site Development Standards; and 4) the requirement that all applications for discretionary project permits and all ministerial project permits (except single family residences on residential lots) include a Site Sensitivity Literature Review.

Regional Transportation Plan

Overview

The 1994 Regional Transportation Plan (RTP) includes a Policy Element, Action Element (transportation system improvements), and Financial Element. The RTP policy element provides direction to decision-makers in the development of the future transportation system. Needs identified in the 1994 RTP are a result of past trends and future trend forecasts. Past trends indicate that Nevada County has experienced a very high population growth rate. According to population forecasts, a high growth rate is expected to continue. In order to adequately accommodate future travel demand associated with high growth, improvements to the transportation system are needed. The following provides a brief summary of the three elements of the RTP.

Policy Element

The purpose of the Policy Element of the RTP is to provide a policy framework by which the County's transportation needs are identified and met. The goals identified in this Element are provided in Table 3-4 and form the basis for objectives and policies contained in the Policy Element, as well as components of both the Action Element and the Financial Element which are described below. It is intended that the Policy Element of the RTP and the Circulation Element of the proposed General Plan are complimentary.

Table 3-4
RTP Policy Element - Goal Summary

1.	Provide for the safe and efficient movement of all people, goods, services, and information.
2.	Reduce adverse impacts on the natural, social, cultural, and historical environment and the quality of life.
3.	Develop an economically feasible transportation system.
4.	Create and maintain a comprehensive, multi-modal transportation system to serve the needs of the County.

SOURCE: Nevada County Regional Transportation Plan, February 1994 (Interim Draft)

Action Element

Roadway Improvements. The purpose of the Action Element is to identify the short and long range needs of each component of the regional transportation system in Nevada County. Policies 4.1 and 4.3 of the General Plan Circulation Element identify level of service goals which were used as the basis for identifying needed improvements in the roadway system. Table 3-5 identifies needed improvements to support buildout of the General Plan and maintain level of service goals identified in Circulation Element policies 4.1 and 4.3.

A Subregional Transportation Study for the Nevada City/Grass Valley area has been completed and accepted by the Nevada County Transportation Commission. The results of the study have been incorporated in the Nevada County General Plan circulation element to the extent possible, given the fact that the study has a 2015 horizon year and does not contemplate buildout of the proposed General Plan. The Urban Study has been utilized throughout the General Plan process to corroborate the HBA model output in the Urban area and to supplement the effort to correlate the General Plan Circulation Element and list of projects to the General Plan Land Use Element.

Transit. Demand for transit services is expected to increase with buildout under the proposed General Plan. The primary growth areas are currently served by the fixed route services or can be served by extension of existing services. The Transit Development Plan is currently being updated and will address provision of transit services to meet future demand.

One of the primary goals of the General Plan Circulation Element is to reduce dependency on the automobile. To increase the viability of transit as an alternative to the automobile, incentives must be provided to make transit affordable, comfortable, and convenient. A Marketing Plan for the Gold Country Stage service is being prepared by the Nevada County Transportation Commission. The Plan will seek to increase ridership and improve awareness of the services.

Non-Auto Facilities. Non-auto facilities include paths and trails for bicycles, pedestrians, and equestrians. Due to the County's topography and long travel distance, non-auto trails cannot be expected to significantly reduce automobile dependency or use. However, in areas where development is more concentrated, non-auto facilities would be an integral part of the transportation system, as an alternative to the automobile.

The 1989 Nevada County Master Bicycle Plan provides bike lanes within the urbanized areas of the County that improve non-auto access and mobility. The Plan identifies a contiguous system for bicycle travel in most areas of the County expected to have significant population growth.

Table 3-5
Road Improvement Summary

Roadway	Segment	Facility Type	Existing Lanes	Proposed Lanes
SR 20	• Pleasant Valley to SR 49	Principal Arterial	2	4
SR 49	• Placer Co. to McKnight	Principal Arterial	2	4
SR 89	• Placer Co. to I-80	Minor Arterial	2	4
SR 174	• You Bet to Brunswick	Minor Arterial	2	4
Allison Ranch Road	• McCourtney to SR 49	Minor Collector	2	2*
Bennett Road	• SR 20/49 to Sutton Way	Minor Collector	2	4
Brunswick	• SR 20/49 to SR 174	Minor Arterial	2	4
Combie Road	• SR 49 to Magnolia Road	Major Collector	2	4
Donner Pass Road	• Northwoods to Commercial	Major Collector	2	4*
Dorsey Drive	• Nevada City Hwy to SR 20/49	Major Collector	2	4
Dorsey Drive (ext)	• SR 20/49 to Sutton Way • Sutton Way to Brunswick • Nevada City Hwy to Ridge	Major Collector Major Collector Major Collector	2 0 0	4* 4* 2*
Hughes Road	• Ridge to Main Street	Major Collector	2	2*
Idaho-Maryland Road	• SR 20/49 to Sutton Way	Major Collector	2	4
LaBarr Meadows Road	• McKnight Way to Dog Bar	Major Collector	2	2*
Loma Rica Drive	• Brunswick to Charles	Minor Collector	2	2*
Magnolia Road	• Combie to E. Hacienda	Major Collector	2	2*
McCourtney Road	• Indian Springs to Old Auburn • Old Auburn to SR 20	Major Collector Major Collector	2 2	3 6
Nevada City Hwy	• Dorsey to Brunswick • Brunswick to Gates Place	Minor Arterial Minor Arterial	2 2	2* 4
New Town SDA	• Direct connection to SR 20	Major Collector	0	4
Northwoods Blvd.	• Trout Creek to Donner Pass	Minor Collector	2	4
Pleasant Valley Road	• SR 20 to Lake Wildwood	Major Collector	2	3
Ridge Road	• Alta to Nevada City Hwy	Major Collector	2	2*
Rough & Ready Hwy	• Bitney Springs to GV limits	Major Collector	2	4
Sutton Way Ext.	• Whispering Pines to Bennett	Major Collector	0	2

(*) Indicates only "spot" improvements required to attain desired level of service. Such spot improvements could include shoulder widening, channelization or intersection turn lane additions.

SOURCE: Nevada County General Plan, Volume 2 (Final Draft, March 1994)

TSM/TDM Measures. Transportation systems management (TSM) and transportation demand management (TDM) are two strategies that increase the efficiency of the existing transportation system. TSM actions maximize transportation system operating efficiency through low cost, physical improvements. TDM actions maximize transportation system utilization through modification of travel behavior decisions. There are two active Transportation Management Associations that address TSM/TDM. Nevada County participates in the Truckee-North Tahoe Transportation Management Association and in the Western Nevada County Transportation Management Association. More emphasis will be placed on TSM/TDM Measures in future County Transportation Planning Work programs, as required by Implementation Measure 17 and Policy 4.16. Such measures will be important in the future for maximizing the efficiency of the transportation system. Typical TSM/TDM measures include:

- Freeway high occupancy vehicle lanes;
- Arterial/downtown high occupancy vehicle lanes;
- Signal system improvements;
- Roadway improvements;
- Freeway control/ramp metering;
- Parking supply limits;
- Suburban park-and-ride lots;
- Fringe area park-and-ride lots;
- Exclusive transit lanes;
- Light rail;
- Bus service expansion;
- Land development policies favoring vehicle trip reduction; and
- Polices promoting on-site transit access for new and existing development.

Additionally, strategies that are currently being considered for inclusion in the County's Air Quality Attainment Plan could also be included within a TSM/TDM plan for the County (see Table 3-6).

Air and Rail Transportation. There are two general aviation airports in Nevada County, including the Nevada County Air Park, east of Grass Valley, and Truckee-Tahoe Airport, south of Truckee. The number of aircraft operations and based aircraft at the Air Park and Truckee-Tahoe Airport are projected to increase over the next 20 years. The capacity at the Air Park is not expected to be exceeded by 2010. However, the Air Park will require significant improvements to operate safely and efficiently. Airport operations at the Truckee-Tahoe Airport will exceed capacity in the next 20 years. Improvements will be required to accommodate future demand.

The Southern Pacific (SP) railroad owns and operates one set of tracks that follows Interstate 80 along the southern border of Nevada County. Performance of existing rail facilities and future demand for such facilities were not evaluated in the RTP due to lack of available data.

Table 3-6
TSM/TDM and Air Quality Attainment Plan Strategies

- *Commuter Bus Service.* This service would be an express bus traveling between Grass Valley/Nevada City and Sacramento.
- *Enhanced Carpool Matching Program.* This program would provide ride-matching information for carpool and vanpool riders and providers.
- *Satellite Offices/Telecommuting.* This program is aimed at keeping commuters at home or in local offices.
- *Transit Marketing Plan.* Increase public awareness regarding transit opportunities and the benefits of transit use on air quality.
- *Alternative Modes of Travel.* Telecommuting, carpooling and vanpooling, transit, bicycling, and walking.
- *Alternative Hours of Travel.* Staggered shifts, flexible hours, and compressed weeks.
- *Parking Pricing.* Parking fees, High Occupancy Vehicle (HOV) preferential spaces, and HOV preferential fees.
- *Enhanced Local Transit.* Improved transit service within Grass Valley/Nevada City.
- *Employer Based Carpool Programs.* Increase employee vehicle occupancy through incentives or requirements.

SOURCE: Nevada County General Plan, Volume 2 (April 1994).

Financial Element

The purpose of this Element of the RTP is to provide the cost and revenue estimates necessary for decision-makers to implement the Action Element of the RTP. Additionally, a discussion of financing recommendations is provided, including State funding programs, local funding programs, and other potential sources of revenue.

Zoning Districts and Zoning District Maps

Overview

The existing *Land Use and Development Code of the County of Nevada* (1972) contains zoning regulations. The existing zoning district maps assign specific zoning districts to various locations throughout the County. Zoning regulations and zoning district maps serve as tools for the implementation of the existing General Plan. Table 3-7 identifies existing zoning districts.

To implement the proposed General Plan land uses, three new zoning districts will be incorporated into the existing zoning regulations for the County. These new districts include Heavy Commercial (C3) District, Business Park (BP) District, and Recreation (REC) District. Additionally, the zoning code for the County will be updated to reflect new/revised ordinances identified in the proposed General Plan. Because these zoning

districts implement Policy 1.5 (Sections j., m., and p. respectively), any significant environmental implications of these new/revised ordinances are evaluated in this EIR as part of the General Plan evaluation as a whole. The intent and implications of the new zoning districts are discussed below.

The revised zoning district maps will be prepared to be consistent with the proposed General Plan land use map. Therefore, the environmental implications associated with buildout of proposed General Plan land uses also contemplates the environmental implications of buildout under revised zoning district maps.

Heavy Commercial (C3) District

The intention of this district is to provide for specialized intensive repair and related service uses which may have extensive storage needs and which require access to serve large geographic areas. Permitted uses under this district include limited manufacturing and indoor wholesale and retail sales; outdoor sales and storage; new/used vehicle sales and repairs; recreational facilities for employee use; and other similar uses.

As indicated under proposed General Plan policy 1.19, this district is consistent with the following land use designations: Service Commercial; Public; Special Development Area; and Planned Development. The purpose and intention of each of these land use designations, as identified in policies 1.5(j), (q), (t), and (u), are consistent with the uses that would be allowed in this District. Therefore, evaluation of impacts contained in this EIR contemplates the uses that could be sited under the Heavy Commercial District, as identified above.

Business Park (BP) District

The intention of this district is to provide for a variety of related and mutually supporting manufacturing, distribution, processing, service, and research and development uses normally associated with light industries. Supporting uses may include business and service activities, housing for the owner/operator and on-site security, dining, and recreational facilities for employees.

As indicated under proposed General Plan policy 1.19, this district is consistent with the following land use designations: Business Park; Industrial; Public; Special Development Area; and Planned Development. The purpose and intention of each of these land use designations, as identified in policies 1.5(m), (n), (q), (t), and (u), are consistent with the uses that would be allowed in this District. Therefore, evaluation of impacts contained in this EIR contemplates the uses that could be sited under the Business Park District, as identified above.

Table 3-7
Existing Zoning Districts

Zone	Description	Purpose
A1	General Agricultural	Provide areas for limited general farming and low intensity uses and open space.
AE	Exclusive Agricultural	Establishes, protects, and preserves land that is most suited to agricultural uses and other uses compatible therewith.
RA	Residential Agricultural	Provide areas for the development of single-family dwellings in a semi-rural setting. Dwellings are of primary importance and agriculture secondary.
R1	Single Family Residential	Establish low density residential land use for single family and related accessory uses and structures, to facilitate and direct growth of urban areas.
R2	Multiple Family Residential	Establish a low to medium density residential land use for single family and multiple-family dwellings and related structures.
R3	Medium Density Multiple Family Residential	Establish a high density multiple-family residential development in urbanized areas.
OP	Office and Professional	Provide areas for the development of professional and administrative offices and related uses and structures.
C1	Neighborhood Commercial	Provide areas for retail services directly related to the needs of the neighborhood area.
C2	Community Commercial	Intended to provide a wide range of retail and service uses that would relate to the varied needs of a community area or group of neighborhoods.
CH	Highway Commercial	Intended to provide commercial locations for highway related and tourist services.
RD	Research and Development	Intended to provide areas in which research, development, restricted manufacturing, and related facilities may be established.
M1	Light Manufacturing and Industrial	Designed to provide areas for diverse industrial development that can be established in close proximity to commercial and residential development.
M2	Heavy Manufacturing and Industrial	Intended to provide areas for intensive heavy industrial uses which may be permitted to perform their necessary processes or activities.
U	Unclassified	Established to provide for interim land uses and zoning in conformance with the General Plan.
FR	Forest and Recreation	Established to protect, enhance and provide suitable low intensity uses in forested ares of the County.
P	Public	Intended to provide zoning for areas occupied by Federal, State, and local government uses including non-profit hospital, recreational parks, cemeteries, solid and liquid waste disposal facilities and associated uses.
TPZ	Timberland Preserve Zone	Intended to provide for timberland zoning and restrictions to provide for and encourage prudent and responsible forest resource management and continued use of timberlands for the production of timber products and compatible uses.
OS	Open Space	Intended to provide for adequate open space in the County, defined as essentially unimproved land devoted to preservation of natural resources, outdoor recreation, or for public health and safety needs.

SOURCE: *Land Use and Development Code of the County of Nevada* (1972)

Recreation (REC) District

The intention of this district is to provide for a wide range of recreation uses and supporting services. Permitted uses include destination and day-use resorts, marinas, ball fields and stadiums, campgrounds, parks and playgrounds, churches and other organization and community group facilities, and other similar uses.

As indicated under proposed General Plan policy 1.19, this district is consistent with the following land use designations: Recreation; Public; Special Development Area; Planned Development; and Planned Residential Community. The purpose and intention of each of these land use designations, as identified in policies 1.5(p), (q), (t), (u), and (v) are consistent with the uses that would be allowed in this District. Therefore, evaluation of impacts contained in this EIR contemplates the uses that could be sited under the Recreation District, as identified above.

RELATIONSHIP TO INCORPORATED AREAS OF THE COUNTY

The proposed Nevada County General Plan land use map, and goals, objectives, policies, and implementation measures are applicable to all unincorporated lands within the County. Unincorporated lands also include those areas within the spheres of influence of incorporated areas. **The County's General Plan does not control future land use decisions within the incorporated cities of Truckee, Nevada City, or Grass Valley. However, the General Plan does consider the General Plan for each city, especially as it relates to future population and employment growth in the County.**

Nevada County contains three incorporated areas including, the cities of Grass Valley and Nevada City, and the Town of Truckee. As discussed previously, the Community Region boundaries for these areas are defined by their spheres of influence. Proposed General Plan policy 1.38 indicates that within the City/Town spheres, the General Plan land use maps will generally reflect the City's/Town's land use mapping. In some instances, the County may provide for a less intensive land use due to infrastructure capability, environmental constraints or effect on land use and development patterns outside the spheres. However, the County's General Plan will not preclude implementation of the City/Town Plans.

Additionally, for all discretionary projects within a sphere of influence, the County shall request that the City/Town determine whether or not it desires to annex the project site. If so, the applicant will be directed to the City/Town. If not application will be under County jurisdiction, but the County shall refer the application to the City/Town for review and comment.

INTENDED USES OF THE EIR

As indicated in the Introduction, this EIR is an informational document for both agency decision-makers and the public. The County of Nevada is the lead agency for the project under consideration in this EIR and as such, is responsible for certification of this EIR and approval and adoption of the proposed General Plan, amended zoning regulations, and revised zoning district maps. The County would generally be the lead agency for

subsequent development projects on land under its jurisdiction. The Nevada County Transportation Commission is responsible for approving and adopting the Regional Transportation Plan.

Discretionary approvals of individual projects, such as subdivision maps, rezonings or use permits may rely on the EIR only to the extent that the EIR provides sufficient site-specific information. Each individual project may be subject to preparation of an Initial Study as defined by CEQA to verify that no different or additional significant impacts identified in this EIR would result from the individual project approval.

4. ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATIONS INTRODUCTION

INTRODUCTION

Section 4, Environmental Setting, Impacts, and Mitigations provides the environmental analysis for the proposed project on a topic-by-topic basis. This introduction provides an overview of the topics that are evaluated in this section, identifies the section format for topical subsection, and provides an overview of the impact analyses performed.

TOPICS ADDRESSED IN EIR

This section addresses project-related impacts within the following categories:

- Land Use
- Geology and Soils
- Hydrology and Water Quality
- Biotic Resources
- Cultural Resources
- Visual Resources
- Traffic and Circulation
- Air Quality and Climatology
- Noise
- Public Services **and Utilities**

SECTION FORMAT

Each topical section in this EIR presents information in four parts. An introductory paragraph describes the scope of the issue under consideration. The *Environmental Setting* section provides a general overview of the conditions in the County. Local, State, and federal regulations are also identified and discussed, when relevant. The Environmental Setting information contained in this document is based on Volumes 2 and 3 of the Proposed General Plan. Volume 2 consists of background data and analysis that was developed to support the preparation of the proposed General Plan. Volume 3 includes specific reports prepared during the General Plan update process, including the following documents:

- The Nevada County Master Environmental Inventory (MEI), prepared by Harland Bartholomew & Associates, Inc. (December 1991).

- Public and Private Sewerage Systems, prepared by HBA (December 1992).

- Public and Private Water Systems, prepared by HBA (December 1992).

MEI information was not updated unless specifically stated in the Introduction subsection of each topical section. Both Volume 2 and Volume 3 of the proposed General Plan are hereby incorporated by reference.

A *Relevant Plan Policies* section includes relevant policies of the proposed General Plan and RTP used in the evaluation of impacts for a particular topic. All proposed General Plan and RTP policies are contained in Appendix A of this EIR.

The *Impacts and Mitigation Measures* section provides a brief description of standards used to evaluate whether an impact is considered significant based on standards identified in the California Environmental Quality Act (CEQA) and State CEQA Guidelines. Specifically, standards of significance are derived from various sections of the CEQA Guidelines, as well as from Appendix G and Appendix I of the Guidelines. Agency policy or regulations and/or professional judgement are also used to further define what actions may cause significant effects.

The Impacts and Mitigations Measures section focuses on the identification and analysis of significant impacts of the proposed General Plan, as compared to existing conditions. The level of significance for each impact is clearly identified within a statement which summarizes the nature of the impact. (See the Plan Alternatives section for environmental impacts that would occur under the existing General Plan.) Mitigation measures that would reduce significant impacts are then identified. The significance of the impact after mitigation is also identified. For impacts found to be less-than-significant, mitigation measures are not required. Mitigation measures consist of revised policies, additional policies, land use map changes, and other mitigation measures. Revisions to policies are indicated as follows: policy language that is added is <u>underlined</u> in the text and language that is deleted is ~~struck-out~~.

A *Mitigation Monitoring Program* (MMP) will be prepared as part of the Final EIR. State law requires that a public agency adopt a monitoring program to ensure that mitigation measures that are identified in an EIR are appropriately implemented.

OVERVIEW OF IMPACT ANALYSES

While Nevada County, located in the Sierra Nevada foothills, has experienced substantial growth in the last 10 to 15 years, the rural quality of the County remains. The rural characteristics of the County relate to: the relatively low level of development and associated population; and the abundance of remaining open space **and natural sources** in the County **(much of which are in close proximity to population centers)** ~~which provides~~ **providing** for wildlife habitat, visual quality, ~~and~~ agriculture, mining, and timber activities**, and recreational opportunities**.

Buildout of the proposed General Plan would more than double the existing population, employment, and housing that occurs in the County. As discussed throughout this section, this level of development would result in significant environmental impacts for various topics. The proposed General Plan relies on two primary policy concepts as a means to address the physical effects of proposed General Plan growth on the environment. These include: the development of Comprehensive Site Development Standards (policy 1.17 and other associated policies); and the voluntary use of clustering when significant environmental features or environmental constraints are present (policy 1.18 and associated policies). As discussed throughout this section, these two policies taken together would not necessarily ensure that significant environmental impacts of proposed General Plan buildout are mitigated to less-than-significant levels. Each of these policies is further discussed below.

The preparation and implementation of Comprehensive Site Development Standards (SDS), as stipulated in policy 1.17 would be prepared once the proposed General Plan is adopted. Therefore, the SDS cannot be evaluated within the confines of this EIR for their effectiveness in mitigating impacts on a site-by-site basis. Further, a program for the preparation and implementation of these SDS is not presented. Therefore, it is unknown whether or not adequate standards would be developed; how these standards would be implemented; and the types of land use, siting, and design mechanisms (including clustering) that would be employed to achieve the intent of the standards.

Additionally, policy 1.18 encourages clustering on sites where significant environmental features and/or environmental constraints are present. However, within the context of the entire Plan, it is unclear whether or not clustering is "encouraged" or "mandated." Policy 1.18 appears to only encourage clustering. However, Policy 13.1 states that clustering "shall" occur on all portions of a project containing "significant environmental features". Policy 13.8 states that measures to minimize disturbance of heritage and landmark trees and groves "shall" include mandatory clustering. Other policies (6.2, 15.3, 16.9, and 19.4) imply flexibility rather than mandating clustering.

Based on the outcome of the environmental impacts analyses performed in this EIR, policies 1.17 and 1.18 have been revised (see Mitigation Measure #1, in the Land Use section). Revised policies 1.17 and 1.18 provide a program for the preparation and implementation of the SDS. This program would ensure that: effective standards are prepared; appropriate land use, siting (including clustering), and design tools are applied on a site-by-site basis; and project approval occurs in accordance with defined conditions. This revised policy would allow for development while providing for adequate mitigation of significant environmental impacts that could occur on a site-by-site basis. While revised policies 1.17 and 1.18 (Mitigation Measure #1) are presented in the Land Use subsection, it applies to most of the natural resource subsections and is therefore referred to throughout the document.

While this revised policy addresses proposed General Plan buildout on a site-by-site basis, it does not fully address significant environmental impacts that could occur as a result of

overall buildout of proposed General Plan land uses at the densities identified on the land use map. This is the case for overall loss/disruption of wildlife habitat (including loss/disturbance of deer winter range) and habitat fragmentation that would occur with buildout of proposed General Plan land uses. These impacts would occur primarily in Rural Regions of the western portion of the County. Therefore, several land use map changes have been recommended (see Mitigation Measures #16 and #18 in the Biotic Resource subsection) as a means to mitigate these impacts.

4.1 LAND USE

INTRODUCTION

This section addresses potential land use impacts associated with buildout under: (1) proposed General Plan land uses and goals, objectives, policies, and implementation measures; (2) the RTP; and (3) amended zoning and revised zoning district maps as described in the Project Description section of this EIR. Specific topics include impacts related to: loss of open space; conversion of prime agricultural land; compatibility of land uses; and consistency of proposed General Plan land uses and goals, objectives, and policies with other area plans such as the General Plans for the Cities of Nevada City and Grass Valley.

This section is based on existing conditions information developed in the Nevada County Master Environmental Inventory, prepared by Harland Bartholomew & Associates, Inc. (1991), and in the proposed General Plan, Volume 2, (HBA, 1994). These documents are hereby incorporated by reference.

ENVIRONMENTAL SETTING

This subsection of the Land Use discussion provides an overview of the County's existing population, housing, land use and development patterns and activities, land use compatibility issues, open space, farmland, and other area plans that may affect development in the County.

Population

Substantial growth has occurred in Nevada County during the past two decades. The current County population is 78,510 (1990 Census data). With a population increase of 52,164 during the 1970-1990 period (see Table 4.1-1), considerable land has been absorbed for residential, commercial and industrial uses. During this 1970 to 1990 period, population growth occurred primarily in the unincorporated areas of the County. Both the western and eastern portions of the County grew appreciably during the 1980's. However, the eastern portion of the County grew at a greater rate than the rest of the County. The eastern portion of the County that experienced the most growth is now within the incorporated Town of Truckee.

Table 4.1-1 Population Projections		
Year	**Number**	**Percent Change**
1970	26,346	---
1980	51,645	96
1990	78,510	52
Source: Nevada County General Plan, Volume 2 (April 1994).		

Households

The substantial growth in the County is reflected in the overall growth in households. During the past 30 years, the number of households in the County has increased substantially. As shown in Table 4.1-2 this growth has generally outpaced household formation at the state level, particularly during the past two decades, and will continue to do so through the year 2010. However, as with population growth, the rate of household growth is expected to decrease over time. Overall, the rate of household growth corresponds closely with the rate of population growth identified above.

Table 4.1-2 Household Growth				
Year	**Nevada County**		**California**	
	Number	**percent Change**	**Number**	**percent Change**
1960	7,430	---	4,982,108	---
1970	9,601	29.2	6,573,861	31.9
1980	20,012	108.4	8,629,866	13.1
1990	30,758	53.7	10,381,206	20.3
2000	43,500	41.4	12,731,000	22.6
2010	50,600[1]	28.7	14,900,000[1]	17.0
1. Straight line projection as year 2010 projection not available from State Department of Finance. SOURCE: Nevada County General Plan, Volume 2 (April 1994).				

As with population, the unincorporated portion of the County registered the largest increase in households. The number of households in the unincorporated area grew by almost 60 percent during the 1980 to 1990 period, roughly double the percentage increase recorded for the incorporated areas.

Jobs/Housing Balance

The jobs-housing concept is used to examine whether an area has a balance between its housing supply and its employment base. The primary functions of a jobs-housing analysis are to: (1) provide a generalized measure of housing demand in a given area; (2) determine whether housing is available and affordable to meet housing demand; and (3) evaluate the potential severity of a jobs-housing imbalance on traffic congestion and fiscal imbalances.

An area that has too many jobs relative to its housing supply is likely to experience rapid escalations in housing prices (with a concurrent decline in affordability for the lower-income segments of the community), and intensified pressure for additional residential development. Conversely, if an area has relatively few jobs in comparison to employed residents, many of the workers are required to commute to jobs located elsewhere. The resulting traffic patterns can lead to road congestion and reductions in both local and regional air quality. Even if the communities have a statistical balance between jobs and housing, they are still very likely to experience sizable levels of in-commuting and out-commuting, given the dispersed nature of employment and residential opportunities elsewhere in the region and the mobility offered by the automobile. Jobs-housing indices are more useful for examining the potential for "self-containment" at the regional level than in determining whether this self-sufficiency actually exists in a given community.

The jobs-to-housing balance typically has been expressed as the ratio of jobs to housing units. In theory, a jobs to housing balance is achieved when there is a match between the number of jobs and housing units in an area. More specifically, this balance would be achieved when the number of housing units in each price range were matched with appropriate income levels of the jobs which were available in the area. A ratio of 1:1 represents one job for each housing unit. In accordance with the national trend of more than one wage earner per household, an appropriate balance would range from a low of 1.2:1 to a high of 1.6:1. California currently has a job/housing balance of 1.25:1. Numerous benefits have been ascribed to the attainment of a jobs to housing balance, including:

- an increase in quality, affordable housing for all income levels;
- a reduction in commuter vehicle traffic and correspondingly, air pollution;
- a reduction in commuter travel times;
- an increase in opportunities for alternative modes of transportation; and
- the achievement of social objectives, such as relief from class segregation and a greater sense of community among residents.

Based on an assessment of year-round housing units in Nevada County, the existing job/housing ratio is 0.9:1 (based on 1990 census data). This ratio is supported by existing evidence of commuting patterns in the County, which indicates that a substantial number of persons work outside of the County. However, it should also be noted that according to a 1992 study conducted by the Western Nevada County Transportation Management Association, approximately 32 percent of the work force commutes into the County, primarily from Placer and Sacramento Counties, and primarily on State Highway 49.

Housing Affordability

Overview of Housing Affordability

Table 4.1-3 displays the estimated 1990 distribution of households in Nevada County by income group. ~~It should be noted that the household distribution for 1990 was estimated using the 1980 Census and California Department of Finance "Population and Housing Estimates" for January 1990.~~ As Table 4.1-3 indicates, the lower income households tend to be located in more urbanized portions of the County. For example, very low income households constituted 39 percent of Grass Valley's and 38 percent of Nevada City's households compared to only 23 percent for the rural unincorporated area households. Lower income households tend to locate **in urban areas where housing costs are less, where** ~~near available~~ urban services (schools, sewer and water) **are available,** and in areas where dependency on the private automobile is reduced due to the availability of public transit.

Table 4.1-3
Household Distribution by Income Group by Area 1990

Geographic Location		Income Group			
		Less than 80% of Median	Between 50% and 80% of Median	Less than 50% of Median	Total
Grass Valley -	Households	**2,507**	**852**	**1,655**	**4,174**
	Percent of Total	**60%**	**20%**	**40%**	100%
Nevada City -	Households	**698**	**260**	**438**	**1,374**
	Percent of Total	**51%**	**19%**	**32%**	100%
Unincorporated -	Households	**8,581**	**4,267**	**4,314**	**25,259**
	Percent of Total	**34%**	**17%**	**17%**	100%
Nevada County -	Households	**11,787**	**5,380**	**6,407**	**30,807**
	Percent of Total	**38%**	**17%**	21%	100%

Source: ***Housing Needs Analysis*, December 1993 (1990 U.S. Census)**

In addition, 42 percent of the unincorporated area's households were in the above moderate income group. The unincorporated area of Nevada County is characterized by rural large lot development of single family homes. Many of these homes are served by private wells and septic tanks and depend entirely on the automobile for transportation. Therefore, development of affordable housing in the unincorporated area, particularly multi-family dwellings, typically is not feasible. This conclusion suggests that housing for very low and other low income group households should be provided for in the urbanized areas of Nevada County.

Regional Housing Needs Plan

The Sierra Planning Organization (SPO) is the agency responsible for the preparation of a Regional Housing Needs Plan (RHNP), pursuant to state housing law. SPO's jurisdiction, which covers a four-county area, including portions of Placer and El Dorado counties, Sierra and Nevada counties, and the cities of Nevada City, Grass Valley, Truckee, Loyalton, Placerville, Auburn and Colfax. The RHNP identifies the existing and future housing needs of all the communities within a region and serves as a guide to create interdependent management plans for the areas in that region. The housing needs determined in the RHNP are considered by SPO to be minimums. As part of the housing element, a land use analysis must be performed demonstrating that a jurisdiction has land available to meet the housing needs established in RHNP.

According to the 1997 allocation of households, the RHNP allocated 100 percent of very low income households and 97 percent of other low income households to the then unincorporated area of Nevada County (See Table 4.1-4.). This final allocation does not appear to consider the cost of providing affordable housing in an area that is largely without public services.

The RHNP allocation was available for review and comment by Nevada County, Grass Valley and Nevada City during the draft RHNP review period. During this review, the County and incorporated cities had the opportunity to comment on the housing allocation and to request exchanges between unincorporated and incorporated areas. This was the only opportunity for reallocation.

Based on the allocation of housing needs in the 1997 RHNP, the housing element's land use analysis contained in Chapter 6 of Section 2, Volume 2 of the Draft General Plan demonstrates that adequate land exists for the housing allocations within each income group.

Table 4.1-4
1997 Housing Allocation Nevada County

Geographic Location	Units per Income Group				
	Very Low[1]	Other Low[2]	Moderate[3]	Above Mod.[4]	Total
Incorporated	0	47	175	1,049	1,271
Grass Valley	0	31	133	948	1,112
Nevada City	0	16	42	101	159
Unincorporated	2,821	1,461	2,098	3,165	9,549
Nevada County Total	2,821 26%	1,511 14%	2,273 21%	4,214 39%	10,820 100%

Notes: [1]Very Low Income = Income not exceeding 50 percent of the median family income of the area.
[2]Other Low Income = Income between 50 and 80 percent of the median family income of the area.
[3]Moderate Income = Income between 80 and 120 percent of the median family income of the area.
[4]Above Moderate Income = Income above 120 percent of the median family income of the area.

Source: *Regional Housing Allocation Plan For Sierra Planning Organization, April 1991.*

Existing Land Use and Development Patterns

A land use inventory was conducted in 1991 by HBA as part of the Nevada County General Plan update process. This survey included all developed industrial, commercial, residential, public and quasi-public lands (excluding major open spaces). Figure 4.1-1 is a general and gross depiction of those areas where the inventory reveals a predominance of commercial, industrial, public and quasi-public lands, and/or other residential and residential/agricultural lands with average densities exceeding one household per three acres. A discussion of both private and public lands and associated development is presented below.

Private Land

Of the 992 square miles of land in Nevada County, approximately 623 acres or 67 percent is private land. Development that has occurred on private lands in the County is discussed in this subsection.

The Grass Valley/Nevada City area in the western portion of the County and the Truckee area in the eastern portion of the County have been the focal point of much of the County's commercial, industrial and residential growth and development on private lands, which are described below.

Figure 4.1-1 Areas of Concentrated Development

Figure 4.1-1 Areas of Concentrated Development (continued)

Residential. The Grass Valley and Nevada City areas have had a combined increase of nearly 3,000 residences during the past twenty years. Single family residential is the predominant housing type throughout the County, with most of the multi-family housing development located in Grass Valley. New residential land use outside the Nevada City/Grass Valley area is predominantly located in the Alta Sierra area, Lake Wildwood, and Lake of the Pines. This residential growth has consisted of urban-sized lots, as well as three- to five-acre ranchette parcels. Additionally, other smaller rural communities include Cascade Shores, Cedar Ridge, Chicago Park, Deer Creek Park, Peardale, Red Dog/You Bet and Rough and Ready.

Residential land uses in eastern Nevada County are concentrated around Donner Lake, in the large Tahoe-Donner development, in the Glenshire area to the east and the Prosser subdivisions to the north on Highway 89. Soda Springs, Kingvale and Floriston are small rural communities of less than 100 residences. There are few residential uses outside of these established areas. The eastern portion of the County is unique in that it contains few scattered rural homes found in most counties.

Commercial and Industrial. A majority of the commercial and industrial development in Nevada County is located in or around the incorporated cities of Grass Valley and Nevada City. Commercial uses are concentrated in downtown Grass Valley and downtown Nevada City, with newer uses occurring primarily in the Grass Valley vicinity, such as the Brunswick area and the Pine Creek Shopping Center area.

Since 1983, approximately 8,500 new jobs have been created in Nevada County, with 2,000 new manufacturing jobs, 1,700 in services, 1,400 in retail, 700 in construction and 2,700 jobs in other categories. This employment translates into 860 acres of new commercial and industrial land uses. New commercial development was substantial in the 1980's, but has not kept pace with the population growth of the County. Nevertheless, retail sales since 1986 have increased at a rate of about 10 percent annually in recent years.

The amount of land developed for commercial and industrial uses has increased substantially since 1983. A 1983 land use survey by the County indicated a total of 561 acres of commercial uses and 343 acres of industrial uses for a total of 904 acres. The 1991 land use survey conducted by HBA identified a total of 1,426 acres of commercial and 601 acres of industrial for a combined total of 2,027 acres. This land use survey, reflecting developed acreage, suggests an increase of 1,123 acres of commercial and industrial land use over eight years.

The acreage of commercial and industrial land use per 100 persons in Nevada County increased from 1.47 in 1983 to 2.43 in 1990. The 1991 land use survey compared this ratio with 32 other counties. This comparison showed that commercial and industrial growth in the County has kept pace with other California counties.

Public Lands

Approximately 33 percent of Nevada County's 992 square miles (978 square miles, excluding water areas) is owned by a public agency, and those lands are scattered throughout the entire County.

Federal lands included in Tahoe National Forest (169,686 acres) extend in a fairly consistent checkerboard pattern from east of North San Juan and east of Nevada City, easterly almost to the California-Nevada state line. The Toiyabe National Forest, containing 2,574 acres, lies adjacent to the state line. Federal lands administered by the Bureau of Land Management (some 11,000 acres) are scattered throughout the westerly and southerly portion of the County, although some BLM recreation lands along the South Yuba River corridor are being transferred to the State Department of Parks and Recreation as a part os the South Yuba River Project.

Land owned by the State Lands Commission cover about 4,600 acres in both the westerly and easterly portions of the County. The State Department of Fish and Game administers the 11,000-acre Spenceville Wildlife Management and Recreation Area, located on the common line with Yuba County, with about 7,500 acres lying within Nevada County.

The State Department of Parks and Recreation administers 6,300 acres which includes the historic Empire Mine State Park near Grass Valley; Malakoff Diggins State Historical Park, northeast of Nevada City; Donner Memorial State Park at Donner Lake within the Town of Truckee; and the South Yuba Project which is proposed to extend along the South Yuba River corridor from Englebright Reservoir to Malakoff Diggins State Historical Park.

Development Activities

General Plan Amendments

General Plan Amendments through 1990 have primarily occurred in the unincorporated areas around Grass Valley and Nevada City. The County General Plan currently has a total of twenty land use designations. The commercial and industrial categories contained 3,050 acres in 1980, and were amended between 1980 and 1987 to add 220 acres, which is less than a ten percent increase. The "large lot" residential designations (with 1.5-acre to 40-acre lots) had a net total gain of 1,654 acres between 1980 and 1987, which is a relatively small portion of the total 543,000 acres adopted in these designations in 1980.

Building Permit Activity

A review of residential building permits demonstrates the level of growth that has occurred in the County over the past decade. The highest growth year was 1980 with 1826 permits, and the economic down-turn of 1982 is reflected in the issuance of 847 permits. A total of 12,143 residential building permits were issued from 1980-1989 resulting in a population increase of 31,355 persons, a 68 percent increase. This rate of growth significantly

exceeded the growth in the State of California during the same period, which was approximately 24 percent.

Subdivision Activity

Trends in subdivision plat approvals provide a picture of past residential land-use trends. The number of new lots recorded varied considerably from year-to-year in the 1980 to **1990** ~~1989~~ decade. Between 1980 and 1985 the average annual number of new lots recorded was approximately 360, with a high of 486 new lots recorded in 1982. This average annual rate dropped to approximately **230** ~~180~~ new lots recorded between 1986 and **1990** ~~1989~~, with a low of 124 new lots recorded in 1988 **and a high of 414 new lots in 1990. Parcel recordation data have not been tabulated since 1990.** ~~The 1990 total of 414 new lots may be the beginning of a higher annual rate.~~

The number of existing improved lots within the County ~~at the end of 1990~~ in **mid-1994** was ~~33,214~~ **37,000.** ~~As of 1990, t~~ There were **also 17,300** ~~21,074~~ existing unimproved lots within the County for a total of ~~54,288~~ **54,300** lots. With a 199~~0~~**4** population of ~~78,510~~ **87,700**, the ratio is 2.4 persons per improved parcel. The ~~21,074~~ **17,300** vacant lots would accommodate an additional population of about ~~50,000~~ **41,000** based upon this ratio. (However, it should be noted that every existing unimproved lot may not be a "building site.") The projected year 2010 population is 139,488 persons, based on California Department of Finance projections, which would require approximately 28,000 dwelling units. Thus, even considering potential unbuildable parcels, existing vacant lots could accommodate a significant part of the projected year 2010 population in the County.

Open Space

The rural qualities of Nevada County relate to the amount and distribution of open space lands. Existing open space in the County provides for wildlife habitat; agriculture, timber and mining uses; recreational activities; and aesthetic values.

Open space in the County occurs on both private and public lands. On private lands the occurrence of open space is related to residential development at rural densities and agricultural, timber, and mining activities. On public lands, the occurrence of open space is related to the permanent designation of land for open space and recreational uses (such as for State Park lands), and the designation of land for multi-use purposes, including mining, timber, grazing, recreation, and habitat preservation (such as for Tahoe National Forest and Bureau of Land Management lands).

Farmland

The primary focus of agriculture in the County has centered on small family farms. Small farms have occurred most frequently due to the rolling terrain of the foothills. This trend of small farms has increased over the last 20 years. According to the 1987 Census of Agriculture, there were 386 farms in Nevada County. (A "farm" is defined as any place from which $1,000 or more of agricultural products were produced and sold, or normally

would have been sold during the census year.) This number of farms in 1984 represents an increase of 122 percent since 1974. While the number of farms has increased, the size of individual farms has declined 73 percent since 1974. The average size of a farm in Nevada County is 146 acres; 267 farms (69 percent) are less than 50 acres in size.

The increase in farms has included a diversification of crops being raised. Many types of exotic livestock, including llamas, ostriches, colored sheep and pot-belly pigs, as well as the more traditional types of livestock, are raised in the County. Numerous fruit and nut crops are grown as are grapes for the wine industry which is attracting national attention. Other agricultural businesses include specialty nurseries, herb farms, mushroom farms, aquaculture, Christmas tree farms, and fuel wood lots.

According to the California Department of Conservation, Farmland Mapping and Monitoring Program, there are seven classifications of important farmland. These are as follows: (1) prime farmland; (2) farmland of statewide importance; (3) unique farmland; (4) farmland of local importance; (5) grazing land; (6) urban and built-up land; and (7) other land. These categories are defined in Table 4.1-5, below.

Data contained on the Important Farmlands Maps for Nevada County are summarized below. Due to the scale of these maps, they have not been included in this EIR but are on file at the Nevada County Planning Department. Acreage information for each class of farmland in the western portion of the County is contained in Table 4.1-6.

As of February 1995, 5,424 acres of the agricultural and open space lands in Nevada County were held under Williamson Act contracts. Notices of Nonrenewal have been filed for three contracts that cover a total of 2,060 acres (Norman, 1995) The California Land Conservation Act of 1965 (commonly known as the Williamson Act) established a voluntary tax incentive program for preserving agricultural and open space lands. A property owner enters into a ten-year contract with the County, which places restrictions on the land in exchange for tax savings. The property is taxed according to the income it is capable of generating from agriculture and other compatible uses, rather than its full market value. Williamson Act contracts are renewed automatically each year unless they are canceled or a Notice of Nonrenewal is filed with the County. If a Notice of Nonrenewal is filed, the contract expires ten years from the date of the Notice. For cancellation, specific findings must be made. These findings address potential impacts to adjoining agricultural lands, potential discontiguous patterns of urban development, proximity of other non-contracted land available for the proposed use, and other issues.

Table 4.1-5
Definitions for Important Farmland Map Categories

Farmland Category	Definition
Prime Farmland	Land which has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods. It must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date.
Farmland of Statewide Importance	Land other than Prime Farmland which has a good combination of physical and chemical characteristics for the production of crops. It must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date.
Unique Farmland	Land which does not meet the criteria for Prime Farmland or Farmland of Statewide Importance, that has been used for the production of specific high economic value crops at some time during the two update cycles prior to the mapping date. It has the special combination of soil quality, location, growing season and moisture supply needed to produce sustained high quality or high yields of a specific crop when treated and managed according to current farming methods. Examples of such crops may include oranges, olives, avocados, rice, grapes, and cut flowers.
Farmland of Local Importance	Land that is either currently producing crops, or has the capability of production. Farmland of Local Importance is land other than farmland categories identified above. This land may be important to the local economy due to its productivity. This category varies from County-to-County and is determined by each County's boards of supervisors and a local advisory committee.
Grazing Land	Land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock. The minimum mapping unit for Grazing land is 40 acres.
Urban and Built-Up Land	Land used for residential, industrial, commercial, institutional and other land uses. This category includes public infrastructure facilities including landfills, sewage treatment plants, roads, etc. This land does not include strip mines, borrow pits, gravel pits, farmsteads, feedlots, greenhouses, etc.
Other Land	Land which is not included in any other mapping category. The following types of land are generally included: (1) Rural development of 1.5 to 10 acre parcels with at least one structure per parcel; (2) Brush, timber and other lands not suitable for livestock grazing; (3) Public lands not available for agricultural use; (4) Vacant and nonagricultural land larger than 40 acres in size and surrounded on all sides by urban development; (5) Confined livestock facilities of 10 or more acres unless accounted for by another category; (6) Strip mines, borrow pits, etc.

SOURCE: State Department of Conservation, Office of Land Conservation, Farmland Mapping and Monitoring Program. Definitions excerpted from A Guide to the Farmland Mapping and Monitoring Program, 1992, Publication Number FM-92-01.

Table 4.1-6
Important Farmland in Nevada County

Farmland Category	Acreage	Percent of Land Inventoried
Prime Farmland	349	0.1
Farmland of Statewide Importance	948	0.3
Unique Farmland	198	0.07
Farmland of Local Importance	33,188	11.4
Grazing Land	125,373	43.0
AGRICULTURAL LAND SUBTOTAL	**160,056**	**(54.9)**
Urban and Built-Up Land	13,891	4.8
Other Land	115,423	39.6
Water Area	2,075	0.7
TOTAL LAND INVENTORIED[1]	**291,445**	**(±100.0)**

1. Land inventoried includes lands in western Nevada County only (personal communication, Emily Kishi, State Department of Conservation, May 1994).

SOURCE: State Department of Conservation, Office of Land Conservation, Farmland Mapping and Monitoring Program.

The central and eastern portions of the County do not contain important agricultural farmlands. As shown in Table 4.1-6, farmland constitutes approximately 55 percent of the land area inventoried in the western portion of the County by the State Department of Conservation, Farmland Mapping and Monitoring Program. The majority of this farmland land is considered grazing land (78 percent), with prime farmland, farmland of statewide importance, unique farmland, and farmland of local importance constituting approximately 22 percent of the farmland in the western portion of the County. Urban and built-up land constitutes only 5 percent of the total land inventoried, providing an indication of the overall rural character of the western portion of the County. Small acreages of prime farmland occur in:

- Chicago Park;
- Near Grass Valley;
- Near Penn Valley;
- North of Alta Sierra; and
- Other scattered locations.

Small acreages of farmland of statewide importance occur:

- North of Newtown Road;
- South of Lake of the Pines;
- West of Wolf Road;
- West of Willaura Estates;
- Penn Valley;
- Near Lake Wildwood;
- South of Sweetland;
- Near North San Juan;
- South of North Columbia; and
- Other scattered locations.

Small acreages of unique farmland occur:

- Chicago Park;
- North of Alta Sierra;
- Southwest of Grass Valley;
- Near Cherokee; and
- Northwest of Nevada City Airport.

Land Use Compatibility Issues

Land use compatibility issues usually arise when different types of land uses occur in proximity to one another. For example, agricultural activities in proximity to residential uses can create land use conflicts related to dust, noise, odor, and traffic. Additionally, other conflicts can arise when private land uses occur in proximity to public land uses, such as the Tahoe National Forest. These issues are discussed further below.

Dust

Dust and debris can be generated by agricultural, mining, timber, and some industrial activities involving the manufacture of products. Such dust generation can be seasonal, as with agricultural activities, or on-going, as with manufacturing activities. The siting of land uses sensitive to dust, such as residences, schools, and hospitals can result in nuisance impacts and health impacts depending on the degree and type of dust generated and the proximity of the dust source to the sensitive land use.

Noise

Noise can be generated by roadways, as well as by the uses identified above. The Noise section of this EIR discusses ambient noise levels from both roadways and stationary noise sources. The siting of land uses sensitive to noise, such as residences, schools, hospitals, etc., can result in nuisance impacts and health impacts depending on the noise level generated and the proximity of the noise source to the sensitive land use.

Odor

Odors can be generated by public facilities (such as landfills, wastewater treatment plants, etc.), and agricultural activities/facilities (such as use of pesticides, storage of animal waste, etc). The siting of land uses sensitive to odors, such as residences, schools, hospitals, etc., can result in nuisance impacts depending on the nature and intensity of the odor generated and the proximity of the odor source to the sensitive land use.

Truck Traffic

Traffic characteristics that can result in land use compatibility issues usually relate to excessive truck traffic mixing with residential traffic. Such truck traffic mixing with residential traffic. Such truck traffic could result from commercial, industrial, or mining/timber operations.

Other Relevant Area Plans

City General Plans

The General Plans for Nevada City and Grass Valley are briefly discussed below with a focus on land use and policies that relate to development in the cities' Spheres of Influence (those lands that surround the cities and are potentially subject to annexation but are unincorporated). ~~Additionally, the recently incorporated Town of Truckee is also discussed, although, to date it does not have a General Plan to guide its future development.~~ **The Town of Truckee is currently preparing its first General Plan and has adopted draft policies and a land use map.**

Nevada City. The Nevada City General Plan (1980-2000) was prepared and adopted in 1986. The Plan consists of a land use map and text consisting of goals, objectives, and policies meeting State requirements. This Plan is relevant to consideration of growth and development in the County, especially with regards to those County lands that are included in the City's Sphere of Influence (SOI). County lands are currently included in the City's SOI, including developed, partially developed, or undeveloped lands in close proximity to the present City limits. It is the City's intention to ultimately annex all lands within its SOI.

The City's General Plan indicates that development in both the City and surrounding County lands requires interagency cooperation, as well as consistency in the identification and implementation of policies, especially as they relate to provision of public services and infrastructure. Policies of the City's General Plan provide for such interagency cooperation in the identification, funding, and implementation of public service improvements.

Grass Valley. The existing Grass Valley General Plan was prepared and adopted in 1982. The identified planning area around the City includes land in unincorporated Nevada County. The City's General Plan indicates procedures and goals for ultimate annexation of lands in its planning area. However, it does not indicate the extent to which land would

be annexed into the City. The City's General Plan also indicates the need for City/County cooperation in identifying and implementing future roadway improvements. Additionally, development in both the City and surrounding County lands will continue to require interagency cooperation, as well as consistency in the identification and implementation of policies, especially as they relate to provision of public services and infrastructure. Policies of City's General Plan provide for such interagency cooperation in the identification, funding, and implementation of public service improvements.

Truckee. The Town of Truckee officially incorporated on March 23, 1993, creating a new jurisdiction in eastern Nevada County. The Town, as of that date, assumed responsibility for planning functions within its boundaries, which encompasses most of the more intensively developed areas of eastern Nevada County. ~~The proposed General Plan land use map and goals, objectives, and policies reflect the most current land use planning information for the Town. Truckee does not yet have a General Plan to guide its future development.~~ **Preparation of the Town's first comprehensive General Plan is currently underway. The Town has adopted a draft land use map and policies to guide the completion of this General Plan process.**

Airport Master Plans and Comprehensive Land Use Plans

Nevada County has within its boundaries several small private airports and two public airports: the Nevada County Air Park and Truckee-Tahoe Airport. The Nevada County Air Park lies within the foothills near Grass Valley and Nevada City and the Truckee-Tahoe Airport is located east of the Town of Truckee. The Foothill Airport Land Use Commission designates airport safety areas adjacent to both of these airports.

Nevada County Air Park Master Plan. The 1990 Nevada County Air Park Master Plan analyzed three forms of airport capacity, which included airfield, building area, and environmental. The results of the capacity analyses showed that airport capacity will not be exceeded through the year 2010. However, the Master Plan indicated that significant improvements would be required in the short- and long-term to continue to operate safely.

Safety issues arise as a result of compatible and non-compatible land uses existing in close proximity to one another. The Federal Aviation Administration (FAA) defines the most critical areas as those that are immediately beyond the runway ends - the initial climbout and final approach sectors. It is within these approach/departure sectors that the concentration of aircraft accidents occur. In addition, according to the Comprehensive Land Use Plan (CLUP) for the Nevada County Air Park, there are studies indicating that about half of all airport accidents occur on airport property and an additional 15 percent of accidents occur within one mile outside the airport property.

This information suggests that areas immediately off the ends of the runway and under the airport traffic pattern should be carefully evaluated for developed and planned land uses. Land uses that can create hazards include objects that:

- Exceed Federal Aviation Regulations Part 77 height standards;

- Attract large concentrations of birds within approach/departure sectors;
- Produce smoke;
- Flash or reflect light; or
- Generate electronic interference.

The Airport Land Use Commission designates airport safety areas and land use compatibility standards. Safety areas for Nevada County Air Park are shown on Figure 4.1-2.

Truckee-Tahoe Airport Master Plan. The Truckee-Tahoe Airport Master Plan was most recently undated in 1988. The Master Plan indicates that improvements will be required to accommodate future demand. The Airport Land Use Commission designates airport safety areas. Safety areas for Truckee-Tahoe Airport are shown on Figure 4.1-3.

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of land use impacts are listed below.

Land Use Element

Policies 1.1, 1.4, 1.5, 1.6, 1.12, 1.14, 1.16, 1.17, 1.18, 1.20, 1.21, 1.24, and 1.25.

Economic Development Element

Policies 2.1 through 2.21.

Recreation Element

Policies 5.1, 5.2, and 5.4 through 5.23.

Open Space Element

Policies 6.1 through 6.9.

Housing Element

Policies 8.2 through 8.25

Noise Element

Policies 9.1 through 9.19.

Agricultural Element

Policies 16.1, and 16.4 through 16.9.

Minerals Management Element

Policies 17.6, 17.14, 17.15, 17.17, and 17.24.

Figure 4.1-2

Figure 4.1-2 (continued)

Figure 4.1-3

Figure 4.1-3 (continued)

Regional Transportation Plan

Policies 1.1 and 2.2.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a plan impact would be considered significant: (1) if the plan will result in nuisance impacts as a result of incompatible land uses; (2) if the plan will result in conversion of open space to urban- or suburban-scale uses; (3) if development would convert prime agriculture land, **unique farmland, farmland of local importance, or grazing lands in ownership patterns of 40(+) acres** to non-agricultural uses; (4) if the plan will result in conflict with adopted environmental plans and goals; or (5) if it would pose public health and safety hazards. These standards are generally derived from portions of the CEQA Guidelines, including various sections and Appendix G and Appendix I. Some standards are derived from agency regulations or are professional standards commonly used to further define what actions may cause "significant effects" under CEQA.

Impact #1. *Buildout of proposed General Plan land uses and RTP road improvements would result in incompatible land uses in proximity to one another. This is considered to be a* ***significant*** *impact as proposed plan policies would not necessarily minimize land use conflicts that could occur.*

As stated above, in the Environmental Setting section, land use conflicts can occur when a sensitive land use (such as a residence or school) is located in proximity to land uses that generate noise, dust, odor, or heavy traffic. Such conflicts can occur when a sensitive land use is sited in proximity to some industrial uses; agricultural, mining and timber harvesting/production activities; or in heavy commercial areas where vehicle and truck traffic is a problem. (Note: Land use conflicts related to noise are discussed in the Noise section of this EIR. Land use conflicts related to agricultural activities are discussed in Impact #3, below.)

A review of the Land Use Maps indicates that buildout of proposed General Plan land uses could result in land use conflicts in Community Regions related primarily to sensitive land uses in proximity to industrial or commercial uses. Land use conflicts in Rural Regions would be related primarily to sensitive land uses in proximity to agricultural, mining and timber harvesting/production activities. Several examples of areas where potential land use conflicts could occur include: around the outskirts of the New Town SDA where rural residential land uses are located, and the SDA area located to the northwest of the Nevada County Airpark (as discussed in the Noise section of this EIR). The occurrence of such conflicts would ultimately depend upon the types of land uses that would be located adjacent to existing sensitive uses or adjacent to existing nuisances. The occurrence of such conflicts would also relate to the ultimate location of designated open space lands throughout the New Town SDA. As identified on the Land Use Maps, over one-half of the total 7,000 acres attributed to this SDA would be open space, which could provide for

buffering of adjacent uses as identified in policy 1.16 and provide mitigation for potential land use conflicts.

The proposed General Plan provides policies which seek to address potential land use conflicts that can occur between various uses. Specifically, policy 1.17 provides for the development of site development standards which would provide for transitions between uses and multiple-use site development. Revised policy 1.17 (see Mitigation Measure #1, below) provides a program for the preparation and implementation of site development standards related to minimizing conflicts between land uses. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions. Policies 1.20 and 1.21 indicate that the permitting and siting of future industrial uses in proximity to public facilities or institutions (such as schools or hospitals) shall provide for buffers, setbacks, landscaping, fencing, or other means to mitigate adverse impacts.

As mining activities can result in traffic, noise, and air and water pollution, sensitive land uses located in mineral resource zones could be incompatible with mining operations and interfere with existing and future mineral extraction. Potential land use conflicts associated with mineral extraction are addressed by policies 17.6, 17.14, 17.15, 17.17, and 17.24 which provide for evaluation and mitigation of the environmental impacts associated with mining. (Refer to the Noise section of this EIR for further discussion regarding noise impacts of mining.)

Regional Transportation Plan policy 1.1 stipulates that transportation facilities should be compatible with adjacent uses. Policy 2.2 indicates that the significant adverse environmental impacts of transportation improvements shall be avoided or fully mitigated (policy 2.2).

Implementation of the above policies and revised policies 1.17 and 1.18 (see Mitigation Measure #1 below), taken together, serve to minimize potential land use conflicts that could occur. Reduction in conflicts would occur due to recommended buffering, screening, and land use transitions. Land use conflicts related to agricultural activities are addressed below in this section. Land use conflicts related to noise are specifically addressed in the Noise section of this EIR.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.20, 1.21, 17.6, 17.14, 17.15, 17.24 and Regional Transportation Plan policies 1.1 and 2.2 would serve to reduce this impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of proposed policies identified above and Mitigation Measure #1, below, would serve to reduce the impact to a *less-than-significant* level.

1. Replace proposed General Plan policies 1.17 and 1.18 in their entirety, as follows, in order to provide for: a program for preparing adequate development standards; implementing these standards via the use of appropriate land use, siting, and design tools (including mandatory clustering); and determination of project approval.

Policy 1.17 - The County shall prepare and adopt Comprehensive Site Development Standards. These standards shall be used during the "project site review process" to provide a consistent approach for addressing: the presence of sensitive environmental features and/or natural constraints; clustering and provision of open space as part of site development; the potential for land use conflicts between uses; and the potential for public health hazards.

The County shall prepare and adopt specific Comprehensive Site Development Standards which shall be applicable to all development projects in *Community Regions* and *Rural Regions* and protective of the County's unique character, providing guidance for:

a. Protection of environmentally sensitive resources;
b. Provision of open space as part of site development;
c. Prevention and elimination of fire hazards;
d. Maintenance and enhancement of vegetation and landscaping;
e. Prevention and elimination of flood hazards;
f. Transitions between uses and multiple-use site development;
g. Community design;
h. Buffering and screening to mitigate adverse effects; and
i. Incentives to provide for access to public resources and open space values; and
j. Protection of important agricultural mineral and timber resources.

The standards shall identify the basic requirements for site development in the County, including, at a minimum, standards to mitigate the impact of development on environmentally sensitive resources as defined in the following criteria:

- Wetlands (as delineated in the National Wetlands Inventory (NWI);
- Important deer habitats, as defined by Fish and Game's Migratory Deer Range Maps;
- Landmark oaks, defined as any oak 35+" at dbh;
- Landmark groves, defined as areas with 10+% canopy closure based on CDF's Hardwoods Map;
- Rare and endangered species, as found in NDDB and Inventory of Rare and Endangered Vascular Plants of California, 1994;
- Riparian corridors within 100 feet of intermittent or perennial water courses, as shown on USGS quad maps;
- Significant cultural resources, as defined by Appendix K of CEQA;
- Floodplains, as defined by FEMA, precluding development and land disturbance within floodways and restricting development within the floodway fringe, through the establishment of floodplain setbacks and associated development regulations;

- Important timberlands, as defined by Site Class 1 through 4, or a moderately high to very high site index (85+) using soils survey maps;
- Important agricultural lands, as defined by State Important Farmland map;
- Significant mineral areas, defined by State DM&G's MRZ-2 classification maps;
- Earthquake faults, as defined by State Fault Map of California, 1975, or as determined by the State DB&G;
- Avalanche hazard, as defined by Avalanche Hazard Study;
- Steep slopes (30+%);
- Areas with high erosion potential, as delineated in Figure 3.3 of the Nevada County Master Environmental Inventory;
- **Areas subject to fire hazards, as defined by the State Department of Forestry's Fire Hazard Zone Map;**
- **Visually important ridgelines and viewsheds, as defined by standards developed by Policy 18.3 of the General Plan.**

Where such resources are present, the standards shall require that professional field inventory and review shall be undertaken to delineate the extent of the resource and determine the impact of the proposed development:

- Identification of building envelopes;
- Conservation easements/deed restrictions;
- Use of common vs. individual driveways;
- Specification of location and type of fencing;
- Identification of setbacks and/or buffers;
- Development restrictions;
- Use of Transfer of Development Rights; and
- Offsite mitigation/mitigation banking.

The County shall approve a project for a discretionary permit only if it can be demonstrated that the project as designed and sited meets the intent of the SDS performance criteria.

Policy 1.18 - Clustering of development is an effective and direct means to provide for the maintenance of the rural quality of life and protection of environmental resources which are important to Nevada County. Therefore, clustering of all land divisions shall be required within the Estate, Rural, and Forest General Plan land use designations in order to maintain the open, pastoral character of development which gives definition to the *Rural Regions*, and to protect environmental features by preserving areas containing such features as Open Space.

In all other residential use designations (including Residential, Urban Single-Family, Urban Medium Density, and Urban High Density), clustering of development shall be strongly encouraged to maintain viable open space onsite to contribute to open space linkages through and between land use areas. In addition, clustering in these land use designations shall be mandatory for all discretionary projects where environmentally sensitive resources, as defined in Policy 1.17, are present.

Clustering may be achieved by building site clustering with creation of permanent open space; restriction of buildable area on individual lots; or other means which are consistent with the protection of the natural resources and environmental characteristics on the site.

No specific amount or ratio of open space shall be required; however, the amount of open space shall not be less than the amount of land area on the site subject to significant environmental features, as defined in Policy 1.17. Where the entire site is affected by significant environmental features, clustered development shall occur on the least sensitive habitat or resource area, as defined by an environmental analysis. Within such defined areas, **minimum** ~~maximum~~ subdivision parcel size shall be limited to that needed to meet water and sewage disposal standards, as determined by the Department of Environmental Health.

Open space created through clustering shall be assured of permanent maintenance as open space by mechanisms such as, but not limited to, dedication, permanent easement, irrevocable trust, deed restrictions, or other mechanism assuring its permanent status.

The allowable number of dwelling units for any clustered development shall not exceed the number of units determined by dividing the total acreage of a parcel by the maximum permitted density specified in Policy 1.22 for the land use designation in which the parcel is located.

1A. Additional mitigation could include changes to the land use map to reduce densities to the RES designation for the Sunset, Squirrel Creek, Alta Hill, and Ridge Road areas in response to the Resolution Committee recommendations. Densities should be reduced in the Penn Valley area, the Mystic Mine Road area, the Rough and Ready area, and the Lake Vera/Round Mountain Neighborhood Association area in response to the Resolution Committee recommendations.

1B. Revise Policies 1.5j and 1.5k as follows:

Policy 1.5.j.: Highway Commercial (HC) is intended to provide for the retail service needs of both highway-related and tourist populations, including automotive and travel-related services, recreation, dining, and lodging. Development within this designation shall ~~should~~ be grouped as a contiguous center to preclude strip development, and with convenient, controlled access to Interstate, freeway or primary arterial routes.

Policy 1.5.k.: Rural Commercial (RC) is intended to provide for limited day-to-day retail and service needs for local residents, or for uses of limited scale and intensity providing goods and services to support local agricultural, natural resource or recreational operations. Such designations should have not more than 5 ~~10~~ acres in a single location, and a convenient, controlled access to an arterial or major collector roadway.

Size may be increased to not more than 10 acres where it is determined that a local market need clearly exists for this size development based upon a professionally-prepared market study, and a Design Master Plan is adopted providing for development in keeping with the rural character of the area.

1C. Policy 3.19 should be amended as follows:

Policy 3.19 ~~**Maintain the existing requirement for minimum lot sizes for single-family residential uses based upon type of water and sewer facilities as follows:**~~

~~**a. Public domestic treated water and public sewage system - 10,000 square feet.**~~

~~**b. Public domestic treated water and individual sewage disposal system - 1.5 acres.**~~

~~**c. Groundwater well and public sewerage system - 1.5 acres.**~~

~~**d. Groundwater well and individual sewage disposal system - 3 acres.**~~

~~**These minimum requirements may be increased where other considerations, including adverse soil, geologic or topographic conditions may warrant larger parcel sizes.**~~

Maintain minimum lot size standards sufficient to maintain adequate area for the appropriation of water and disposal of sewage and ensure the continued protection of the public health, safety, and welfare.

Impact #2. *Buildout of proposed General Plan land uses and RTP road improvements would result in the conversion of open space areas to urban/suburban uses. This is considered to be a* ***significant*** *impact as proposed General Plan policies would not prevent the significant conversion of existing open space to developed uses.*

Buildout of proposed General Plan land uses and RTP road improvements would result in the development of a large amount of currently undeveloped land in the County, subsequently reducing the amount of open space within the County. This loss of open space would result from conversion of agricultural land to more urban uses, subdivision allowed under the proposed General Plan, and development of currently unimproved parcels.

The proposed General Plan emphasizes growth in Community Regions and limits growth in Rural Regions (policy 1.1). This focus will help to maintain the overall rural character of the County and minimize loss of open space. Loss of open space associated with development allowed under the proposed General Plan would occur primarily in identified Community Regions and other planned communities that could be developed under the

Planned Development (PD) and Special Development Area (SDA) land use designations. For example, development of the New Town SDA could convert up to 7,000 acres of currently undeveloped open space land to a mix of both urban and non-urban land uses. Over one-half of this acreage would remain as designated open space, according to the proposed General Plan land use map and policy 1.16.

The General Plan land use map allows for the maintenance of open space through the Open Space land use designation (policy 1.5) which is intended to provide for lands serving one or more of the following purposes, as identified in policy 6.1:

- Preservation of natural resources;
- Conservation of open spaces for the managed production of resources (such as timber and mining);
- Maintenance of areas with importance for outdoor recreation;
- Delineation of open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions; and
- Provision of open spaces to create a buffer which may be landscaped to minimize the adverse impact of one land use on another.

As further stated in policy 6.1, the Rural, Forest and Recreation designations of the proposed General Plan also provide visual and functional open space. In addition, open space would also be maintained through the provision of adequate parkland to meet park standards identified in policy 5.5. Approximately 300 acres of new regional parkland would need to be dedicated and developed to provide for planned growth. Local park districts would also be providing for neighborhood and community parks.

Policy 6.2 indicates that the County may use clustering of development to preserve open space as provided for in Land Use Element policy 1.18. Policy 1.18 indicates that clustering will be encouraged in areas to maintain the rural character of the County and to protect environmental features. However, as this clustering is not required, open space areas would not necessarily be maintained. Policies 1.14 and 6.5 provide for development of urban open space in conjunction with development in Community Regions, Villages, and Rural Centers. Policies 1.17 and 6.9 provide for the development and implementation of site development standards to determine the open space requirements of each discretionary project. However, as the site development standards have not been prepared it is difficult to evaluate whether such standards would maintain open space and associated visual and natural resource values. Revised policy 1.17 (see Mitigation Measure #1, above) provides a program for the preparation and implementation of site development standards related to providing open space as part of site development. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions.

Policy 6.9 further states that the site development standards will include consideration of non-disturbance and open space setbacks from identified sensitive environmental,

biological, or cultural resources. Policies 6.3, 6.4, and 6.6 through 6.8 further provide for the protection of and access to open space.

While these policies may serve to maintain a certain proportion of existing open space as development allowed under the General Plan occurs, overall loss of open space is considered to be an inevitable and irreversible effect of future development. Loss of open space associated with proposed General Plan buildout would affect the existing rural quality and aesthetic values, wildlife habitat, recreational resources, and agricultural, timber, and mining activities.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.1, 1.5(r), 1.14, 1.16, 1.17, 1.18, 5.1 through 5.23, and 6.1 through 6.9 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of proposed policies identified above, Mitigation Measure #1, above, Mitigation Measures #16 and #18 in the Biotic Resources Section, **Mitigation Measure #39 in the Public Services and Utilities Section,** and Mitigation Measure #2 below would serve to further reduce the impact, but *not* to a *less-than-significant* level. Therefore, this impact is considered to be *significant and unavoidable*.

2. The following policy should be added to the Open Space Element of the proposed General Plan.

   The County shall consider forming an Open Space District to acquire and manage open space lands. Such a District would be able to acquire open space through dedication, or voluntary purchase from willing sellers of property of easements; the use of eminent domain would not be allowed.

   The District would be able to acquire land or other real property interests which could focus on lands which contain unique, valuable or sensitive resources reflecting environmental or biological sensitivity; scenic landscape units; community separators; historic, cultural, and archaeological content; and low intensity recreational potential. **The District could also serve as a mitigation bank to provide funds for the restoration and enhancement of wetlands and watersheds in coordination with mitigation for new development allowed under the General Plan.**

   The County may also consider formation of an Open Space Authority under applicable State legislation to finance the acquisition of open space in the County through a transaction and use tax over a 20 year period; the Authority would enter into an agreement with the District for use of the funds generated by the tax in accordance with an expenditure plan adopted by the Authority.

Impact #3. *Buildout of proposed General Plan land uses and RTP road improvements would result in the conversion of farmland to urban- or suburban-scale uses. This is considered to be a* ***significant*** *impact as proposed General Plan policies do not necessarily protect farmland from conversion to urban uses.*

Development under the proposed General Plan land use map would result in the direct conversion of most of the remaining 349 acres of prime agricultural farmland in the County. **In addition, farmland that has been mapped as unique farmland, farmland of local importance, and grazing lands in ownership patterns of 40(+) acres would be converted to urban or suburban-scale uses.** As noted in the Environmental Setting section, prime farmland is located in Chicago Park, near Grass Valley and Penn Valley, north of Alta Sierra, and in other scattered locations. Most of this prime farmland acreage occurs in small pockets on lands designated for Rural 5 or denser development. As stated in the California Government Code, Section 51222, agricultural land shall be presumed to be in parcels large enough to sustain their agricultural use if the land is: (1) at least 10 acres in size in the case of prime agricultural land; or (2) at least 40 acres in size in the case of land which is not prime agricultural land. Therefore, if these prime farmland areas were subdivided as allowed under these proposed land use designations, it can be assumed that the prime agricultural land would ultimately be converted as a result of development in these areas.

Likewise, development under the proposed General Plan land use map would result in the direct conversion of other important farmlands in the County (including farmland of statewide importance, unique farmland, farmland of local importance, and grazing land). These farmlands would be converted as a result of development under Rural 5 and denser land use designations.

Additionally, land use compatibility issues can arise when residential and related development occurs near agricultural operations, which can impact the continued viability of agriculture. Compatibility issues occur as residential development comes into areas where active agricultural activities are taking place. Exposure to dust, noise, odors, and pesticide spraying can cause residents to complain and put pressure on local officials to require modification of standard farming practices. Many farmers attempt to modify their farming practices to appease their neighbors, but the costs of such modifications can make their operations less competitive. Special practices are sometimes mandated by state or local restriction on farming operations. As discussed in *The Impacts of Farmland Conversion in California* (Department of Conservation, Office of Land Conservation, 1991) in extreme cases, farmers may cease farming altogether and sell their land to developers, which in turn increases urban pressures on remaining farmers in the area.

As discussed in the Environmental Setting section, with the occurrence of increased land values in Nevada County over the past 20 years, there has been a trend towards subdivision of large historical farmland areas, resulting in greater numbers of smaller farms. There is no reason to expect that this trend would change in the future. Land normally has greater economic value in urban/suburban use than in farm use. As development proceeds in an area, land prices increase above their value for agricultural production. Higher land prices

can constitute barriers to entry into farming and to expansion of existing farms. Farmers also have an incentive to sell the land. Therefore, a trend towards higher land prices could reduce the sustainability of agriculture over the long term.

Proposed General Plan policies 16.1 and 16.4 encourage agriculture in Rural Regions and maintenance of existing agricultural zoning on lands designated as Rural on the General Plan land use map, including lands in the Residential Agriculture (RA), General Agriculture (A1), Exclusive Agriculture (AE), Forest and Recreation (FR), and Timber Production Zone (TPZ) districts. While these districts would allow for continued agricultural activities, provisions of these districts would not prohibit subdivision and development of rural residential uses. Subdivision of farmlands to Rural 5 or less would make continuation of agricultural activities difficult, if not infeasible.

Policies 16.5 through 16.9 are intended to reduce potential land use conflicts between residents and farmers, and provide for: (1) minimum 100-foot setback between new residential and important agricultural lands; (2) amendment to the Right-to-Farm Ordinance to provide for notice to buyers of land in the RA, A1, AE, and FR zoning districts describing normal agricultural practices and informing buyers of the right to continue such practices; and (3) clustering of new residential in accordance with policy 1.18, to reduce potential conflicts with agricultural operations. It should be noted, however, that clustering of development is only "encouraged." It is not "required" as a condition of development. Further, policy 1.17 stipulates that site development standards will be implemented to provide for transitions between uses and for buffering/screening to mitigate adverse effects. However, as these site development standards have not yet been prepared, it is difficult to assess their effectiveness. Revised policy 1.7 (see Mitigation Measure #1, above) provides a program for the preparation and implementation of site development standards related to minimizing conflicts between agricultural land and surrounding uses. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions.

Implementation of these policies would not necessarily prevent the conversion of farmland to urban/suburban uses, nor would they affect the trend towards increasing land values in the County which could put pressure on farmers to subdivide and/or sell their land. Implementation of these policies will help to minimize potential conflicts, but will not eliminate them. As stated in *The Impacts of Farmland Conversion in California*, right-to-farm ordinances do not prevent people from complaining about farming practices. Additionally, right-to-farm ordinances do not grant farmers immunity against enforcement of health and safety laws, such as those concerning pesticide drift. However, local authorities are likely to be sensitive to such complaints, especially if complaints begin to mount.

Regional Transportation Plan policy 1.1 stipulates that transportation facilities should be compatible with adjacent uses. Policy 2.2 indicates that the significant adverse environmental impacts of transportation improvements shall be avoided or fully mitigated (policy 2.2).

Regional Transportation Policy 1.1 stipulates that transportation facilities should be compatible with adjacent uses. Policy 2.2 of the RTP indicates that the significant adverse environmental impacts of transportation improvements shall be avoided or fully mitigated.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.18, 16.1, and 16.4 through 16.9 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

The following text should be added to the end of Policy 16.17: "Parcels eligible for Williamson Act contracts shall be 5 or more acres in size."

Implementation of proposed policies identified above, ~~and~~ Mitigation Measure #1, **and Mitigation Measure #39 in the Public Services and Utilities Section,** would serve to further reduce the impact but *not* to a *less-than-significant* level. This impact is therefore considered to be *significant and unavoidable.*

Impact #4. *Buildout of proposed General Plan land uses could result in conflicts with environmental plans and goals identified in the Nevada City and Grass Valley General Plans. This is considered to be a* ***less-than-significant*** *impact as proposed plan policies would minimize conflicts.*

The proposed Nevada County General Plan land use map, and goals, objectives, policies, and implementation measures are applicable to all unincorporated lands within the County. Unincorporated lands also include those areas within the spheres of influence of incorporated areas.

Nevada County contains three incorporated areas including, the cities of Grass Valley and Nevada City, and the Town of Truckee. Buildout of proposed General Plan land uses within the spheres of influence of these incorporated areas could potentially conflict with adopted environmental plans and goals contained in the cities' General Plans. It should be noted that the Town of Truckee does not yet have a General Plan as they only recently incorporated in March of 1993. Goals, objectives, and policies for the Town of Truckee are contained in the proposed General Plan for Nevada County.

Proposed General Plan policy 1.38 indicates that within the City/Town spheres, the General Plan land use maps will generally reflect the City's/Town's land use mapping. This policy further states that in some instances, the County may provide for a less intensive land use due to infrastructure capability, environmental constraints or effect on land use and development patterns outside the spheres. However, the County's General Plan will not preclude implementation of City/Town Plans. Policy 1.40 indicates that the County will cooperate in the development and/or revision of the City and Town General Plans. The

County may amend its General Plan within spheres of influence to reflect these updates or revisions.

Policy 1.39 further provides that for all discretionary projects within spheres of influence, the County shall request that the City/Town determine whether or not it desires to annex a given project site. If annexation is desired, the applicant will be directed to the City/Town. If annexation is not desired, the application will be under County jurisdiction but the County shall refer the application to the City/Town for review and comment.

Implementation of these policies would provide for land use designations within spheres of influence, consistent with City General Plans and consideration of City environmental policies during the review of discretionary projects.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.38 through 1.40 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #5. *Buildout of proposed General Plan land uses could result in conflicts with airport master plans related to potential public safety concerns. This is considered to be a* ***less-than-significant*** *impact as proposed plan policies would minimize conflicts.*

Figures 4.1-2 and 4.1-3 identify airport safety areas in and adjacent to the Nevada County Air Park and the Truckee-Tahoe Airport. A review of proposed General Plan land uses adjacent these airports indicates the following.

Safety Area 1 and 2 (Clear Zones) of Runway 25 at the Nevada County Air Park are bordered, but not encroached upon, on the north and south sides by residential developments. Safety Area 1 of Runway 7 is bordered, but not encroached upon, on the south by industrial buildings. All other safety areas at this airport are surrounded by open space.

At the Truckee-Tahoe Airport some industrial buildings are located south of Runways 28L and 10R but do not encroach upon any of the safety areas. Most of the airport is bordered by open space, with the exception of a residential development at the foot of Safety Area 2 of Runway 10R.

Proposed County General Plan policy 10.7 stipulates that, through appropriate zoning regulations, the County will enforce airport ground and height safety areas, and land use compatibility standards that are consistent with the Comprehensive Land Use Plan adopted by the Foothill Airport Land Use Commission for the Nevada County Airpark. This policy

should help to ensure that incompatible development does not occur within airport safety areas.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policy 10.7 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

4.2 GEOLOGY AND SOILS

INTRODUCTION

This section addresses potentially significant impacts related to seismic activity, erosion, landslide activity, and mineral resources. Seismic hazards are related to ground rupture and groundshaking associated with buildout under proposed General Plan land use designations and goals, objectives, and policies, the Regional Transportation Plan, and amended zoning and revised zoning district maps as described in the Project Description section of this EIR. Seismic-related dam failure and avalanches are identified herein but discussed in detail in the Hydrology and Water Quality and the Air Quality and Climatology sections of this EIR.

This section is based on existing conditions information developed in the Nevada County Master Environmental Inventory (HBA 1991). This document is hereby incorporated by reference.

ENVIRONMENTAL SETTING

Geologic Substructure

Nevada County is part of the Sierra Nevada Range, a geologic block approximately 400 miles long and 80 miles wide which extends in a north-south band along the eastern portion of California. The terrain of Nevada County is distinctly characterized by two features of the Sierra Nevada Range. The western third of the County is comprised of rolling foothills which form a transition between the low-lying Sacramento Valley and the mountains to the east. The eastern two-thirds of the County is comprised of the steep terrain and exposed granite of the Sierra Nevada range itself. The geologic substructure of the County can be divided into three very broad groups (See Figure 4.2-1). Zone I is located in the western foothills, Zone II is located in the central portion of the county, and Zone III is located in the eastern portion of the county. These areas are described below.

Western Foothills (Zone I). This area, extending from the Yuba County border to just northeast of the Grass Valley/Nevada City area, is generally comprised of metavolcanic (Mesozoic Jura-Trias Metavolcanic) and granitic (Mesozoic Granitic) formations.

Central Portion (Zone II). The area extending northeast of the Grass Valley/Nevada City area to the upper mountainous area near Bowman Lake Road is generally comprised of sedimentary and metasedimentary (Paleozoic Marine Metasedimentary) and volcanic (Cenozoic Volcanic) formations.

Eastern Portion (Zone III). This portion of the County is generally comprised of volcanic (Cenozoic Volcanic) and granitic (Mesozoic Granitic) formations.

Seismic Characteristics

Earthquakes are naturally occurring events that involve the moving or shaking of the earth's crust, and are believed to be caused by the release of stresses accumulated as a result of rock rupture along opposing fault planes in the Earth's outer crust. Faults are breaks and fractures in the earth's crust formed by movement in the crust. Movement along a fault is what occurs during an earthquake. The greater the number of faults within an area, the greater the risk of seismic activity. The amount of seismic risk involved with a fault is dependent upon several factors, including fault size, depth and length, and fault activity. Seismic risk increases as fault depth decreases and length increases. Whether or not a fault is considered to be active is based on fault movement at or near the surface of the ground during a given period of time. However, at the present, there is no general agreement among authorities as to the length of the time period to be used to distinguish an active fault from an inactive fault.

As shown on Figure 4.2-2, prequaternary faults can be found in the County's western half, running generally in a north-south direction. Although the western half of the County contains relatively inactive faults, it should be pointed out that a very high percentage of building construction within the high-density areas of Grass Valley and Nevada City is quite old. Therefore, damage in these areas might be considerable if a major earthquake occurs, despite the fact that most of the buildings are only one or two stories. Quaternary and historic faults can be found in the eastern portion of the County near Truckee. Of particular note is the Dog Valley or Truckee fault which runs through Truckee from Prosser Reservoir past Boca Reservoir to Stampede Reservoir in Sierra County.

Faults within the State of California are divided into three categories: prequaternary (older than two million years); quaternary (younger than two million years); and historic (less than 200 years). Prequaternary faults can be found in the County's western half, running generally in a north-south direction. Quaternary and historic active faults can be found in the eastern portion of the County near the Town of Truckee (see Figure 4.2-2).

According to the U.S. Geological Service, Nevada County falls within all three "Maximum Expectable Earthquake Intensity" severity zones. The western half of the County is in the low intensity zone, the middle quarter is in the moderate zone and the eastern quarter is in the highest intensity zone (see Figure 4.2-2 and Table 4.2-1).

Since 1887, Nevada County has experienced 26 earthquakes at a Modified Mercalli Intensity (MMI) of VI or VII and 10 earthquakes at a MMI of VIII (see Figure 4.2-2). No major earthquakes of MMI of X or greater have occurred in the Nevada County area.

Figure 4.2-1 Geologic Substructure

Figure 4.2-1 Geologic Substructure (continued)

Figure 4.2-2 Epicenters and Faults

Figure 4.2-2 Epicenters and Faults (continued)

Table 4.2-1
Maximum Expectable Earthquake Intensity Zones

Zone	Probable Damage	Probably Maximum Intensity	Richter Magnitude Scale
I-Low	Minor to Moderate	VI or VII	5
II-Moderate	Moderate	VII or VIII	5 to 6
III-High	Major	IX or X	7

SOURCE: Nevada County Master Environmental Inventory (December 1991).

The latest earthquake to affect Nevada County was the Boca or Truckee earthquake of 1966 which had a Richter magnitude of 5.4 and an MMI of VII. Twenty-one after shocks at a magnitude of four or greater were felt in the area, with Russell Valley generally believed to be the location of the earthquake's epicenter. Although damage was extensive in the area, it was minor in scale, occurring almost entirely in unconsolidated natural fill. Relatively slight damage occurred to bridges along Highway 80 and both Prosser and Boca earthfill dams. The earthquake was also noticeably felt in western Nevada County.

Seismic Hazards

Seismic, or earthquake hazards, consist of: primary hazards, caused by the actual rupture or shaking of the ground; and secondary hazards, caused by various topographic and hydrologic conditions triggered by the earthquake. Primary and secondary hazards are discussed in greater detail below.

Primary Hazards

Actual ground breakage generally affects only those buildings directly over or nearby the fault. Ground shaking generally has a much greater impact over a greater geographical area than ground breakage. The amount of breakage and shaking is a function of earthquake magnitude, type of bedrock, depth and type of soil, general topography, and groundwater. In the Sierra Nevada Range, the common occurrence of relatively shallow weathered material underlain by dense bedrock lessens the seismic risk. This is consistent with the fact that many authorities list igneous and metamorphic bedrock (found extensively throughout Nevada County) as providing the least amount of seismic hazard due to ground shaking. Hazard due to ground breakage is considerably less dependent upon the kind of bedrock. An example of a primary hazard would be dam failure resulting from severe ground shaking, which in turn would result in flooding (see Hydrology and Water Quality section of this EIR for a discussion of flooding).

Secondary Hazards

Secondary hazards include ground settlement or subsidence, which is caused when poorly consolidated soils are compacted; liquefaction, which occurs when a shock or strain causes a sudden loss of soil strength in saturated cohesionless soils; and landslides which are part of the process of erosion that can be triggered by earthquake shock.

Because much of Nevada County is steeply sloping, the threat of landslides is ever present. However, due to the fact that most of the soils within the County are underlain with dense bedrock, and lack the depth and cohesionless structure associated with ground failure, most secondary hazards should be considered moderate at worst. Some communities have assigned a "low risk" landslide rating to all areas with igneous and metamorphic bedrock, and since most of the Nevada County is underlain with similar formations, it is a safe assumption to assign a similar "low risk" rating to most of the County (see Figure 4.2-3). The "low risk" rating would apply to ground settlement and liquefaction hazards, as well. Even though geologic conditions in Nevada County reduce the potential hazards from ground failure and landslides, the County's steep terrain and deep snowpack present the potential for earthquake-induced avalanches in the mountainous areas. Further discussion of avalanche hazards are discussed in Air Quality and Climatology section of this EIR and landslide hazards are further discussed below in the Landslide Hazards subsection.

Generally, potential damage resulting from earthquakes is related to the magnitude of the quake, local rock and soil characteristics, and the vulnerability of property to the resulting quake intensity. Therefore, the hazard of an earthquake is based on the interrelationships between faults, weak geologic materials, and human activity.

Landslide Hazard

Landslide activity is a function of slope, soil type and depth, soil moisture, bedrock, and seismic activities. A landslide can be defined as an event in which surface masses of slope-forming earth move outward and downward from their underlying and stable floors in response to the force of gravity. This occurs whenever "shear resistance" of the mass is exceeded by the "shear stress." Such movements include:

- **Falls** - Falling of soil or rock masses where a sliding surface does not occur.
- **Flows** - Surface material breaks up and moves down a slope and flows as viscous fluid.
- **Creeps** - Slow down-slope movements of an earth mass.
- **Transitional or Rotational Slides** - Transitional or rotational slides are movements of earth that involve a distinct rupture or zone of weakness separating the earth slide.

As shown on Figure 4.2-3, most of Nevada County falls within Zone 2; areas of low landslide activity. It should be noted that mapping of landslide activity in Nevada County

Figure 4.2-3 Landslide Activity

Figure 4.2-3 Landslide Activity (continued)

has not been done in over 20 years. Due to this lack of adequate and updated mapping, Figure 4.2-3 shows only generalized areas of past landslide activity.

Unstable or potentially unstable slopes are those areas susceptible to slides, falls, creeps, or flows, as described above. Steep slopes, heavy rainfall, soils conditions and underlying geology, and groundwater are factors contributing to slope instability. Additionally, slope destabilizing factors also include seismic activities, discussed previously, hydraulic mining activities, and human-related activities which can reactivate inactive slide areas. These factors are discussed in greater detail below.

The geologic properties of slope-forming materials are a primary factor determining the stability of a slope. Although slope movements can occur in any type of rock material, certain bedrock formations exhibit a high susceptibility to such movement. Cenozoic Volcanic is of this type which is found in the central portion of the County. However, most of the County's soils are underlain with dense bedrock formations and lack the characteristics contributing to landslide susceptibility.

Historic Hydraulic Mining

According to the Soil Conservation Service, any area adjacent to a hydraulically mined area is subject to landslide activity. The mining removes the toe of the slope resulting in slope instability uphill or upstream. Triggering devices such as an earthquake or heavy rainfall would set a slide in motion.

Many hydraulic mining sites are located within Nevada County. Located east of Nevada City is an area of over 20,000 acres containing the majority of these sites. Some of the largest mining sites in Nevada County are listed below:

- Malakoff Diggins, North Bloomfield area;
- Montezuma Hill, Nevada City;
- Chalk Bluff, You Bet/Red Dog area;
- North San Juan; and
- French Corral.

In 1982, Nevada County experienced 100 inches of precipitation and in the following year, received 90 inches. According to the Soil Conservation Service, every landslide that occurred during those periods was adjacent to a hydraulic mine site. Mapping of these areas was unavailable. There has been no mapping done that includes the locations of hydraulic mining-related landslide activity.

Reactivation of Inactive Slides

After movement, most landslides attain a degree of stability, but a landslide reacts with remarkable sensitivity to changes brought on by nature and human-related activities. Equilibrium can be upset by increasing the driving force (i.e. overloading the head of the slide) or by decreasing the resisting force (i.e. removing support from in front of the slide,

in the area called the toe). This is apparent every winter to road maintenance crews who remove the toe of a fresh slide from the highway only to leave the slide in a poised and precarious state for the next triggering rain. The same is true where new roads are constructed across the toe of an old inactive slide; or where grading on a residential tract is completed with satisfactory precautions, only to have grading during utility, sidewalk, house or yard construction remove toe support from a creep or slide area.

Triggering devices such as water, ground shaking, and grading activities are not the basic causes that create the unstable condition and determine the dimension of the slide. Rather, it is the effect of these triggering devices on the basic environmental conditions; the relationship of rock type and geologic structure to, most importantly, slope height and slope angle.

Soils

Soil surveys for Nevada County have been conducted by the United States Department of Agriculture Soil Conservation Service (SCS) and the Tahoe National Forest. The SCS has surveyed the western third of the County, roughly the area west of Scotts Flat Reservoir, while the Forest Service has surveyed the balance of the County.

The characteristics of different soil types result in varying constraints in terms of permeability, septic suitability, erosion hazards, agricultural and timber capabilities, etc. Table 4.2-2 summarizes some of the basic characteristics of the general soil types found in the County. Septic suitability, erosion hazards, and agricultural and timber capabilities are discussed below.

Septic Suitability

Within the County, the soils present significant constraints to septic uses and effluent disposal due to slow permeability, steep slopes, and shallow soil depth, (see Figure 4.2-4 for septic capabilities in the County). According to the SCS, all soil types within Nevada County are classified as having "severe" limitations for private sewage disposal. Soils are rated severe because they have slopes of more than 9 percent, are less than 4 feet deep, or are limited in their ability to percolate water. However, the soil capabilities identified in Figure 4.2-4 are a refinement of the SCS data, based on variations in soil depth, slope and percolation rates. Four categories of soils have been identified based on relative suitability for on-site systems (see Table 4.2-2). This categorization does not necessarily indicate suitability for on-site disposal systems, but rather ranks the soils relative to each other in terms of septic constraints. For example, the existence of Category A soils (highest level of capability) does not necessarily provide that lands are suitable for on-site systems, but that the potential for such systems is better.

Large sections of the County's urbanized or semi-urbanized development with sewage collection systems has occurred in areas categorized as the "worst" for on-site disposal. Figure 4.2-5 indicates concentrated development areas that are outside of existing sewer service areas and must depend on septic systems.

Figure 4.2-4 Septic Tank Capability

Figure 4.2-4 Septic Tank Capability (continued)

Figure 4.2-5 Developed Areas Outside of Existing Sewer Areas

Figure 4.2-5 Developed Areas Outside of Existing Sewer Areas (continued)

Table 4.2-2 Soil Characteristics

Septic tank and leachfield system problems have evolved in portions of western Nevada County for a number of reasons, including soil conditions, slope, small lot sizes and inadequate permit and construction practices. Because of these problems, the use of septic systems for the disposal of domestic wastewater has been a concern in the County for some time with respect to surface and groundwater quality. The *Public and Private Sewerage Systems* report, prepared in 1992 by Harland Bartholomew and Associates, Inc. for the General Plan, identifies that soil conditions are typically very poor in western Nevada County, and that a survey of existing septic system conditions and failures should be undertaken to document failures and problems, determine the potential long-term effects of the use of septic systems on water quality, and to aid in the decision regarding continued use of septic-leachfield systems. Refer to the Hydrology and Water Quality section of this EIR for a discussion of water quality issues related to septic systems.

Erosion Hazards

Erosion is the process by which soil and rock are detached by running water, wind, and gravity. Soil erosion can result in habitat degradation, siltation of rivers, streams, and ponds, loss of productive soil, slope instability, and flooding.

Soil type, texture, slope angle, slope length, and vegetation cover are factors affecting susceptibility to erosion. Soil types and associated erosion hazards are identified in Table 4.2-2. As shown on Figure 4.2-6, erosion hazard is variable but generally increases near major rivers and with steeper slopes. Much of the steep slope areas are concentrated in the more remote portions of the County: the Middle Yuba River, South Yuba River and the Pacific Crest Trail. Pockets of steep slopes are also located on the Bear River, Deer Creek,Wolf Creek, and South Wolf Creek. Other smaller pockets of steep slopes and associated high erosion also exist within other areas of the County.

Agricultural and Timber Capabilities

Although the soils in Nevada County are generally poor for intensive agriculture use, ranging from Class II and up, the moderate to high elevation soils are an excellent resource for timber growth. Refer to the Land Use section of this EIR for a further discussion of agricultural lands in the County. Refer to the Biotic Resources section of this EIR for a further discussion of timber resources in the County.

Mineral Resources

Mineral resources, particularly gold, have played a major role in the history of Nevada County. Since 1849, when gold was first discovered in the area, to the years preceding World War II, most of the County's population was economically supported, directly or indirectly, by the local gold mining industry. Other metals produced in the County since 1880 include silver, copper, lead, zinc, chromite, and small amounts of tungsten and manganese. Industrial minerals include barite, quartz for silicon production, and small amounts of limestone, asbestos, clay, and mineral paint. Also, significant deposits of sand, gravel, and rock types suitable for construction aggregate are exposed throughout the County.

Figure 4.2-6 Erosion Hazard

Figure 4.2-6 Erosion Hazard (continued)

In order to promote the conservation of the state's mineral resources, and to ensure adequate reclamation of mined lands, the Surface Mining and Reclamation Act of 1975 (SMARA) was enacted. SMARA requires that the State Geologist classify land in California for its mineral resource potential. Local governments are required to incorporate the mineral and classification reports and maps into their general plans and consider the information when making land use decisions.

Areas subject to mineral land classification studies are divided into various Mineral Resource Zone (MRZ) categories that reflect varying degrees of mineral potential. Figure 4.2-7 indicates areas which are classified by the State Geologist as areas of identified mineral resource significance for mineral deposits of all types. Areas classified as MRZ-2 are those containing significant mineral deposits. The existence of deposits may be actually measured or indicated by site date (MRZ-2a), or inferred from other sources (MRZ-2b).

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of geologic impacts are listed below.

Land Use Element

Policy 1.18.

Safety Element

Policies 10.8, 10.9, 10.13, 10.16, 10.17, and 10.18.

Soils Element

Policies 12.1, 12.2, 12.4, and 12.5.

Wildlife and Vegetation

Policy 13.2.

Regional Transportation Plan

Policy 2.2.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and State CEQA Guidelines, a plan impact would be considered significant: (1) if development would be located (and/or policies would allow for the location of development) within a known active fault zone or an area characterized by surface rupture that might be related to a fault; (2) if soil substrates consist of materials that are subject to liquefaction or other secondary seismic hazards in the event of groundshaking; (3) if there is evidence of static hazards such as landsliding or excessively steep slopes, that could result in slope failure; (4) if development areas are in the vicinity of soils that are

likely to collapse; (5) if structures would be exposed to erosion hazards due to inadequate setbacks from cliffs/steep slopes; or (6) if development may be located in a Mineral Resource Zone identified by the California Department of Mines and Geology. These standards are generally derived from portions of the CEQA Guidelines, including various sections and Appendix G and Appendix I. Some standards are derived from agency regulations or are professional standards commonly used to further define what actions may cause "significant effects" under CEQA.

Impact #6. *Buildout of proposed General Plan land uses, associated population growth, and RTP road improvements, may expose future residents and structures to seismic hazards related to ground rupture and ground shaking from a large magnitude earthquake. This is considered to be a* ***significant*** *impact as proposed plan policies would not necessarily ensure that seismic hazards are minimized.*

As shown in Figure 4.2-2 and Table 4.2-1, the western portion of the County is within Zone I (low intensity zone), the central portion of the county is within Zone II (moderate intensity zone), and the eastern portion of the county is within Zone III (high intensity zone). The eastern portion of the County, located in the high intensity zone, could experience an earthquake with a maximum probable intensity of Modified Mercalli Intensity X (7 on the Richter scale).

Buildout of proposed General Plan land uses and RTP road improvements may result in structural damage and human injury related to seismic activities in the County. Location of structures in areas susceptible to major faulting and surface rupture conditions could result in structural, road, and underground utility failure. Groundshaking can cause structures to shift off their foundations and can rupture subsurface infrastructure lines. Liquefaction can cause foundations to shift during an earthquake where development is located in areas with high groundwater and alluvial materials. As indicated in Figure 4.2-2 such seismic risks would be relatively higher in the eastern portion of the County.

Actions to minimize the damage to buildings and risks to people from earthquake-related ground shaking have occurred within the last 60 years. Hospitals must be built so that the facility can be fully functional after an earthquake. The Uniform Building Code (UBC), applies to all structures, and is updated on an annual basis. The UBC requires that structures be built to withstand groundshaking in areas of low, moderate, and high earthquake hazard areas, as identified above. Alquist-Priolo Special Studies zones are areas on either side of a potentially active or active fault in which the California Department of Mines and Geology (CDMG) feels the potential exists for surface rupture. Alquist-Priolo Studies zones have been established by CDMG throughout the state, although, to date, no Special Study zones have been established in Nevada County.

Figure 4.2-7 Mineral Resource Areas

Figure 4.2-7 Mineral Resource Areas (continued)

Proposed General Plan policy 10.16 indicates that building design would need to meet the requirements of the UBC. Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section) provides a program for the preparation of site development standards, which will address seismic and other geologic hazards. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions. Such site development standards would relate to the design and siting of structures to meet UBC. Siting could be an issue in cases where faults or fault traces are on, or adjacent to, building sites indicating potential for ground rupture.

Additionally, policy 10.13 indicates that site development standards will consider the need to mitigate projects with seismic hazards in accordance with Federal, State and local standards. Further, this policy stipulates the nature of soils and geologic investigations as a means of identifying seismic hazards. However, policy 10.13 does not clearly stipulate the conditions under which projects could be approved given the presence of such hazards, nor does it stipulate that soils investigations should be carried out to address other geologic hazards such as slope instability and erosion. Revised policy 10.13, below specifically stipulates conditions under which project approval would occur when seismic or geologic hazards are present.

The protection of underground utility lines, particularly water and natural gas mains, is addressed in Policy 10.18, which requires that underground utilities are designed to withstand seismic forces. Additionally, policies 10.8 and 10.17 identify efforts to promote public awareness of emergency evacuation procedures, and to coordinate with the OES on an earthquake preparedness plan. Identification of County-wide primary and secondary evacuation routes is addressed in Policy 10.9.

Taken together, proposed General Plan policies and revised policies identified above and other existing regulations would require the siting, design and construction of new development and infrastructure improvements to minimize seismic hazards related to ground rupture and ground shaking.

Seismic-related hazards associated with dam failure and avalanche are discussed in the Hydrology and Water Quality and Air Quality and Climatology sections of this EIR. Seismic-related hazards associated with landslides are discussed below.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 10.8, 10.9, 10.13, 10.16, 10.17, and 10.18 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of policies identified above, Mitigation Measure #1 (see Land Use section of this EIR), and Mitigation Measure #3, below, would serve to reduce the impact to a *less-than-significant* level.

3. Revise policy 10.13 as follows:

> As part of the project site review process, require sufficient soils and geologic investigations to identify and evaluate the various geologic and seismic hazards that may exist for all proposed development including subdivisions. Such investigations shall be required within an area determined to be seismically active by the State Division of Mines and Geology or within an area having potential geologic hazards, including slope instability and excessive erosion.
>
> Approve the final density of a development proposal only if it is consistent with the recommendations and/or risks identified in soils/geologic investigations, prepared in accordance with the Site Development Standards.

Impact #7. *Buildout of the proposed General Plan land uses and RTP road improvements may result in exposure of future residents and structures to landslide hazards. This is considered a* ***significant*** *impact as plan policies would not necessary protect future structures and residents from landslide hazards.*

Figure 4.2-3 indicates very generalized areas of past landslide activity in the County, and Figure 4.2-6 indicates potential erosion hazards related to steep slopes. As this figure indicates, most of the steep slope areas in the County are concentrated in relatively remote portions of the County: the Middle and South Yuba River basins, Pacific Crest Trail, Bear River, Deer Creek, Wolf Creek, and South Wolf Creek. Other smaller pockets of steep slopes also occur. The potential for landslides would be present in various locations in association with old hydraulic mining sites, new excavation in areas of active or inactive slide areas, in isolated pockets of steep slopes, or otherwise unstable slope areas.

Development of proposed General Plan land uses and RTP roadway improvements in areas sensitive to landslide hazards (active or inactive slides, areas near hydraulic mining sites, areas of steep slope or otherwise unstable slopes) could trigger slope instability. As stated previously, human-related landslide activity generally involves disturbance or excavation of the toe or overloading the head of a slope or slide. Historic and active hydraulic mining can disturb the toe or otherwise destabilize a slope or slide. This is of concern if proposed development would be sited in proximity to such mining activities, in areas that could be affected by a mining-induced landslide. Such a landslide could be triggered by an earthquake, heavy rainfall, or mining activities.

Landslide hazards could also occur if excavation activities, associated with road construction, foundation preparation, or utility trenching, occur in areas of steep slopes or active/inactive slides. Additionally, landslide hazards can also occur if development is sited in proximity to unstable slopes or the head of a slope or slide, which may overload it.

Proposed General Plan policy 1.18 encourages new development to be clustered if necessary, to avoid site constraints such as steep slopes (greater than 30 percent) and highly erosive areas. However, such clustering is "encouraged" and is not a requirement. Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section) provides a program for

the preparation of site development standards, which would address landslide hazards. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions.

Policy 10.13 indicates that site development standards will consider the need to mitigate development in geologically sensitive areas in accordance with Federal, State and local standards. This policy has the potential to provide sufficient standards for site development to ensure that landslide hazards are adequately addressed in the siting and design of structures. However, as the standards have not been developed it is difficult to determine their adequacy in mitigating potentially significant impacts of future development related to landslide hazards. Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section) provides a program for the preparation of site development standards, which will address seismic and other geologic hazards, including landslides. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions. Further, revised policy 10.13 (see Mitigation Measure #3 above), indicates specific conditions under which project approval would occur when geologic hazards are present.

Implementation of these proposed policies and revised policies identified above would require the siting, design and construction of new development and infrastructure improvements to minimize geologic hazards related to landslide activity.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18 and 10.13 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measures #1 (see Land Use section) and #3, above, would serve to reduce the impact to a *less-than-significant* level.

Impact #8. *Buildout of proposed General Plan land uses and RTP road improvements may result in increased erosion associated with development in areas of steep slope and/or improper development practices. This is considered a* ***significant*** *impact, as the proposed General Plan policies would not necessarily include site plan and excavation procedures to reduce the impact.*

Figure 4.2-6 identifies areas of low, moderate, and high erosion hazards in the County. Identification of erosion hazards is based on angle of slope and erosivity of soils. Areas of high erosion hazard in the County are concentrated along the major stream valleys (Middle Yuba River and South Yuba River) and the Pacific Crest Trail. Pockets of areas of high erosion hazards are also located along the Bear River, Deer Creek, Wolf Creek and South Wolf Creek. Areas of high erosion hazard generally correspond to areas of steep

slopes. As steep slope areas are generally outside most significant growth areas, erosion impacts associated with development on steep slopes are relatively limited. The majority of steep slope areas are designated for 40- and 160-acre minimum parcel sizes (Rural and Forest), several small pockets of 30-acre minimum parcel sizes, and open space. Therefore, the majority of steep and highly erosive areas of the County could be avoided by future development on large parcels (30-, 40-, and 190-acre minimum parcel sizes) as steep slopes could probably be avoided on such parcels. However, pockets of steep slopes and associated erosion hazard exist within the developed, and potentially developable areas in the vicinity of Alta Sierra and the New Town Reserve, which are slated for more intense development. It should also be noted that areas of moderate erosion hazard occur throughout the County, in areas slated for both more rural, and urban/suburban level development.

Buildout of proposed General Plan land uses and RTP road improvements may cause erosion, be subject to the direct impacts of erosion (such as undermining of foundation integrity), and potentially generate secondary water quality impacts associated with erosion and sedimentation.

A number of proposed General Plan policies address potential erosion hazards. Policy 1.18 encourages clustering of new development, if necessary, to avoid on-site constraints such as highly erosive soils. However, such clustering is "encouraged" and is not a requirement. Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section) stipulates that clustering and other land use, siting, and design tools shall be used as necessary to meet the objectives of the site development standards performance criteria. This revised policy further stipulates conditions under which a project can be approved.

Policy 10.13 indicates that site development standards will consider the need to mitigate geologic hazards, which include erosion. This policy has the potential to provide sufficient standards for site development to ensure that erosion hazards are adequately addressed in the siting and design of structures. However, as the standards have not been developed it is difficult to determine their adequacy in mitigating potentially significant impacts of future development related to erosion hazards. Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section) provides a program for the preparation of site development standards, which will address geologic hazards, including erosion. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions. Further, revised policy 10.13 (see Mitigation Measure #3 above), indicates specific conditions under which project approval would occur when geologic hazards are present.

Policies 12.1 and 12.2 require compliance with the County's Grading Ordinance which addresses erosion control and removal of surface vegetation. Erosion control measures on all projects, and comprehensive site development standards regarding vegetation removal and landscaping maintenance are also addressed in Policies 12.4 and 13.2.

Implementation of proposed policies and revised policies identified above would require the siting, design and construction of new development and infrastructure improvements to minimize geologic hazards related to erosion.

(The secondary effects of erosion and sedimentation on water quality are discussed in the Hydrology section of this EIR.)

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18, 10.13, 12.1, 12.2, 12.4 and 13.2 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measures #1 (see Land Use section) and #3, above, would serve to reduce the impact to a *less-than-significant* level.

Impact #9. *Buildout of General Plan land uses and RTP road improvements may result in development over known deposits of valuable mineral resources. Incompatible land uses may conflict with active mining or preclude future mining. This is considered a* ***significant*** *impact as proposed Plan policies would not ensure that all mineral resources would remain accessible.*

Land Use Map Implications. As identified in the Environmental Setting section and in Figure 4.2-7, various Mineral Resource Zones (MRZ) have been designated in Nevada County, identifying both known and potential mineral deposits. Since mining activities often result in traffic, noise, air and water pollution, sensitive land uses located within an MRZ could be incompatible with mining operations and interfere with mineral extraction. Identification of the MRZ areas is intended to avoid encroachment of incompatible land uses in mineral resource areas.

In Nevada County, Community Regions and Rural Centers which are located in, or near MRZ-2 zones include Nevada City, Grass Valley, Truckee, Washington, Alta Sierra, Rough and Ready, Penn Valley, and portions of the New Town Reserve. Buildout of proposed General Plan land uses in these and other areas could result in land use conflicts between mining activities and other uses, and could eliminate or inhibit access to mineral resources. To minimize land use conflicts and ensure the ability to extract mineral resources in these and other areas, the proposed County General Plan includes policies addressing the need to recognize the location of mineral deposits, and ways to minimize conflicts between mining and other land uses.

The following policies serve to establish public awareness of significant mineral deposits as a resource. Policy 17.5 establishes that the MRZ-2 areas are adopted as part of the General Plan land use map, and that these maps will be amended to reflect new information from Classification Reports from the State Geologist. Property owners of MRZ-2 lands are to be notified by the County of the existence of mineral deposits and the potential for

mining in the area, under Policy 17.16. Policy 17.17 states that the County shall use the "ME" Mineral Extraction Combining District as a means to provide for public awareness for surface mining to occur where it has been established that important minerals are present. Surface mining is conditionally permitted only in compatible designations and on parcels zoned "ME." The "ME" district is used only on lands within compatible General Plan designations. The proposed General Plan Volume 1 Glossary defines "compatible land use" as land uses inherently compatible with surface mining or surface access to subsurface mining. Those proposed General Plan land use designations potentially compatible for mining include the following: Rural; Forest; Industrial; Public; Water; and Planned Development. Areas not zoned "ME" that occur in a compatible designation may be rezoned if a significant resource can be shown to be present. Areas classified as MRZ-2 are those containing significant mineral deposits. However, all MRZ-2 lands within compatible General Plan designations have not been zoned "ME." Mitigation Measure #4, below, provides a new policy directing the County to zone areas with the "ME" Combining District that are within compatible General Plan designations.

To protect the designation of mining lands, Policy 17.20 states that removing an "ME" zone from its base district shall be considered only when specific studies prove that the mineral deposit no longer exists. Additionally, policy 17.24 allows that regardless of the General Plan designation, subsurface mining would be conditionally permitted throughout the County.

To ensure that surface and subsurface mining will not result in significant impacts on the environment or nearby land uses, policies 17.15 and 17.24 stipulate that such mining would be conditionally permitted only after adequately reviewed and found to be in compliance with CEQA. Policy 17.4 stipulates that mining activities must comply with noise standards. To further reduce the likelihood of land use conflicts with mining activities, policies 17.6 and 17.9 encourage mineral extraction in an area prior to urbanization or conversion to other incompatible land uses, and on previously mined lands. In policy 17.18, land uses incompatible with surface mining are to be "discouraged" in areas designated MRZ-2. Additionally, time limits for each conditional use permit will be based on both the reasonable life expectancy of the mining operation and on foreseeable potential conflicts with further neighboring land uses (policy 17.7).

A discussion of potential conflicts between mining and future land uses is discussed in the Land Use section of this EIR.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 17.4 through 17.7, 17.9, 17.15, 17.17, 17.18, 17.20, and 17.24 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

Implementation of proposed policies identified above and Mitigation Measure #4, below would serve to reduce the impact to a *less-than-significant* level.

4. Add the following policy to Chapter 17 of the proposed General Plan.

The County shall zone lands identified as MRZ-2 areas in the "ME" Mineral Extraction Combining District as a means to provide for the public awareness of the potential for surface mining to occur where it has been established that important minerals are present. The "ME" District shall be used only on those lands which are within a compatible general Plan designation and which are not residentially zoned.

4.3 HYDROLOGY AND WATER QUALITY

INTRODUCTION

This section addresses potential hydrologic impacts associated with buildout under proposed General Plan land use designations and goals, objectives and policies, the Regional Transportation Plan, and amended zoning and zoning district maps as described in the Project Description section of this EIR. Specific topics include flooding from increased stormwater runoff and earthquake-related dam failure, and degradation of surface and ground water quality.

This section is based on existing conditions information developed in the Nevada County Master Environmental Inventory (HBA, 1991). Additionally, water quality information was also extracted from the following documents, "Public and Private Sewerage Systems" and "Public and Private Water Systems" (HBA, 1992). These documents are hereby incorporated by reference.

ENVIRONMENTAL SETTING

Drainage

Surface water drainage within Nevada County is composed of three separate watersheds that, when combined, produce enough water to serve portions of both northern California and western Nevada. The three major watershed areas include the Truckee River basin, the Yuba River basin, and the Bear River basin. These drainage basins and major tributaries are shown in Figure 4.3-1.

The Truckee River basin drains approximately 170 square miles within the County and flows from Lake Tahoe in a northerly eastern direction through Nevada County into Pyramid Lake in the State of Nevada.

The South Fork and Middle Fork of the Yuba River combined make up the largest of the three watershed areas within Nevada County. The Middle Fork of the Yuba River drains approximately 86 square miles of Nevada County and eventually drains into Englebright Reservoir. The South Fork drains approximately 343 square miles of the County before connecting with the Middle Fork of the Yuba River near Englebright Reservoir.

The third basin, the Bear River, forms just below Spaulding Reservoir, flows in a southwesterly direction and drains approximately 277 square miles of Nevada County.

Five smaller streams which are also significant drainage basins include Deer Creek, Squirrel Creek, Wolf Creek, Greenhorn Creek, and Steephollow Creek. Deer and Squirrel

Creeks flow westward into the Yuba River; Wolf, Greenhorn, and Steephollow Creeks drain into the Bear River.

The headwaters of Deer Creek originate in the Sierra Nevada at about the 5,000 foot elevation. Deer Creek discharges into the Yuba River just below the Englebright Dam and has a drainage area of approximately 85 square miles. Its main tributaries are Little Deer Creek, Gold Run Creek, Slate Creek, Lake Wildwood Creek, and Squirrel Creek. The flow in Deer Creek follows seasonal precipitation patterns. Its flows are also augmented by releases from Upper Scott's Flat Lake via Lower Scott's Flat Lake for use downstream. Nevada City's and Lake Wildwood's wastewater treatment plants discharge to Deer Creek.

Wolf Creek drains approximately 76 square miles from its headwaters at Banner Mountain to its confluence with Bear River. Wolf Creek passes through the City of Grass Valley where it receives stormwater runoff and wastewater treatment plant discharges. A number of mines also drain into Wolf Creek.

Many of the creeks and rivers in the County supply both water and hydroelectricity. A variety of impoundments, canals and diversions serve to divert water for these uses. As would be expected, all of the hydrologic features in the County are dependent on winter rain and snowfall. The Sierra snowpack is the primary source of water throughout the watersheds. The volume of flows varies considerably from year to year, season to season and between watersheds. The low season for water is typically summer. Peak months vary due to snow melt, with rainfall peaks typically occurring in the November-February period and snowmelt-related peak typically occurring between April and June.

The seasonal as well as annual river flows are highly variable. During extremely heavy storms, the maximum daily flow can be on the order of 25 to 50 percent of average annual flow.

Flood Hazards/Dam Failure

Flooding of lands adjacent to streams and rivers is caused by flows that exceed the capacity of the normal water course. This type of flooding involves the spill-over of above-normal stream flows onto lands immediately adjacent to the normal watercourse. Those areas subject to overflow are referred to as the stream or river's floodplain. Areas susceptible to flood hazard were identified by the Federal Emergency Management Agency (FEMA) in "Flood Insurance Study, Revised July 2, 1987" and associated maps. The study covered unincorporated areas within the County which have potential for development. Grass Valley, Nevada City and land formerly belonging to Beale Air Force Base in the western portion of the County were not included in this study. A summary of these maps showing areas within Nevada County subject to 100-year and 500-year flooding is provided in Figure 4.3-2. As shown on this figure, the flood hazard areas are generally confined to the areas immediately adjacent to the County's local rivers and streams.

Figure 4.3-1 Drainage Basins

Figure 4.3-1 Drainage Basins (continued)

In general, there are no significant, wide floodplains within the County as would be found in areas with less steep slopes. Squirrel Creek in Penn Valley is relatively wider than other flood potential areas within the County. However, it is still not considered a wide floodplain, such as those identified in the Central Valley of California, which cover thousands of acres. The major flooding problems normally occur during the winter months from November through April. Flooding can be severe when the ground is already saturated or existing snow is melted by warmer rains.

Areas within Nevada County subject to 100-year and 500-year flooding include, as shown in Figure 4.3-2: Deer Creek west from Scott's Flat Reservoir through Nevada City towards Lake Wildwood; two tributaries bordering Alta Sierra and Highway 49 to the east and west; along Bear River to Rollins Reservoir; Little Greenhorn Creek; Greenhorn Creek; Steep Hollow Creek; the South Yuba River; the entire extent of the Truckee River through eastern Nevada County; and tributaries that run south into Prosser Creek Reservoir, Boca Reservoir, and Martis Creek Reservoir. Shorter stretches are located south of Nevada City; along Highway 20 near Penn Valley; and in the northwest area of the County.

Dam failure is another form of flood hazard. Failure can occur as a result of manmade or natural causes. Such causes include improper siting, structural design flaws, erosion of the face of foundation, earthquakes, massive landslides, and rapidly rising flood waters.

There are **16** ~~15~~ dams located within Nevada County, owned and/or operated by various agencies or organizations. These include:

- Scott's Flat Dam (NID - Nevada Irrigation District);
- Lower Scott's Flat Dam (NID);
- Rollins Dam (NID);
- Combie Dam (NID);
- Magnolia Dam (Lake of the Pines Homowners Association);
- Bowman Dam (NID);
- Jackson Meadows Dam (NID);
- Martis Creek Dam (U.S. Army Corp of Engineers);
- Prosser Creek Reservoir Dam (U.S. Army Corp of Engineers);
- Boca Reservoir Dam (Bureau of Reclamation);
- Spaulding Reservoir (Pacific Gas & Electric);
- Englebright Reservoir (U.S. Army Corps of Engineers);
- Lake Wildwood (Lake Wildwood Home Owners Association);
- Donner Lake (Sierra Pacific Power); and
- Independence Lake (Sierra Pacific Power).
- **French Lake (Nevada Irrigation District)**

Populations occur within the inundation zone of several of these dams. According to the Office of Emergency Services for Nevada County, of particular concern is the failure of either the Upper or Lower Scott's Flat dam. The failure of either dam would most likely be the result of an earthquake magnitude of MMI X (see Table 4.2-1, in the Geology section of this EIR). The inundation zone of these dams include Nevada City as well as

Bitney Springs Road and Deer Creek and a portion of Newtown Road and the Lake Wildwood Subdivision. However, it should be noted that the area of Nevada County in which these dams exist is not located within an historical seismic zone.

The western half of the County resides within the lowest "Maximum Expectable Earthquake Intensity" zone in California, as discussed in the Geology section of this EIR. The far eastern portion of the County is classified in the highest earthquake intensity zone. Within this area, there are three major dams; Prosser Creek Reservoir Dam, Stampede Reservoir Dam (located within Sierra County), and Boca Reservoir Dam. A Seismotechtonic Study of the Truckee/Lake Tahoe Area identified two major faults believed to be "potential seismic sources of greatest significance" in the eastern portion of the County - The Mohawk and Dog Valley faults. The Dog Valley Fault appears to be the more active of the two and of special significance due to its close proximity to the three dams listed above. However, the Truckee earthquake of 1966 had a magnitude of 5.4 and an intensity of VII and resulted in relatively slight damage to both Prosser and Boca earthfill dams.

Seismic activity can also result in seiches. Seiches are seismically-induced waves in bodies of water that can be considered a flood-related hazard. Seiches are particularly hazardous where lakes and reservoirs are bordered by campgrounds or other facilities on flat banks. Because of the large number of recreational lakes in Nevada County, seismically-induced seiches could prove very damaging. However, most recorded seiches have proved rather inconsequential. The Alaskan earthquake of 1964 for example, produced seiches no larger than 1.2 feet. Considering the overall seismic risk in this County, seiche risk should be considered only a moderate hazard.

Any new or existing dam over six feet, or reservoir with a capacity of more than 15 acre feet is subject to the review and approval of the California Division of Safety of Dams. The California Division of Safety of Dams requires that dam designs be earthquake and seiche resistant, and that any construction or alteration undergo a full seismic and geologic investigation. Water may be impounded in volumes above 15 acre-feet only upon the issuance of a Certificate of Approval from the Division.

Water Quality

Water quality degradation can be caused by several sources including: wastewater disposal practices; stormwater runoff from parking lots and roadways; erosion; siltation; agricultural, mining, and logging operations; and some industrial operations. The quality of both surface water and ground water is discussed further below.

Figure 4.3-2 Flood Potential Areas

Figure 4.3-2 Flood Potential Areas (continued)

Surface Water Quality

Soil erosion and sedimentation are closely tied to surface water quality. Erosion is the process of loosening or dissolving earthy or rock material by water or wind sources into smaller particles. The smallest of those particles may be transported and deposited by water or air constituting the process of siltation. These silt elements typically consist of 80 percent soil or silt and less than 12 percent clay. Sedimentation occurs when the larger particles consolidate into another rock or earthen material and are deposited on the beds of creeks, rivers or streams. Eroding soils, siltation, and streambed alteration as a result of new subdivision development can contribute to a reduced level of surface water quality. Naturally occurring elements such as heavy metals, have also contributed to water quality degradation in a number of areas within the western portion of the County.

A surface water sampling program was conducted as part of a 1974 Department of Water Resources (DWR) study to identify water quality conditions. The DWR's efforts were concentrated on determining water quality impacts on those tributaries where development was taking place. Sampling stations were located to provide water quality documentation in watersheds which were considered to have high, medium, and low population densities. Water quality samples were collected at 26 stations. Samples were analyzed for both bacteriological quality and mineral and physical constituents.

The bacteriological results of the 1974 DWR study indicated degradation of the surface waters due to the unsatisfactory disposal of domestic sewage through the use of septic tank and leach field systems. Significant bacteriological contamination was reported in some waters traveling through developed areas which utilized on-site disposal systems.

The 1974 DWR study found that the general mineral and physical characteristic of surface waters were of good quality with low concentrations of dissolved solids. Samples collected were analyzed for chlorides, nitrates, Methylene-Blue Active Substances (measurement of surfactants such as soap) (MBAS), phosphates, total hardness, and turbidity. In addition, certain samples were also tested for temperature, dissolved oxygen, specific conductance, and pH.

Natural concentrations of chlorides in most mountainous surface waters are low. Elevated levels may indicate water quality degradation and may be caused by wastewater disposal or salt application to roadways. Analyses for chlorides as reported in the 1974 DWR study did not indicate any extreme degradation of surface waters. Only the chloride concentrations in Wolf Creek were found to be higher than levels that would be considered normal. The sample station reporting high chlorides was downstream of the wastewater treatment plant discharge.

Analyses for phosphates were consistent with those conducted for chlorides. The only tributary where concentrations were found to be higher than the normal background concentrations was Deer Creek. The reporting sample station was downstream of the wastewater treatment plant discharge.

The 1974 DWR study concluded that surface waters were being degraded along some of the area's tributaries, in particular along portions of Wolf Creek.

Since the 1974 study, water quality in Wolf Creek, which receives discharge from Grass Valley's wastewater treatment plant, and Deer Creek, which receives discharge from Nevada City's wastewater treatment plant, was described as unsafe for domestic use, prompting improvements to both of these treatment facilities. With these improvements, use of these streams as a downstream water source is now considered to be acceptable, as long as the discharged water continues to meet Department of Health Services standards.

The Lahontan Regional Water Quality Control Board (RWQCB) has designated the Truckee River and several tributaries, including Donner Lake, as impaired "water quality limited segments" under Section 303(d) of the federal Clean Water Act due to elevated levels of metals and/or toxic organic substances in fish tissue sample under the State Water Resources Control Board's Toxic Substances Monitoring Program. RWQCB staff are currently sampling a number of Truckee River stations to determine the extent of problems related to sediment, nutrients, and ambient metals.

Recent concern has been raised about abandoned mine drainage degrading surface water quality. Some of these mines have ownership and others do not. The 1974 DWR study did not address mine drainage, thus the extent of mine drainage impacts has not been determined.

The 1972 Clean Water Act provides that the discharge of pollutants from stormwater is prohibited, unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In California, these permits are issued through the State Water Resources Control Board and the nine Regional Water Quality Control Boards. In general, municipalities with a population of over 100,000, industries which have been identified by the Environmental Protection Agency to be a probable source of stormwater pollutants, and construction projects that disturb more than five acres must obtain an NPDES permit. **In addition to NPDES permits, the RWQCBs may issue and enforce waste discharge requirements under state law, participate in the state Water Quality Certification process, and set water quality standards and waste discharge prohibitions.**

Ground Water Quality

The western and eastern portions of the County differ in terms of groundwater resources. The majority of groundwater in western Nevada County occurs in fractures of the hard rocks and moves through a zone that lies above a depth of about 215 feet and that is less than 200 feet thick. Very little groundwater was found to occur in the alluvium and colluvium of the area. In the eastern part of the County, the Martis Valley aquifer is the only significant subsurface water resource. This aquifer is currently under study to determine its total storage, its recharge and its safe yield.

Information of the quality and chemical characteristics of the area's groundwater is limited. Very little information on the area's groundwater general mineral and chemical quality was developed for the 1974 DWR report. The DWR collected samples from wells in various locations across western Nevada County. Samples were analyzed for pH, electrical conductivity, total hardness, and total iron.

The DWR study found that electrical conductivity values were typically low, while values for pH were within the range of natural waters. Groundwaters in general were found to be of a calcium bicarbonate type. The 1974 DWR report identified a number of areas or wells which exhibited poor water quality. In most instances, poor water quality was the result of bacteriological contamination caused by inadequate sewage disposal from domestic households. Areas in low-lying valleys are more susceptible to this type of contamination. The contaminants are essentially trapped within the valley.

In 1982, Nevada County adopted regulations governing sewage disposal that require a minimum horizontal distance of 50 feet between a septic tank and a well. A distance of 100 feet is required between a well and a leach field, and 150 feet between a well and a seepage pit. In 1983, Nevada County enacted a well ordinance which required County Department of Environmental Health (DEH) investigation and testing of wells prior to occupation, due to concerns of bacterial contamination to groundwater sources. In most cases, DEH found that wells were installed correctly and that there was no contamination. After several years of testing wells prior to occupation, which indicated little or no occurrence of contamination, a new well ordinance was adopted in 1991. This ordinance provided more detail on permitting procedures, required inspection of all well seals, but deleted the requirement for testing new wells unless there was a site-specific reason. **Testing of new wells does occur periodically, but not routinely. Thus, the County is lacking a detailed database regarding potential effects of septic systems on the drinking water supply.** ~~Testing of existing wells, over time, has not occurred so the effect of septic systems on the water supply once the system is in use is not known.~~

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of hydrologic impacts are listed below.

Land Use Element

Policies 1.17, 1.18, and 1.23.

Circulation Element

Policy 4.38.

Safety Element

Policies 10.9, 10.10, 10.12, 10.14, 10.15, and 10.17.

Water Element

Policies 11.2 through 11.11.

Soils Element

Policies 12.1 through 12.5.

Wildlife and Vegetation Element

Policies 13.2 and 13.4.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a plan impact would be considered significant if: (1) if development is located in areas of flood hazard; (2) increased runoff volumes exceeded capacity of natural drainage or storm drain facilities, cause downstream or offsite drainage problems; (3) if stormwater discharges exceed established water quality standards, result in increased erosion and sedimentation, or endanger aquatic habitats; or (4) if the plan substantially degrades groundwater resources. These standards are generally derived from portions of the CEQA Guidelines, including various sections and Appendix G and Appendix I. Some standards are derived from agency regulations or are professional standards commonly used to further define what actions may cause "significant effects" under CEQA.

Impact #10. *Buildout of the General Plan may expose future residents and structures to flood hazards related to dam failure and earthquake-related seiches. This is considered to be a* ***less-than-significant*** *impact as existing regulations, local plans, and proposed plan policies would minimize the hazards.*

Dam failure could result in a surge of water that would threaten life and property within the area of inundation. As stated in the Environmental Setting, dam failure can result from improper siting, structural design flaws, earthquakes, massive landslides, and rapidly rising flood waters. However, the failure of dams would most likely be the result of an earthquake. The most significant areas of impact would be realized with the failure of either Upper or Lower Scott's Flat Dam, as the inundation zone of these dams includes the population centers of Nevada City, Bitney Springs Road, Deer Creek and a portion of Newtown Road, and the Lake Wildwood Subdivision. Proposed General Plan buildout as allowed under the Land Use Map would result in increased amounts of property and population exposed to dam failure flood risk in these areas.

A seismic event could also induce seiches along any of the rivers or reservoirs located within the County. The hazard would be greatest along lakes and reservoirs bordered by campgrounds or other facilities on adjacent gently sloping banks. Because of the large number of recreational lakes in the County, seismically-induced seiches could be very

damaging. However, given the relatively limited seismic risk in Nevada County, seiche risk would be considered only a moderate hazard.

As discussed in the Environmental Setting, any new or existing dam over six feet, or reservoir with a capacity of more than 15 acre feet is subject to the review and approval of the California Division of Safety of Dams. The California Division of Safety of Dams requires that dam designs be earthquake and seiche resistant, and any construction or alteration shall undergo a full seismic and geologic investigation. Water may be impounded in volumes above 15 acre-feet only upon the issuance of a Certificate of Approval from the Division. Therefore, the existing review and approval process of the Division of Safety of Dams helps to minimize the potential for dam failure and seiches. Given the above regulations and the relatively low probability of major seismic activity in the County, dam failure and seiche activity is not considered to be a significant risk. Further, major intensification of land uses are not proposed in the General Plan for areas adjacent to reservoirs which might be subject to seiches.

The proposed General Plan addresses potential risks from dam failure and seiches in Policy 10.8 which promotes continued public awareness of the Emergency Operational Plan, through the Office of Emergency Services, as the planning tool for emergency evacuation of threatened populations. The Plan identifies procedures and responsibilities for designating local evacuation routes. Policy 10.9 identifies primary and secondary highway emergency evacuation routes, in accordance with the Emergency Operational Plan. Policy 10.17 calls for coordination with the Office of Emergency Services for emergency preparation and response to an earthquake, seiche, and other natural disaster. Additionally, during the project site review process, sufficient soils and geological investigations would be conducted to identify and evaluate all seismic hazards that may exist for a proposed project, including potential for significant impacts from dam failure and seiches (policy 10.13).

Implementation of existing California Division of Safety of Dams regulations and certification procedures for new and existing dams, the Emergency Operational Plan, and proposed General Plan policies identified above will ensure that flood-related hazards associated with dam failure and earthquake-related seiches are minimized.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 10.8, 10.9, 10.13, and 10.17 would reduce this impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #11. *Buildout of proposed General Plan land uses and associated population could result in increased development in floodplains resulting in periodic damage to structures and possible loss of life if flooding occurs. This is considered to be a* ***significant*** *impact,*

as plan policies do not necessarily provide for avoidance of development in floodplain areas.

Floodplain areas are located in and around the population centers of Nevada City, Grass Valley, Penn Valley, Alta Sierra, and Truckee. Floodplain areas are also located in the vicinity of Hobart Mills, **Hirschdale,** and Floriston. Development allowed under the proposed General Plan within these areas would increase the exposure of people and property to flood hazards.

The Lahontan RWQCB's waste discharge prohibitions and exemption criteria for the Truckee River and Little Truckee River watersheds preclude fill within all 100-year floodplains of these watersheds, whether of not they have been mapped by federal authorities. The RWQCB may require floodplain mapping by a qualified consultant as part of a project application. Elevation of floodplain structures above the flood level does not constitute compliance with the prohibitions. Waste discharge prohibitions are regulations with the force of law and are also considered part of the Lahontan RWQCB's water quality standards. Exemption criteria apply to public projects or private projects which provide public benefits such as recreation; exemptions are not available for residential and most commercial projects.

General Plan measures which serve to limit development in flood prone areas and to maintain safety and emergency support services when flooding does occur are addressed in the following policies. The application of Comprehensive Site Development Standards to prevent and eliminate flood hazards is identified in Policy 1.17. However, as these standards have not been developed it is difficult to determine their adequacy in mitigating potentially significant impacts of future development related to flood hazards. Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section) provides a program for the preparation of site development standards, which will address flood hazards. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions.

The use of clustering on sites to avoid floodplains is discussed in Policies 1.18 and 11.8. However, both of these policies indicate that clustering to protect floodplains will be encouraged, not required, and will take place on a voluntary basis. Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section) stipulates that clustering and other land use, siting, and design tools shall be used as necessary to meet the objectives of the site development standards.

As addressed in Policy 10.14, the County shall continue to work with local, State and Federal agencies, particularly FEMA, in maintaining current flood hazard information as a basis for project review and limiting development in flood hazard areas. Policy 10.15 states that the County will continue to participate in the National Flood Insurance Program. Coordination with the Office of Emergency Services for evacuation and other procedures in the event of a natural disaster, such as flooding, are discussed in Policies 10.8, 10.9, and

10.17. Policy 10.10 states that new development shall support public safety facilities by means of the County's development impact fee program.

Taken together, proposed policies and revised policies identified above serve to minimize the potential damage to structures and loss of life that could be associated with a flood event.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18, 10.14, 10.15, and 11.8 would serve to mitigate the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of the policies above, Mitigation Measure #1 (see Land Use section of this EIR), and the following mitigation measure would serve to reduce the impact to a *less-than-significant level.*

5. Add the following policies to the Water Element of the proposed General Plan.

- Approve only those grading applications and development proposals that are adequately protected from flood hazards and which do not add flood damage potential. This may include the requirement for foundation design which minimizes displacement of flood waters, as well as other mitigation measures.

- Require new utilities, critical facilities and non-essential public structures to be located outside the 100-year flood plain unless such facilities are necessary to serve existing uses, there is no other feasible location, and construction of these structures will not increase hazards to life or property within or adjacent to the flood plain ~~or coastal inundation areas~~.

- When constructed within a floodplain, require elevation of the habitable portions of residential structures to be above the 100-year flood level. Require flood-proofing or elevation of non-residential structures. Require that foundations do not cause floodwater displacement except where necessary for flood-proofing.

Impact #12. *Buildout of proposed General Plan land uses will result in increased impervious surfacing and associated stormwater runoff. This would be considered a* ***significant*** *impact if the capacity of natural drainage and/or constructed stormwater drainage systems would not have the capacity to handle increased flows.*

Development of proposed General Plan land uses would decrease infiltration rates and concentrate surface water flows which could increase flood levels downstream. This impact would be more pronounced in areas of higher density within the Community Regions, although low density development would incrementally contribute to overall runoff volumes.

Increased stormwater runoff from development would be considered significant if increased runoff volumes exceed capacity of natural drainage or storm drain facilities or cause downstream or offsite drainage problems. Many jurisdictions are adopting policies of "no net increase" for stormwater runoff, particularly for larger projects and subdivisions. To achieve this, projects must incorporate on-site storage basins to detain runoff and to reduce peak flow rates, or retain runoff to reduce the overall volume of flow continuing downstream.

Potential impacts caused by increased stormwater runoff from development may occur due to inadequate maintenance of existing drainage facilities. Inadequate maintenance may reduce the capacity of channels to carry the increased volume of flow, or even to handle existing volumes. Many of these drainage ways are not currently maintained by the County due to the lack of an adequate funding source. Policies in the proposed General Plan which would provide for funding of new public facilities or improvements to existing facilities would not address the maintenance of existing facilities.

Policy 10.12 addresses the need to avoid potential increases in downstream flooding by protecting natural drainage and vegetative patterns through project site review, use of clustered development and project subdivision design. This policy also identifies that the Comprehensive Site Development Standards (identified in Policy 1.17) use measures applicable to all discretionary and ministerial projects to avoid downstream flooding from new development. Such measures would include, but not be limited to: avoidance of stream channel modifications; avoidance of excessive areas of impervious surfaces; and use of on-site retention and detention of stormwater. However, as the site development standards have not been developed it is difficult to determine their adequacy in mitigating potentially significant impacts of future development related to stormwater runoff. Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section) provides a program for the preparation of site development standards, which will address stormwater runoff. This program, in conjunction with Mitigation Measure #6 below, should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions. Mitigation Measures #7 and #8, below, would provide for maintenance of drainage facilities to maintain capacity to handle stormwater runoff.

Policy 1.23 identifies maximum allowable impervious surfacing for each land use designation, as identified in Table 4.3-1.

Table 4.3-1
Maximum Impervious Surfacing

General Plan Designation	Maximum Impervious Surface in %
Urban High Density Residential	60
Urban Medium Density Residential	50[1]
Urban Single Family Residential	40[1]
Residential	30[1]
Estate	20
Rural-5 (5 acre minimum parcel size)	10
Rural-10 (10 acre minimum parcel size)	10
Rural-20 (20 acre minimum parcel size)	10
Rural-40 (40 acre minimum parcel size)	10
Rural-160 (160 acre minimum parcel size)	10
Neighborhood Commercial	85
Community Commercial	85
Highway Commercial	85
Service Commercial	85
Rural Commercial	85
Office-Professional	60
Business Park	50
Industrial	85
Recreation	10
Forest	5
Public	85
Open Space	5
Water Area	5
Special Development Area	(2)
Planned Development	(2)
Planned Residential Community	40[1]

(1) Maximum impervious surface may be increased to 60% for conditionally permitted support uses.
(2) Intensity of use within Special Development Areas (SDA) and Planned Developments (PD) shall conform to that for the land use designations shown on the General Plan land use maps for each specific SDA or PD.

Implementation of proposed policies and revised policies would serve to minimize impacts related to increased stormwater runoff from proposed development.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.23, 3.8 and 10.12 would serve to reduce the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of the policies above, Mitigation Measures #6, #7, and #8, and Mitigation Measure #1 (see Land Use section of this EIR) would serve to reduce the impact to a *less-*

than-significant level. **The following policies should be added to Chapter 3 (Public Facilities and Services) of the General Plan:**

6. For all discretionary development, the County shall require full onsite retention/detention of stormwater flow **(for 100-year storms)** so that the rate of runoff from the developed site is not greater than that from the site prior to development.

7. The County shall strongly encourage the formation of independent or dependent entities (Community Service Area, County Service Area, special district or equivalent entities) for the purpose of maintaining drainage facilities to handle stormwater runoff.

8. For all discretionary projects, the County shall require that maintenance of all onsite drainage facilities and all offsite facilities constructed as part of the project is assured through a permanent, legally-enforceable mechanism.

Impact #13. *Buildout of proposed General Plan land uses and RTP road improvements may result in an overall decrease in surface water quality in County streams, lakes, and reservoirs due to increases in erosion and sedimentation due to improper development practices, urban pollutants carried in stormwater, and septic system failure. This is considered a* ***significant*** *impact, as implementation of proposed plan policies will not necessarily protect surface water quality.*

When land is converted to developed uses, the discharge of non-point source stormwater contaminants would increase due to the introduction of additional paved surfaces, automobiles, landscaping fertilization and irrigation. Non-point source contaminants are those that result from dispersed undefined sources, such as oil, grease and heavy metals from roads and driveways that are washed into storm drains and into natural water courses. Grading and construction, and inadequate revegetation can also result in exposed soil which ultimately would increase sediment levels in area streams. **Increased sediment levels can damage important fish spawning and rearing habitat and reduce trout populations in Nevada County streams. Increased erosions from construction of buildings and roads can also result in increased sedimentation of lakes and reservoirs, thus reducing the water storage capacity and possibly increasing water treatment costs for domestic use.** Domestic wastewater which is improperly disposed of, or leaks from faulty septic systems could also contaminate sub-surface and surface waters.

Proposed General Plan policies would minimize increases in the discharge of non-point stormwater contaminants into receiving waterways. Policies 4.38, 11.2, 11.3, 11.4 and 11.5 address cooperative efforts between the County and other agencies to protect the quality of water resources and reduce sources of water pollution such as road salting, storm drains, dump sites, sanitary waste systems, parking lots, roadways, and mining and logging operations. Policy 11.9 indicates that within Rural Regions low density development will be maintained in the Rural and Forest General Plan designations in order to protect watersheds.

Policies 11.7 discusses the use of Comprehensive Site Development Standards to establish and enforce minimum building setback lines of perennial streams. However, as these standards have not yet been developed it is difficult to determine their adequacy in mitigating potentially significant impacts of future development related to water quality issues. Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section) provides a program for the preparation of site development standards, which will address water quality and other hydrologic issues. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions.

Policy 11.6 addresses County enforcement of regulations concerning the installation and operation of private sanitary waste disposal systems in order to protect water quality. Implementation of Policy 12.1 would serve to control erosion by enforcement of the County's Grading Ordinance. Water quality issues associated with mining operations are addressed in Policies 17.11, 17.12 and 17.15. Policies 11.1 and 13.1 address the use of drip irrigation and drought-tolerant landscape plantings, which would reduce the level of irrigation and associated runoff from landscaped areas. This would serve to minimize water quality impacts associated with fertilizers.

While Policy 10.12 is intended to address runoff volumes rather than quality, the recommended use of on-site stormwater retention or detention facilities as part of the Comprehensive Site Development Standards would also serve to mitigate surface water quality. A detention pond serves to settle and filter pollutants from stormwater, and could provide dual flooding and water quality mitigation. In addition to detention facilities, the use of grease and silt traps for parking lots, subdivisions and commercial and industrial development would also serve to reduce pollutant levels, and is included as a recommended site development standard below.

Implementation of proposed policies and revised policies identified above would serve to minimize impacts related to decreased water quality from proposed development.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 11.2 through 11.7, 11.9, 12.1, 17.11, 17.12 and 17.15 would serve to reduce the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of the above policies and Mitigation Measures #1 (see the Land Use section of this EIR) and #9, below, would reduce the impact to a *less-than-significant level.* The following recommended measure is for consideration during the development of the Comprehensive Site Development Standards related to protection of water quality.

9. New development shall minimize the discharge of pollutants into surface water drainages by providing the following improvements or similar methods which provide equal or greater runoff control: (a) include curbs and gutters on arterials,

collectors, and locals consistent with adopted urban street designs; and (b) oil, grease, and silt traps for parking lots, land divisions, or commercial and industrial development. **Maintenance of such facilities shall be assured through a legally-enforceable mechanism.**

9A. **Policy No. 12.3 should be revised to read "Cooperate with and encourage the activities of the Nevada County Resource Conservation District, <u>including provision of educational materials for the general public regarding techniques and practices to minimize erosion from construction activities.</u>**

Impact #14. *Buildout of proposed General Plan land uses and associated population may result in an overall decrease in ground water quality as a result of increased use of septic systems. This is considered a* ***significant*** *impact as proposed plan policies would not necessarily serve to minimize impact.*

Given the generally poor conditions of soils in the County, the expanded use of septic-leachfield systems could impact groundwater quality. There are over 17,000 homes or businesses within the rural regions of Nevada County that are not connected to an area with wastewater collection and treatment system. This number would increase under General Plan buildout (Refer to the Public Services section of this EIR for further discussion). Most of the possible connections are outside existing wastewater service areas, relying on either community subdivision or individual septic tank-leachfield systems. Conversion to a treatment plant system may be possible for more concentrated areas of development, but would not be feasible for rural areas. Therefore, the use of septic leachfield systems in the poor soil environment is likely to continue.

Some of the concerns identified with septic systems have been problems with inadequate lot size or poor design and construction of the systems. Given the poor soils in the County, the design and quality of the septic tank and leachfield would be critical. Under the County's Zoning Ordinance, a minimum lot size of 1.5 acres is required for a lot with a septic system, a minimum of 3 acres is required if a well is also to be included on the parcel. For each, adequate space must be available for a minimum usable disposal area, and a future repair or replacement area. If other constraints are present, the minimum parcel size may be increased.

Proposed General Plan policies address greater reliance on community treatment facilities rather than septic systems, and standards for density, minimum lot sizes and septic facility design and quality which would serve to minimize potential problems. Policies 11.2, 11.4 and 11.5 address cooperative efforts between the County and other agencies to protect the quality of water resources and reduce sources of water pollution such as leaking fuel tanks, storm drains, dump sites, sanitary waste systems, and mining operations.

Policy 3.1 indicates that within Community Regions the capacity of public facilities will be increased to serve higher levels of development directed to these regions. The levels of service and provision of public facilities in Rural Regions shall be based upon limiting the amount of development to ensure that adequate facilities are available. Within

Community Regions and Rural Centers, higher densities would need to provide a public or community sewage treatment system. Only Rural Areas could rely on individual septic systems. Policy 3.5 indicates that all new development in Community Regions shall be required to connect to public sanitary sewer systems. Policy 11.6 states that the County shall continue to enforce its regulations concerning the installation and operation of private sanitary waste disposal systems.

These policies would require development within areas of concentrated development, as discussed above, to rely on sanitary sewer systems or package treatment systems. Therefore, these policies would help to reduce the future reliance on septic systems. However, the use of septic and leachfield system would increase with buildout of proposed General Plan land uses. Given the soil limitations for septic in the County, this increase in septic systems may result in groundwater quality degradation.

Special waste discharge prohibitions and exemption criteria for septic system discharges apply to part of the Truckee River watershed in Nevada County. The Lahontan RWQCB has established regionwide septic system density limits which apply to the portion of eastern Nevada County east of the "prohibition area". Further discussion of this issue can be found in the letter from the Lahontan RWQCB to Mr. Norm Greenberg of the Nevada County Department of Environmental Health (4 August 1993) that can be found in Appendix B of the Draft EIR. Compliance with septic system exemption criteria would need to be evaluated on a project-by-project basis.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 11.2, 11.4, 11.5, 11.6, 3.1 and 3.5 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measures #10, #11, and #12, below, would serve to reduce the impact to a *less-than-significant* level. The following recommended measures are for consideration during development of the Comprehensive Development Standards related to groundwater quality.

10. In order to determine the potential long-term effects of the continued use of septic tank/leachfield systems on groundwater quality, a survey of existing system conditions and failures within the County should be undertaken to supplement the limited existing information. Based upon the documentation of existing failures and problems resulting from the study, this proposed survey should recommend specific courses of action to take to mitigate groundwater impacts. Such actions may include more stringent requirements for new development, using septic systems, protections of aquifer recharge areas, and new requirements regarding protection of wells. The survey should include consideration of the variables listed in Table 4.3-2. This table presents an outline of study components and variables as identified

in the *Public and Private Sewerage Systems Report* (HBA, 1992), which should be considered in developing a scope for such a survey.

Table 4.3-2 should be amended to include "eastern Nevada County" in the first sentence (A). The study should be coordinated with the recommended groundwater study addressed under Mitigation Measure No. 38.

11. ~~Prohibit installation of septic tanks or leachfields within 100 feet of all natural waterways including perennial or intermittent streams, seasonal water channels, and natural bodies of standing water. An exception may be made for the repair of existing systems if the 100 foot setback cannot be maintained, and adequate provisions are made for quality protection.~~ **Restrict septic tank and leachfields from all waterways, including perennial or intermittent streams, seasonal water channels, natural bodies of water, and 100-year floodplains consistent with the State Regional Water Quality Control Board Basin Plan Guidelines.**

12. Prohibit the location of septic systems and leachfields within the 100-year flood plain. ~~Allow the placement of fill within the 100 year flood plain in the minimum amount necessary not to exceed 50 cubic yards and only as part of a permitted development and only if it can be demonstrated that the fill will not have adverse impacts on or off site.~~ **However, for the western portion of the County, sewage systems should be set back 100 feet from the 100-year floodplain to be consistent with requirements of the Central Valley Regional Water Quality Control Board.**

Table 4.3-2 Septic Study

4.4 BIOTIC RESOURCES

INTRODUCTION

This section addresses potential biotic impacts associated with buildout under proposed General Plan land use designations and goals, objectives, and policies, the Regional Transportation Plan, and amended zoning and revised zoning district maps as described in the Project Description section of this EIR. Specific topics include: loss or disturbance of habitat used by deer; special status species; wetlands; riparian habitats; oak woodlands; and timberlands.

This section is based on existing conditions information developed in the Nevada County Master Environmental Inventory (MEI). Additionally, a 1994 data base search through the California Natural Diversity Data Base (CNDDB) was conducted to update the special status species information contained in the MEI.

ENVIRONMENTAL SETTING

Nevada County contains an extremely wide range of plants, animals and habitat types. This habitat diversity is related to topographic elevations ranging from 300 feet in the west to 9,143 feet in the east and precipitation (snow or rainfall) levels varying from 30 inches in the west to 60 inches near the crest of the Sierras. Generally, the County can be characterized by gently rolling oak woodlands in the west transitioning to coniferous forest and an almost desert-like association on the eastern slope of the Sierras.

This Environmental Setting section provides a discussion of life zones and habitat types, special status species, and other sensitive or important habitats or habitat features that are present in the County.

Life Zones and Habitat Types

A given type of vegetation association, with associated animal life, is referred to as a life zone. A life zone is an area of generally homogeneous characteristics located within very general geographic boundaries. The life zones that exist in Nevada County include: Upper Sonoran, Transition, Canadian, Hudsonian, Arctic-Alpine and Mixed Conifer-Jeffrey Pine-Sagebrush. Table 4.4-1 presents a description of the six life zones which occur in the County. The table identifies the habitat types, and primary vegetation and wildlife species which occur in each zone. The six life zones that occur in the County are shown in Figure 4.4-1.

Table 4.4-1 Life Zones Located in Nevada County

Table 4.4-1 Life Zones Located in Nevada County (continued)

As shown in Table 4.4-1, many habitat types can occur within each life zone. The State of California Department of Fish and Game recognizes five primary wildlife habitat types in California: tree dominated; shrub dominated; herbaceous dominated; aquatic; and developed. Each of these general habitat types is further subdivided as shown in Table 4.4-2. The primary vegetation and wildlife associated with each habitat type are briefly identified below and described in Appendix C. Additionally, Figure 4.4-2 identifies generalized areas of vegetation types in the County.

These habitats occur in continuous stretches, as well as isolated "pockets" depending on the overall topography, elevation, climate and pattern of development of a particular area. Wildlife may move between various habitat types to satisfy their life requirements and will utilize riparian corridors, low lying or "saddle" areas of ridges, established trails, and other corridors for this inter-habitat movement. In addition, many species, including deer, move seasonally throughout the County in response to their seasonal habitat requirements.

Habitats throughout the County have been modified by human activity. The western portion of the County, especially the Upper Sonoran and Transition life zones, have experienced rapid residential growth in recent years and the resultant parcelization, fencing, alteration of vegetation, introduction of cats and dogs, roadways, noise and nightlighting have served to reduce the habitat values throughout the area. In the mid to high elevations, logging, mining, and development of second homes and rural subdivisions have also served to alter habitats. Habitat values can be reduced by both direct (construction of housing) and indirect (increased density in wide movement corridors) activities. Although the overall trend in the County is toward a decline in habitat values as identified by the Department of Fish and Game, there is a wide localized variation in habitats, tolerances of species and degrees of human disturbance. In some cases, disruption of predator-prey balances occur; in others, food sources are affected; while in others, breeding or birthing areas are disturbed.

Tree Dominated Habitats

Tree dominated habitats include Subalpine Conifer, Red Fir, Lodgepole Pine, Sierran Mixed Conifer, White Fir, Jeffrey Pine, Ponderosa Pine, Eastside Pine, Juniper, Aspen, Closed-Cone Pine-Cypress, Montane Hardwood-Conifer, Montane Hardwood, Blue Oak Woodland, Valley Oak Woodland, Blue Oak Digger Pine, Montane Riparian, and Valley Foothill Riparian. These habitats and associated physical and wildlife characteristics are described in Appendix C.

Shrub-Dominated Habitats

Shrub-dominated habitats include low sage, bitterbrush, sagebrush, montane chaparral, mixed chaparral, and chamise-redshank chaparral. These habitats and associated physical and wildlife characteristics are described in Appendix C.

Figure 4.4-1

Figure 4.4-1 (continued)

Figure 4.4-2 Vegetation Types

Figure 4.4-2 Vegetation Types (continued

Table 4.4-2 Wildlife Habitat Types in Nevada County

Herbaceous-Dominated Habitats

Herbaceous-dominated habitats include annual grassland, wet meadow, fresh emergent wetland, and pasture. These habitats and associated physical and wildlife characteristics are described in Appendix C.

Aquatic Habitats

Aquatic habitats include riverine and lacustrine (lake) habitats. These habitats and associated physical and wildlife characteristics are described in Appendix C.

Developed Habitats

Developed habitats include cropland, orchard-vineyards, and urban habitats. These habitats and associated physical and wildlife characteristics are described in Appendix C.

Special Status Species

Special status species include those species listed as endangered, threatened, or rare pursuant to the Federal Endangered Species Act (FESA), or by the State of California (California Department of Fish and Game), pursuant to the California Environmental Quality Act (CEQA), the California Native Plant Protection Act, and the California Endangered Species Act (CESA) of 1984. Special status plant species also include species listed on List 1 or List 2 of the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Plants of California* (Smith and Berg, 1988). Species that are listed as endangered, threatened, or rare under FESA and CESA are legally protected. Both the FESA and the CESA prohibit the "taking" of a listed species. Additionally, under the U.S. Migratory Bird Treaty Act, it is unlawful to take, possess, buy, sell, purchase, or barter any migratory bird identified in the statute, which includes disturbance that causes nest abandonment and/or loss of reproductive effort (e.g. killing or abandonment of eggs or young).

The California Department of Fish & Game (CDFG) also identifies "species of special concern" which are species that are possibly declining or are vulnerable to extirpation and may be considered for listing or special management and protection. While, they are not afforded legal protection under the CESA or FESA, the CDFG has developed conservation management guidelines for some of these species. Some of these species may also be afforded legal protection under the Migratory Bird Treaty Act. These species also may meet the definition of "rare" and "endangered" under CEQA, as discussed below.

CEQA Guidelines (Section 15380, Subsection [b]) also provides criteria for determining whether a species is "endangered" or "rare." Subsection (d) states, "a species not included in any listing identified in Subsection (c) (i.e., pursuant to the provision of the California Native Plant Protection Act, the California Endangered Species Act, or the Federal Endangered Species Act) shall nevertheless be considered to be rare or endangered if the

species can be shown to meet the criteria in Subsection (b)." These criteria define rare or endangered as:

- *Endangered* - When species survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over exploitation, predation, competition, disease, or other factors.

- *Rare* - When either:

  A. One species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or

  B. The species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered "threatened" as that term is used in the Federal Endangered Species Act.

A complete list of federally- and state-listed plants and animals which are considered to be endangered is presented in Appendix C. The list of plants located within Nevada County considered by the California Native Plant Society (CNPS) to be threatened is presented in Appendix C. This list is more extensive than the federal and state listing as these are species which the CNPS considers to be at risk which have not been listed by either the Federal or State governments.

Figure 4.4-3 presents the known locations of special status plants and wildlife species in the County, based on a 1994 data base search throughout the California Natural Diversity Data Base (CNDDB). Table 4.4-3 provides a listing of these species, their legal status, and habitats in which they are typically found. There is a high potential that special status species exist in areas not yet officially mapped, as the majority of the County has not been systematically surveyed and studied. Much of the known mapping is the result of field surveys prepared for specific development projects.

According to the Department of Fish and Game, the overall trend in the County is toward a decline in habitat values. It is probable that such a decline could result in an increase in plant and animal species gaining formal listing as endangered, rare, or threatened. Additionally, without ongoing management and monitoring, species in the County that are currently listed as endangered, rare, or threatened could become extinct in the County.

Table 4.4-3
Special Status Species Known to Occur in Nevada County

Name	Status[1]	Characteristic Habitat	CNDDB Map Index #[2]
VEGETATION SPECIES			
(Monadenia Mormonum Buttoni)	C2	Known from the central Sierra Nevada counties of El Dorado and Calaveras.	13087
Stebbin's Morning Glory (*Calystegia Stebbinsii)*	C2/CE 1B	Chaparral. Found on red clay soils of the Pine Hill Gabbro formation.	22742 22746
Scadden Flat Checkerbloom (*Sidalcea Stipularis)*	C1/CE 1B	Marshes and swamps. Found in wet marshes fed by springs. 2400 feet.	12076
Donner Pass Buckwheat (*Eriogonum Umbellatum* var Torreyanum)	C2/1B	Upper montane coniferous forest and nearby chaparral. Found on steep slopes and ridgetops. 7000-7800 feet.	13752 13771 13609 13420
Cantelow's Lewisia (*Lewisia Cantelovii)*	C3c/1B	Broadleaf upland forest and lower montane coniferous forest. Found on mesic rock outcrops and wet cliffs, usually in moss or clubmoss, sometimes on serpentine. 1800-3500 feet.	12444 12310 12295
Long-Petaled Lewisia (*Lewisia Longipetala)*	C2/1B	Alpine boulder and rocky field and subalpine coniferous forest. Found on mesic rocky sites, in cracks of granite or gravelly volcanic soils. 8500-9500 feet.	13674 13701 22874
Ivesia Sericoleuca (*Ivesia Sericoleuca)*	C2/1B	Great Basin scrub and upper montane coniferous forest. Found on alkaline flats and meadows in vernally mesic areas. 4600-6000 feet.	14161 14095 14178 13946
Pine Hill Flannelbush (*Fremontodendron decumbens*)	**CR/C1**	**Serpentine soils. General habitat type is chaparral and cismontane woodland.**	

Table 4.4-3
Special Status Species Known to Occur in Nevada County

Name	Status[1]	Characteristic Habitat	CNDDB Map Index #[2]
ANIMAL SPECIES			
Foothill Yellow-Legged Frog (*Rana boylii*)	C2/CSC	Small, rocky permanent streams above 200m elevation including valley-foothill riparian, coastal scrub, and wet meadow areas that are not occupied by bullfrogs. Use rocks and sediment for refuge.	12687 12684 21032 21036
Northern Goshawk (*Accipiter gentilis*)	C2/CSC	Coniferous forest, usually on north slopes and near water. Use old nests typically in lodgepole pine, jeffery pine and aspens.	12520 12459 14051 14017 24719
Black Swift (*Cypseloides niger*)	CSC	Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons. Forages widely.	13671
Willow Flycatcher (*Empidonax traillii*)	CE	Extensive thickets of low, dense willows on edges of wet meadows, ponds or backwaters in areas between 2000-8000 feet. Require dense willow thickets for nesting/roosting and low exposed branches for singing/hunting perches.	13990
Yellow Warbler (*Dendroica petechia brewsteri*)	CSC	Nests primarily in riparian woodlands, in low trees such as willows and alders. Uses a variety of woodland habitats during migration.	13012
Lahontan Cutthroat Trout (*Oncorhynchus clarki henshawi*)	FT	Cold waters of the Lahontan Basin in a wide variety of water temperatures and conditions. Require gravel riffles in streams for spawning. Cannot tolerate presence of other salmonids.	13194 13776
Pacific Fisher (*Martes pennanti pacifica*)	C2/CSC	Large areas of mature, dense coniferous forests and deciduous-riparian areas with canopy closure. Use cavities, snags, logs and rocky areas for cover and denning.	13427 13227

Table 4.4-3
Special Status Species Known to Occur in Nevada County

Name	Status[1]	Characteristic Habitat	CNDDB Map Index #[2]
California Wolverine (*Gulo gulo luteus*)	C2/CT	Found in a wide variety of high elevation habitats. Uses caves, logs, burrows for cover and den area. Hunts in more open areas.	13611 13290 13308 14031 13625
California Horned Lizard (*Phrynosoma coronatum frontale*)	CSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	23689

1. Notes for Status designations:

STATE LIST: **CE** = Endangered **CR** = Rare **CT** = Threatened **CSC** = CDFG Species of Special Concern

FEDERAL LIST: **FE** = Endangered **FT** = Threatened **C1** = Candidate - sufficient data to support listing
C2 = Candidate - threatened and/or distribution data are insufficient to support listing **C3a** = Extinct
C3b = Taxonomically invalid
C3c = Too widespread and/or not threatened.

CNPS STATUS: **List 1A**: Plants presumed extinct because they have not been seen or collected in the wild for many years. List 1A plants meet the definition of Section 1901, Chapter 10 of the CDFG Code. **List 1B**: These plants (Predominantly endemic) are rare through their range and are currently vulnerable or have high potential for vulnerability due to limited or threatened habitat, few individuals per population, or a limited number of populations. List 1B plants meet the definitions of Section 1901, Chapter 10 of the CDFG Code.

2. CNDDG map reference numbers refer to known sitings of these species. See Figure 4.4-3.

Figure 4.4-3 Special Status Species

Figure 4.4-3 Special Status Species (continued)

Sensitive Habitats and Important Habitat Features

Sensitive habitats are defined by local, state, or federal agencies as those habitats that support special status species, provide important habitat values for wildlife, represent areas of unusual or regionally restricted habitat types, and/or provide high biological diversity. The California Natural Diversity Data Base (CNDDB) includes a listing of high priority habitat types along with a State-wide ranking. The ranking is a reflection of the condition (rarity and endangerment) of a natural community within the State. The California Natural Heritage Program lists habitats that are endangered and of limited distribution in California.

Nevada County supports a variety of wildlife habitats that are considered to be sensitive and/or important by local, state, or federal agencies. These include the following habitat types: wetlands; riparian; and oak woodlands. Additionally, other habitat features that are considered to be important due to their value to wildlife and/or economic/recreational value include: wildlife movement corridors; large areas of undeveloped habitat; timber resources; and fisheries. These sensitive habitats and important habitat features are discussed below.

Wetlands

Wetlands in Nevada County are generally small, isolated features dependent on riparian water, Nevada Irrigation District ditch leaks or overflows, diversions by agricultural operations or natural seeps or springs.

Artificial or naturally occurring wetlands provide an important biological resource both through provision of localized habitat and habitat for migratory species and as a natural water filtration system. The wetlands of the County are not well mapped but are located throughout the County. The primary issues related to wetlands are: (1) loss due to filling as a result of land development; (2) degradation or loss due to interruption of water supply from natural and artificial drainage systems; and (3) degradation due to poor water quality, resulting from increased pollution from urban runoff, sedimentation, pesticides and herbicides. Nevada County's zoning ordinance, General Provisions Section 3.28 of Chapter II of the Nevada County Land Use and Development Code, provides for protection and replacement of "significant" wetlands.

Fill of "waters of the U.S." is regulated under Section 404 of the Clean Water Act, which is administered by the U.S. Army Corps of Engineers (COE). Waters of the U.S. include deep water aquatic habitats such as rivers, lakes, and streams, as well as special aquatic habitats such as wetlands. The COE regulates the discharge of dredged or fill materials into all such waters under the provisions of the Clean Water Act. Additionally, the CDFG has a policy to protect wetlands with significant wildlife value. In order to be considered a "jurisdictional wetland" under COE regulations, a wetland must possess three essential characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. The COE has prepared a technical manual that details elements of these criteria (*Corps of Engineers Wetlands Manual,* Environmental Laboratory, 1987).

Wetlands are considered waters of the State as well as of the United States. As such, State Water Quality Certification under Section 401 of the Clean Water Act is required for COE permits for disturbance of wetlands. The State Water Resources Control Board has denied the application of most COE "Nationwide Permits" within California. In particular, the COE Section 26 Nationwide Permit which applies to disturbance of headwaters is not in effect. Wetlands are considered surface waters, and surface water quality standards apply. The Lahontan RWQCB's new Water Quality Control Plan for the Lahontan Region (Basin Plan), which may take effect by March 1995, includes specific beneficial use designations for the wetlands of the Truckee River and Little Truckee River watersheds, and new language on the RWQCB's policies for the protection and restoration of wetlands. To the extent that wetlands of the Truckee River and Little Truckee River watersheds are also 100-year floodplains, the floodplain discharge prohibitions and exemption criteria also apply.

Stream and Riparian Corridors

Nevada County contains an extensive network of intermittent (seasonal) and perennial (year round) creeks, streams and rivers. These waterways provide for wildlife movement (see "Wildlife Movement Corridors" subsection, below), and wildlife resources associated with both the aquatic and riparian habitats. These areas provide important year round and migratory habitats. The riparian habitats that occur along these waterways provide shelter, forage, and nesting values, as well as drinking water and habitat for water dependent amphibians, mammals and birds. The stream systems are important for fisheries and provide resources for other species.

The riparian plant community has been identified by the CDFG as a habitat of special concern (Wetlands Resource Policy, California Department of Fish and Game Commission, 1987). Riparian habitat is considered to be valuable because it supports a high density and diversity of wildlife species and because it is a diminishing resource. In the State of California, at least 89 percent of riparian areas existing 130 years ago have been lost. Riparian corridors in the County have been disrupted as a result of agricultural operations, logging activities, domestic water development, residential development, water pollution, hydroelectric facilities, road crossings, and other **factors** ~~improvement activities~~. The quality of individual corridors relates to the vegetative cover, the width of the undisturbed corridor, the microclimate conditions, proximity to development, and a variety of factors. However, even apparently degraded areas can retain value, as can corridors traversing developed areas. Riparian corridors can provide important habitats and linkages between rural areas for wildlife.

Oak Woodlands

Oak woodlands and savannas provide an important habitat which serves as a significant grazing resource for area ranchers, a wildlife habitat of diverse values, and as a source of hardwood. Additionally, oak woodlands and savannas contribute to the overall protection of watersheds by stabilizing soils on even the steepest slopes.

The oak trees of California have been experiencing a significant decline in reproduction rates in recent years. Since 1979, or before, this phenomenon had been documented and concerns have been raised. The decline in regeneration has resulted in a variety of studies and the development of guidelines for resource management. While the Nevada County oak woodlands have not been officially evaluated, oak populations, both locally and statewide, appear to be experiencing a decline in both numbers and regeneration due to impacts of agricultural practices, residential development, and cord wood harvesting (affecting primarily Blue Oak and Black Oak) in the western foothill area and due to timber practices in the mid-county area (affecting Black Oak).

As contributions to wildlife values, oaks are extremely important. Oak trees, although varying by species and by associated plant communities, provide food (acorns), shelter, roosting, and nesting habitats for a wide variety of birds. The understory associated with the oaks can also provide browsing, shelter and breeding habitat for mammals, insects and reptiles. Oaks also provide microhabitats due to their shading characteristics, which contribute to the overall diversity of species in areas where they occur. Of all these characteristics, the provision of acorns as a food source appears to be the most significant contribution. As stands of oaks or individual trees age, their production of acorns peaks and then begins to decline. Therefore, consistent regeneration is needed to ensure ongoing supplies of trees and acorns.

Wildlife Movement Corridors

Movement corridors serve two primary purposes: first, to enable migratory animals, especially deer, to move seasonally between winter and summer habitats, and second, to allow animals to move within their home range or residence areas.

Figure 4.4-4 illustrates the general deer movement corridors as well as ranges and deer herd boundaries. Seasonal corridors serve to sustain overall habitat values and insure population density and diversity. These corridors are not necessarily individual paths, but zones or corridors through which animals move. In the case of deer, the corridors serve to link winter and summer habitats which serve the lifecycle of the animal. Seasonal corridors therefore tend to run east to west for the Nevada City herd, and more north-south with the Truckee-Loyalton herd. In general, animal movement generally occurs along riparian corridors and/or low-lying "saddles" which connect various micro-habitat areas. However, the characteristics of animal movement are species specific and highly variable.

The deer population in Nevada County is made up of both resident and migrating animals (see Figure 4.4-4). The western portion of the County supports both resident deer and winter populations of migrating deer. The migratory populations tend to move seasonally with winter ranges located in the eastern slope near Reno or western slope, and summer and spring ranges moving into the timbered area of mid-county. Much of the summer range is in the forested mid-county area. The east side of the County supports portions of the Truckee-Loyalton migratory deer herd, while the western portion of the County supports the migratory Nevada City deer herd, as well as resident populations known as the

Motherlode herd. Winter ranges of the Nevada City and Motherlode herds often overlap. Deer populations throughout the County have been characterized by both the California Department of Fish and Game and the Tahoe National Forest as unstable and declining. Development in the winter range of the wester portion of the County and disruption of migration corridors are significant contributors to the decline. However, an overall decline in habitat values throughout the County is also contributing. Such factors as fire suppression, road kills, subdivision, harassment by dogs, and predator control all may be part of the decline.

Aside from deer, most mammals in the County move locally through established vegetation. Even corridors which have been impacted by residential development, road construction or other uses can retain residual values and support animal movement. These areas are shown on Figure 4.4-4 as "Approximate Boundaries of High Urbanization".

The highest values for resident wildlife in the County generally occur in areas which have not yet been disturbed by development. Within the County, resident wildlife values have been significantly degraded as a result of urbanization, parcelization and the direct and indirect effects of human activities. The areas of the County which are still in large-parcel, undeveloped acreage generally represent the more valuable habitat areas simply due to their essentially open space and low density land uses, although the values vary locally with density and diversity varying in response to local vegetational characteristics. Animals which do not migrate, but which move throughout a home range can be severely affected by development within their range, especially those species which are less tolerant of human activity or are dependent on specific habitat characteristics which are altered by development.

Areas of Undeveloped Habitat

The California Department of Fish and Game (CDFG) has indicated, in response to the Notice of Preparation for this EIR (see Appendix B) and throughout the General Plan update process, that remaining large areas of undeveloped habitat in the County are "critical" to wildlife. Wildlife habitat provides wildlife species with resources for foraging, nesting, denning, birthing, cover, and resting. Nevada County currently supports a wide diversity of both habitats and the wildlife species that rely on these habitats.

Undeveloped habitat areas allow wildlife to move through various habitat types as necessary to satisfy their habitat and life history requirements. This is especially important for wildlife species that have large home ranges (such as mountain lions and coyotes), or those that migrate seasonally (such as deer).

Figure 4.4-4 Migratory Deer Ranges

Figure 4.4-4 Migratory Deer Ranges (continued)

Timber Resources

Nevada County supports an extensive timber resource, the majority of which is under the jurisdiction of the Tahoe National Forest (TNF). According to the Soil Conservation Service, forests are one of the important resources of the Nevada County area. They supply raw material for one of the major industries, provide recreation and aesthetic enjoyment for many people, provide food and cover for many forms of wildlife, and protect watersheds.

Considered a renewable resource, commercial timberlands are located primarily in the mid and eastern areas of the County, in elevations ranging from 1,200 feet above sea level in the west to over 9,000 feet in the east. Timberlands are those lands capable, available and suitable for commercial timber production. There are 449,842 acres of prime forest land on the TNF. Approximately 629,018 acres are considered suitable for timber production. Shown on the following page, Table 4.4-4 identifies classifications of forest types by approximate acreage suitable for timber production.

Fisheries

According to the California Department of Fish and Game, approximately 220 waters (including reservoirs, lakes, and rivers) in the County are **inhabitated by and** stocked with target fish species. Above the 2,000-foot elevation, waters are stocked with rainbow and brown trout. Below the 2,000-foot elevation, waters are stocked with bass and sunfish. The lower section of Deer Creek has anadromous fish (fish that ascend rivers from the sea for breeding purposes), such as trout and salmon. Approximately 20 to 25 species of fish are found in the County, including special status species such as Lahontan Cutthroat trout (discussed in Table 4.4-3) (Hiscox, 1994). Reservoirs, lakes, and rivers in the County are generally stocked from the air.

The maintenance of fisheries in the County requires protection of vegetative cover along waterways, provision of adequate stream flows, protection of water quality, and adequate mitigation where waterways are obstructed (such as fish ladders or hatcheries). Shoreline and aquatic vegetation serve as a food source, provide cover from predators, and serve to regulate water temperatures. Inadequate water flows can prevent fish migration, contribute to decreased dissolved oxygen levels, and higher water temperatures during critical periods, and result in reduced productivity of the riparian habitat as a whole.

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of biotic resource impacts are listed below.

Land Use Element

Policies 1.17 and 1.18.

Open Space Element

Policies 6.1, 6.2, 6.4, 6.5, and 6.9.

Wildlife and Vegetation Element

Policies 13.1 through 13.8.

Forest Element

Policies 15.1 through 15.6.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and State CEQA Guidelines, a plan impact would be considered significant if development would: (1) adversely affect significant riparian, wetlands, or other important wildlife habitat; (2) eliminate, reduce the number or restrict the range of a rare, threatened, or endangered plant or animal species; (3) substantially interfere with the movement of any resident or migratory fish or wildlife species; or (4) cause a fish or wildlife population to drop below self-sustaining levels. These standards are generally derived from portions of the CEQA Guidelines, including various sections and Appendix G and Appendix I. Some standards are derived from agency regulations or are professional standards commonly used to further define what actions may cause "significant effects" under CEQA.

Impact #15. *Buildout of proposed General Plan land uses and RTP road improvements would result in the direct loss of wildlife habitat and/or habitat fragmentation. This is considered to be a* ***significant*** *impact as proposed plan policies would not necessarily prevent this loss/fragmentation.*

Buildout of proposed General Plan land uses and RTP road improvements would result in the direct loss of wildlife habitat and/or habitat fragmentation in both Community Regions and Rural Regions. Comments received from the California Department of Fish and Game during the Notice of Preparation for this EIR indicate that this loss of habitat and habitat fragmentation should be considered a significant impact of proposed General Plan buildout. While this is likely the case, there is very little information regarding how loss/fragmentation of particular types of habitats may impact particular species and overall species diversity. The following impact evaluation is based on existing available information.

Table 4.4-4 Categories of Vegetation in the TNF

Within Community Regions, infill development and development of new communities or new growth areas, such as the New Town SDA or other SDAs, is assumed to result in the loss of most functional wildlife habitat. Development in these areas would result in loss of habitat due to site grading, road building, infrastructure installation, and construction of residential and other uses. Additionally, such development could result in the fragmentation of areas that currently consist of relatively undeveloped, uninterrupted wildlife habitat. The dedication of open space lands in these areas would provide for retention of some habitat. However, remaining fragments of habitat would be isolated and would have lower biological value. Therefore, development in Community Regions is assumed to result in habitat conversion, although some lower quality vegetation and wildlife habitat may continue to exist on undeveloped properties, in parks, greenbelts, or other areas.

Development within Rural Regions is assumed to result in partial vegetation removal and associated loss of wildlife habitat. As with Community Regions, development in these areas would result in loss of habitat associated with site grading, road building, infrastructure installation, and construction of other uses. Additionally, such development could result in the fragmentation of areas that currently consist of relatively undeveloped, uninterrupted wildlife habitat. Such fragmentation is expected to be of primary concern in the western portion of the County, below approximately the 4,000-foot level, in areas that have not already been fragmented by development (Finn, personal communication, 1994). Above this elevation much of the land is within the Tahoe National Forest and private land is designated in large parcels (40- and 160-acre minimums). The primary remaining large areas of undeveloped habitat exist: along the San Juan Ridge from approximately Lake Wildwood north; around the Penn Valley area; and in the southwestern portion of the County.

Development patterns resulting in parcels less than 20 acres in size are assumed to generally result in lower habitat values. However, it should be noted that there is a lack of research available which specifically defines the minimum habitat land area necessary to maintain habitat values. While development in Rural Regions is not assumed to result in loss of all wildlife habitat, fragmentation of habitat and loss in habitat values will occur, especially in areas with minimum parcel sizes of less than 20 acres. This loss in habitat values associated with buildout of proposed General Plan land uses would occur in areas that are not already developed at parcel sizes smaller than 20 acres. Additionally, disturbance associated with construction and human habitation would further impact remaining habitat.

The proposed General Plan does address the potential for habitat loss from future growth by emphasizing development within Community Regions and Rural Centers. Concentrating growth in this way would reduce the overall habitat loss and fragmentation that could occur if concentrated growth occurred in more haphazard or dispersed patterns. However, the densities allowed for in Rural Regions (Estate, Rural-5, Rural-10, and Rural-20) would serve to lower overall habitat values via habitat loss and habitat fragmentation.

Proposed General Plan policy 13.1 indicates that when significant environmental features, as defined in policy 1.18, are identified during the review of a project, all portions of the project site that contain or influence said areas must be retained as non-disturbance open space through clustered development or other means. The intent of this policy is to promote continued viability of contiguous or interdependent habitats by avoiding fragmentation of existing habitat areas and preserving movement corridors between related habitats. While the intent of this policy is to avoid habitat fragmentation and ensure continued viability of contiguous or interdependent habitats, the protection of only certain "significant environmental features," as defined in policy 1.18, would not necessarily provide for this goal. Further, policy 1.18 "encourages" clustering when significant environmental features are present, it does not "require" clustering. Therefore, the protection of such resources would not necessarily occur via implementation of this policy.

Policies 1.17 and 13.2 indicate that site development standards will be developed to: protect environmentally sensitive resources; provide for open space as part of site development; and minimize the removal of existing vegetation. However, as these standards have yet to be developed it is difficult to assess their effectiveness in minimizing adverse effects.

Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section of this EIR) provides a program for the preparation and implementation of site development standards that would address critical wildlife areas. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions.

While site development standards may somewhat reduce overall habitat loss and fragmentation, they would not significantly reduce the loss that would occur with buildout of proposed General Plan land use designations in Rural Areas, including designations with minimum parcel size less than 20 acres.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18, 13.1, and 13.2 would serve to reduce the impacts but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measures #1 (see the Land Use section of this EIR), and #14, #15, and #16, below, would reduce the impact to a *less-than-significant* level.

14. The following policies should be added to the Wildlife and Vegetation Element of the proposed General Plan.

- No net loss of habitat functions or values shall be caused by development where significant environmental features or significant habitat, as defined in Policy 1.18, are identified during the review of proposed projects. No net loss shall be achieved through avoidance of the resource, or through creation or restoration of habitat of superior or comparable quality, in accordance with guidelines of the U.S. Fish and Wildlife Service and the California Department of Fish and Game.

- Habitat that is required to be protected, restored, or created as mitigation for a project's impacts shall be monitored and maintained in accord with a County-approved Habitat Management Plan.

- The land use designations and associated acreages identified on the proposed General Plan land use maps for Special Development Areas should be modified as necessary at the Specific Plan stage to protect sensitive natural communities and other important biotic resources.

- The County shall prepare and implement a Habitat Management Plan for the western **and eastern** portions of the County. This plan shall include result in a descriptive and mapped inventory of habitat types and associated characteristic plant and wildlife species. This plan shall also describe special status species known to occur within the County or typically associated with habitats found in the County. This information shall be used as the basis for developing and adopting a program for the management of habitat and associated species in the western portion of the County. This program shall include but not be limited to recommendations related to site development standards, habitat protection/restoration programs, and General Plan land use map changes. General Plan land use map changes could include the identification of favorable sites for future ecological reserves. The County should redesignate the ecological reserve areas as Open Space/Resource Conservation on the land use map. Identified areas suitable as reserves could serve as the possible "mitigation banking" sites where future development projects could contribute to the purchase and maintenance of selected reserves through contribution to a conservation impact fee.

- The County shall investigate establishing interagency agreements with adjoining counties where new developments could impact significant natural resource areas shared by adjoining counties. The agreements shall require notification of development projects within one mile of the County's borders and provide for review and comment by affected counties.

15. Revise proposed General Plan policy 13.3 as follows:

As part of the Comprehensive Site Development Standards, require ~~at least~~ the maximum feasible use of drought tolerant native ~~and/or site appropriate~~ plant

species for landscaping of all new multi-family residential, commercial, ~~and~~ industrial, and public projects. Invasive, non-native plants that may displace native vegetation on adjoining undeveloped lands shall not be used. Landscaping with native trees and shrubs shall be encouraged to provide suitable habitat for native wildlife, particularly in proposed open space uses of future development.

16. Revise proposed General Plan Land Use Maps to redesignate lots of less than 20 acres to provide for designations with a minimum parcel size of 20 acres or larger in Rural Regions (outside of Rural Centers) within the western portion of the County, except as indicated in Mitigation Measure **#18** ~~#10~~ below. This redesignation would primarily affect lots in the San Juan Ridge, around the Penn Valley area, and in the southwestern portion of the County. This redesignation would also result in the elimination of the New Town SDA in the southwestern portion of the County.

An impact associated with the elimination of the New Town SDA would be an associated removal of affordable housing. Thus, this mitigation measure could affect the County's ability to have a desirable jobs/housing balance and to meet goals for affordable housing.

16A. Revise Policy 1.5.r as follows:

Policy 1.5.r.: Open Space (OS) is intended to provide for land, primarily in public ownership, which is dedicated to recreation, resource and habitat preservation, and protection of environmental resources, and which typically allows only recreation or very low-intensity limited uses, such as, but not limited to, visual corridor preservation, interconnecting wildlife corridors, slope protection, preservation of ditches, railroad rights-of-way, and historic trails. This designation shall also provide for the designation of land in private ownership which is permanently devoted to open space through clustering or other open space requirements.

Impact #16. *Buildout of the General Plan would result in the loss or disturbance of habitat used by deer for movement, as winter and summer range, and for fawning. This is considered to be a* ***significant*** *impact, as proposed General Plan policies would not necessarily protect habitat used by deer.*

As stated above in the Environmental Setting section, deer populations throughout the County have been characterized by both the California Department of Fish and Game and the Tahoe National Forest as unstable and declining. Development in the winter range of the western portion of the County and disruption of migration corridors are significant contributors to the decline. However, an overall decline in habitat values throughout the County, associated with urbanization, parcelization, and the direct and indirect effects of human activities, is also a contributing factor. Factors such as fire suppression, road kills, parcel subdivision and development, and harassment by dogs also relate to the decline. The

CDFG has indicated that to protect deer winter range, the following should occur: all critical migratory deer winter ranges should be designated for 40-acre minimum parcel sizes; and all non-critical winter range should be designated with 20-acre minimum parcel sizes (Broddrick, written communication, 1993). The CDFG has also indicated that in areas of critical migration corridors, land should be designated for 40-acre minimum parcel sizes to allow for continued movement; the specific locations, width, and characteristics of these migration corridors is not well defined.

A review of proposed General Plan land use maps indicates that buildout of proposed General Plan land uses would further impact winter and summer ranges and migration corridors for deer, as identified in Figure 4.4-4. The County provides winter and summer deer ranges for both resident and migrating deer. The western portion of the County supports both resident deer and winter populations of migrating deer, and the eastern portion of the County supports summer populations of migrating deer. Much of the summer range is in the forested central portion of the County which is proposed for Forest uses. Summer range for deer occurs primarily in the Forest-160 land use designation (central and eastern portions of the County) with smaller, isolated areas of 40-acre minimum parcel sizes. Buildout of such uses would not significantly impact summer range (or fawning habitat) for deer as such development would allow for retention of sufficient land area and associated vegetation to provide adequate summer range resources for deer.

As discussed in the Environmental Setting section, existing development in the western portion of the County has resulted in or contributed to the decline and instability of deer herds in the County. Buildout of proposed General Plan land uses in the winter range of the western portion of the County would result in an overall reduction of land area and associated vegetation available to deer. This reduction in available land area would, in turn, reduce foraging resources and areas for cover and resting. Buildout of General Plan land uses allowing parcels smaller than 40 acres in size would also result in indirect impacts associated with development, including fire suppression, increased presence of people, harassment by dogs, noise, etc.

Deer movement corridors serve to link winter and summer ranges which serve the lifecycle of the animal. Seasonal corridors tend to run east to west for the Nevada City herd, and more north-south with the Truckee-Loyalton herd. Although movement occurs primarily along riparian corridors and/or low-lying "saddles" which connect various micro-habitat areas, other areas (such as ridges, south facing slopes, and undeveloped land) are also commonly used. Migration corridors located in the Forest-160 land use designation (central and eastern portions of the County) would not be significantly impacted by future development allowed under these designations (see Figure 4.4-4). Allowing for continued seasonal migration of deer is a concern primarily in the western portion of the County, due to the concentration and density of existing and planned land uses.

Proposed development would still be subject to the provisions of policies 1.18 and 13.1 if habitat resources for deer are identified (including winter or summer range, fawning area, and migration corridors) on or adjacent a proposed parcel site. Land Use Element policy

1.18 stipulates that clustering of development will be "encouraged" where significant deer migration corridors, winter deer range, or fawning areas (or other significant environmental features) are present. Therefore, this policy would not necessarily provide for the protection of these significant environmental features. Policy 1.18 further stipulates that where the entire site is affected by significant environmental features, clustered development shall occur on the least sensitive habitat or resource area, thereby allowing for development in areas of significant natural features.

In contrast to policy 1.18, policy 13.1 indicates that the County would "require" all portions of a project site that contain or influence deer migration corridors, deer winter range, and/or deer fawning areas (or other significant environmental features identified in policy 1.18) be retained as non-disturbance open space through clustered development or other means where clustering cannot be achieved. Further, Implementation Measure 2 indicates that the Zoning Ordinance would be amended to "require" clustering where natural "constraints" are present. Due to the inconsistency in language used in these policies, it is unclear whether or not they would necessarily provide for the protection of deer migration corridors, winter range, and fawning areas. See also the discussion in Impact #15 above, regarding policies 1.17, 1.18, 13.1 and 13.2.

Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section of this EIR) provides a program for the preparation and implementation of site development standards that would address critical wildlife areas including deer winter range and migration corridors. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions. While site development standards may somewhat reduce overall loss of winter range foraging resources, they would not significantly reduce the loss that would occur with buildout of proposed General Plan land use designations in Rural Regions minimum parcel sizes of less than 20 to 40 acres.

Plan Policies that Serve as Mitigation

Implementation of policies 1.17, 1.18, 13.1, and 13.2, of the proposed General Plan would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measures #1 (see the Land Use section), #16 above, and #17 **and #18**, below, would reduce the impact to a *less-than-significant* level.

17. The following policy should be added to the Wildlife and Vegetation Element of the proposed General Plan.

    Non-development buffers shall be maintained adjacent to stream corridors through the use of clustering, the designation of a Planned Development, or the implementation of other siting and design tools. Buffers shall be sufficient in size

to protect the stream corridor for movement, as well as provide some adjacent upland habitat for foraging.

18. Revise General Plan land use map to provide for a 40-acre minimum parcel size in critical migratory deer winter ranges in Rural Regions within the western portion of the County (see Figure 4.4-4).

Impact #17. *Buildout of proposed General Plan land uses and RTP road improvements would result in the loss or degradation of oak trees in the western portion of the County. This is considered to be a* ***significant*** *impact, as proposed plan policies would not necessarily serve to minimize this loss.*

As indicated in Figure 4.4-2, oak woodlands occur primarily in the western portion of the County. Buildout of proposed General Plan land uses and RTP road improvements would result in the loss or disturbance of individual trees as site development occurs, as well as entire groves of trees as concentrated areas of new growth occurs in undeveloped areas, such as for the New Town SDA. Loss or disturbance of oak trees and woodlands as development occurs would result in a corresponding loss of wildlife habitat and habitat value which is discussed above. This impact discussion focuses on the loss or disturbance of heritage trees and landmark trees and groves, as defined by the proposed General Plan glossary. As defined in the glossary, landmark trees, oaks, or groves are those trees or groves that have been marked for preservation by a local, state, or federal agency due to their size, visual impact, or association with a historically significant structure or event. A heritage tree or grove are those that have been designated by the Board of Supervisors to be of historical or cultural value, outstanding specimens, unusual species, or of significant community benefit due to size, age, or any other unique characteristic and considered in good health.

The CDFG has indicated that the proposed New Town SDA, which would be a future Community Region, is one of the last remaining large expanses of oak woodland habitat within the County (Broddrick, written communication, April 1993). Development in this area would remove and/or disturb heritage or landmark trees/groves as a result of construction and human habitation.

As discussed above, the land use map does address the potential for habitat loss, including loss of oak trees and groves from future growth, by emphasizing development within Community Regions and Rural Centers. Concentrating growth in this way would reduce the overall loss of oaks, and associated habitat fragmentation and loss of habitat values, that could occur if concentrated growth occurred in more haphazard or dispersed patterns. However, development in the New Town SDA would result in the significant removal of oaks. Additionally, infill development in Community Regions, development in Rural Regions, and construction of new roads and road improvements in the western portion of the County would probably also result in the loss of some oak trees and/or groves.

Proposed General Plan policy 13.1 indicates that when significant environmental features, as defined in policy 1.18, are identified during the review of a project, all portions of the project site that contain or influence said areas must be retained as non-disturbance open space through clustered development or other means. Policy 1.18 identifies "landmark groves and oaks" as significant environmental features. However, this policy would not necessarily provide for clustering to protect oaks as this policy "encourages" clustering when such significant environmental features are present, but does not "require" clustering. Therefore, it is unclear whether the protection of oaks would occur via implementation of these two policies.

Policies 1.17, 13.2, and 13.8 indicate that site development standards will be developed to: protect environmentally sensitive resources; provide for open space as part of site development; minimize the removal of existing vegetation; and minimize disturbance to "heritage and landmark trees and groves."

Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section of this EIR) provides a program for the preparation and implementation of site development standards that would address critical wildlife areas including landmark groves and oaks. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions.

Implementation of the proposed policies and the revised policy identified above would minimize overall loss or disturbance of heritage and landmark oak trees and groves.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18, 13.1, 13.2, and 13.8 would serve to reduce impacts but *not* to a *less-than-significant* level.

Other Mitigations

Implementation of the proposed policies above and Mitigation Measure #1 (see the Land Use section of this EIR) and #19, below, would reduce the impact to a *less-than significant* level.

19. The following policy should be added to the Wildlife and Vegetation Element of the proposed General Plan.

    Development in the vicinity of significant oak groves **of all oak species** shall be designed and sited to maximize the long-term preservation of the trees and the integrity of their natural setting. **The County should adopt a Tree Protection Ordinance specifically geared towards the protection of oaks.**

Impact #18. *Buildout of proposed General Plan land uses and RTP road improvements may result in the elimination, interruption or disturbance of special status species or their habitat as a result of development and associated loss or degradation of habitat. This is considered to be a* ***significant*** *impact, as proposed plan policies would not necessarily minimize impacts to such species.*

Buildout of proposed General Plan land uses and RTP road improvements may result in the loss or disturbance of wildlife habitat, as discussed above. This could, in turn, potentially impact the special status species identified in Table 4.4-3. The reported locations of these species are generally shown in Figure 4.4-2. The extent and severity of this impact cannot be established without project-level biological resource analyses in areas proposed for development that are currently undeveloped and have the potential for special status species occurrences. However, development in currently undeveloped areas at the scale and intensity proposed in the General Plan is likely to result in the conversion or reduction in quality of important habitat for some special status species, causing direct mortality of individual plants and animals.

Proposed General Plan policy 13.1 indicates that when significant environmental features, as defined in policy 1.18, are identified during the review of a project, all portions of the project site that contain or influence said areas must be retained as non-disturbance open space through clustered development or other means. Policy 1.18 identifies "rare, threatened, or endangered plant and animal species" as significant environmental features. However, this policy would not necessarily provide for clustering to protect these species as this policy "encourages" clustering when such significant environmental features are present, but does not "require" clustering. Further, policy 1.18 does not address those special status species that may not be legally designated but that would be considered to be "rare" or "endangered" under CEQA, as discussed in the Environmental Setting section. Therefore, it is unclear whether the protection of all special status species would occur via implementation of these two policies.

Policies 1.17 and 13.2 indicate that site development standards will be developed to: protect environmentally sensitive resources; provide for open space as part of site development; and minimize the removal of existing vegetation. However, as the standards have not been developed, to date, it is difficult to determine whether of not the implementation of such standards on a site-by-site basis would minimize potential impacts to special status species.

Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section of this EIR) provides a program for the preparation and implementation of site development standards that would address special status species. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions.

Further, Regional Transportation Plan (RTP) policy 2.2 indicates that significant adverse environmental effects of transportation improvements shall be avoided or fully mitigated.

Implementation of the proposed policies and revised policies would reduce overall loss of, or disturbance to, special status species and their habitats.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18, 13.1, and 13.2 and RTP policy 2.2 would serve to reduce impacts but *not* to a *less-than-significant* level.

Other Mitigations

Implementation of proposed policies above, Mitigation Measures #1 (see the Land Use section of this EIR), #14, #16 above, and #20 below, would reduce the impact to a *less-than significant* level.

20. The following policies should be added to the Wildlife and Vegetation Element of the proposed General Plan.

> Project review standards shall include a requirement to conduct a site-specific biological inventory to determine the presence of special status species or habitat for such species that may be affected by a proposed project. The results of the biological inventory shall be used as the basis for establishing land use siting and design tools required to achieve the objective of no net loss of habitat function or value for special status species
>
> The Habitat Management Plan shall be prepared to comply with the requirements of the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA). The plan shall provide the background data, impact analysis, and mitigation programs necessary to obtain a FESA Section 10(a) and CESA Section 2081 permit authorizing incidental take of federal and state listed threatened and endangered species that occur in areas proposed for future development. Prior to implementation of an adopted Habitat Management Plan, project applicants proposing the development of a project that would impact a federal or state listed species, or a species that is proposed for listing, shall be individually responsible for obtaining federal and state incidental take permits on a project-by-project basis.

Impact #19. *Buildout of proposed General Plan land uses and RTP road improvements may result in the loss of wetlands due to filling as a result of development, interruption of drainage to wetlands, and/or degradation of wetland water quality associated with increased urban runoff and sedimentation. This is considered to be a* ***significant*** *impact.*

As described above in the Environmental Setting section, wetlands in Nevada County are generally small, isolated features dependent on riparian water, Nevada Irrigation District ditch leaks or overflows, diversions by agricultural operations, or natural seeps or springs. Man-made and naturally occurring wetlands provide an important biological resource both

through provision of localized habitat and habitat for migratory species and as a natural water filtration system.

Buildout of the proposed General Plan land uses could result in the fill or degradation of wetlands depending on the actual location of development. As wetlands in the County are not well mapped, it is difficult to locate areas within the County where wetland impacts would occur.

As stated in the Environmental Setting section, the U.S. Army Corps of Engineers (COE) regulates the fill of wetlands under Section 404 of the federal Clean Water Act. The Department of Fish and Game recognizes wetlands for their critical value. Both agencies have policies of "no net loss" of wetlands. Therefore, the fill of significant wetland habitats associated with buildout of General Plan land uses and RTP road improvements would be considered a significant impact. Significant wetland areas are those that: (a) meet the three criteria for a jurisdictional wetland; and (b) are greater than 1 acre. If conditions (a) or (b) do not exist, a wetland will be considered significant if it has significant fish, wildlife, recreational, aesthetic, or scientific resources.

Nevada County's zoning ordinance, General Provisions Section 3.28 of Chapter II of the Nevada County Land Use and Development Code, provides for protection and replacement of "significant" wetlands. A finding of significance would be based upon such analysis as may be performed by a Responsible or Trustee agency.

Additionally, proposed General Plan policy 13.1 indicates that when significant environmental features, as defined in policy 1.18, are identified during the review of a project, all portions of the project site that contain or influence said areas must be retained as non-disturbance open space through clustered development or other means. Policy 1.18, identifies "significant water courses, wetlands, and riparian areas" as significant environmental features. However, this policy would not necessarily provide for clustering to protect these **features** ~~species~~ as clustering would be "encouraged" but not "required." Therefore, it is unclear whether significant wetlands would be protected via implementation of these two policies.

Policies 1.17 and 13.2 indicate that site development standards will be developed to: protect environmentally sensitive resources; provide for open space as part of site development; and minimize the removal of existing vegetation. However, as the standards have not been developed, to date, it is difficult to determine whether or not the implementation of such standards on a site-by-site basis would minimize potential impacts to wetland habitats. Additionally, policy 1.17 stipulates that through the development of site development standards and project environmental review, minimum setbacks from streams and significant wetlands will be established to permanently protect resource values. However, these minimum setbacks have not yet been established.

Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section of this EIR) provides a program for the preparation and implementation of site development standards

that would address wetlands. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions.

Further, Regional Transportation Plan (RTP) policy 2.2 indicates that significant adverse environmental effects of transportation improvements shall be avoided or fully mitigated.

Implementation of existing state and federal regulations and policy, and implementation of the proposed policies and revised policies identified above would reduce overall loss of, or disturbance to, wetlands. Impacts associated with the degradation of wetland water quality are discussed in the Hydrology and Water Quality section of this EIR.

Plan Policies that Serve as Mitigation

Implementation of existing state and federal regulations and policies, the local zoning ordinance, and proposed plan policies 1.17, 1.18, 13.1, and 13.2 of the proposed General Plan and RTP policy 2.2 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measure #1 (see the Land Use section of this EIR), and #21 and #22 below would serve to reduce the impact to a *less-than-significant* level.

21. The following policies should be added to the Wildlife and Vegetation Element of the proposed General Plan.

- No net loss of riparian or wetland habitat functions or values shall be caused by development.

- Development projects which have the potential to remove riparian or wetland habitat shall not be permitted unless:

  (a) No suitable alternative site or design exists for the land use;

  (b) There is no degradation of the habitat or reduction in the numbers of any rare, threatened, or endangered plant or animal species as a result of the project;

  (c) Habitat of superior quantity and superior or comparable quality will be created or restored to compensate for the loss; and

  (d) The project conforms with regulations and guidelines of the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, California Department of Fish and Game, and other relevant agencies.

- Future development shall be set back a minimum of 100-feet from all significant wetlands.

Impact #20. *Buildout of proposed General Plan land uses and RTP road improvements may result in the loss or degradation of riparian habitats as a result of adjacent development and/or activities such as agricultural and timber production/harvesting, mineral extraction, etc. Fisheries could be impacted by the loss or degradation of riparian habitats. This is considered to be a* ***significant*** *impact as proposed plan policies would not necessarily minimize impacts.*

Buildout of proposed General Plan land uses and RTP road improvements may result in the removal of riparian vegetation or disruption of riparian habitat values associated with disturbance from adjacent land uses, human- and pet-related disturbance, and urban runoff in areas where development is proposed in, or adjacent to, a riparian corridor. Riparian vegetation removal can serve to reduce the overall width of a riparian corridor, which reduces its value to wildlife. Additionally, future development in or adjacent to riparian corridors could also interrupt wildlife movement that occurs through these areas.

Proposed General Plan policy 13.1 indicates that when significant environmental features, as defined in policy 1.18, are identified during the review of a project, all portions of the project site that contain or influence said areas must be retained as non-disturbance open space through clustered development or other means. Policy 1.18 identifies "significant water courses, wetlands, and riparian areas" as significant environmental features. However, this policy would not necessarily provide for clustering to protect these **resources** ~~species~~ as clustering would be "encouraged" but not "required." Therefore, it is unclear whether significant riparian areas would be protected via implementation of these two policies.

Policies 1.17 and 13.2 indicate that site development standards will be developed to: protect environmentally sensitive resources; provide for open space as part of site development; and minimize the removal of existing vegetation. However, as the standards have not been developed, to date, it is difficult to determine whether or not the implementation of such standards on a site-by-site basis would minimize potential impacts to riparian habitats.

Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section of this EIR) provides a program for the preparation and implementation of site development standards that would address riparian areas. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions.

Further, Regional Transportation Plan (RTP) policy 2.2 indicates that significant adverse environmental effects of transportation improvements shall be avoided or fully mitigated.

Implementation of above policies and revised policy 1.17 would reduce overall loss or disturbance of riparian habitat associated with buildout of the proposed General Plan and RTP road improvements. Impacts associated with the degradation of water quality in riparian corridors are discussed in the Hydrology and Water Quality section of this EIR.

Plan Policies that Serve as Mitigation

Implementation of policies 1.17, 1.18, 13.1, and 13.2 of the proposed General Plan and RTP policy 2.2 would serve to reduce the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of Mitigation Measure #1 (see Land Use section of this EIR), #14, #17, above, and #22 below would reduce the impact to a *less-than-significant* level.

22. The following policy should be added to the Wildlife and Vegetation Element of the proposed General Plan.

- Setback future development a minimum of 100-feet from top of bank, or the width of riparian vegetation if greater, from all **intermittent and perennial creeks, streams and rivers** ~~water bodies~~.

22A. Revise Policy 5.20 of the General Plan as follows:

Policy 5.20: Recognize and protect the South Yuba River canyon as an important resource in terms of recreation, tourism, aesthetics, water resource, mineral resource, water quality, and wildlife habitat through the following actions:

a. Designate publicly-owned lands physically adjoining the river as open space in the General Plan land use maps.

b. Encourage the recreation master planning and development activities by the State Department of Parks and Recreation.

c. Encourage the protection of the South Yuba River from dams.

Impact #21. *Buildout of proposed General Plan land uses and RTP road improvements may result in the loss or degradation of timberlands. This is considered to be a* ***less-than-significant*** *impact as proposed General Plan policies would serve to minimize the loss.*

As discussed in the Environmental Setting section, timber resources are extensive in Nevada County, occurring primarily in the central and eastern portions of the County. These resources not only provide for important habitat, but also supply the raw material for the timber harvesting industry and provide important recreational and aesthetic

resources. The majority of timber resources are on lands that are under the jurisdiction of the Tahoe National Forest. Throughout the TNF, there are private inholdings that are under County jurisdiction.

Buildout of proposed General Plan land uses and RTP road improvements that would occur on these private inholdings would not significantly alter timber resources. This is due to maintenance of large parcels (minimum parcel sizes of 40, 160 and 640) throughout the majority of the forested areas of the County. However, in some portions of the County, such as north and east of Nevada City, higher densities (i.e., Estate, Rural 5 and Rural 10) would be allowed in areas with a high site class/index for timber production. Such densities may limit timber production in these areas. As identified in policy 15.1, low density development is identified in the Forest land use designation, in order to protect the major areas of potential timber resources from conversion to more intensive uses. Timber Production Zones (TPZs) will be designated on lands which have significant commercial timber value in the Estate, Rural and Forest designations (policy 15.5). Additionally, the use of clustered development is encouraged in Rural and Forest designations to preserve timber resources (policy 15.3). Additionally, site development standards shall be prepared and implemented to ensure that development does not adversely impact resource management or timber production/harvesting activities (policy 15.6).

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 15.1, 15.3, 15.5, and 15.6 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigations

None warranted.

4.5 CULTURAL RESOURCES

INTRODUCTION

This section addresses potential cultural resource impacts associated with buildout of proposed General Plan land uses, goals, objectives, and policies, the Regional Transportation Plan, and amended zoning and revised zoning district maps as described in the Project Description section of this EIR. The term "cultural resources" refers to both archaeological remains and historic structures and sites.

This section is based on a Cultural Resource Report prepared by Susan Lindstrom in June 1991 as part of the Nevada County Master Environmental Inventory (HBA, 1991). This report is summarized herein and incorporated by reference.

ENVIRONMENTAL SETTING

Overview

A variety of prehistoric and historic site types occur within Nevada County. Prehistoric sites which have been inventoried include permanent villages and associated cemeteries, temporary multi-task camps, single task-specific locales (such as bedrock mortar milling features), and special use sites (to include hunting blinds, petroglyphs, and quarries). Major historic themes within Nevada County are manifest archaeologically by site types related to early settlement, mining, water management, logging, transportation, emigrant travel, ranching and agriculture, grazing, the ice industry, and recreation. Prehistoric and historic background information is summarized below.

Prehistoric and Native American Period

Nevada County lies within the traditional territories of the Hill Nisenan (or Southern Maidu), who inhabited the west-central Sierra Nevada, and the Northern Washoe who occupied the west-central Great Basin along the eastern Sierra flank. In general, the lower elevations were occupied on a permanent or semi-permanent basis, with higher elevations being inhabited at various times of the year by smaller groups who made seasonal movements in order to procure economic resources as they became available. The archaeological imprint of these subsistence activities is distinctive, with diverse environmental zones closely corresponding to a variety of specific site types, such as villages, multi-task camps, task-specific locales, and special uses areas.

Occupation of western and central portions of Nevada County may extend back from nearly 4,000 years ago up to the time of historic contact. Prehistoric groups may have inhabited the eastern end of the County as early as 6,000 years ago. By the 1850's, Euroamericans had permanently occupied the Nisenan and Washoe territories with the discovery and

exploitation of the Sierra Nevada motherlode and Washoe's Comstock lode, which permanently changed traditional lifeways. The Federal Government's Indian "relocation" policies in California were set in motion during the 1850's with the creation of rancherias and reservations. Today, significant numbers of Nisenan are dispersed throughout many Sierran foothill communities. The Washoe remain as a recognized tribe by the U.S. government and have maintained an established land base.

Historic Period

The earliest explorations during the Spanish and Mexican periods were limited in Nevada County. It wasn't until growing American interest in the Trans-Mississippi West and California, that the U.S. Government dispatched expeditions to explore the region. A route ascending the Truckee River out of Nevada, over Donner Pass, and down the west slope in the Central Valley, was opened in 1844 by members of the Stephens-Townsend-Murphy Party, the first emigrant group to cross the Sierra Nevada by wagon. Hundreds of emigrant trains soon followed, the most notable being the Donner Party. The ordeal of starvation and cannibalism, endured by their members in the winter of 1846-1847, is a well-known and tragic episode in the American settlement of the West and now memorialized at Donner State Historic Park. With the discovery of gold in 1848, the major route across the Sierra Nevada shifted from the Truckee Route of the California Trail further south to the Carson Pass and Johnson's Cutoff.

After gold was discovered at Sutter's Mill in 1848, placer gold was found in Wolf Creek later that same year. Thousands of gold seekers soon arrived and within a few years settlements were permanently established in Nevada County. Nevada County was organized by an act of the legislature, approved May 18, 1851 and Nevada City was made the County seat. Mining from 1850 to 1957 established Nevada County as the heart of the region known as the "Northern Mines." This was the most productive gold producing region in the nation. The first prospecting in the County was confined to the gravel bars and the beds of running streams. Early gold extraction devices included gold pan, rocker, long tom and sluice box.

Throughout the early gold rush period, logging, agriculture, and transportation were adjuncts in support of the mining industry. A heterogenous population composed of people from all over the world crowded into the Sierra mining districts, to try their hands at mining or other support industries. The mingling of these different ethnic groups and nationalities has produced the unique cultural collage from which Nevada County's heritage is drawn.

Prehistoric and Historic Archaeological Sites

The varied environmental zones, the geological characteristics, and the geographical position of Nevada County account for a cultural resource base which is exceedingly rich and exceptionally complex. This explains the relatively large number of recorded archaeological sites and the wide array of site types. Nevada County contains 978 square miles or 625,920 acres. Approximately 52,500 acres, or about 8% of Nevada County has

been subjected to archaeological survey with relatively "complete coverage." (Complete coverage implies the implementation of a systematic survey at 30-meter transect intervals or less.) This includes about 29,300 acres surveyed on private lands, 22,800 acres on Forest Service lands and 480 acres on Bureau of Land Management lands. Within this total County area, approximately 1,490 archaeological sites have been recorded to date.

Table 2, in Appendix D correlates data on location of known sites and site types to elevation. This table indicates that prehistoric sites tend to cluster between the 1,000- and 2,000-foot elevation on the west side, where 33% of all sites have been recorded, and between the 5,000- and 6,000-foot elevation on the east side, where 22% of the sites have been inventoried. The fewest prehistoric sites (only 1%) have been recorded in the crest zone. Historic sites, follow a somewhat different elevation patten than prehistoric sites, with most sites occurring between the 1,000- and 2,000-foot elevation (28%) and the 2,000- and 3,000- foot elevation (18%). About 10% of all historic sites recorded occur on the east side at the 5,000- to 6,000-foot level. The fewest number of historic sites fall within the crest zone.

Considering the total number of cultural sites recorded in the County and given the amount of acreage that has been surveyed, it can be estimated that the potential number of sites expected within Nevada County number about 17,900, leaving about 16,400 potential archaeological sites yet undiscovered. On the average, one site is expected per every 35 acres surveyed within Nevada County. This figure accounts for a relatively high site density, especially when considering that nearly half of the total prior archaeological coverage within the County falls on forested and mountainous public lands which are, overall, less likely to contain cultural resources.

The National Register of Historic Places is the official list of the nation's cultural resources especially worthy of preservation. It was established to help preserve the diversity of our cultural heritage by highlighting the outstanding remaining examples of all site types. 39 sites within Nevada County are either listed on, or have been determined eligible to the National Register (see Table 4, Appendix D). An additional 22 historic properties have been nominated to the National Register, but their eligibility remains to be determined. 19 Nevada County sites are listed as California Historic Landmarks, 27 properties have been established as Points of Historical Interest, and another three sites are on the general State Inventory of Historic Places. Appendix D, Tables 4 through 8, provide a listing of all historic sites identified above.

Cultural Resource Sensitivity Models

Cultural resource sensitivity models offer valuable guidelines in community planning by providing sensitivity ratings which estimate the probable likelihood of cultural sites occurring within a given area proposed for development. In this way, project sponsors can anticipate, at the outset, the extent to which cultural resources may become a constraining issue later on. Sensitivity models are not meant to replace a project specific records search by the North Central Information Center at California State University at Sacramento or a field survey by a professional archaeologist. While the formal records search is required,

field surveys are not always necessary. Not every project area needs to be physically inspected (for example, selected areas in low sensitivity zones). In the event that field work is required, the sensitivity model provides a beginning point from which archaeological survey strategies are then tailored, so as to minimize the number of acres requiring examination, while still maintaining a survey intensity sufficient to identify all the cultural resources in a particular project area. Project areas in high sensitivity zones are addressed at the earliest states of planning, where the likelihood of encountering cultural resources is high and project modifications and/or further mitigative research are usually anticipated. Accordingly, sufficient time and money can be appropriated. It is beneficial for all concerned to know what may be necessary before project planning progresses too far.

Cultural resource sensitivity predictions for Nevada County are derived from the collective results of many archaeological surveys in similar environments throughout the region. Cultural sites do not appear to be randomly located. Rather, it is apparent that the prehistoric and historic inhabitants of an area selected specific locales in which to occupy or work because of the presence of particular environmental conditions. The goal of sensitivity models, then, is to identify the kinds of environmental situations in which sites may be expected to occur, so that inventory efforts may be focused on (but not limited to) those "sensitive" areas.

In order to be selective about the areas of the County to be inventoried, and yet still locate all of the sites that potentially exist, an understanding of the relationship between independent environmental variables (such as elevation, slope, aspect, proximity to water, etc.) and dependent cultural variables (or site types to include prehistoric villages, task-specific locales, historic mining, logging sites, etc.) is required. Environmental variables influencing cultural resource sensitivity assessment are presented in Tables 9 and 10, Appendix D.

In general, correlations with specific environmental variables are better for prehistoric site types than for historic sites, as historic activities, particularly mining, involved intensive use of specific locations with little reliance or dependence on local resources for subsistence or other needs.

Prehistoric Sites

A summary of the findings of the cultural resource sensitivity modeling for prehistoric sites/resources is presented below.

- Grassland and oak woodland zone below 3,000 feet - Location of winter villages of the Nisenan and Washoe. Cemeteries and single task-specific locales, from which a multitude of resources were procured are found in proximity to winter villages.

- Elevations above 3,000 feet on the west slope and 6,000 feet on the east slope - Contain seasonal camps, hunting blinds, petroglyphs, etc.

- Areas less than 30 percent slope - Greater likelihood for prehistoric habitation or other sites.

- Southern and eastern exposure was generally advantageous for warmth and protection from storms.

- Higher concentration of sites along permanent and intermittent streams.

- Sites are more likely to be found in areas containing hardwoods, brush, and grass as they provided more food resources than coniferous forests. However, it should be noted that the distribution of vegetation was different than it is today. Changes are due to the introduction of non-native plant species and to the cessation of regular aboriginal burning, which was practiced to improve the vigor of plant resources.

- Zones which accommodate deer migration routes and winter ranges or support productive fisheries are more likely to contain prehistoric sites.

- Disturbed areas are less likely to contain sites that are intact.

Historic Sites

A summary of the findings of the cultural resource sensitivity modeling for historic sites/resources is presented below.

- Lower elevations have a consistently higher than average density of historic sites.

- On the east side, historic site densities are high between 5,000 to 6,000 feet due to the historic logging activities that occurred in this zone.

- All areas that are within zones designated on the Mineral Land Classification Map for Western, Central, Eastern Nevada County are likely to contain sites related to mining activities.

- Mining is generally absent from the east slope, with the exception of possible sites associated with sand and gravel resources.

- Mining in the crest zone is geographically limited to the area around Meadow Lake.

- For west slope mining sites are more likely to be found in areas with steep slopes and near water.

- Logging site patterns are tied to forest vegetation type harvested and associated soils and elevations. More moderate slopes, sunny exposures and the presence of water are important factors in historic logging camp locations.

RELEVANT PLAN POLICIES

All proposed General Plan and Regional Transportation Plan policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of cultural resource impacts are listed below.

Land Use

Policy 1.18.

Circulation

Policy 4.39.

Cultural and Historic Resources

Policies 19.1 through 19.7.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and State CEQA Guidelines, significant impacts on cultural resources are those actions that will result in disruption of, or adverse effect on, a prehistoric or historic archaeological site, a property of historic or cultural significance to a community, ethnic or social group, a paleontological resource, or a local landmark of cultural importance. Appendix K of the CEQA Guidelines provides additional guidance with respect to determining the significance of archaeological resources, limitations on mitigation, and actions to be taken in the event that human remains are discovered. These standards are generally derived from portions of the CEQA Guidelines, including various sections and Appendix G and Appendix I. Some standards are derived from agency regulations or are professional standards commonly used to further define what actions may cause "significant effects" under CEQA.

Impact #22. *Buildout of proposed General Plan land uses and construction of RTP road improvements may result in disturbance to known or undiscovered cultural resource sites related to development as well as increased vandalism. This is considered to be a* ***significant*** *impact, as implementation of proposed plan policies would not necessarily result in the identification and protection of cultural resources.*

As discussed above in the Environmental Setting section, 1,490 prehistoric and historic archaeological sites have been recorded to date. Based on the limited land area surveyed to date, it is estimated that about 17,900 sites may exist in Nevada County, leaving about 16,400 potential prehistoric and historic archaeological sites yet undiscovered. Buildout of proposed General Plan land uses and RTP road improvements could occur on or in proximity to known or unidentified sites. Such development and associated grading and excavation could result in disturbance of known and unidentified sites depending on the specific siting of individual projects. Additionally, an increase in residents and

recreationalists will escalate the destruction of cultural sites and/or artifacts through increased vandalism.

The proposed General Plan provides policies which seek to protect cultural resources. Policy 19.1 indicates that a Cultural Resource Ordinance will be enacted to ensure effective preservation, protection, and management of cultural resources. Policy 19.4 indicates that cultural and historic resource management standards would be developed as part of the County's Comprehensive Site Development Standards and that clustering and restricted building sites would be used as techniques for the preservation of cultural resources. Policies 1.17 and 1.18, the primary policies which relate to the preparation of site development standards and use of clustering do not, however, identify cultural resources. Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section of this EIR) provides a program for the preparation of site development standards which will address cultural resources. Further, this revised policy stipulates that clustering and other land use, siting, and design tools shall be used as necessary to meet the objects of the site development standards.

Policy 19.6 indicates that a records search be conducted through the North Central Information Center and field review be conducted as necessary to determine the significance of any potential cultural sites. This policy does not indicate, however, how the significance of such sites will be determined and appropriate mitigation identified. Revised policy 19.6, below (see Mitigation Measure #23) specifies procedures for evaluating site significance and identifying appropriate mitigation in accordance with Appendix K of the California Environmental Quality Act.

Additionally, the cultural resource sensitivity modeling prepared for the Nevada County Master Environmental Inventory (HBA, 1991), contained in Appendix D, provides specific information on the likelihood that a given site type would occur at a given elevation, aspect, slope, etc. In the event that field work is required, the sensitivity model provides a beginning point from which archaeological survey strategies are then tailored, so as to minimize the number of acres requiring examination, while still maintaining a survey intensity sufficient to identify all the cultural resources in a particular project area. Mitigation Measure #24 below stipulates how this sensitivity modelling shall be used in the project site review process.

Implementation of the policies and mitigation measures discussed above and identified below would serve to minimize adverse effects of buildout of proposed General Plan land uses.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies, 4.39 and 19.1 through 19.7 would serve to reduce the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of the policies identified above, and Mitigation Measures # 1 (see the Land Use section of this EIR), #23, and #27, below, would serve to reduce the impact to a *less-than-significant* level.

23. Revise Cultural and Historic Resource Element policy 19.6 as follows:

....Where review indicates significant archaeological or historical sites or artifacts are, or are likely, present, an on-site field review ~~by a registered archaeologist~~ shall be required. If a site or artifacts are discovered, the find shall be evaluated and potential significance determined. If significant cultural resources may be directly or indirectly impacted by proposed development, appropriate mitigation shall be developed and implemented in accordance with California Environmental Quality Act standards, including Appendix K, prior to onset of ground disturbance. Avoidance of significant cultural resources shall be considered the mitigation priority. Excavation of such resources shall be considered only as a last resort when sufficient planning flexibility does not permit avoidance. On-site field review, evaluation of site significance, and development of mitigation measures, as identified above, shall be performed by a qualified professional archaeologist.

24. Site development standards for cultural and historic resources, as stipulated in revised policy 1.17 (see Mitigation Measure #1) and policy 19.5, shall be developed in accordance with revised policy 19.6 (see Mitigation Measure #23), above, and shall incorporate the use of the Cultural Sensitivity Modelling contained in Appendix D.

24A. Revise Cultural and Historic Resource Element Policy 19.1 as follows:

Policy 19.1 Enact a Cultural Resources Ordinance to ensure effective preservation, protection, and management of cultural resources. Such an ordinance might include the identification and preservation of historical, cultural, and architecturally significant sites and resources within Nevada County. The establishment of a county listing of significant cultural resources may be part of a Cultural Resources Ordinance. The identified cultural resources could be evaluated as to their potential significance in relation to the criteria used for both the National Register of Historic Places and the California Register of Historic Places. These four criteria for evaluation are the same for both registers. The resource must either be:

A. associated with events that made a significant contribution to local, state, or national history;

B. associated with the lives of persons significant in our past (local, state, or national);

C. embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose component may lack individual distinction; or

D. yields, or may be likely to yield information important in prehistory or history.

In addition, the identified cultural resource must be evaluated as to its integrity of location, design, setting, materials, workmanship, feeling, and association. All of these same criteria may be used to designate significant resources for a local, county-wide listing of significant sites and/or resources.

The Cultural Resources Ordinance could also specify the mitigation procedures to be followed once a resource has been identified and determined to be significant. The preferred measure would be avoidance and/or protection of a site by project redesign or fencing, etc. If the resource is or will be impacted, a professional archaeologist/historian/architectural historian should be contacted to set up a research design to deal with the resource.

4.6 VISUAL QUALITY

INTRODUCTION

This section addresses potential impacts to the overall visual quality of Nevada County associated with the following: 1) buildout under proposed General Plan land use designations and identified on the land use map; 2) goals, objectives and policies of the General Plan; 3) the Regional Transportation Plan; and 4) amended zoning and zoning district maps as described in the Project Description section of this EIR. Specific topics include impacts associated with changes in the overall visual characteristics of the County, development within scenic highway corridors, interruption and/or modification of public views, and potential increases in light and glare.

ENVIRONMENTAL SETTING

Overview

Nevada County's 978 square miles contain a variety or resources which characterize the visual quality of the County. One of the County's most notable features is its diversity in elevation. The County climbs from the Sacramento Valley at an elevation of 300 feet to the crest of the Sierra Nevada Mountains, at an elevation of 9,143 feet, the peak of Mount Lola. Average annual precipitation amounts vary from 30 inches in the west to 60 inches in Nevada City and near the crest of the Sierra. With this wide variation in both elevation and precipitation, the County supports a wide diversity of habitat types. Generally, the County is characterized by gently rolling oak woodlands in the west, transitioning to coniferous forest in the central and eastern portions of the County to an almost desert-like association on the eastern slope of the Sierra. The variation in elevation also provides for views of rolling foothills, mountain peaks, and river gorges. The following discussion provides a summary of the prominent visual resources of the County.

The County is predominantly rural, with development concentrated in Nevada City, Grass Valley, and Truckee. Outside of these communities, residences are scattered throughout the County, primarily on five-, ten-, and twenty-acre lots. Many of these residences are screened from view by vegetation and topography, adding to the County's overall rural ambience.

Prominent Visual Resources

The prominent visual resources in Nevada County include: foothills and ridges; significant oak groves; river corridors; lakes and reservoirs; scenic highway corridors; open space; and historic architecture. These resources are described below.

Foothills and Ridges

The terrain of Nevada County is distinctly characterized by two features of the Sierra Nevada Range. The western third of the County is comprised of rolling foothills which form a transition between the low-lying Sacramento Valley and the mountains to the east. The eastern two-thirds of the County are comprised of steep terrain and exposed granite of the Sierra Nevada Range.

The rolling foothills of the western portion of the County are characterized by grassland and oak woodlands. These foothills are visible from many locations including State Route 49, McCourtney Road, and various locations in the Sacramento Valley.

Prominent mountain ridges and peaks in the eastern two-thirds of the County are highly visible from Interstate Highway 80, State Route 20, and numerous local roads. From these locations, one can view coniferous forests and granitic formations associated with the higher elevations of the County.

Significant Oak Groves

Significant oak groves are visible in the western portions of the County, on rolling foothills where large expanses of grassland are also visible. These oaks are a significant visual resource that contrast with low-lying surrounding vegetation and that create visual interest due to their branching pattern and overall size.

River Corridors

Nevada County is characterized by a large and diverse system of rivers, streams, and creeks. Drainage occurs in three primary watersheds: the Truckee River basin in the eastern part of the County; and the Yuba River and Bear River basins in the western part of the County. Within all parts of the County, there is an extensive network of perennial (year round) and intermittent (seasonal) creeks, streams and rivers, ranging in size from the South Yuba River to small, unnamed seasonal drainages. Heavily-vegetated riparian corridors are a primary visual feature along these watercourses.

Lakes and Reservoirs

Lakes and reservoirs in Nevada County not only provide for recreation and water supply, but are a prominent visual feature in the County. Some examples of visually-prominent lakes and reservoirs are Donner Lake, Lake of the Pines, Lake Wildwood, Rollins Reservoir, and Scotts Flat Reservoir.

Scenic Highway Corridors

The scenic highways in Nevada County administered by the State Department of Transportation are an important scenic program within Nevada County. Designated scenic routes include:

- Route 20 from near Grass Valley to Interstate 80 near Emigrant Gap;
- Route 49 throughout the entire County;
- Interstate 80 throughout the entire County; and
- Route 89 throughout the entire County.

Any highway that is a part of the State Scenic Highways Master Plan is eligible for official designation as an "Official Scenic Highway" which is publicized on official maps. The Official Scenic Highway program includes specific styles of signage, roadside rests, vista points and other improvements by the State. Other possibilities for inclusion as designated scenic routes are several County roads, State Route 267, **State Highway 174,** and the Yuba-Donner Scenic Byway sponsored by the Tahoe National Forest.

The Master Plan of State Highways Eligible for Official Scenic Highway designation contains a list of both eligible and officially designated sections of highway. If a highway is already on the Master Plan list, the local jurisdiction (city or county) needs to make a visual assessment to familiarize Caltrans staff with the route (considered Step 1 - Visual Assessment). Step 2 is the preparation of a Scenic Highway Resolution Package which includes mapping, map overlays of visual intrusions, a zoning map and a narrative description of the elements that make the route scenic. Following receipt of this package, the Caltrans Departmental Transportation Advisory Committee (DTAC) will evaluate the proposed scenic route to determine if it has reasonable potential for official designation.

The Designation Process follows this action if the DTAC approves the designation. Step 1 of the Designation Process includes the local jurisdiction developing and adopting protection measures in the form of ordinances to apply to the area of land within the scenic corridor (Note: The scenic corridor is defined as the area of land generally adjacent to and visible from the highway, according to the Caltrans Draft publication entitled "Guidelines for the Official Designation of Scenic Highways", 5 January 1995) Step 2 is a review of the Scenic Highway Corridor Protection Program, with the local jurisdiction submitting a request for official designation. Step 3 is DTAC approval of the Scenic Highway Corridor Protection Program and Step 4 is official designation and the placement of poppy signs along the corridor. Monitoring at the conclusion of this process is to be done by Caltrans, in conjunction with DTAC, every five years. As part of this monitoring, the local jurisdiction is asked to attest to Caltrans to continue enforcement of the approved corridor protection measures.

Open Space

A review of existing land use patterns in the County indicates that the majority of development is concentrated in the three cities, Grass Valley, Nevada City, and Truckee. Smaller communities, such as Alta Sierra and Penn Valley, are scattered throughout the County. There is a large amount of remaining open space in the County which contributes significantly to the County's aesthetic quality and scenic values. The ownership and operation of forests by the U.S. Forest Service in the Tahoe National Forest and the open

lands under the control of the Bureau of Land Management also preserve a significant portion of the County for permanent scenic quality.

Historic Architecture

Scenic resources in Nevada County include historic structures. Of primary importance are the historic buildings found in the cities of Grass Valley, Nevada City, and Truckee. When concentrated in one area, these structures create a uniform urban design that conveys the historic qualities of the County.

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of visual quality impacts are listed below.

Aesthetics Element

Policies 18.1 through 18.11

Open Space Element

Policies 6.2, 6.3, 6.5, and 6.9.

Land Use Element

Policies 1.1, 1.14, 1.16d, 1.17, and 1.18.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. Although few objective or quantitative standards exist to analyze visual quality, in accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a plan impact would be considered significant if development would: (1) eliminate or substantially alter significant visual features or view corridors; (2) result in significant alteration of natural landforms; (3) be incompatible with the scale or visual character of the surrounding area; and (4) create significant new sources of light and glare. These standards are generally derived from portions of the CEQA Guidelines, including various sections and Appendix G and Appendix I. Some standards are derived from agency regulations or are professional standards commonly used to further define what actions may cause "significant effects" under CEQA.

Impact #23. *Buildout of the General Plan may result in scattered rural development on hillsides and ridgelines which could result in degradation of the aesthetic quality of views. This is considered to be a* ***less-than-significant*** *impact as existing regulations and proposed plan policies would minimize this impact.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 18.3, 18.6, 18.7, 18.8, 1.17, and 1.18 would reduce this impact to a *less-than-significant level.*

Other Mitigation Measures

~~None warranted.~~

25A. The following revisions should be made to Policy 18.2 of the General Plans:

Policy 18.2 The County may adopt Specific Design Guidelines for areas within *Community Regions*, *Rural Places, and Rural Centers* to provide for the maintenance of community identity, scenic resources and historic sites and areas. The Specific Design Guidelines may include, but not be limited to, standards which:...

Impact #24. *Buildout of proposed General Plan land uses may impact the significant stands of oak trees in the western portion of the County. This is considered to be a* ***significant*** *impact, as plan policies do not necessarily provide for avoidance of development in areas of oak woodlands.*

The existing groves of oak trees are a significant visual resource, providing visual contrast to surrounding croplands and grasslands. Development activities that affect oak groves include: removal or elimination of specimens; damage to trees during construction activities; and development in the vicinity which severely disrupts or blocks significant views of trees.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.18, 10.14, 10.15, and 11.8 would serve to mitigate the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Implementation of the proposed policies identified above along with Mitigation Measure #1 (see Land Use section of this EIR), **Mitigation Measure #19 (see Biotic Resources section of this EIR)** and Mitigation Measure #25 below, would serve to reduce the impact to a *less-than-significant* level.

25. The County shall adopt a regulation to protect heritage trees, native oak trees, and significant oak groves. All native tree species with a trunk diameter of 36 inches or greater should be protected.

Impact #25. *Buildout of proposed General Plan land uses in close proximity to the County's river corridors could adversely affect the scenic value of the waterways,*

especially if vegetation adjoining the waterways were removed for new development. This would be considered a ***significant*** *impact as plan policies do not necessarily provide for protection of visual quality along river corridors.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.23, 3.8 and 10.12 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of the proposed policies identified above, and Mitigation Measures # 1 (see Land Use section of this EIR) #21, ~~and~~ #22 (see Biotic Resources section of this EIR), **and #25B** would serve to reduce the impact to a *less-than-significant level.*

The following new policy should be added under Objective 18.2 of the General Plan:

To provide for scenic stream corridor protection along designated streams, the County shall prepare standards and procedures whereby local groups, associations, or similar organizations can apply for designation of a segment of any stream as a local scenic stream corridor. If approved, a Scenic Stream Corridor Plan shall be prepared.

Impact #26. *Buildout of proposed General Plan land uses and RTP road improvements within the viewshed of designated scenic routes could diminish the aesthetic value of the roadside scenery. This is considered a* ***significant*** *impact, as implementation of proposed plan policies will not necessarily protect visual quality.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 18.3, 18.4, 18.5, 18.6, 18.7, 18.8, and 18.9 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of the proposed policies identified above along with Mitigation Measures #26 and #27 below, would serve to reduce the impact to a *less-than-significant* level.

26. The County should designate scenic corridors along the following routes: Interstate 80 and Highways 49, 89, 174, and 267 for their entire length in the County; **all of** Highway 20 ~~from Highway 49 to Interstate 80~~; Donner Pass Road (Old Highway 40), from the Interstate 80 intersection at Soda Springs to Donner State Memorial Park. These corridors should be placed within the SC "Scenic Corridor" Combining District, with boundaries based upon adopted studies.

27. The following policies shall be added to the Aesthetics chapter of the General Plan:

The County shall ~~request that the State Department of Transportation~~ prepare Scenic Highway Reports for all those highways in the County as shown on the State Scenic Highways Master Plan for which such reports have not been prepared. The County shall **prepare** ~~request the preparation of~~ such reports within one year of the adoption of the General Plan, and shall implement these studies by zoning **and other applicable regulations** ~~specified areas~~ along such routes within the SC "Scenic Corridor" Combining District within **two** ~~five~~ years of the **approval of the Scenic Highway Resolution Package by the Caltrans Departmental Transportation Advisory Committee.** ~~acceptance of a report.~~

In addition to the designation of visual corridors within the SC "Scenic Corridor" Combining District zoning, mandatory clustering shall be required for all residential development along designated visual corridors.

27A. The following changes should be made to Policy 18.9 of the General Plan:

Policy 18.9 To encourage a system of scenic County roads, the County shall prepare ~~adopt~~ standards and procedures whereby local groups, associations, or similar organizations can apply for designation of County roadways. If approved, a County Scenic Corridor Plan shall be prepared. ~~for protection of scenic corridors and shall prepare a Scenic Corridor Plan which may include, but not be limited to, State Scenic Highways.~~

Impact #27. *Buildout of proposed General Plan land uses within the Community Commercial, Highway Commercial, Business Park, Industrial, and Recreation designations could result in buildings as tall as 60 feet. Depending on their location, such buildings could create a dominant visual feature, contrasting significantly with adjoining agricultural lands and limiting the view of motorists.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 18.1 and 18.2 would serve to reduce the impact, but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of the proposed policies identified above along with Mitigation Measure #28 below, would serve to reduce the impact to a *less-than-significant* level.

28. The maximum allowable height limit for Community Commercial, Highway Commercial, Business Park, Industrial and Recreation designations should be 45 feet. Discretionary permits could be required for special uses that would need to exceed the allowable height.

Impact #28. *Buildout of proposed General Plan land uses* ***and RTP improvements*** *could generate light and glare that would be visible from major roads and from residences. Light and glare could be created throughout the areas proposed for development by lighting of* ***roads,*** *parking lots, playing fields, industrial/business park areas, interior building lighting, and the use of exterior building materials that could be reflective.*

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 18.10 and 18.11 would serve to reduce this impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #29. *Buildout of General Plan land uses could result in a linear "sprawl" along the major transportation routes linking the communities.*

One characteristic that partially defines the rural landscape of Nevada County is the existence of separate, distinctive communities and cities. Some lands are needed to serve as non-urbanized buffers between communities to prevent the corridor-style development patterns that characterize many urban landscapes. Although these buffer lands may not be highly scenic, they provide visual relief from continuous development and perform the valuable function of a community separator.

To date, most of the cities and communities in Nevada County are geographically distinct. Continued development, associated with the projected increase in population, residential growth, and employment opportunities in the County over the next twenty years is certain to place pressure on outlying areas. Areas along major transportation corridors are particularly susceptible to development pressures.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 18.1 and 18.2 would serve to reduce this impact, but *not* to a *less-than significant* level.

Other Mitigation Measures

Implementation of the proposed policies identified above along with Mitigation Measure #29 below, would serve to reduce the impact to a *less-than-significant* level.

29. The following policy shall be added to the Aesthetics chapter of the proposed General Plan:

    The County shall promote a compact development pattern to protect open space buffers between communities and to maintain a geographic distinction between communities.

4.7 TRAFFIC AND CIRCULATION

INTRODUCTION

This section addresses potential traffic-related impacts associated with buildout under proposed General Plan land uses and goals, objectives, and policies, the Regional Transportation Plan, and amended zoning regulations and revised zoning district maps as described in the Project Description section of this EIR. Specific topics include impacts related to roadway or intersection levels of service, safety concerns, and provision for parking, bicycle, pedestrian, and transit facilities/access.

ENVIRONMENTAL SETTING

Street System

Roadways

The street system in Nevada County is composed of a combination of roadways which are categorized into one of the following functional classifications:

- Interstates and Freeways - Limited access highways.
- Principal Arterials - Major roadways providing access from rural to urban areas and access to freeways.
- Minor Arterials - Streets providing through service to industrial and commercial areas and between cities and/or providing access to highways and freeways.
- Major and Minor Collectors - Streets that collect traffic from local streets within residential areas.
- Locals - Streets that primarily provide access to individual properties.

Figure 4.7-1 displays the functional classification of the major streets in the County. As can be seen in this figure, Nevada County does not contain the traditional grid street network, due to the mountainous topography.

Travel Characteristics

Travel characteristics within Nevada County vary widely according to the region in which it occurs. The western portion of the County contains a large number trip-producing (residential) land uses in relation to trip-attracting (office and commercial) land uses. Approximately 80 percent of the developed land contains residential uses. This causes

many trips to originate in this area with a destination outside of the area. Travel within the eastern portion of the County, however, is driven by a greater quantity of trip-attracting land uses than trip-producing uses. This area is characterized by many recreational and tourist attractions, which causes large amounts of traffic to originate outside the area with destinations either inside or outside the area. Additionally, the 1990 Census determined that, of the 32,524 employed residents in the County, 7,652 worked outside the County. This represents 25% of all workers compared with a State average of 15%. As indicated previously, a 1992 study by the Western Nevada County Transportation Management Association found that 32% of the local work force commutes into Nevada County to work. Table 4.7-1 provides the 1990 average daily traffic volumes on selected roadways in Nevada County. Additionally, Figure 1 in Appendix E displays this information graphically.

Levels of Service

A level of service (LOS) is a measure of the operating efficiency of a transportation facility. Letter designations from A (best) to F (worst) are assigned to a road or intersection to describe how well it functions. Table 4.7-2 provides a general description of each level of service. The actual volume of traffic which can be accommodated at each level of service depends on several factors including:

- Number of lanes;
- Width of lanes;
- Width of shoulder;
- Topography;
- Design speed; and
- Vehicle mix (percent auto, truck, etc.)

Table 4.7-3 displays level of service volume criteria for six general roadway types. Using the LOS criteria in Table 4.7-3, the existing average daily LOS was determined for selected roadways in the County as is provided in Table 4.7-1. Additionally, Figure 2 in Appendix E displays this information graphically. Based upon the level of service standards contained in policies 4.1 and 4.3, the existing regional road system serving Nevada County generally provides acceptable service. However, the principal roads in the downtown areas of Grass Valley and Truckee have an existing daily level of service of less than "D", which is the minimum acceptable for Community Regions.

The following roads have segments which may currently function at less than desirable levels of service using the planning level of service criteria contained in Table 4.6-3: SR49; Donner Pass Road at SR267; West Main Street within Grass Valley; Nevada City Highway; Pleasant Valley Road; and Combie Road. However, after specific segment Highway Capacity Manual Peak Hour Operational Analysis was conducted, Nevada City Highway and Pleasant Valley Road do not appear to be currently functioning at less than desirable levels of service due to spot improvements which have been made which were not taken into account in the Daily Planning Level of Service Volume Criteria Chart.

Figure 4.7-1 Functional Classification

Figure 4.7-1 Functional Classification (continued)

Table 4.7-1
Existing Daily Traffic Volumes and Level of Service

Roadway	Segment	Existing Volume	LOS
I-80	- Placer Co. Line to SR 174 - SR 174 to SR 20 - SR 20 to SR 89	28,500 29,000 23,500	A A A
SR 20	- Yuba Co. Line to Pleasant Valley Rd. - Pleasant Valley Rd to SR 49 - SR 49 to Willow Valley Rd. - Bowman Lake Rd. to I-80	5,600 10,400 4,100 2,700	A A A A
SR 20/49	- Grass Valley to Nevada City	36,000	A
SR 49	- Placer Co. Line to Alta Sierra Dr. - Alta Sierra Cr. to McKnight Way - W. Broad St. to Newtown Rd.	18,100 21,500 5,500	E F A
SR 49 NB Ramp	- Empire Street to 49	6,000	A
SR 49 SB Ramp	- 49 to SR 20	6,000	A
SR 89	- Placer Co. to I-80	9,000	A
SR 174	- You Bet Rd. to Brunswick Rd.	6,400	A
SR 267	- Placer Co. to I-80	7,100	B
Alder Creek Rd.	- Fjord Rd. to SR 89	815	A
Allison Ranch Rd.	- McCourtney Rd. to SR 49	616	A
Alta Sierra Dr.	- SR 49 to Dog Bar Rd.	6,530	A
Banner Ridge-Lava Cap	- SR 49 to Red Dog Rd.	4,540	A
Bennett Rd.	- SR 20/49 to Brunswick	1,750	A
Bitney Springs Rd.	- Pleasant Valley Rd. to R & R Hwy	2,120	A
Boulder Street	- SR 49 to Red Dog Rd.	4,325	A
Brunswick Rd.	- SR 49/20 to Sutton Way - Sutton Way to Idaho-Maryland Rd. - Idaho-Maryland Rd to SR 174	21,020 10,675 7,825	D C A
Combie Rd.	- SR 49 to Magnolia Rd. - Magnolia Rd to end	10,500 4,854	E A
Dog Bar Rd.	- LaBarr Meadows Rd. to Magnolia Rd.	---	---
Donner Pass Rd.	- Northwoods Blvd. to Commercial Row - Donner Lake Dr. to I-80	12,840 4,600	E A
Dorsey Dr.	- Nevada City Hwy to SR 49/20 - SR 49/20 to Sutton Way	unknown unknown	unknown unknown
Glenshire	- Truckee River to SR 267	5,352	A

Table 4.7-1
Existing Daily Traffic Volumes and Level of Service

Roadway	Segment	Existing Volume	LOS
Gold Flat Rd.	- Gracie Rd. to SR 20/49	2,532	A
Hughes	- Ridge Rd. to Main St.	10,200	D
Idaho-Maryland Rd.	- SR 49/20 to Brunswick Rd. - Brunswick Rd. to Banner Ridge	3,500 1,222	A A
Indian Springs Rd.	- SR 20 to Spenceville Rd. - Spenceville Rd. to McCourtney	1,192 1,591	A A
La Barr Meadows Rd.	- McKnight Way to Dog Bar Rd.	6,695	B
Lime Kiln Rd.	- McCourtney Rd. to SR 49	2,022	A
Loma Rica Dr.	- Brunswick Rd. to Charles Dr.	5,724	B
Magnolia Rd.	- Combie Rd. to Dog Bar Rd.	10,144	D
McCourtney Rd.	- Lime Kiln Rd. to Indian Springs Rd. - Indian Springs rd. to Old Auburn Rd. - Old Auburn Rd. to SR 20	3,743 3,750 7,561	A A B
Mill St.	- W. Main St. to McCourtney Rd.	1,000	A
Nevada City Hwy	- Dorsey Dr. to Brunswick Rd. - Brunswick Rd. to Gates Place - Gates Place to Ridge Road	12,700 15,200 6,899	D D* A
Newtown Rd.	- Bitney Springs to SR 49	1,000	A
North Bloomfield	- SR 49 to Lake Vera-Purdon Rd. - Lark Vera-Purdon Rd. to Yuba River - Yuba River to Graniteville	4,373 1,352 271	A A A
Northwoods Blvd.	- Trout Creek to Donner Pass Rd.	7,323	C
Penn Valley Dr.	- Pleasant Valley Rd. to Spenceville Rd. - Spenceville Rd. to SR 20	1,000 4,913	A A
Pleasant Valley Rd.	- SR 20 to Lake Wildwood Dr. - Lake Wildwood Dr. to SR 49	10,428 1,373	D* A
Rattlesnake Rd.	- SR 174 to Dog Bar Rd.	890	A
Red Dog Rd.	- Boulder St. to You Bet Rd.	3,680	A
Ridge Rd.	- R & R Hwy to Alta St. - Alta St. to Nevada City Hwy	6,104 5,069	B A
Rough & Ready Hwy	- SR 20 to Bitney Springs Rd. - Bitney Springs Rd. to Ridge Rd. - Ridge Rd. to Grass Valley city limits	2,992 7,207 4,545	A B A
Sutton Way (ext)	- Brunswick Rd. to E. Bennett St.	10,675	C
Tyler Foote Crossing Rd.	- SR 49 to Lake City Rd.	1,495	A

Table 4.7-1
Existing Daily Traffic Volumes and Level of Service

Roadway	Segment	Existing Volume	LOS
W. Main St.	- E. Main St. to Alta St.	12,100	F
Wolf Rd.	- Lime Kiln Rd. to SR 49	2,716	A
You Bet Rd.	- SR 174 to Red Dog Rd	2,008	A

SOURCE: Compiled from data provided in the Nevada County General Plan, Volume 2 (April 1994).

* Planning level of service = E
Operational level of service = D

Table 4.7-2
Level of Service Description

LOS	Description
A	Represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
B	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.
C	Stable flow, but marks the beginning of the range of flow in which operations of individual users become significantly affected by interaction with others in the traffic stream.
D	Represents high-density, but stable flow.
E	Represents operating conditions at or near the capacity level.
F	Forced or breakdown flow.

SOURCE: Highway Capacity Manual, Special Report, 209, Transportation Research Board, 1985.

Table 4.7-3 Level of Service Criteria

Combie Road functions at an undesirable level of service according to both the Daily Volume Criteria Chart and Peak Hour Operational Analysis, but will not function at an undesirable level of service after this construction season due to improvements currently under construction.

High Accident Locations

Figure 4.7-2 displays high accident locations on County roads. As this data shows, the majority of the high accident locations occurred in the more urbanized areas of the County. It should also be noted that these accident rates are relatively low, considering the fact that two-thirds of the locations had fewer than 5 accidents per million vehicle miles.

Truck Routes

Most truck traffic enters and exits Nevada County on State Routes 20, 49, 174, and Interstate 80. Designation of these roadways as truck routes has not occurred due to the lack of other alternative routes for goods movement. Urban areas such as Grass Valley and Nevada City, however, have delineated truck routes within their jurisdictions. These routes are designated to avoid obstructions, residential neighborhoods, or to prevent roadway damage associated with heavy vehicle travel.

Transit Facilities

Public transit in Nevada County is made up of Fixed-Route Services and Specialized Services which are described below. Public transit facilities in Nevada County are the responsibility of the County Department of Services for Transit, Aviation, and Recreation (STAR). STAR is responsible for operation of the public transit system and works under a member governing body, The Operational Policy Committee. The following summarizes each public transit facility operating in the County.

Fixed-Route Services

The following descriptions summarize the Fixed-Route Services in the County. Figure 4.7-3 displays the service areas.

Gold Country Stage. Gold Country Stage (GCS) is a fixed route system which operates primarily in and between Nevada City and Grass Valley, on an hourly basis. New routes have recently been added to serve the State Route 49 corridor between Grass Valley and Lake of the Pines, with connections for Placer County Transit service, and to serve the Highway 20 corridor between Grass Valley and Penn Valley. STAR operates this system and has nine busses with 22-passenger capacity. Average ridership on this service exceeds 50 percent of available capacity.

This system is funded by the Transportation Development Act (TDA), which provides Nevada County approximately one million dollars annually for transit services. Fares are $ 1.00 for single trip, $ 2.00 for a daily pass and $ 17.00 for a monthly pass.

Additionally, the Truckee-North Tahoe Transportation Management Association has been spearheading efforts to provide a public transit service linking Truckee and the Tahoe Basin. The focus of this effort has been on service between Truckee and Tahoe City via State Route 89. Service levels have fluctuated between 3 and 5 round trips per day. Review of the service data indicates that ridership is increasing.

Specialized Services

Specialized services are another form of public transit in Nevada County. This type of service provides transportation for elderly and handicapped residents, as described below.

Dial-A-Ride. Dial-A-Ride is a demand-based service operated through a non-profit contract with Durham Transportation, Inc. The California Alta Regional, Inc. subsidizes the elderly, handicapped and disabled passengers, but does not directly subsidize the overall operation of the service.

Gold Country Telecare. Gold Country Telecare is a private, non-profit organization serving elderly, handicapped and disabled patrons. Passengers are transported by full-sized vans, mini-vans, or station wagons to shopping and medical appointments. A total of 3 vehicles is operated by this service. In addition to paid staff, there is a large volunteer staff, part-time drivers who use their own vehicles.

High Sierra Senior Services. High Sierra Senior Services is also a demand-based service for elderly, handicapped and disabled passengers. The service area is confined to the Eastern portion of the County. The service operates two vans.

Air Transportation Facilities

There are two general aviation airports in Nevada County as well as several small, private airports. The Nevada County Air Park, located east of Grass Valley, serves the Western County while the Truckee-Tahoe Airport, located east of Truckee, serves the Eastern County.

The Nevada County Air Park is a small aircraft airport classified in the Airport Reference Code as B-1, meaning it generally accommodates aircraft $\leq$ 12,500 pounds and $<$ 49 foot wingspan. The 1990 Nevada County Air Park Draft Master Plan recommends expansion of the Air Park which included physical improvements to meet future demand and to correct a line-of-sight distance requirement for aircraft. The number of aircraft operations and based aircraft at the Air Park is projected to increase over the next 20 years but will not exceed existing capacity during this time.

The Truckee-Tahoe Airport is a Basic Utility-Stage II Airport which handles predominantly small aircraft but has the capability to handle larger aircraft due to runway size. This airport is owned and operated by a special airport district which includes portions of Eastern Nevada and Placer Counties.

Figure 4.7-2 High Accident Locations

Figure 4.7-2 High Accident Locations (continued)

Figure 4.7-3 Transit Service Areas

Figure 4.7-3 Transit Service Areas (continued)

The Truckee-Tahoe Airport Master Plan was updated in 1988. A three-phase development plan was proposed in the Master Plan, which outlined improvements for the airport to allow for a classification of General Utility with Basic Transport Capability. Airport improvements were based upon the anticipated growth in airline activities that would occur with future development within the Truckee-Tahoe area. The number of aircraft operations and based aircraft at the Truckee-Tahoe Airport is projected to increase over the next 20 years beyond existing capacity.

Rail Transportation Facilities

Southern Pacific (SP) railroad owns and operates one set of tracks that follows Interstate 80 along the southern border of Nevada County. The rail line is used for the shipment of goods and people. Currently, Amtrak's California Zephyr serves the San Francisco to Chicago corridor with a mid-day train in each direction through nearby stations at Sacramento, Roseville, Colfax, Truckee, and Reno. Also, the mid-day train supplies an alternative mode of travel to the automobile or airplane in the Reno to San Francisco corridor.

The Truckee Intermodal Transportation Center is an important facility located in the eastern County which serves transit, rail, automobiles, trucks, bikes, and pedestrians.

Bikeway/Pedestrian/Equestrian Corridors

The number of existing bicycle, pedestrian, and equestrian trails in Nevada County is limited. **Existing deficiencies are also exacerbated by the lack of secured funding to mitigate such deficiencies.** Figure 4.7-4 displays the non-auto trails within Nevada County which are either complete or partially complete. These trails are oriented toward recreational use and do not provide logical connection for non-auto transportation within the urbanized areas of Nevada County. A brief description of each trail is provided in below.

Scotts Flat Trail is a 50 mile trail that crosses both Forest Service and private property. It serves Upper Burlington Ridge, Deer Creek, Forebay, Indian Springs and Towle Mill.

Nugget Trail is approximately 50 miles at the Sierra County Line. It also crosses both Forest Service and private property.

South Yuba Trail begins at the South Yuba Recreation Area and extends approximately 5 miles to campgrounds.

Missouri Bar Trail extends north of Highway 20 across the South Yuba River.

Pioneer Trail parallels Highway 20 east of Nevada City. Approximately 15 miles are complete, with plans for an extension to the Pacific Crest Trail by 1993.

Emigrant Trail is a historic trail of regional significance extending through the entire County.

Wildwood is a proposed equestrian center and trail system of approximately 25 miles near Lake Wildwood.

Empire Mine State Park is a trail of approximately 10 miles off Highway 49 in Grass Valley.

Independence Trail is a 2 mile trail adjacent to Highway 49 north of Nevada City designed for handicapped and wheelchairs.

Pacific Crest Trail is a north-south trail extending from Canada to Mexico through the eastern portion of the County.

Mount Olive Bike Path is a Class I path adjacent to Mount Olive Road adjacent to Lower Colfax Road.

Magnolia School Trail is a short path that serves Magnolia School students along Magnolia Road.

The 1989 Nevada County Master Bicycle Plan includes bike lanes within the urbanized areas of the County that improve non-auto access and mobility. The network identified in the Master Plan provides a contiguous system for bicycle travel in most areas of the County expected to have significant population growth.

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of traffic and circulation impacts are listed below.

Public Services Element

Policy 3.1.

Circulation Element

Policies 4.1 - 4.39.

Air Quality Element

Policy 14.7.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a plan impact would be considered significant: (1) if it would cause existing intersection or roadway levels of service to drop to unacceptable levels as defined in the proposed General Plan; (2) if plan-related trips would contribute to traffic increases along roadways or at intersections currently operating at unacceptable levels; (3) if it does not have adequate circulation capacity to accommodate increased traffic; (4) if increased traffic or roadway design would result in safety concerns; or (5) if the plan does not include adequate provision for bicycle, pedestrian, or transit facilities/access. These standards are generally derived from portions of the CEQA Guidelines, including various sections and Appendix G and Appendix I. Some standards are derived from agency regulations or are professional standards commonly used to further define what actions may cause "significant effects" under CEQA.

Figure 4.7-4 Non-auto Trails in Nevada County

Figure 4.7-4 Non-auto Trails in Nevada County (continued)

Impact #30. *Buildout of proposed General Plan land uses and associated population growth will result in a net increase of approximately 887,400 daily trips in the County which would contribute to roadways currently operating at unacceptable levels of service and/or would cause operation of some* ***County*** *roadways to drop to unacceptable levels. This is considered to be a* ***less-than-significant*** *impact, as RTP improvements and proposed General Plan policies would ensure that* ***County*** ~~*area*~~ *roadways continue to operate at acceptable levels of service.*

In order to forecast future conditions of the street system, under buildout of the proposed General Plan, a travel demand model was developed for use in the Nevada County General Plan and Regional Transportation Plan. The model, which was developed using the MINUTP software, generates travel demand forecasts based on land use and street network data. A more recent model developed for the Nevada City/Grass Valley area was also used to assist in developing estimates for future traffic volumes within these areas. Details of the model and assumptions are contained in the Proposed General Plan, Vol. 2 (Section 6) and in *Technical Memorandum: Traffic Model Validation-Final Report* (December 1991).

Buildout of proposed General Plan land uses and associated population and employment growth would increase traffic volumes on County roadways, which would result in decreases in existing levels of service (LOS) on some roadways. Buildout of proposed General Plan land uses would result in a net increase of approximately 887,400 daily vehicle trips. This estimate of daily vehicle trips was generated using the trip generation (TRPGEN) portion of the MINUTP software which compiles household and employment data at buildout within various traffic zones in the County. These trips were then distributed over the County street network using the trip distribution (TRPDST) portion of the MINUTP software. The resulting traffic volumes and LOS are shown in Table 4.7-4. Additionally, this information is displayed graphically in Figures 3 and 4 contained in Appendix E. The criteria used to determine LOS is identified in Table 4.7-3.

The proposed General Plan Circulation Element policies 4.1 and 4.3 stipulate that the minimum acceptable Level of Service (LOS) allowable is "C" in Rural Regions and "D" in Community Regions, except where the existing LOS is below C (Rural Regions) or D (Community Regions). In such cases LOS shall not be allowed to be less than the existing LOS. Road improvements were identified for those roadway segments that would experience unacceptable LOS at buildout, given the standards identified in policies 4.1 and 4.3. These improvements and resulting LOS are provided in Table 4.7-4 and are summarized in Table 3-5 contained in the Project Description section of this EIR. With the implementation of identified roadway improvements, all studied roadways would be consistent with LOS criteria identified in policies noted above, except the following:

SR 49/SR 20 Interchange. Based upon the MINUTP modeling, this interchange at buildout of the proposed General Plan, would operate at LOS F without improvements. Additional modeling of this interchange at the site and intersection level performed by County Department of Transportation staff confirmed that there would be potentially significant traffic impacts at the interchange and also on the surface streets in the vicinity. The ultimate conclusion of the additional modeling analysis was that a significant improvement

to the interchange, probably in the form of a "loop" ramp in one quadrant of the interchange, would be required to achieve LOS D at buildout of the General Plan. The costs of such a improvement could be as high as $5.0 million.

Table 4.7-4
Proposed General Plan - Daily Traffic Volumes and Level of Service

Roadway	Segment	Buildout Volume	Without Improvements		With Improvements	
			Lanes	LOS	Lanes	LOS
I-80	- Placer Co. Line to SR 174	60,000	4	B	--	--
	- SR 174 to SR 20	60,000	4	B	--	--
	- SR 20 to SR 89	57,000	4	A	--	--
SR 20	- Yuba Co. Line to Pleasant Valley Rd.	14,000	2	C	--	--
	- Pleasant Valley Rd to SR 49	22,000	2	F	4	A
	- SR 49 to Willow Valley Rd.	10,700	2	A	--	--
	- Bowman Lake to I-80	6,000	2	A	--	--
SR 20/49	- Grass Valley to Nevada City	62,000	4	B	--	--
SR 49	- Placer Co. Line to Alta Sierra Dr.	36,000	2	F	4	E
	- Alta Sierra Cr. to McKnight Way	38,000	2	F	4	F
	- W. Broad St. to Newtown Rd.	11,000	2	C	--	--
SR 49 NB Ramp	- Empire Street to 49	17,600	1	F**	--	--
SR 49 SB Ramp	- 49 to SR 20	22,250	1	F**	--	--
SR 89	- Placer Co. to I-80	16,000	2	F	4	A
SR 174	- You Bet Rd. to Brunswick Rd.	19,000	2	F	4***	B
SR 267 (w/bypass)	- Placer Co. to I-80	21,000	2	F	4	B
Alder Creek Rd.	- Fjord Rd. to SR 89	2,500	2	A	--	--
Allison Ranch Rd.	- McCourtney Rd. to SR 49	9,600	2	F	2*	D
Alta Sierra Dr.	- SR 49 to Ball Rd.	9,000	2	D	--	--
	- Ball Rd. to Dog Bar Rd.	7,000	2	B	--	--
Banner Ridge-Lava Cap	- SR 49 to Red Dog Rd.	6,300	2	B	--	--
Bennett Rd.	- SR 20/49 to Sutton Way	13,000	2	F	4	B
	- Sutton Way to Brunswick	8,000	2	D	--	--
Bitney Springs Rd.	- Pleasant Valley Rd. to R & R Hwy	3,000	2	A	--	--
Boulder Street	- SR 49 to Red Dog Rd.	8,000	2	D	--	--
Brunswick Rd.	- SR 49/20 to Sutton Way	37,500	6	D	--	--
	- Sutton Way to Old Tunnel	25,000	2	F	4	D
	- Old Tunnel to Idaho-Maryland Rd.	20,000	2	F	4	B
	- Idaho-Maryland Rd to SR 174	18,500	2	F	4	A
Combie Rd.	- SR 49 to Magnolia Rd.	14,000	2	F	4	B
	- Magnolia Rd to end	7,000	2	B	--	--
Dog Bar Rd.	- LaBarr Meadows Rd. to Carrie Dr.	7,000	2	B	--	--
	- Carrie Dr. to Magnolia Rd.	2,000	2	A		

Table 4.7-4
Proposed General Plan - Daily Traffic Volumes and Level of Service

Roadway	Segment	Buildout Volume	Without Improvements		With Improvements	
			Lanes	LOS	Lanes	LOS
Donner Pass Rd.	- Northwoods Blvd. to Commercial Row - Donner Lake Dr. to I-80	20,000 7,500	2 2	F B	4* --	C --
Dorsey Dr.	- Nevada City Hwy to SR 49/20 - SR 49/20 to Sutton Way	18,500 20,000	2 2	F F	4 4*	D C
Dorsey Dr. (ext)	- Sutton Way to Brunswick Rd. - Nevada City Hwy to Ridge Rd.	18,000 11,000	0 0	NA NA	4 2*	D D
East Lime Kiln Rd.	**- SR 49 to Shana Way**	**2,560**	**0**	**NA**	**2**	**A**
Glenshire	- Truckee River to SR 267	9,000	2	D	--	--
Gold Flat Rd.	- Gracie Rd. to SR 20/49	5,000	2	A	--	--
Hughes	- Ridge Rd. to Main St.	10,000	2	E	2*	C
Idaho-Maryland Rd.	- SR 49/20 to Sutton Way - Sutton Way to Brunswick Rd. - Brunswick Rd. to Banner Ridge	15,000 4,000 5,000	2 2 2	F A A	4 -- --	B -- --
Indian Springs Rd.	- SR 20 to Spenceville Rd. - Spenceville Rd. to McCourtney	5,000 5,000	2 2	A A	-- --	-- --
La Barr Meadows Rd.	- McKnight Way to Dog Bar Rd.	10,000	2	E	2*	C
Lime Kiln Rd.	- McCourtney Rd. to SR 49	5,400	2	A	--	--
Loma Rica Dr.	- Brunswick Rd. to Charles Dr.	10,000	2	F	2*	D
Magnolia Rd.	- Combie Rd. to E. Hacienda Dr. - E. Hacienda Dr. to Dog Bar Rd.	10,000 1,900	2 2	E A	2* --	C --
McCourtney Rd.	- Lime Kiln Rd. to Indian Springs Rd. - Indian Springs rd. to Old Auburn Rd. - Old Auburn Rd. to SR 20	8,400 11,000 30,000	2 2 2	C E F	-- 2* 6*	-- D C
Mill St.	- W. Main St. to McCourtney Rd.	6,700	2	C	--	--
Nevada City Hwy	- Dorsey Dr. to Brunswick Rd. - Brunswick Rd. to Gates Place - Gates Place to Ridge Road	15,000 18,000 12,000	2 2 2	E F C	2* 4 --	A A --
Newtown Rd.	- Bitney Springs to SR 49	1,500	2	A	--	--
New Town SDA	- New Town SDA to SR 20 direct connect	15,000	0	NA	4	B
North Bloomfield	- SR 49 to lake Vera-Purdon Rd. - Lark Vera-Purdon Rd. to Yuba River - Yuba River to Graniteville	7,000 2,000 150	2 2 2	C A A	-- -- --	-- -- --
Northwoods Blvd.	- Trout Creek to Donner Pass Rd.	13,700	2	F	4	C
Penn Valley Dr.	- Pleasant Valley Rd. to Spenceville Rd. - Spenceville Rd. to SR 20	**3,000** 7,000	**2** 2	**A** B	-- --	-- --

Table 4.7-4
Proposed General Plan - Daily Traffic Volumes and Level of Service

Roadway	Segment	Buildout Volume	Without Improvements		With Improvements	
			Lanes	LOS	Lanes	LOS
Pleasant Valley Rd.	- SR 20 to Lake Wildwood Dr.	15,000	2	F	3	B
	- Lake Wildwood Dr. to Bitney Springs Rd.	5,000	2	A	--	--
	- Bitney Springs Rd. to SR 49	1,500	2	A	--	--
Rattlesnake Rd.	- SR 174 to Tiger Lily Lane	5,900	2	B	--	--
	- Tiger Lily Lane to Dog Bar Rd.	1,800	2	A	--	--
Red Dog Rd.	- Boulder St. to You Bet Rd.	5,000	2	A	--	--
Ridge Rd.	- R & R Hwy to Alta St.	9,000	2	D	--	--
	- Alta St. to Hughes Rd.	10,000	2	E	2*	C
	- Hughes Rd. to Nevada City Hwy	9,000	2	D	--	--
Rough & Ready Hwy	- SR 20 to Bitney Springs Rd.	5,500	2	A	--	--
	- Bitney Springs Rd. to Ridge Rd.	12,000	2	F	4	A
	- Ridge Rd. to Grass Valley city limits	12,000	2	F	4	A
Sutton Way (ext)	- Brunswick Rd. to E. Bennett St.	9,000	2	D	--	--
Tyler Foote Crossing Rd.	- SR 49 to Lake City Rd.	2,500	2	A	--	--
W. Main St.	- E. Main St. to Alta St.	14,000	2	D	--	--
Wolf Rd.	- Lime Kiln Rd. to SR 49	5,800	2	A	--	--
You Bet Rd.	- SR 174 to Red Dog Rd	4,000	2	A	--	--

* Indicates that spot improvements would be necessary to maintain policy level of service. Such improvements could include shoulder widening, channelization, or intersection turn land additions.

** Indicates that additional study would be required to accommodate projected traffic volumes at the Empire interchange with SR 20/49.

*** **It should be noted that the Caltrans Route Concept Report for State Route 174 is not consistent with the County recommendation for 4 lanes for State Route 174, in that only two lanes are noted in the Concept Report. Nevada County should work with Caltrans to eliminate this inconsistency. Alternatively, land use changes may be necessary to maintain an adequate LOS with only two lanes.**

SOURCE: Nevada County General Plan, Volume 2 (April 1994).

Intersection analysis of the surface streets in the vicinity, especially the Mill/McCourtney/Freeman/Allison intersection, did not reveal a project that could reasonably be designed to achieve LOS D for this intersection at buildout of the proposed General Plan. The non-standard configuration of the intersections and ramps in the vicinity of the Mill/McCourtney intersection may require that additional or substitute access to SR 49 and/or SR 20 be provided to achieve LOS D in the McCourtney and Allison Ranch Road area at buildout of the proposed General Plan.

The analysis performed by the County DOT staff also indicated that a reduction in land use intensity along the SR 20 corridor from SR 49 west, particularly in the Northstar area, in the Penn Valley/Lake Wildwood area, and in the proposed New Town would be necessary

to achieve minimum LOS without significant improvements to the SR 20/SR 49 interchange. The analysis indicated that under buildout of the 1980 Nevada County General Plan, LOS D could be achieved for the SR20/SR 49 interchange without significant improvements, and that while there would still be an impact on the surface streets, it would be less severe than under buildout of the proposed General Plan.

Allison Ranch Road. At buildout of the General Plan and implementation of improvements, this roadway would operate at LOS D. Allison Ranch Road was not broken into segments to account for it being bisected by a Community/Rural boundary. However, as most of this roadway occurs outside the Grass Valley Community Region, the minimum acceptable LOS for this roadway would be C. The future LOS deficiency may be not true for that portion of Allison Ranch Road outside the Community boundary. In addition, reduction in land use intensity in the Northstar area, as discussed above, should also result in a reduction of projected traffic volumes on Allison Ranch Road.

Alta Sierra Drive. At buildout of the General Plan and implementation of improvements, this roadway, between SR 49 and Ball Road, would operate at LOS D. As this roadway occurs within a Rural Region of the County, the minimum acceptable LOS for this roadway would be C unless the existing LOS is less than C. As existing traffic volume is 6,530 with an LOS of A, the minimum acceptable LOS for this roadway would not be achieved at buildout. As the projected volume is just above the cutoff for LOS C, it may be possible to provide spot improvements to improve the LOS to C. However, LOS C can also be achieved with the construction of East Lime Kiln Road from SR 49 to Shana Way, which is in the County Development Fee Program, to provide relief for the eventual volume expected on Alta Sierra Drive.

McCourtney Road. At buildout of the General Plan and implementation of improvements, this roadway (between Indian Springs Road and Old Auburn Road) would operate at LOS D. As most of this roadway occurs outside the Grass Valley Community Region, the minimum acceptable LOS for this roadway would be C unless the existing LOS is less than C. As existing LOS for this segment is A, the identified improvement, once implemented, would not provide for maintenance of the LOS standard for Rural Regions identified in policy 4.1. A project to increase McCourtney Road from 2 lanes to 3 lanes on this segment would provide adequate capacity for projected volumes under buildout of the proposed General Plan. However, reductions in land use intensity in the area of the proposed New Town and the Northstar area, as discussed above with respect to the SR 49/SR 20 interchange, would also result in reduction in projected volumes on McCourtney Road, so that LOS C or better can be maintained without improvements.

It should be noted that the regional travel demand model used to identify needed improvements for the studied roadways, is not designed to analyze improvements for intersections or accident locations. The RTP indicates that these improvements will be identified through the Urban Area Subregional Study which has been completed and accepted by the Nevada County Transportation Commission. It is anticipated that additional recommended improvements resulting from that study may be incorporated into the Nevada County General Plan or some improvements identified in Table 3-5 may be

revised as the result of implementation of the Subregional Study. **It should also be noted that the feasibility of recommended road improvements has not been assessed as part of this EIR.**

Additionally, policies 4.17 and 4.26 through 4.36 provide for improving the capacity of the transportation system by providing for alternative modes of transportation (bicycle and pedestrian) and more efficient modes of transportation (ride sharing, transit, and use of transportation system management measures), were not accounted for in estimates of traffic volumes and LOS at buildout. Therefore, buildout calculations may somewhat overestimate actual conditions of the roadway system that would occur at buildout.

The Circulation Element provides policies which address the identification of needed roadway improvements on an annual basis to maintain acceptable levels of service on area roadways (as defined by LOS standards contained in policies 4.1 and 4.3). Policy 4.5 and Implementation Measure 15 indicate that the road system will be monitored annually to identify road improvements for those components of the road system that are at or approaching unacceptable levels of service. The County Road Improvement Program, identified in policy 4.6, shall establish a schedule for needed improvement projects.

Buildout of General Plan land uses and associated population would cause several roadways to operate at unacceptable levels of service, even with implementation of RTP improvements, which constitutes a significant impact. However, implementation of policies identified above, would serve to identify needed improvements to accommodate future growth and maintain acceptable LOS standards for other segments, as well as, improve the overall efficiency of the roadway system.

Plan Policies that Serve as Mitigation

Implementation of proposed RTP road improvements and General Plan policies 4.1, 4.3, 4.5, 4.6, **4.8, 4.11,** 4.17, 4.26 through 4.36 would serve to reduce the impact but *not* to a *less-than-significant level.*

Other Mitigation Measures

Reduction of the intensity of use in the Northstar area to levels allowed under existing zoning (which are consistent with the 1980 Nevada County General Plan) along with the reduction in intensity of use to levels allowed in the Penn Valley and New Town areas under Mitigation Measure #16 (see the Biotics section of this EIR) and #39 (see the Public Services and Utilities section of this EIR) would result in reduction of the traffic volumes at the SR 20/SR 49 interchange, allowing the minimum acceptable LOS to be achieved. Also, these reductions in intensity of use would be likely to similarly reduce the volume of traffic on surface streets in the vicinity, as indicated by the reduction in volumes on McCourtney Road from as high as 11,000 ADT under the proposed General Plan to 6,500 ADT with the reduced land use intensities based upon the existing zoning. Additionally, the following Mitigation Measure #31 would address the impacts of development on the future LOS for Alta Sierra Drive.

31. Amend the circulation chapter of the proposed General Plan to include the improvement of East Lime Kiln Road as a 2-lane minor collector from SR 49 to Shana Drive.

These Mitigation Measures along with the proposed policies identified above would reduce the impact to a *less-than-significant* level.

Impact #31. *Buildout of proposed General Plan land uses and associated population growth may result in State roadways* ***and roads within incorporated areas (not under the jurisdiction of the County)*** *operating at unacceptable levels of service, until needed roadway improvements can be funded and constructed. This is considered to be a* ***significant and unavoidable*** *impact, as proposed General Plan and RTP policies would not necessarily ensure that funding would be available to construct improvements needed to maintain acceptable LOS on State roadways.*

Provision of adequate funding for local and non-local roadways includes local funds (primarily development impact fees identified in policy 4.11) and State funds (policy 4.9). Additionally, RTP policies 3.1 through 3.12 seek to develop alternative funding sources for transportation improvements, to minimize the cost of improvements, and to require new development to fully mitigate their impact on the transportation system.

In general, for local roads under the jurisdiction of the County, development impact fees would be collected as development occurs and improvements would be constructed in accordance with the prioritization of improvements identified in policy 4.7. If adequate funds are not available to construct a given roadway at or approaching unacceptable LOS (as defined in policies 4.1 and 4.3), the County would take action to ensure growth is compatible with the road system, as stated in policy 4.8, by limiting or restricting further development, or implementing TSM measures to increase the capacity of the roadway. As funding of such improvements, would require the accumulation of adequate development impact fees, the County may have to take such action. Additionally, policy 4.6 indicates that the Road Improvement Plan will identify a schedule for each improvement, as the basis for determining the roadway capacity available to support new development. As further stated in policy 4.20, when reviewing discretionary permits the County will consider the effect of the proposed development on the area-wide transportation network.

With regard to state roads not under the jurisdiction of the County, policies 4.9 and 4.11 indicate that local moneys will be provided to partially fund critical State highway improvements and that development impact fees will mitigate the impact of development on both state and local roads. However, policy 4.9 acknowledges that short-term adverse impacts to the State highway system from growth and development in the County will occur until adequate funding is available, as major funding limitations exist within the State System.

Similar to the State roadways situation, construction and timing of improvements to mitigate traffic impacts within incorporated areas are outside the County's jurisdiction and control.

State highway improvements are constructed in accordance with the State Transportation Plan (STP) and the State Transportation Improvement Program (TIP), and improvements to State routes necessary to accommodate projected volumes from buildout of the proposed General Plan would not necessarily be included in the STP or TIP. The STP is based upon a 20-year horizon and the TIP is a 5-year program. While buildout of the proposed General Plan would require that SR 174 be improved to 4 lanes between Brunswick Road and Yon Bet Road, current State plans identify only a 2-line improvement for this segment. Even with potential availability of local funding for State route improvements under policies 4.9 and 4.11, there is no assurance that the State would include the additional improvements in its planning. Therefore, buildout of proposed General Plan land uses and associated population and employment growth may have significant impacts on State roads in the County until adequate funds are available and improvements constructed.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 4.6, 4.7, 4.8, 4.9, 4.11, and 4.20, and RTP policies 3.1 through 3.12 would serve to reduce the impact to a *less-than-significant* level on local roads under the jurisdiction of the County. However, *significant unavoidable* impacts would occur on State roads **and roads within incorporated areas** if needed roadway improvements are not funded and constructed as necessary to provide for minimally acceptable LOS.

Other Mitigation Measures

~~None available.~~

Implementation of the proposed policies identified above along with Mitigation Measure #31A below, would serve to reduce the impact but not to a less-than-significant level.

31A. The following new action policy should be added under Objective 3.2 of the General Plan as a new Policy 3.9(a): To ensure adequate timing of major development projects in the Martis Valley with the availability of adequate transportation facilities, the County shall conditionally restrict or otherwise prohibit development of all discretionary projects within the Martis Valley and with access to State Highway 267 until the bypass with Interstate Freeway 80 is completed.

31B. The following new text should be added to the end of Policy 1.42:

> **The coordinated development impact fee program shall include coordination with incorporated cities and possibly a Memorandum of Understanding between the County and cities regarding facilitation and implementation of this program.**

Impact #32. *Buildout of proposed RTP improvements and other improvements that could result from implementation of proposed General Plan and/or RTP policy will have physical impacts on the environment and surrounding land uses. This is considered to be a* ***less-than-significant*** *impact as proposed plan policies would ensure that such impacts are fully mitigated.*

Construction of road improvements that could result from implementation of the proposed RTP and General Plan would result in physical impacts on the environment and surrounding land uses. RTP policy 2.2 stipulates that adverse environmental impacts of each improvement should be fully analyzed prior to implementation, and either totally avoided or mitigated to a level of insignificance. Circulation Element policy 4.37 requires continued use of environmentally sound practices for construction and maintenance and that all improvements shall be located, constructed and maintained in a manner compatible with the environment. Additionally, RTP policy 1.1 stipulates that transportation facilities should be compatible with adjacent land uses.

Implementation of these and other policies, as identified throughout this EIR, will serve to minimize the physical impacts on the environment and surrounding land uses. Each topical section of this EIR provides an analysis of potentially significant environmental impacts of buildout of RTP road improvements and other improvements that could result from implementation of proposed policies.

Plan Policies that Serve as Mitigation

Implementation of proposed RTP policies 1.1 and 2.2 and proposed General Plan policy 4.37, as well as other policies as identified throughout this EIR would serve to reduce the impacts to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #33. *Buildout of proposed General Plan land uses and associated population and employment growth will increase the demand for bicycle,* ~~*and*~~ *pedestrian,* ***and equestrian*** *facilities. This is considered to be a* ***significant*** *impact as the proposed General Plan policies would not necessarily provide for facilities to meet this demand.*

Although bicycle and pedestrian trails have been planned for in the County, the number of existing trails is limited to those identified in the Environmental Setting subsection and shown on Figure 4.7-4. These trails serve as recreational resources as well as provide linkages between different portions of the County.

Buildout of proposed General Plan land uses and associated population and employment growth would result in an increase in demand for bicycle and pedestrian paths and facilities, especially in Community Regions where the land use patterns would make pedestrian and bicycle travel a viable alternative to the automobile. If provision for such

facilities are not made, it is possible that conflicts between automobiles and pedestrians/bicyclists may occur resulting in potential safety issues. Additionally, as identified above, substantial increases in traffic volumes on the County roadway network may also contribute to the need to provide adequate pedestrian/bicycle facilities to minimize potential conflicts.

Additionally, provision of adequate bicycle and pedestrian facilities and services may also help achieve the County's goal of reducing dependency on the automobile. However, due to the County's topography, weather, and long travel distances related to rural development patterns, non-auto trails will not significantly reduce automobile dependency or use.

The 1989 Nevada County Master Bicycle Plan includes bike lanes within the urbanized areas of the County that improve non-auto access and mobility. The network identified in the Master Plan provides a continuous system for bicycle travel in most areas of the County expected to have significant population growth. However, to date the plan has not been implemented. Implementation of the Plan would increase the quantity of non-auto trails in Nevada County, which serve as recreational resources and alternative routes/modes of travel, primarily within areas of concentrated development.

Proposed General Plan land use patterns would accommodate bicycle travel as an alternative to the automobile, primarily within areas of concentrated growth. Proposed General Plan policies seek to enhance both bicycle and pedestrian modes of travel. Policy 4.27 provides for the preparation and implementation of a Pedestrian Master Plan that would provide for a system of sidewalks, pathways, and trails within Community Regions, designed to encourage pedestrian use. Policy 4.28 stipulates that the Bicycle Master Plan will be updated and implemented. Both of these Plans would be implemented partially through the development review process with individual developers responsible for construction and maintenance of improvements made pursuant to the Master Plans. Policies 4.32 through 4.36 further stipulate how both the Bicycle and Pedestrian Master Plans would be implemented and funded within private developments and as part of County road improvements.

However, these policies do not provide assurance that bicycle and pedestrian routes which primarily provide a general or community-wide benefit can be provided through the development review process. To achieve the implementation of the Bicycle and Pedestrian Master Plans which are correlated with future development, provision for construction of these facilities through the Development Impact Fee program would be necessary.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 4.27, 4.28, and 4.32 through 4.36 would serve to reduce the impact but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of the proposed policies identified above along with Mitigation Measure #32 below, would serve to reduce the impact to a *less-than-significant* level.

32. Replace General Plan Policy 4.33 in its entirety to provide for inclusion of bicycle and pedestrian facilities as follows:

> The County shall impose comprehensive development fees in amounts sufficient to offset the costs identified as the appropriate share of the bicycle and pedestrian improvements under the approved Bicycle and Pedestrian Master Plans **and Non-Motorist Multi-Purpose Transit Master Plan** which are necessary to serve future development. The comprehensive development fee structure shall ensure that future growth fully mitigates its direct and cumulative impacts on the County.
>
> and revise Policy 4.27 and 4.28 as follows; by adding
>
> 4.27 New development adjacent to or including any designated **bicycle** ~~pedestrian~~ facility shall be coordinated with provision of such facility under Policy 4.33.
>
> 4.28 New development adjacent to or including any designated **bicycle** ~~pedestrian~~ facility shall be coordinated with provision of such facility under Policy 4.33.

Impact #34. *Buildout of proposed General Plan land uses and associated population and employment growth will increase the demand for transit services and facilities. This is considered to be a* ***less-than-significant*** *impact as the proposed General Plan has policies that would provide for adequate facilities to meet this demand.*

As discussed above, buildout of proposed General Plan land uses and associated population and employment growth would result in substantial increases in traffic volumes and associated impacts on the level of service on the County roadway network. Existing transit services provide fixed-route services within and between Nevada City and Grass Valley and Truckee and Tahoe City. It is expected, that the demand for transit services will increase with population growth in the County, especially in the primary growth centers. If buildout of the proposed General Plan occurs without associated expansion of the transit services, travel within and through the County would increasingly rely on the personal automobile. Therefore, provision of adequate transit facilities and services may also help achieve the County's goal of reducing dependency on the automobile.

As discussed in the RTP, to reduce the future dependency on the automobile, additionally transit facilities and services would need to be provided in key locations of the County to accommodate as much of the travel demand as possible. In order for public transportation services to be a viable alternative to the private automobile, incentives must be provided. Transit services must be inexpensive, comfortable, convenient, and reliable.

The Transit Development Plan~~, which is currently being updated, will identify~~ **identifies** the services and facilities needed to meet future demand. Additionally, a Transit Marketing Plan for the Gold Country Stage ~~is being prepared by the Nevada County Transportation Commission. The goal of the plan is~~ **attempts** to increase ridership and improve public awareness of the services.

Proposed General Plan policies also support the expansion of existing transit facilities and services. Policy 14.7 provides for the preparation of a comprehensive Transportation System Management program that would consider business contribution to public transit. Policy 14.7 stipulates that through interagency cooperation, programs shall be developed to maximize participation of employers in mass transit service for both employees and customers. Policy 4.29 stipulates that the Department of Services for Transportation, Aviation, and Recreation (STAR) shall work with local Transportation Management Associations to increase opportunities for transit use and other means to reduce demand for additional roadway capacity. Additionally, focusing growth in Community Regions shall also help to maximize the efficiency of the transit system, as identified in policy 4.31.

If fully implemented, these policies would provide for adequate transit facilities to serve future growth.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 4.17, 4.29, 4.31, and 14.7 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact 34A. Increased traffic from growth associated with the General Plan could result in safety concerns, especially on narrow rural roads where sight distance may be limited and winter conditions such as ice and snow may affect travel safety. This is considered to be a less-than-significant impact, as RTP and General Plan policies would ensure that roadways operate safely.

Many of the roads in the County are winding roads that cross varied terrain. Sight distance can be limited which can create unsafe conditions, especially when numerous driveways access principal and minor arterials where the average speeds are significantly higher than on collectors and local streets. Such unsafe conditions can be exacerbated in the winter months due to snow and ice.

Plan Policies that Serve as Mitigation

Policy 1.2 of the Regional Transportation Plan and Policies 4.2, 4.5, 4.6, 4.7, 4.19, 4.25 would serve to reduce the impact to a less-than-significant level.

Impact 34B. If residential development in the County outpaces job-generating development (or vice versa), an imbalance in the jobs/housing ratio may result in either out-commuting or in-commuting and associated traffic, air quality and noise-related impacts. This impact would be *less-than-significant* with the adoption of existing policies and other recommended mitigation measures.

Policies That Serve as Mitigation

Policies 2.5, 2.6, and 4.30 would serve to partially mitigate the above impact.

Other Mitigation Measures

The following policy should be added to the Circulation section of the General Plan:

4.30(c). Approval of future residential building permits should be tied to job growth within the County. The County should monitor both residential building permits and job generation within the County to ensure that a job/housing balance is maintained. Should an imbalance occur, the County should adopt an ordinance restricting either residential building permits or job-generating building permits (depending on the type of imbalance) until a specified balance is achieved.

4.8 AIR QUALITY AND CLIMATOLOGY

INTRODUCTION

This section addresses potential air quality and climatological impacts associated with buildout under proposed General Plan land use designations and goals, objectives, and policies, the Regional Transportation Plan, and amended zoning regulations and revised zoning district maps as described in the Project Description section of this EIR. Specific topics include regional air quality impacts associated with emissions generated by mobile emissions and impacts associated with development in areas with severe weather hazards.

This section is based on existing conditions information developed in the Nevada County Master Environmental Inventory (1991). Additionally, the MEI information was updated with 1991 and 1992 air quality data provided by the California Air Resources Board, *California Air Quality Data, Annual Summaries.*

ENVIRONMENTAL SETTING

Climatology

Nevada County exhibits large variations in terrain and consequently exhibits large variations in climate. The western portions of the County slope gradually with deep river canyons running from southwest to northeast towards the crest of the Sierra Nevada Range. East of the divide, the slope of the Sierra is steeper, but river canyons are relatively shallow. Elevations range from about 200 feet at the southwest corner of the County to 9,143 feet at Mt. Lola on the crest of the Sierras.

The topography of the County strongly affects temperature and rainfall distributions. The warmest areas within the County are found at the lower elevations along the west side of the County, while the coldest average temperatures are found at the highest elevations. Average annual precipitation generally increases with altitude ranging from about 30 inches in the western portions of the County to over 60 near the crest of the mountains. East of the crest of the Sierra, annual precipitation drops off rapidly, diminishing to about 30 inches at the eastern end of the County.

The prevailing wind direction over the County is westerly. However, the terrain of the area has a great influence on local winds, so that wide variability in wind direction can be expected. Afternoon winds are generally channelled up-canyon, while nighttime winds generally flow down-canyon. Winds are, in general, stronger in spring and summer and lower in fall and winter.

Periods of calm winds and clear skies in fall and winter often result in strong, ground-based inversions forming in mountain valleys. These layers of very stable air restrict the

dispersal of pollutants, trapping these pollutants near the ground, representing the worst conditions for local air pollution occurring in the County.

Hazards associated with the climatological characteristics of the County, are discussed below.

Avalanche Hazard

Avalanche hazard areas are generally located on high, mountainous slopes and terrain at elevations above 7,000 feet. The location of avalanche hazard areas depends upon the location of snow accumulation areas - those areas where snow tends to drift during peak winter storms. Wind velocity and the density of vegetation determine the pattern of snow drift and accumulation. In general, snow drifts from areas of low, or no vegetation to areas such as woodland terrain, where the wind is less able to exert its influence. The most important factor necessary to release an avalanche is heavy snow fall. A rapidly increasing snow layer is unable to stabilize or bond with the old layer of snow or the ground below it, so that after a certain amount of time the new snow layer will simply slide off as an avalanche.

Hazard zones are classified according to the following criteria:

- Red Zones (high hazard): Areas where avalanches that could damage standard wood-frame structures and/or bury automobiles are expected to occur with a probability of one chance in twenty per year;

- Blue Zones (moderate hazard): Areas where avalanches that could damage standard wood-frame structures and/or bury automobiles are expected to occur with a probability of less than one chance in twenty per year, but more than one chance in one hundred per year;

- Yellow Zones (low hazard): Areas where avalanches that could damage standard wood-frame structures and/or bury automobiles are expected to occur with a probability of less than one chance in one hundred per year; and

- White Zones (no hazard): Areas where, barring cataclysmic or unprecedented events, avalanches will not occur.
(Wilson)

In 1982, Snow Consultant Services prepared a study that identified avalanche hazard areas within Nevada County. The areas include portions of the Donner Lake, Tahoe-Donner, and Soda Springs areas (see Figure 4.8-1). These hazard areas are currently populated, subdivided, or where domestic or commercial uses are planned (ski areas are not included). The mapping does not include areas where people would likely travel by foot, snowshoes, skies, or snowmobile (i.e. back country or roadless areas).

Figure 4.8-1 Severe Weather Hazards

Figure 4.8-1 Severe Weather Hazards (continued)

Severe Weather Hazard

The weather plays an important role in many of the hazards mentioned. For instance, rainfall, humidity, and wind affect the severity of a wildland fire. Snow and wind are factors determining avalanche hazard zones. However, these are intermittently occurring hazards whereas severe weather hazard is of seasonal concern in Nevada County.

Winter months are of special concern in Nevada County due to the heavy snow fall received at the higher elevations. The area most affected by severe winter weather is the Donner Summit/Truckee area. High winds and blowing snow often result in gridlock at the Truckee basin causing Interstate 80 to close.

Below the 3,000 foot-level, the western half of the County is not prepared for heavy snow fall and therefore is severely affected if a substantial storm occurs. This was evident during the February storm of 1990 when over 32 inches of snow fell in the Nevada City/Grass Valley area in less than 36 hours. Surface streets and main roadways were difficult to clear and many of the areas were without electricity for several days.

Heavy rainfall also has the potential for impacting areas of the County. The February storms of 1986 were so severe that the County qualified for state reimbursement for costs incurred as a result of flooding.

Air Quality

Air Pollution Standards

The State Mulford-Carrell Act of 1969 and the Federal Clean Air Act of 1970 established state and federal air quality standards for several pollutants. These standards are divided into primary standards, designed to protect the public health, and secondary standards, intended to protect the public welfare from effects such as visibility reduction, soiling, nuisance and other forms of damage. The state and federal standards exist for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter (PM-10), sulfates, lead, hydrogen sulfide, and vinyl chloride. Of these pollutants, only ozone and PM-10 standards are regularly exceeded in the County (see discussion below regarding "Existing Air Quality"). These two pollutants and their effects are described below.

Ozone. Ozone is the most prevalent of a class of photochemical oxidants formed in the urban atmosphere. The creation of ozone is a result of a complex chemical reaction between hydrocarbons and oxides of nitrogen in the presence of sunshine. Unlike other pollutants, ozone is not released directly into the atmosphere from any sources. The major sources of oxides of nitrogen and reactive hydrocarbons, known as ozone precursors, are combustion sources such as factories, automobiles and evaporation of solvents and fuels.

Ozone can be transported many miles by prevailing winds. For the most part the ozone affecting Nevada County is transported into the area by the prevailing summertime westerly winds. Ozone is known to be transported from the Bay Area and the broader Sacramento

area in quantities that significantly impact the mountainous areas to the east and north. The health effects of ozone are eye irritation and damage to lung tissues. Ozone also damages some materials such as rubber, and is known to damage plants and crops.

Suspended Particulate Matter (PM-10). Suspended particulate matter consists of solid and liquid particles of dust, soot, aerosols and other matter which are small enough to remain suspended in the air for a long period of time. A portion of the suspended particulate matter in the air is due to natural sources such as wind blown dust and pollen. Man-made sources include combustion, automobiles, field burning, factories and unpaved roads. Fireplaces, woodstoves and road sand are known to be major sources of particulate matter in mountain towns during the winter months.

The effects of high concentrations on humans include aggravation of chronic disease and heart/lung disease symptoms. Non-health effects include reduced visibility and soiling of surfaces.

Existing Air Quality

Nevada County is within the Mountain Counties Air Basin, an air basin consisting of 9 counties or portions of counties stretching from Plumas County in the north to Mariposa County in the south. The North Sierra Air Quality Management District is the local agency for air quality planning with authority over air pollutant sources.

Until recently, air quality was not monitored in Nevada County. Beginning in 1986 the North Sierra Air Quality Management District started operating air quality monitoring sites in the County. Ozone is currently monitored in Grass Valley and Truckee and until 1993 was measured in Nevada City. PM-10 is monitored in Grass Valley (two locations), Truckee, and Glenshire. The Placer County Air Pollution Control District also operates monitoring sites just south of the Nevada County border in Colfax, and at the airport in Blue Canyon.

Table 4.8-1 provides ozone monitoring data from 1989 through 1992, from the Nevada City station. The data indicates that both the state and federal ambient air quality standards were exceeded in Nevada City. At the Grass Valley ozone site, all ozone data collected to date is within the Federal Standard. However, data on hot, sunny days show Grass Valley to be very near to the Federal Standard (0.111 ppm was measured, 0.12 ppm is the standard). In addition, the State standard was violated six times at this tie in the last six months of 1993. 1994 data from NSAQMD indicate a continuing trend toward poorer air quality at the Grass Valley site. Data from Colfax, located just south of the Nevada County border, also shows violations of both the state and federal standards.

Data from the Grass Valley and Truckee PM-10 monitoring sites for 1989-1992 are shown in Table 4.8-2. Data from the Nevada City monitoring site and the Glenshire Fire Station is provided for 1992 only, as this was the first year that PM-10 monitoring was conducted at these locations. (The Nevada City site was terminated in March 1993.) Data from these sites indicate that air quality in the County complies with the federal PM-10 standards, but

exceeds the more stringent state standards. The violations of the state PM-10 standards generally occur in winter, although violations in the summer months have been noted during forest fires or periods of open burning. This pattern suggests that the major contributor to PM-10 violations is woodsmoke from the use of woodstoves and fireplaces. Other contributors of suspended particulate matter are road sand used during the winter and prescribed burning in the spring and fall.

Table 4.8-1
Ozone Air Quality Data, 1989-1992
(Nevada City Station)

Standard	1989	1990	1991	1992
Annual Maximum (ppm)	0.12	0.15	0.11	0.11
Number of Days Over Federal Hourly Standard **(0.12 ppm)**	0	2	0	0
Number of Days Over State Hourly Standard **(0.09 ppm)**	12	8	7	2

SOURCE: California Air Resources Board, California Air Quality Data, Annual Summaries, 1989, 1990, 1991, and 1992.

Table 4.8-2
PM-10 Air Quality Data, 1989-1992

Standard	Year	Glenshire Fire Station	Nevada City	Grass Valley	Truckee	TOTAL
Days Over Federal 24-Hour Standard **(150 ug/m³)**	1989	--	--	0	0	0
	1990	--	--	0	0	0
	1991	--	--	0	0	0
	1992	0	0	0	0	0
Days Over State 24-Hour Standard **(50 ug/m³)**	1989	--	--	2	6	8
	1990	--	--	2	12	14
	1991	--	--	1	14	15
	1992	6	0	1	2	9

SOURCE: California Air Resources Board, California Air Quality Data, Annual Summaries, 1989, 1990, 1991, and 1992.

Regional Air Quality Planning

The California Clean Air Act of 1988 requires local air pollution control districts to prepare air quality attainment plans for areas deemed "nonattainment" for the California state air quality standards. Generally, these plans must provide for district-wide emission reductions of five percent per year averaged over consecutive three-year periods. The Act also grants air districts explicit statutory authority to adopt indirect source regulations and transportation control measures, including measures to encourage or require the use of

ridesharing, flexible work hours or other measures which reduce the number or length of vehicle trips.

Nevada County is within the Mountain Counties Air Basin. This basin is classified as "nonattainment" for ozone and PM-10, and is either "attainment" or unclassified for other pollutants. The California Clean Air Act requires that a nonattainment plan for ozone and PM-10 be adopted.

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of air quality and climatological impacts are listed below.

Circulation Element

Policies 4.17, and 4.26 through 4.36.

Safety Element

Policies 10.8, 10.9, and 10.17.

Air Quality

Policies 14.1 through 14.8.

Regional Transportation Plan

Policies 2.2, and 4.1 and 4.9.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and State CEQA Guidelines, significant impacts on air quality are those actions that will: (1) result in a violation of ambient air quality standards; (2) contribute any criteria pollutants in a non-attainment area; (3) expose sensitive receptors to substantial pollutant concentrations; or (4) cause a significant health risk, or create other health hazards or potential public health hazards (as with allowing development in areas exposed to severe weather hazards). These standards are generally derived from portions of the CEQA Guidelines, including various sections and Appendix G and Appendix I. Some standards are derived from agency regulations or are professional standards commonly used to further define what actions may cause "significant effects" under CEQA.

Impact #35. *Buildout of proposed General Plan land uses and associated population growth may expose future residents and structures to severe weather conditions or weather hazards if development would be located in areas with such hazards. This is considered to be a* ***less-than-significant*** *impact, as proposed plan policies would minimize these hazards.*

As discussed in the Environmental Setting section, avalanche hazard areas are located in portions of eastern County, including Donner Lake, Tahoe-Donner, and Soda Springs (see Figure 4.8-1). These areas are currently developed and populated. Future growth allowed in these areas susceptible to avalanche would expose future residents and property to potential avalanche hazards. Additionally, other severe weather conditions can create hazards of a seasonal concern in. This section will discuss those hazards related to severe winter weather. Weather conditions that relate to wildland fire hazards are discussed in the Fire Protection subsection of the Public Services section of this EIR. Weather conditions that relate to flood hazards are discussed in the Hydrology and Water Quality section of this EIR.

The County's Zoning Ordinance identifies all avalanche hazard areas, shown on Figure 4.8-1, as "Potential Snow Avalanche Area Combining District" (PSAA). The intent of the PSAA is to identify areas with avalanche hazards, to give notice to the public of such areas, and to minimize extraordinary public expenditures associated with search and rescue missions. Additionally, proposed General Plan policies 10.8 and 10.9 provide for continued implementation of the Emergency Operations Plan, and the designation of evacuation routes, which would address response to and avalanche and access through or away from an area affected by avalanche. Additionally, policies 4.23 and 4.24 seek to ensure that alternative access be provided and an interconnected road system be maintained, as warranted for all discretionary projects. Additionally, policy 10.7 requires coordination with the State Office of Emergency Services with regards to public awareness and State programs addressing natural disasters, including avalanches.

Taken together, implementation of the existing zoning ordinance and the proposed policies identified above would serve to minimize potential impacts of buildout of proposed General Plan land uses and associated population, from avalanche hazards.

Plan Policies that Serve as Mitigation Measures

Implementation of proposed General Plan policies 4.23, 4.24, 10.7 through 10.9 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #36. *Buildout of proposed General Plan land uses and associated population growth will incrementally increase air emissions from mobile sources. This is considered to be a* ***less-than-significant*** *impact as ~~air quality in the region will be improving over time. Additionally,~~ proposed plan policies would ~~further~~ ensure that air emissions from future County growth are minimized.*

Mobile emissions (those generated by vehicles) that would result from implementation of the proposed General Plan and RTP, were calculated by Donald Ballanti, Certified Meteorologist. Typically, the URBEMIS 3 computer model, developed by the State Air

Resources Board (ARB), is used to estimate mobile emissions. New vehicle emissions that would be generated by various land uses (i.e. residential, commercial, industrial, etc.) were calculated using this model. In addition, to demonstrate overall regional emissions projections for the County in the year 2010, the BURDEN7F model was also used. This computer program was developed by the California Air Resources Board to allow prediction of emissions from on-road vehicles in all counties in the State. Taken together the results of this modeling will demonstrate the incremental increase in mobile emissions from buildout of proposed General Plan land uses and the regional context in which these emission increases would occur.

Localized concentrations of carbon monoxide (CO) at intersections or along roadways were not estimated using the Caline4 model. Based on monitoring conducted by the Northern Sierra Air Pollution Control District, local CO concentrations do not currently exceed state or federal standards, **and no adverse health impacts are anticipated from CO concentrations before 2010** ~~nor are they expected to in the foreseeable future~~ (Hill, personal communication, 1995). The Mountain Counties Air Basin is classified as an attainment area for CO. That is, no exceedences of the State or federal CO standards have occurred.

The results of the URBEMIS modeling indicate that plan-related traffic would generate the following pollutant levels: reactive organic gases (ROG) - 2,680 lb/day; nitrogen oxides - 4,362 lb/day; sulfur oxides - 513 lb/day; and carbon monoxide - 20,069 lb/day. While, these numbers demonstrate a significant increase in air emissions from mobile sources associated with plan buildout, the BURDEN7F model demonstrates that between 1994 and the year 2010 emissions of ROG, nitrogen oxides, carbon monoxide, and sulfur oxides are expected to decrease up to 57 percent **from 1994 emission levels** (see Table 4.8-3). This is the case even though vehicles miles traveled and vehicle trips are expected to increase approximately 150 percent by the year 2010. This decrease in emissions is related to **assumptions in the model regarding** improving emission rates for vehicles due to state emission control programs.

Additionally, proposed General Plan and RTP policies seek to reduce air quality issues associated with future growth by increasing the efficiency of the transportation system, increasing alternative transportation options and providing incentives to use these options. For example, policies 4.17 and 4.26 through 4.36 provide for alternative modes of transportation such as bicycle and pedestrian paths to provide options to the private automobile; provide for more efficient mode of transportation, such as ride sharing, van pools, transit, etc.). Additionally, policy 14.7 provides for interagency cooperation to develop programs to maximize participation of employer-operated van pools, ride sharing, and other transit services for employees.

Policies 14.1 and 14.5 provide for cooperation with the Northern Sierra Air Quality Management District to provide for: assessment of cumulative and long-term air quality impacts; and to develop and implement a long-term monitoring program to quantify air quality in the County. Further, policy 14.5 indicates that where a proposed project may generate more than 25 tons per year of non-attainment pollutants, on-site monitoring will be conducted.

Table 4.8-3
Estimated County-wide Emissions from Vehicles in Nevada County, 1994 and 2010 (BURDEN7F Model Output)

Pollutant/Parameter	1994	2010	Percent Change
Daily Emissions in Pounds/Day			
Reactive Organic Gases	8,640	3,720	57% decrease
Carbon Monoxide	71,320	34,520	52% decrease
Nitrogen Oxides	12,840	12,220	5% decrease
Sulfur Oxides	1,420	740	48% decrease
Daily Vehicle Miles Travelled	2,677,000	4,194,000	156% increase
Daily Vehicle Trips	362,393	556,524	152% increase

Taken together, implementation of proposed policies identified above would help to minimize the increase in mobile emissions from plan-related traffic. Also, The BURDEN7F model indicates that increases in emissions due to traffic associated with the General Plan buildout may be offset by reduced mobile emissions; as vehicle emission controls take effect, the net result may be that air quality improves in the County.

Plan Policies that Serve as Mitigation

Implementation of the proposed General Plan policies 4.17, 4.26 through 4.36, 14.1, and 14.5 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #37. *Buildout of proposed General Plan land uses and associated population growth will incrementally increase PM-10 emissions associated with woodsmoke and other sources of suspended particulates. This is considered to be a* ***less-than-significant*** *impact as proposed plan policies would ensure that PM-10 emissions from future County growth are minimized.*

Buildout of proposed General Plan land uses and associated population growth would result in incremental increases in PM-10 emissions primarily from woodsmoke. **By 2010, vehicular use and residential development associated with the General Plan could result in an incremental increase of 483 lbs/day of PM-10. About 54 lbs. of this increase would be unrelated to vehicle use and would be associated primarily with woodsmoke during winter months in concentrated areas of the County.** As

development continues the use of woodstoves, fireplaces, and prescribed burning could also increase. As the Mountain Counties Air Basin currently experiences exceedences of State PM-10 standard during the winter months, the contribution of woodsmoke from future residences could result in further exceedences.

Additionally, construction of structures and road improvements would also generate dust. However, construction typically occurs during the dry season (late spring through early fall). Therefore, it is not expected to contribute to further exceedences of the State PM-10 standard. However, the Northern Sierra Air Pollution Control District Rule 226 addresses standards and procedures for construction to limit dust generation.

The proposed General Plan has policies which address the use of woodstoves, fireplaces, and prescribed burning. Policy 14.2 indicates that as part of the Comprehensive Site Development Standards, installations of solid fuel-burning devices shall comply with current U.S. Environmental Protection Agency (EPA) emissions standards, and that installations of fireplaces in new construction comply with the current EPA Phase particulate emission limits. Policy 14.6 further states that for new construction, the County shall prohibit the installation of non-EPA certified and non-EPA exempt solid fuel burning devices.

Additionally, policy 14.4 indicates that the County would cooperate with the Northern Sierra Air Pollution Control District to: (1) develop a community chipping program to provide incentives for chipping in-lieu of outdoor burning; (2) adopt control measures to reduce pollutant emissions from open burning; (3) develop a program to regulate and control fugitive dust emissions from construction projects; and (4) identify and establish visibility standards for air quality.

Taken together, implementation of the proposed policies identified above would help to minimize the increase in PM-10 emissions from plan-related development.

Plan Policies that Serve as Mitigation

Implementation of the proposed General Plan policies 14.2, 14.4, and 14.6 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

The following mitigation measures (#33, #34, and #35) would serve to further reduce the impact of development on air quality.

#33 The County shall, as part of its development review process, ensure that proposed discretionary developments address the requirements of NSAQMD Rule 226.

#34 The County shall, as part of its Road Improvement Program, consider the benefits to air quality from the paving of unpaved roads.

#35 The County shall revise proposed General Plan Policy 14.4 to include all types of biomassing options (e.g., composting, mulching, grinding, cogeneration, feedstocks, etc., in addition to clipping).

4.9 NOISE

INTRODUCTION

This section addresses potential noise impacts associated with buildout under proposed General Plan land use designations and goals, objectives, and policies, the Regional Transportation Plan, and amended zoning and revised zoning district maps as described in the Project Description section of this EIR. Specific topics include development adjacent to existing noise sources (such as roadways, railroads, airports, and some industrial uses), noise increases associated with proposed general plan buildout, and impacts on sensitive noise receptors.

This section is based on existing noise conditions information developed in the Nevada County Master Environmental Inventory and projected noise conditions information developed in the proposed General Plan Volume 2, Section 3, Noise Analysis. The acoustical consulting firm of Brown-Buntin & Associates, Inc. (BBA) provided technical reports for both of these documents.

ENVIRONMENTAL SETTING

Measurements of Noise

There are several measurements of noise. The intensity of loudness is measured in decibels (dB), which describes the level of noise at any instant in time. However, community noise levels vary according to the distance from noise sources and differences in noise levels during day and night. The "Day-Night Average Noise Level" scale (L_{dn}) is a measure of the average equivalent sound level during a 24-hour period. This measure of noise accounts for the greater sensitivity of the noise receptor at night by adding 10 dB to noise levels between the hours of 10:00 PM and 7:00 AM. Similarly, the "Community Noise Equivalent Level" (CNEL) is also an average equivalent sound level during a 24-hour day, but provides a distinction between day, evening and nighttime sensitivity to noise by adding 5 dB to sound levels between 7:00 PM and 10:00 PM, and 10 dB between 10:00 PM and 7:00 AM. An "Equivalent Sound Level" (L_{eq}) is the sound level containing the same total energy as a varying level over a given sample period of time, typically 1, 8 and 24-hour sample periods. CNEL and L_{dn} represent daily levels of noise exposure averaged on an annual basis, while L_{eq} represents the average noise exposure for a shorter time period, typically one hour. Other measurements for brief, or peak noise levels include L_{max}, which is the maximum noise level recorded during a noise event, and SEL (Sound Exposure Level), which is the level of noise accumulated during a single noise event, for duration of one second.

Existing Noise Conditions

The following subsections describe methodology for modeling and measuring the existing noise environment in Nevada County, and existing noise levels associated with roadways, railroads, airports, and fixed noise sources.

Methodology

The existing noise environment in Nevada County was established with extensive file data collected by the Nevada County Planning Department and project-related data collected by Brown-Buntin & Associates. This data, along with noise modeling for transportation sources, was used to describe existing noise levels in noise-sensitive areas within Nevada County. Significant noise sources include traffic on major roadways and highways, railroad operations, airport operations, some industrial activities and other fixed noise sources.

Noise modeling techniques use source-specific data including average levels of activity, hours of operation, seasonal fluctuations, and average levels of noise from source operations. Modeling methods have been developed for a number of environmental noise sources including roadways, railroad line operations, railroad yard operations, industrial plants and airports. Such methods produce reliable results as long as data inputs and assumptions are valid. The modeling methods used in this report closely follow recommendations made by the State Office of Noise Control, and were supplemented where appropriate by field-measured noise level data to account for local conditions. The noise exposure contours are based upon annual average conditions. As local topography, vegetation, or intervening structures may significantly affect noise exposure at a particular location, the noise contours should not be considered site-specific.

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to develop L_{dn} contours for all highways and major roadways in Nevada County. The FHWA model is the analytical method presently used by most state and local agencies, including Caltrans. The current version of the model is based upon the CALVENO noise emission factors for automobiles and trucks. The FHWA Model predicts hourly L_{eq} values for free-flowing traffic conditions, and is generally considered to be accurate within 1.5 dB. See also proposed General Plan (Volume 2), Section 3, Noise Analysis for further information regarding the development of noise contours for County roadways.

Roadways

Local roadway traffic is probably the most significant noise source in Nevada County. Table 4.9-1 provides traffic noise levels based on existing (1990) traffic volumes. Noise contours were developed for representative roadways with the major roadway network defined in the Nevada County Road Functional Classification Plan, including roadways from each of the different functional classifications (see Transportation section of this EIR for information on roadway classification). Development of noise contour data for each segment of the several hundred miles of roadways in the total system is not practical, particularly given the rural character and low traffic volume of many of the roadways. The

Table 4.9-1
Roadway Noise Contour Data
(Distance in feet from centerline of roadway to L_{dn} contour)

Roadway	Segment	1990		Plan Buildout	
		60 dB	65 dB	60 dB	65 dB
SR 49	@ Placer County Line	329	153	535	248
	South of Combie Road	343	159	535	248
	South of Allison Ranch Road	284	132	442	205
	North of McKnight Way	435	202	692	321
	North of Newton Road	110	51	124	58
SR 20	@ Yuba County Line	122	57	235	109
	West of Rough and Ready	158	74	254	118
	West of SR 49	194	90	389	180
	North of Empire Street	339	157	582	270
	South of Idaho-Maryland	398	185	582	270
	South of Brunswick	382	177	487	226
	North of Gold Flat	304	141	472	219
	North of Broad Street	204	95	284	132
	North of Nevada Street	99	46	209	97
SR 89	South of I-80	265	123	327	152
	North of I-80	108	50	161	75
SR 267	South of Commercial Row	198	92	329	153
	South of River Street	166	77	329	153
	I-80 to Bridge Street	227	105	274	127
NEVADA CITY HWY	South of Banner Lava Cap	134	62	183	85
	South of Ridge Road	139	65	150	70
PLEASANT VALLEY ROAD	North of SR 20	176	82	251	117
	South of Mooney Flat Road	110	51	173	80
PENN VALLEY ROAD	South of SR 20	87	40	114	53
	South of SR 20/Rough and Ready	108	50	155	72
ROUGH AND READY HWY	North of SR 20	77	36	99	46
	East of Bitney Springs Road	129	60	182	84
BRUNSWICK ROAD	East of Nevada City Highway	246	114	220	102
	East of Sutton Way	281	131	220	102
	North of Idaho-Maryland	179	83	225	104
	North of Bennett Road	168	78	225	104
	South of Bennett Road	142	67	110	51
SUTTON WAY	East of Brunswick Road	169	79	149	69
	West of Brunswick Road	182	84	149	69
IDAHO-MARYLAND ROAD	East of Main Street	166	77	178	83
	East of Railroad Avenue	160	74	176	82
	East of Dorsey	99	46	117	54
	South of SR 20	53	24	39	18
BENNETT ROAD	East of Ophir	53	24	160	74
	West of Brunswick	44	20	115	53

Table 4.9-1
Roadway Noise Contour Data
(Distance in feet from centerline of roadway to L_{dn} contour)

Roadway	Segment	1990		Plan Buildout	
		60 dB	65 dB	60 dB	65 dB
COLFAX HWY	East of Empire	117	54	148	69
	South of Brunswick	153	71	140	65
	East of SR 20	140	65	140	65
LA BARR MEADOWS ROAD	South of McKnight	161	75	266	123
	North of Dog Bar Road	137	63	174	81
COMBIE ROAD	East of SR 49	177	82	242	113
	South of Magnolia	107	49	242	113
MAGNOLIA ROAD	North Combie Road	173	80	194	90
	West of Dog Bar Road	31	14	37	17
RIDGE ROAD	East of Rough and Ready	101	47	145	67
	East of Hughes Road	153	71	217	101
	West of Zion Street	102	47	117	54
I-80	Entire Length	558	259	1036	481

SOURCE: Proposed Nevada County General Plan, Volume 2 (April 1994).

selected roadways are intended to be representative of the impact of exiting roadways noise. Noise contour data do not include consideration of shielding caused by local buildings or topographical features, so the distances reported in Table 4.9-1 are worst-case estimates of noise exposure along roadways in the community.

Railroads

Railroad activity in Nevada County includes freight activity on the Southern Pacific Transportation Company (SPTCo) trackage which travels east/west through the eastern portion of the County and through the town of Truckee. Present operations on this line include an average of six freight trains per day traveling in each direction, all on an unscheduled basis. Freight trains are randomly distributed throughout the daytime and nighttime hours. One Amtrak operation occurs during the early afternoon hours in each direction.

Locomotive noise, warning horn noise, and roadway crossing bells were the major contributors to railroad noise levels as defined by SEL. SEL, or "Sound Exposure Level", is the level of noise accumulated during a single noise event, such as a train passing, for a duration of one second. The results of the noise measurements indicate an average SEL of 101.9 decibels (dB) at a distance of 75 feet. The total L_{dn} of railroad operations at a distance of 75 feet from the tracks was determined to be 67.6 dB. The distance to the 60 dB L_{dn} noise contour is about 240 feet from the track centerline. For further information

regarding the development of noise data for railroad operations, see also proposed General Plan (Volume 2) Section 3, Noise Analysis.

Airports

There are two public use airports located in Nevada County, the Nevada County Air Park located east of Grass Valley and the Truckee-Tahoe Airport located south of Truckee. CNEL contours are shown in Figure 4.9-1 and Figure 4.9-2 to describe existing operations at each of the airports.

Fixed Noise Sources

Many industrial processes produce noise even when the best available noise control technology is applied. Noise exposures within industrial facilities are controlled by Federal and State employee health and safety regulations (OSHA and Cal-OSHA), but exterior noise levels may exceed locally acceptable standards. Commercial, recreational and public service facility activities can also produce noise which affects adjacent sensitive land uses.

The following descriptions of existing fixed noise sources in the Nevada County study area are intended to be representative of the relative noise impacts of such uses. Although much of the data was collected prior to 1988, the County has conducted limited field monitoring since 1988, and the pre-1988 data is still representative of the noise environment of the County.

Light Industrial Areas. Numerous light industrial areas exist in Nevada County. Based upon noise level measurements conducted by the Nevada County Planning Department staff, most of the light industrial areas have very little noise associated with their operations. High noise levels observed in the vicinity of these operations were noted as being due to roadway traffic. Located on the following page, Table 4.9-2 lists light industrial facilities and noise level data collected by the Nevada County Planning Department staff in the near vicinity of each operation.

Lumbermills. Lumbermills are distributed throughout Nevada County, and are considered to be potentially significant stationary noise sources. Noise generating equipment associated with lumbermills includes the operation of saws, planers, blowers, dry kilns and fork-lifts. BBA file data on lumbermill operations indicate that noise levels of approximately 65 dB L_{eq} and 71 dB L_{max} could be expected at a distance of 400 feet. Table 4.9-3 on the following page displays the noise level data collected by County staff.

Mining Operations. Mining operations are scattered throughout Nevada County. These operations include the mining of rock, sand/gravel, gold and barite. Many of these operations are inactive or operate intermittently. Some of these operations are located in extremely remote areas and are removed from residences which could be disturbed by mining operation noise. Table 4.9-4, summarizes the noise level data for each mining operation that is actively operating.

Figure 4.9-1 Nevada County Air Park - CNEL Contours

Figure 4.9-2 Truckee-Tahoe Airport - CNEL Contours

Table 4.9-2 Light Industrial Facilities Noise Level Data

Table 4.9-3 Lumbermill Noise Level Data

Table 4.9-4 Mining Operations Noise Level Data

Transfer Station. The former Nevada County Landfill site on McCourtney Road is now operated as a solid waste transfer facility. Measurements taken at E. Van Tam Way, 1000 feet north of the facility, by the Nevada County Planning Staff showed noise levels of 44 dB L_{eq} and 71 dB L_{max}.

Nevada County Sportsmen's Club. The Nevada County Sportsmen's Club is located on Banner Mountain Trail. This is a facility open to the public, providing target practice using pistols and large bore rifles. The facility also has a trap shooting facility. Noise level data indicate that a .357 magnum pistol registers a maximum noise level of 112 dB at a distance of 50 feet. A 7mm magnum rifle registers approximately 111 dB at a distance of 50 feet. A 12-gauge shotgun registers 97 dB at a distance of 50 feet.

Noise level measurements conducted by the Nevada County Department of Planning staff in the vicinity of the Nevada County Sportsmen's Club indicated that maximum noise levels ranged between 86.0 - 95.8 dB on Rocker Way, 60.3 - 71.9 dB on Caledonia Way and 60.4 - 69.2 dB on Melanie Court. The wide range of measured maximum noise levels is due to the type, number and caliber of guns being fired at the facility.

Dog Kennels. Dog kennels and animal control shelters can be considered as an objectionable source of noise if located near noise sensitive land uses. The primary noise source associated with kennels is barking dogs. The existing Nevada County Animal Control Shelter is located on Freeman Lane in Grass Valley.

A consultant report was prepared for Nevada County at the Horton Street Kennel which is operated by Larry and Sandra Self. The report indicated that maximum noise levels from barking dogs was approximately 78.1 dB at a distance of 100 feet. The measured L_eq value for a 1-2 minute sample period was approximately 63.2 dB at 100 feet. BBA file data for the Sacramento County Animal Control Shelter indicated that average noise levels ranged between 80.5 and 66.2 dB at distances of 30 to 100 feet.

Race Track. The Nevada County Fair Grounds is located off of McCourtney Road south-west of Grass Valley. During the summer months, the Fair Grounds hold stock car races on Saturday nights. Time trials for the stock car races begin at 6:30 pm, and races typically occur between the hours of 8:00 pm and 10:00 pm. BBA file data for the Nevada County Fair Grounds race track and a report prepared by Land Use Associates in June, 1982 indicate that maximum noise levels range between 88 and 100 dB at a distance of 100 feet.

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of noise impacts are listed below.

Land Use Element

Policies 1.17, 1.20, and 1.21.

Noise Element

Policies 9.1 through 9.19.

Minerals Management Element

Policies 1.17, 17.4, 17.6, 17.14, 17.15 - 17.19, 17.21, 17.24, and 17.25.

Regional Transportation Plan

Policies 1.1 and 2.2.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and State CEQA Guidelines, significant noise impacts are those actions that will: (1) generate noise levels that would conflict with local noise regulation; (2) substantially increase noise levels in areas of (existing) sensitive receptors; or (3) if proposed land uses would substantially increase ambient noise levels and would therefore be incompatible with existing uses. These standards are generally derived from portions of the CEQA Guidelines, including various sections and Appendix G and Appendix I. Some standards are derived from agency regulations or are professional standards commonly used to further define what actions may cause "significant effects" under CEQA. County noise standards contained in the proposed General Plan are also used.

Impact #38. *Buildout of General Plan land uses and RTP road improvements would result in increases in noise levels along roadways. This is considered to be a* ***significant*** *impact as proposed General Plan policies would not necessarily ensure that siting of plan-related land uses would not result in conflicts with noise regulations.*

Development of proposed General Plan land uses would result in an increase in traffic noise levels. Table 4.9-1 identifies the distances to the traffic noise contours for all highways and other major roadways in the County, with buildout of proposed General Plan land uses. Future land uses could be sited within areas adjacent to roadways that exceed acceptable noise exposure limits for noise sensitive land uses if such uses are located within the 60 or 65 L_{dn} noise contours, as indicated by exterior noise limits identified in policy 9.1. Noise sensitive land uses include residences, schools, hospitals, nursing homes, churches, and libraries, as defined in policy 9.8.

Increased noise levels along roadways may also impact existing noise-sensitive land uses. Traffic increases may result in some existing noise-sensitive uses falling within the 60 or 65 L_{dn} noise contour, that currently experience acceptable noise levels. Additionally, four new roads/roadway extensions would be constructed as part of the RTP road improvements. These improvements would result in traffic-related noise in areas not currently exposed to such noise.

As new development allowed under the proposed General Plan takes place, or a change of use or intensification occurs requiring County approval, the noise performance and land use

compatibility standards for noise-sensitive uses identified in policies 9.1 and 9.8, would be applied. Policy 9.4 serves to implement the noise standards defined under Policy 9.1 by incorporating them into the Land Use and Development Code. With regards to addressing roadway noise, these standards would apply to: (1) proposed noise sensitive land uses being sited adjacent to or near a roadway, and (2) proposed roadway or other projects that could result in increased noise exposure to existing noise sensitive land uses.

As stated in policy 9.8, proposed noise sensitive land uses will be strongly encouraged to locate in areas of the County where the impact of noise is limited. Additionally, regardless of location, all new construction would be subject to the noise insulation requirements of Title 24 of the California Administrative Code (policy 9.12). Additionally, uses such as schools and hospitals must meet other state siting requirements related to noise exposure levels.

Policy 9.10 requires the preparation of a comprehensive noise study for proposed projects having the potential to create noise levels inconsistent with policy 9.1 standards. Additionally, a Noise Prediction Methodology Manual has been prepared as part of the proposed General Plan Volume 2 and shall be the basis for preparation of any noise analysis and identification of appropriate mitigation measures (see revised policy 9.10, below). Policy 9.11 stipulates that design controls including increased setbacks, landscaping, and barriers (berms or walls) would be provided to "assist in minimizing" impacts of future noise. As written, this policy would not necessarily ensure that significant noise impacts of future development would be mitigated. As revised below, this policy would provide design controls to fully mitigate significant adverse impacts.

Comprehensive Site Development Standards, identified in policy 1.17, shall also consider standards which provide transitions between uses and buffering and screening to mitigate adverse effect. However, as these standards have yet to be prepared it is difficult to assess their effectiveness in minimizing noise impacts. Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section of this EIR) provides a program for the preparation and implementation of these site development standards that would address noise-related issues. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions.

Additionally, new and increased noise levels generated by RTP roadway improvements would be mitigated by the above policies, as well as by Policy 9.15 which states that new or expanded transportation facilities shall incorporate feasible measures necessary to mitigate increases in noise levels. Further, RTP policies 1.1 and 2.2 indicate that transportation facilities should be compatible with adjacent uses and that adverse environmental impacts of each transportation improvement should be avoided or fully mitigated.

Buildout of General Plan land uses could result in noise levels that would conflict with noise standards or increase noise levels in areas with existing sensitive receptor. Proposed General Plan policies identified above do address these potential noise impacts but would not necessarily ensure that siting of plan-related land uses would not result in conflicts with noise regulations. Revised policies 1.17 (see Mitigation Measure #1 in the Land Use section of this EIR), 9.10, and 9.11 (see Mitigation Measures #36 and #37, below) would ensure that noise-sensitive land uses are not located in areas in which noise levels would exceed acceptable limits, and that appropriate noise attenuating measures are included in project designs as necessary to maintain standards.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 9.1, 9.4, 9.5, 9.8, 9.10 through 9.13, and 9.15, and Regional Transportation Plan policies 1.1 and 2.2 would serve to reduce the impact of future land uses and roadway improvements but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of policies above, and Mitigation Measures #1 (see the Land Use section of this EIR), and #36 and #37, below, would serve to reduce the impact to a *less-than-significant* level.

36. Revise Noise Element policy 9.10 as follows:

> Require the preparation of a comprehensive noise study for all land use projects determined to have ~~to~~ a potential to create noise levels inconsistent with those standards found in Policy 9.1, and in accordance with the methodology identified in the Noise Element Manual contained in General Plan Volume 2, Section 3-Noise Analysis, Appendix A.

37. Revise Noise Element policy 9.11 as follows:

> Provide for adequate design controls to ~~assist in minimizing~~ fully mitigate the significant adverse impacts of future noise generating land uses through increased setbacks, landscaping, earthen berms, and solid fencing.

Impact #39. *Buildout of proposed General Plan land uses may expose noise-sensitive land uses to unacceptable industrial and other fixed noise sources. This is considered to be a* ***significant*** *impact as proposed General Plan policies would not necessarily ensure that siting of plan-related land uses would not result in conflicts with noise regulations.*

Buildout of proposed General Plan land uses could result in the siting of noise sensitive uses and noise generating land uses in proximity to one another. This would be considered significant if noise sensitive land uses would be exposed to noise levels above standards identified in policy 9.1. Primary examples of such fixed noise sources in the County include industrial operations, lumbermills, and mining operations. Other sources of fixed

noise also occur, including but not limited to dog kennels, a gun club, and a race track as identified in the Environmental Setting section.

The development of future land uses that could generate unacceptable noise levels in proximity to noise sensitive land uses would be required to prepare a comprehensive noise study if there is a potential that noise performance standards defined in Policy 9.1 could be exceeded (policy 9.10). Additionally, a Noise Prediction Methodology Manual has been prepared as part of the proposed General Plan Volume 2 and shall be the basis for preparation of any noise analysis and identification of appropriate mitigation measures (see revised policy 9.10, below). Policy 9.1 provides standards to ensure that all land use projects comply with specific noise standards. Policy 9.9 precludes County approval of noise-generating land uses inconsistent with Policy 9.1 standards. This Policy would ensure that significant noise impacts from future fixed-noise sources would be mitigated. Policy 9.8 discourages, but does not preclude, noise-sensitive land uses from those areas where Policy 9.1 standards are exceeded. Therefore, incompatibility problems will occur, but only to the extent that noise-sensitive uses are developed within areas where Policy 9.1 standards are exceeded. Policy 9.11 stipulates that design controls including increased setbacks, landscaping, and barriers (berms or walls) would be provided to "assist in minimizing" impacts of future noise. As written, this policy would not necessarily ensure that significant noise impacts of future development would be mitigated. As revised below, this policy would provide design controls to fully mitigate significant adverse impacts.

Comprehensive Site Development Standards, identified in policy 1.17, shall also consider standards which provide transitions between uses and buffering and screening to mitigate adverse effect. However, as these standards have yet to be prepared it is difficult to assess their effectiveness in minimizing noise impacts. Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section of this EIR) provides a program for the preparation and implementation of these site development standards that would address noise-related issues. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions.

The permitting and siting of future industrial uses in proximity to public facilities or institutions (such as schools and hospitals) shall provide for buffers, setbacks, landscaping, fencing or other means to mitigate adverse impacts, including noise (policies 1.20 and 1.21). Policies 9.4 and 9.12 would also mitigate noise impacts from stationary sources, as described above for roadway noise.

The conditional permitting and siting of mining operations shall adhere to the following policies. Policy 17.6 states that the extraction of mineral resources shall be encouraged prior to urbanization or conversion to other incompatible land use. Policy 17.14 states, that existing development shall be protected from adverse effects of mining. Surface mining would only be allowed after the impacts on the environment and on nearby land uses have be adequately evaluated and mitigated, including noise-related impacts (policies 17.15 and 17.24). Further, the County shall use the "ME" (Mineral Extraction Combining District) on lands which are compatible with mining to provide for public awareness of the potential for surface mining (policy 17.17).

Buildout of General Plan land uses could result in noise levels that would conflict with noise standards or increase noise levels in areas with existing sensitive receptor. Proposed General Plan policies identified above do address these potential noise impacts but would not necessarily ensure that siting of plan-related land uses would not result in conflicts with noise regulations. Revised policies 1.17 (see Mitigation Measure #1 in the Land Use section of this EIR), 9.10, and 9.11 (see Mitigation Measures #36 and #37, above) would ensure that noise-sensitive land uses are not located in areas in which noise levels would exceed acceptable limits, and that appropriate noise attenuating measures are included in project designs as necessary to maintain standards.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.17, 1.20, 1.21, 9.1, 9.4, 9.7 through 9.12, 17.6, 17.14, 17.17, and 17.24 would serve to reduce impacts but *not* to a *less-than-significant* level.

Other Mitigation Measures

Implementation of policies above, and Mitigation Measures #1 (see Land Use section of this EIR) and Mitigation Measures #36 and #37, above, would serve to reduce the impact to a *less-than-significant* level.

Impact #40. *Buildout of General Plan land uses may expose future land uses to aircraft noise. This is considered to be a* ***less-than-significant*** *impact as proposed General Plan policies would ensure that siting of plan-related land uses would not result in conflicts with noise regulations.*

Future growth in the vicinity of the Nevada County Air Park and Truckee-Tahoe Airports could expose future residents, employees, and visitors to aircraft noise. However, General Plan land use designations, recommendations of the Airport Land Use Commission, and enforcement of the Airport Land Use Noise Compatibility Criteria would avoid the location of incompatible land uses within areas exposed to unacceptable aircraft noise levels, as stipulated in policies 9.17 and 9.18. Further, policy 9.19 states that the County shall enforce noise standards consistent with the Airport Land Use Noise Compatibility Criteria, identified in Table 4.9-5 and in Figure 1, page II-124 of the proposed General Plan Volume 1. Noise standards identified in policy 9.1 appear to be consistent with these criteria. Additionally, the Noise Prediction Methodology Manual referred to in policy 9.4 and revised policy 9.10 stipulates that if a proposed project site is located within the 60 dB CNEL contour of an airport then predicted single-event aircraft noise levels at the project site should be described. These levels would then be related to the L_{max} standards identified in policy 9.1.

Table 4.9-5 Airport Land Use Compatibility Criteria

Land uses designations surrounding the Nevada County Air Park identified in the proposed General Plan land use map include a Special Development Area (SDA) to the west, industrial along portions of the airport to the immediate north and south, and residential development (Estate and Rural 5) to the north, south, and east. Depending on the actual siting, future industrial development would be "clearly" to "normally" acceptable given the land use noise compatibility criteria identified above. Possible residential development within the SDA designation could fall within areas considered normally unacceptable, depending on the actual siting of future development. Likewise, residential development in the Estate and Rural 5 designations to the north, south and east could fall within areas considered normally unacceptable, depending on the actual siting of future development. This may occur in areas immediately adjacent to the airport.

Land use designations surrounding the Truckee-Tahoe Airport identified in the proposed General Plan land use map include residential to the west and northwest, Public, Business Park and Open Space to the north and northeast, and commercial and industrial to the west and southwest. Given existing noise contours, it appears that all of these land uses would be "clearly" to "normally" acceptable given the land use noise compatibility criteria identified above.

As stated above, in policy 9.19 the County would enforce noise standards consistent with airport land use noise compatibility criteria. Therefore, the siting of residential or other development with areas having unacceptable noise exposure level would generally be discouraged. In accordance with the airport land use noise compatibility criteria, if newconstruction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Therefore, buildout of General Plan land uses adjacent to the airports noted above, could result in noise levels that would conflict with noise standards. However, implementation of proposed General Plan policies identified above would ensure that noise-sensitive land uses are not located near airports in areas in which noise levels would exceed acceptable limits, and/or that appropriate noise attenuating measures are included in project designs as necessary to maintain standards.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 9.1, 9.17, 9.18, and 9.19 would serve to reduce impacts to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact: #41. *Buildout of General Plan land uses may expose noise-sensitive land uses to unacceptable railroad noise. This is considered to be a* ***significant*** *impact as proposed General Plan policies would not necessarily ensure that siting of plan-related land uses would not result in conflicts with noise regulations.*

Future growth in the vicinity of the Southern Pacific (SP) Railroad trackage could expose future residents to unacceptable railroad noise, depending on the actual siting of development. As identified in the Environment Setting indicate an average SEL (measurement of single event noise) of 101.9 decibels (dB) at a distance of 75 feet. The total L_{dn} of railroad operations at a distance of 75 feet from the tracks was determined to be 67.6 dB. The distance to the 60 dB L_{dn} noise contour is about 240 feet from the track centerline.

The siting of development in the vicinity of the SP trackage would be considered significant if noise sensitive land uses would be exposed to noise levels above standards identified in policy 9.1. Future development of noise-sensitive land uses along the railroad corridor could occur within the 60 dB L_{dn} noise contour. If there is a potential that noise performance standards defined in Policy 9.1 could be exceeded (policy 9.10) a comprehensive noise study would be prepared. Additionally, a Noise Prediction Methodology Manual has been prepared as part of the proposed General Plan Volume 2 and shall be the basis for preparation of any noise analysis and identification of appropriate mitigation measures (see revised policy 9.10, Mitigation Measure #36).

Policy 9.11 stipulates that design controls including increased setbacks, landscaping, and barriers (berms or walls) would be provided to "assist in minimizing" impacts of noise. As written, this policy would not necessarily ensure that significant noise impacts of future development would be mitigated. As revised in Mitigation Measure #10, this policy would provide design controls to fully mitigate significant adverse impacts.

Comprehensive Site Development Standards, identified in policy 1.17, shall also consider standards which provide transitions between uses and buffering and screening to mitigate adverse effects. However, as these standards have yet to be prepared it is difficult to assess their effectiveness in minimizing noise impacts. Revised policy 1.17 (see Mitigation Measure #1 in the Land Use section of this EIR) provides a program for the preparation and implementation of these site development standards that would address noise-related issues. This program should help ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions. Policies 9.4 and 9.12 would also mitigate noise impacts from stationary sources, as described above for roadway noise.
Therefore, buildout of General Plan land uses could result in exposure of future land uses adjacent the SP railroad trackage, to noise levels that would conflict with noise standards. Proposed General Plan policies identified above do address these potential noise impacts but would not necessarily ensure that siting of plan-related land uses would not result in conflicts with noise regulations. Revised policies 1.17 (see Mitigation Measure #1 in the Land Use section of this EIR), 9.10, and 9.11 (see Mitigation Measures #36 and #37, above) would ensure that noise-sensitive land uses are not located in areas in which noise levels would exceed acceptable limits, and that appropriate noise attenuating measures are included in project designs as necessary to maintain standards.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 9.1, 9.4, 9.8 and 9.12 would serve to reduce impacts to a *less-than-significant* level.

Other Mitigation Measures

Implementation of policies above, and Mitigation Measures #1 (see Land Use section of this EIR) and Mitigation Measures #36 and #37, above, would serve to reduce the impact to a *less-than-significant* level.

4.10 PUBLIC SERVICES AND UTILITIES

INTRODUCTION

This section addresses potential public service impacts associated with buildout of proposed General Plan land uses and goals, objectives, and policies, the Regional Transportation Plan, and amended zoning and revised zoning maps as described in the Project Description section of this EIR. Specific topics include water, sewer, solid waste, fire protection services, sheriff services, schools, parks and recreation, and libraries.

This section is based on existing conditions information developed in the Nevada County Master Environmental Inventory (MEI). Additional agency information was gathered during the preparation of this EIR, as necessary, for the preparation of the impact analysis.

WATER

ENVIRONMENTAL SETTING

Overview

In the eastern portion of the County, the water purveyors depend primarily on groundwater from the Martis Valley Aquifer and springs to supply domestic, commercial, and industrial users. The primary purveyors in the eastern portion of the County are Truckee Donner Public Utility District, the Donner Summit Public Utility District, Donner Lake Utility Company and Glenshire Mutual Water Company.

As the western portion of the County does not have significant groundwater aquifers, it must depend in part on potable and non-potable water from surface water brought by natural and constructed facilities from the high Sierra by the Nevada Irrigation District (NID). The western portion of the County is served primarily by the Nevada Irrigation District (NID) and the cities of Nevada City and Grass Valley. The water districts are shown on Figure 4.10-1. The supply and purveyance of water for both the western and eastern portions of the County are discussed below.

Western County

Three major streams traverse the western portion of the County from east to west. These streams are the Middle Yuba River, which drains approximately 86 square miles and forms the County's northern boundary; the South Yuba River, which drains 343 square miles of the central portion of the County; and the Bear River, which drains 277 square miles and forms the County's southern boundary. Five minor stream systems which are also significant include Deer Creek, Squirrel Creek, Wolf Creek, Greenhorn Creek, and Steephollow Creek. Deer and Squirrel creeks flow westward into the Yuba River while Wolf, Greenhorn, and Steephollow Creeks all drain into the Bear River (see Figure 4.3-1).

Deer Creek originates in the Sierra Nevada at an elevation of approximately 5,000 feet. It discharges into the Yuba River just below the Englebright Dam and has a drainage area of approximately 85 square miles. Its main tributaries are Little Deer Creek, Gold Run Creek, Slate Creek, Lake Wildwood Creek, and Squirrel Creek. Flow in Deer Creek follows seasonal patterns of precipitation. It is also augmented by releases from Upper Scotts Flat Lake through the Lower Scotts Flat Lake for use downstream. A number of the streams have been dammed, creating artificial reservoirs. Nevada City's and Lake Wildwood's wastewater treatment plants discharge to Deer Creek.

Wolf Creek drains approximately 76 square miles from its headwaters at Banner Mountain to its confluence with Bear River. The NID uses a portion of Wolf Creek to convey water from Deer Creek to the Tarr Ditch. It is also possible for overflow from other ditches to reach this water course. Wolf Creek travels through the City of Grass Valley where storm water runoff and sewage treatment plant effluents enter. A number of mines also drain into Wolf Creek.

In the western portion of the County, water development began during the gold rush era. Water was diverted into mining ditches from the rivers that flowed from high in the Sierra Nevada to the east. As farming replaced mining activities, the mining ditches were extended to the west in the lower elevations. In the western portion of the County, those early mining ditches formed the backbone of the NID which supplies surface water to its domestic, industrial and agricultural customers. Outside of the existing service areas, water users depend primarily on groundwater through individual or small systems. The purveyors that deliver surface water supplies in the western portion of the County are discussed below. The use of private wells is also discussed.

Water Purveyors

Nevada Irrigation District. The primary purveyor of treated domestic water and agricultural water in the western portion of Nevada County is the Nevada Irrigation District (NID). The NID provides treated water for domestic, commercial, and industrial purposes as well as untreated water for irrigation. The District encompasses an area of approximately 286,800 acres in Nevada, Placer, and Yuba counties. The area actually served by treated water systems or ditches is much smaller (see Figure 4.10-1). There are some areas, principally mining zones within the NID boundary, which are not included in the District. The District area within Nevada County covers approximately 200,000 acres or about 70 percent of the total area of the District. Water is delivered though approximately ~~430~~ **400** miles of ditches and **300 miles of pipeline** ~~other water conveyance structures~~. Reservoirs have been constructed which provide water storage within the District's boundaries. Storage reservoirs in the mountainous areas in the north central portion of the County are also used to store water in the higher elevations of the Sierra. Total storage of the ten NID reservoirs is approximately 250,280 acre-feet~~ with a "safe yield" of 220,000 acre-feet annually~~.

Figure 4.10-1 Water Districts

Figure 4.10-1 Water Districts (continued)

The District diverts waters from the Middle Fork of the Yuba River and Canyon Creek watersheds into the South Yuba watershed at the Spaulding Powerhouse No. 3 penstock located at Lake Spaulding. This lake is owned by the Pacific Gas and Electric Company. The water is released from Lake Spaulding for power generation and returned to the District through both the Drum Canal and the South Yuba Canal for use within the District's boundaries. Scotts Flat Reservoir is one of the reservoirs in the system used to store water for distribution in the western portion of Nevada County.

NID delivered a total of approximately 133,000 acre-feet of water in 1992 **in Placer, Nevada, and Yuba Counties**. Approximately 7,000 acre-feet per year, or 5 percent was treated domestic water for approximately **15,000** residential and commercial customers **in these counties**. Approximately 126,000 acre-feet per year or 95 percent **is delivered** for agricultural purposes. The NID provides water to most of the urban and suburban centers in the western portion of the County as indicated in Table 4.10-1. Table 4.10-2 provides a summary of treated water production, and average and maximum daily flows.

With reservoir storage capacities of approximately 250,000 acre-feet~~ and a conservative "safe yield" of 220,000 acre feet annually~~, NID has the potential to deliver over 85,000 acre-feet annually above the approximate 133,000 acre-feet delivered as of late 1992. This additional capacity could serve as many as 160,000 additional customers based upon an average annual demand of 0.5 acre-feet per treated-water customer. Based on their 1990 update of the Urban Water Management Plan, NID projects a total annual demand for treated-waters in 2010 of 15,800 acre-feet serving 32,830 customers. This represents an increase of 128 percent over existing treated-water customers. Overall, NID expects to be delivering an average of approximately 140,000 acre-feet annually in the 1990's (including raw and treated water)~~., which is well below the "safe yield."~~

Washington County Water District. The Washington County Water District serves the small community of Washington located on the South Fork of the Yuba River. The small district, which covers approximately 1,270 acres, serves approximately 125 connections. The District is in an isolated area and has only a maximum of 20 potential future connections. The District produces and distributes approximately 1.0 million gallons of filtered, chlorinated water per year (see Table 4.10-2).

San Juan Ridge County Water District. The San Juan Ridge County Water District, formerly known as the French Corral Water District, serves 20 to 22 irrigation customers. Approximately 19.6 million gallons of water are delivered per year (see Table 4.10-2). No domestic or treated water is provided. Water is supplied on a rotational basis between mid-

May and mid-September. The waters are diverted from Shady Creek and stored in Pine Grove Reservoir which has a capacity of 93 acre-feet.

Table 4.10-1
Communities Receiving NID Water

• ***Nevada City*** purchases raw water from NID mainly during periods of peak demand. The City owns water rights from Little Deer Creek which is its primary water source. Nevada City has its own treatment plant which provides water to approximately 1,177 metered customers with a total annual production of approximately 162.4 million gallons, as of late 1992. Treatment processes are flocculation, sedimentation, chlorination, and pH control. Storage facilities exist for 600,000 gallons.

• ***Grass Valley*** purchases raw water from NID on a year round basis. Water production for 1992 supplied approximately 104 million gallons to approximately 2,105 metered connections. The Grass Valley treatment plant incorporates flocculation, sedimentation, chlorination, and pH control.

• ***Cascade Shores*** receives raw water from NID via the Cascade canal to Deer Creek. Water Treatment is provided at NID's Cascade Shores Treatment Plant utilizing pressure sand filters and chlorination. Current capacity is 0.34 million gallons per day. Water production for 1992 provided approximately 24.9 million gallons of water to approximately 350 customers.

• ***Elizabeth George*** treatment plant has a capacity of 10.0 million gallons per day and supplies approximately 3,300 customers with 872.3 million gallons of water per year. NID owns and operates this plant.

• ***Sherwood Forest*** has a capacity of 0.17 million gallons per day and is supplied treated water from NID to serve 50 customers disinfected water. Sherwood Forest is in the process of constructing a tie-in to the Elizabeth George system.

• ***Lake of the Pines*** receives raw water from NID's Combie Reservoir via the Magnolia #3 ditch. Treatment plant capacity is 3.0 million gallons per day. Currently, the system supplies 1,850 customers with an annual average of 317.8 million gallons. Treatment processes include pre-chlorination, upflow clarifier, pressure sand filtration with backwash equipment, post-chlorination and clearwell storage.

• ***Lake Wildwood*** is supplied water from NID via Newtown Ditch from Deer Creek above Nevada City's wastewater treatment plant discharge. The current treatment plant capacity is 4 million gallons per day and supplies an annual average of 304.5 million gallons to 2,420 customers. Treatment processes include clarification, filtration, pre- and post-chlorination, and pH control.

• ***Penn Valley*** water system is part of the NID and contains three public service wells and treatment facilities with a capacity of 0.5 million gallons per day. Approximately 176 customers are supplied 37.1 million gallons annually. Penn Valley Water Treatment Plant is to be abandoned and treated water will be supplied by the Lake Wildwood System.

• ***Snow Mountain*** facilities include a 1.2 million gallons per day water treatment plant and a 400,000 gallon storage tank. Approximately 300 customers are served 66.7 million gallons annually. Treatment processes include flocculation, sedimentation, chlorination, and pH control.

• ***Loma Rica*** system receives its supply of raw water from NID via the Cascade Canal. The treatment plant incorporates flocculation, sedimentation, chlorination, and pH control as treatment processes. Current plant capacity is 8.0 million gallons per day and served 3,700 customers 761.8 million gallons annually.

• ***Green Reservoir Treatment Plant*** received 0.1 million gallons per day raw water from NID and served 58 customers an annual average of 17.0 million gallons of water. This facility no longer exists. Water is supplied to the original Green Reservoir customers by the Loma Rica system.

• NID also provides water on a much smaller basis to Deer Creek Park Mutual Water Company to augment their water supplies obtained through wells.

SOURCE: Proposed Nevada County General Plan, Volume 2 (1994).

Table 4.10-2
Average and Maximum Daily Water Flows

Location	Water Deliveries per Year (mg)	Existing Connections or EDUs[1]	Average Daily Flow per EDU (gpd)[2]	Maximum Daily Flow per EDU (gpd)
WESTERN NEVADA COUNTY NID:				
Cascade Shores	24.9	350	195	487.5
Elizabeth George	872.3	3,300	724	1,810
Lake Wildwood	304.5	2,420	345	862.5
Penn Valley	37.1	176	578	1,448
Lake of the Pines	317.8	1,850	471	1,177.5
Snow Mountain	66.7	300	609	1,522.5
Loma Rica	761.8	3,730	560	1,400
Green Reservoir	17.0	58	803	2,007.5
Other:				
Nevada City	162.4	1,177	378	945
Grass Valley	104.0	2,105	135	337.5
Washington County W.D.	1.0	125	22	55
San Juan Ridge (irrigation only)	19.6	5	1,024	2,685
EASTERN NEVADA COUNTY:				
Truckee-Donner PUD	1,100.0	6,027	500	1,250
Donner Summit PUD	0.1	500	--	--
Glenshire Mutual WC	117.5	968	333	832.5

SOURCE: Proposed Nevada County General Plan, Volume 2 (1994).

[1] EDU: Equivalent Dwelling Units

[2] gpd: Gallons per day

Private Wells

In areas not served by public or private water purveyors, private wells are used. Approximately 10,000 residences rely on private wells.

Historical background reports indicate that groundwater in the western area is not characterized by well-defined aquifers. The highly fractured characteristics of the subsurface geology, as well as a variety of other factors, combine to create inconsistent groundwater characteristics.

Little information is available on the quantity and quality of well water on private property in the western portion of the County. In the past several years, a significant number of wells have gone dry or have had to be lowered. There is a lack of historical data to help determine whether this has been caused by the prolonged drought or from overdrafting of the aquifer. Officials of the Nevada County Department of Environmental Health have been concerned with the long term water quality impacts of septic systems on the chemical and bacterial constituents in the groundwater. In addition, the accumulation of nitrates and their impact on groundwater supply is of particular concern. No sustained studies, however, have been undertaken to determine the cause of these water quantity and quality impacts.

For use of a private well and septic system, County Ordinance requires a minimum of 3 acres per parcel. For areas supplied by a water purveyor, 1-1/2 acres is required.

Eastern County

In the eastern portion of the County, the water purveyors depend primarily on groundwater from the Martis Valley Aquifer and springs to supply domestic, commercial and industrial users. The aquifer will be the subject of a major study that the California Department of Water Resources is undertaking as a part of determining the operational criteria for implementation of the Truckee-Carson-Pyramid Lake Water Rights Settlement Act.

An estimated 1,000,000 acre-feet (af) of groundwater is located in the Martis Valley aquifer. Recharge is estimated at 18,000 af per year with a safe yield of 13,000 af. The Truckee-Donner Public Utilities District has not noticed any impact of the drought upon groundwater levels in Martis Valley wells.

Water Purveyors

Truckee Donner Public Utility District. The Truckee Donner Public Utility District (TDPUD) service area includes downtown Truckee and surrounding area, Sierra Meadows, Prosser Lake area, Tahoe Donner, and Hirschdale. The District provides domestic water and electricity to their customers. The water production in 1992 was approximately 1,100 million gallons (mg) (see Table 4.10-2). About 6,027 customers were connected to the water system in 1992.

The water production rates have increased significantly in the past several years because of the five years of drought and a significant leaking problem in the water mains in the Tahoe Donner portion of the system. The District estimates that the system loses approximately 350 gallons per minute (gpm). A program was implemented at a cost of approximately $7.5 million to replace 72,650 linear feet of water pipelines in the Tahoe Donner portion of the system. This program is expected to eliminate at least 80 percent of the system losses.

Current water use for the District is approximately 3,400 acre-feet per year used by 6,027 customers. TDPUD expects that in the year 2015 there will be approximately 16,000 equivalent dwelling units (EDUs) (12,862 for residential and 3,143 for commercial) with

a demand of approximately 9,000 acre-feet per year. This water demand is based on an average water use rate of 500 gallons per day (gpd) per EDU.

Donner Summit Public Utility District. The Donner Summit Public Utility District provides domestic water to 234 customers in the Soda Springs area. The source of water is from Lake Angela and Lake Mary. Water production varies from approximately 60,000 to 100,000 gpd during the periods when snow making is not occurring. When the ski areas are making snow, production can increase to over 600,000 gpd. Water for snow making is supplied to Boreal Ridge, Soda Springs, and Sugar Bowl.

Donner Lake Utility Company. The Donner Lake Utility Company (DLUC) is a privately-owned company which serves 1,200 customers around Donner Lake. The purveyor's source of water is from springs at the north side of Donner Lake, wells and Donner Lake itself. The company has seven storage tanks with a total capacity of 457,000 gallons.

Glenshire Mutual Water Company. The Glenshire Mutual Water Company (GMWC), formed to serve the Glenshire subdivision, currently serves 1,428 residential parcels within its service area. Total buildout within the area is estimated to be approximately 2,200 units. As of late 1992, there were 968 connections to the system with approximately 100 units being added per year. It is estimated that 85 percent of the residences are occupied on a full-time basis. Water production for 1992 was approximately 117.5 million gallons. The source of water supply is entirely groundwater wells.

Private Wells

The number of residences in the eastern portion of the County on private wells is relatively small. It is estimated that there are fewer than 100 residences and commercial entities on private wells.

Water Rights

Water rights in California are primarily limited to surface waters, while groundwater, except under very specific conditions, is not controlled by permit or water rights. Water rights in the western portion of Nevada County are either "riparian rights" or "appropriative rights" and are primarily held by NID.

"Riparian rights" are considered to be a part of the land and are passed with the title to the land. They were acquired because the property physically touched a watercourse. Riparian rights are not lost through non-use but must meet the constitutional condition of "reasonable and beneficial" use of the water. They are normally older and superior to appropriative rights. Because of the strict definition of riparian rights, as land with riparian rights is sold and subdivided, those rights will decrease as appropriative rights increase.

Appropriative rights in California grew out of the practice, during the early mining days, of "first in time, first in right" based on physical control and beneficial use, without special relationship to land as in riparian rights. The owner of appropriative rights may sell or transfer those rights. Prior to 1914, appropriative rights were acquired by putting water to

a beneficial use and "posting notice" at the point of diversion. After 1914, the State required application for a permit to appropriate water. A permit is issued when a water user files an application for diversion of water. When the permittee develops the full beneficial use of the water, they file for a license which verifies the term of the appropriated rights.

In order to protect their water rights, NID has an ongoing program to update permits and obtain licenses for all diversions. Diversions are for consumptive uses and power generation. NID has riparian and pre-1914 water rights as well as applications that were filed post-1914. They currently hold 29 licenses and have 10 more applications on record. They expect to complete licensing of outstanding applications within the next two to three years. According to the NID, these water rights will provide adequate water for development through the year 2010. Determinations on the costs and benefits of developing potential water rights have been made. In the opinion of the NID staff, applications have been filed for a majority of the water rights within Nevada County that can be economically developed. For example, NID determined that the cost to enlarge Rollins Dam to increase the yield by 5,000 acre-feet was not cost effective. Also, additional water rights at Camp Far West would not benefit Nevada County because they would have to be diverted at an elevation too low to be economical to pump.

The California Constitution requires that the principle of "reasonable and beneficial" be applied to the use of water and issuance of water rights. The term "reasonable and beneficial" is not fully defined and is evolving as a concept. It does require that water be used for the most beneficial purposes and that unreasonable or wasteful uses are to be eliminated. The State Water Resource Control Board may review all permits and licenses if conditions concerning the public trust change sufficiently.

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of water resource impacts are listed below.

Public Facilities and Services Element

Policies 3.1, 3.5, 3.6, 3.7, 3.8, 3.12, through 3.19.

Water Element

Policies 11.1. 11.2, and 11.5.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a plan impact would be considered significant: 1) if it would significantly increase consumption of potable water; 2) if water demand exceeds existing supply or capacity of the existing water infrastructure system; or 3) if it would require substantial expansion of water treatment or distribution facilities.

Impact #42. *Buildout of proposed General Plan land uses and associated population growth will result in increased demand for surface water and groundwater supplies. This is considered to be a* ***significant, unavoidable*** *impact.*

Buildout of proposed General Plan land uses and associated population growth would result in an increased demand for water supplies. The water use requirements for this growth can be estimated using representative flow factors which correspond to categories of land use. The NID published criteria for maximum daily water use in the 1978 Water Distribution System Master Plan Assumptions. These criteria have since been used by the individual service areas within the NID boundaries. Comparison of these assumptions to actual water use in these areas indicate that the NID criteria are appropriate for planning purposes. Table 4.10-3 presents the NID criteria utilized for estimating maximum and average daily water use, on a per dwelling unit or per acre basis.

Table 4.10-3
Water Use Criteria

Type of Water User	Maximum Daily Water Use[1] (gpd)	Average Daily Water Use[1] (gpd)
Domestic (per dwelling unit)	1,440	576
Commercial (per acre)	3,025	1,210
Light Industrial (per acre)	3,025	1,210
Institutional (per acre)	5,040	2,016
Parks (per acre)	2,015	806

1. Assumes maximum daily demand is 2.5 times average daily demand, which is the peaking factor used by NID.

The maximum and average daily water use rates can be further broken down to per capita flows. NID uses a density factor of 2.5 persons per equivalent dwelling unit (EDU). Therefore, to determine per capita flows for domestic users, the maximum and average daily water use rates identified in Table 4.10-4 are divided by the NID density factor of 2.5, which yields a maximum daily flow of 576 gallons per capita per day (gpcd) and an average daily flow of 230 gpcd.

Commercial and industrial water usage are determined on a per employee basis. This is determined by estimating the average number of employees per acre. The maximum and average gallons per day is then divided by the number of employees. Table 4.10-4 identifies these rates for both commercial and industrial water usage.

Buildout of proposed General Plan land uses and associated population growth, as identified in Table 3-3 of the Project Description section, would result in an average water demand of 47.2 mgd and a maximum water demand of 118.2 mgd (see Table 4.10-4). This

buildout water demand also includes existing water use in the County. As shown in Table 4.10-5, the majority of this total water demand will be associated with use in Community Regions, and therefore water will be provided via public water systems. Approximately 87 percent of employees will work in Community Regions (71 percent in the western portion of the County) and 61 percent of the residential population will live in Community Regions (41 percent in the western portion of the County).

Based on these percentages, an average water demand of approximately 31 mgd will occur in Community Regions with approximately 22 mgd of the total occurring in the western portion of the County. This would result in the need for a total of 33,600 acre-feet per year in Community Regions, of which 23,525 acre-feet per year would be needed in Community Regions located in the western portion of the County and 10,075 acre-feet would be needed in the Truckee Community Region, including existing water demand. Given, that NID has 80,000 acre-feet of remaining storage capacity in its reservoirs, there appears to be adequate supplies to serve increased demand. Additionally, as the Martis Valley aquifer has an estimated safe yield of 13,000 acre-feet per year, there appears to be adequate groundwater supplies to serve increased demand. However, water treatment plant capacities and/or treated water storage facilities for the various communities will need to be expanded to provide for sufficient treated water supplies to serve new growth.

It should be noted that growth in Placer County will also be increasing demands on the Martis Valley aquifer in eastern Nevada County. There are limited water supplies legally available within the California portion of the Truckee River watershed under Public Law 101-618. This limit applies to diversions from all sources, including groundwater. If it appears that the Public Law 101-618 limit may be exceeded, mitigation measures may be needed. Any proposals for greater use of reclaimed wastewater (to offset the demand for non-reclaimed water) in the Truckee River watershed must consider the Lahontan RWQCB's 9 mg/l nitrogen limitation discussed in the RWQCB letter found in Appendix B of the EIR.

Additional future water obligations may be required of the Nevada Irrigation District (NID) due to a new set of Delta water criteria. To protect Delta Public Trust resources, it is possible that NID, as one of the major Sacramento River Basin diverters will be required to contribute to water flows to satisfy Striped Bass pulse flows. The exact amount of diversion is not known at this time. However, previous decisions (in draft form) required the dedication of up to 40,000 acre feet from NID on an annual basis.

Proposed development in Rural Regions would result in an average water demand of approximately 16.3 mgd, or approximately 18,000 acre-feet per year. It is assumed that the majority of this demand would be served by individual wells or community water systems, as most development in these areas is outside of existing water district service areas. Because the availability of groundwater supplies is not known, future growth would result in significant, unavoidable impacts on the County's groundwater resources.

Table 4.10-4
Water Demand Resulting from General Plan Buildout

Land Use[1]	Average Demand		Maximum Demand	
	Rate (gpcd)[2]	Average Use (MG/DAY)[3]	Rate (gpcd)	Max Use (MG/DAY)
Residential (175,760 persons)	230	40.4	576	101.2
Commercial				
• **Retail (29,570 jobs)**	22	0.7	55	1.6
• **Office (48,055 jobs)**	88	4.2	220	10.6
Industrial (17,480 jobs)	110	1.9	276	4.8
TOTAL DEMAND	**47.2 MG/DAY**		**118.2 MG/DAY**	

1. Total population and employment presented on buildout figures identified in Table 3-3 of the Project Description section of this EIR.
2. gpcd: Gallons per capita per day.
3. MG/DAY: Million gallons per day.

SOURCE: Compiled from data presented in proposed General Plan, Volume 2 (1994).

Table 4.10-5
Water Demand by Community Regions[1] and Rural Regions

Community Region	Average Demand (mgd)[2]	Maximum Demand (mgd)[2]
Grass Valley	10.4	26.3
Nevada City	2.2	5.5
Lake Wildwood	1.9	5.3
Penn Valley	1.5	3.8
Higgins Corner/Lake of the Pines	1.9	4.8
New Town Reserve	3.2	10.2
Truckee	8.9	22.4
TOTAL COMMUNITY REGIONS	30.9	78.3
TOTAL RURAL REGIONS	16.3	39.9
TOTAL DEMAND	47.2	118.2

1 Total demand for each Community Region was established based on buildout figures identified in Table 3-3 of the Project Description section of this EIR.
2 Based on average and maximum water rates by use presented in Table 4.10-4.

Indirectly, agricultural operators could be impacted by higher water costs which would be a disincentive for continued agricultural operations within the County. Water costs associated with increased treatment needs may increase user fees. While agricultural users do not require treated water, overall user fees may rise. Special user fees could be implemented for agricultural operators who do not require water treatment.

Proposed General Plan policies seek to guide provision of water services and systems within Community and Rural Regions. Policies 3.1 and 3.5 indicate that development within Community Regions would be served by public water systems. Within Rural Regions, development would be served by public or on-site community water systems in Rural Centers and by individual wells or on-site community water systems in other areas (policy 3.1). Policies 3.2 through 3.4 further emphasize the need to concentrate growth in Community Regions to allow for provision of public facilities in the most efficient and cost-effective manner possible.

Public water systems shall be provided in accordance with policy 3.1, as identified above. The cost of such facilities in the future shall be supported by user fees. Additionally, as stated in policy 3.13, the County shall encourage the establishment of development impact fee programs by special districts to offset the cost of growth-related infrastructure and facilities resulting from proposed General Plan buildout. Further, policy 3.12 indicates that the County shall encourage special districts to prepare Master Service Plans based on buildout of the proposed General Plan.

To ensure that the capacity of public facilities is coordinated with the timing of development and approval of discretionary permits, the County shall require a determination of the adequacy of public facilities, or an impact fee program, to serve the proposed development (policy 3.14). Policy 3.15, further indicates that the County shall encourage and may require as conditions of project approvals, mechanisms to facilitate the funding of public improvements which are attributable to a given project. Such mechanisms could include creation of an independent district, service area, or community service district.

Implementation of the above policies would help to ensure that adequate water services will be provided to meet the needs of future growth. However, the scope and magnitude of improvements necessary to meet these future needs are significant. Additionally, because the "safe yield" of groundwater supply in the County is not known, a potential additional demand of 10 million gallons per day to serve new development in Rural Regions would be considered significant.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.1, 3.2, 3.4, 3.5, and 3.13 through 3.15 would serve to reduce the impact but not to a *less-than-significant* level.

Other Mitigation Measures

Mitigation Measures #16 and #39, which would reduce overall land use intensity in the Rural Regions and Community Regions, respectively, would reduce the impact. In addition, Mitigation Measure #38, below, would address impacts on groundwater supply.

38. The County shall undertake a Countywide ~~aquifer~~ **groundwater** study to assess groundwater supplies, quality, demand, and use. If the results of the evaluation indicate that overdrafting is occurring, alternate water sources should be provided. Rural development may be required to tie into a surface water supply system versus a groundwater system. **The County should work closely with Placer County and the Lahontan RWQCB to ensure that groundwater demands from the Martis Valley aquifer do not violate Public Law 101-618.**

If the expense of rural development tying into a surface water supply system is found to be unreasonable, the County may need to consider reducing densities in certain portions of the County where this occurs.

The recommended groundwater study should be coordinated with the recommended septic tank/leachfield study identified under Mitigation Measure No. 10 to allow cost savings for the County and to incorporate relevant data from both studies.

43A. *Meeting the increased water demands for residential and non-residential uses may be a priority for water purveyors if water supplies are limited. Consequently, water supplies for agricultural irrigation (both hobby and commercial agriculture) may be restricted or may increase in cost which would affect such operations. This impact is considered to be a less-than-significant impact due to policies contained in the General Plan.*

As demands for treated water increase, water purveyors could be required to establish priorities if water supplies are limited, either from surface water or groundwater. Untreated water currently used for agricultural operations may be tapped for treatment and delivery to residential and commercial/industrial uses, possibly limiting raw water available for agricultural operations. In addition, if existing raw water supplies are treated, water costs may rise, making water costs too high for continued agricultural operations, especially for the small farmer. Indirectly, such water demands may result in eliminating agricultural operations currently in the County. Agricultural operations may be pressured to go out of business and to convert their lands to non-agricultural uses.

Plan Policies That Serve as Mitigation

Implementation of proposed General Plan policies 16.15 and 16.16 would serve to reduce the impact to a *less-than-significant* level.

WASTEWATER

ENVIRONMENTAL SETTING

Western County

The Grass Valley and the Nevada City sewage treatment plants were both constructed around 1950. Through the 1970s and 1980s, the cities of Grass Valley and Nevada City continued to expand or upgrade their plans in incremental steps to provide capacity to growth within the existing boundaries and areas that were annexed into the districts. In areas outside the spheres of influence of the cities, the County of Nevada, through the Nevada County Sanitation District No. 1, provided the needed mechanism to develop sewage collection and treatment facilities.

As the population increases and as surface water discharge requirements established by the Central Valley Regional Water Quality Control Board (RWQCB) are increased, solutions other than discharge to the surface waters will need to be addressed. The costs to communities to implement new or expanded sewage collection and treatment systems will be much greater than it has been in the past. With the elimination of the Federal and State Clean Water Grants, local communities will face the true and full cost of growth without subsidy. Table 4.10-6 summarizes the capacity of each system.

Nevada City

Nevada City wastewater treatment plant is designed for a flow of 0.69 mgd. The average dry weather flow to the plant is 0.40 mgd with peak flows up to 1.52 mgd. The system serves 1,131 customers (see Table 4.10-6).

The plant, which was built in 1950, is a secondary treatment plant with a trickling filter. The treated effluent is discharged to Deer Creek. Nevada City is in the process of upgrading the plant, with no appreciable increase in capacity, to meet the most recent discharge standards for effluent to Deer Creek.

Grass Valley

The City of Grass Valley wastewater treatment plant is designed for a flow of 1.72 mgd. The average dry weather flow to the plant is 1.55 mgd with peak flows up to 6.37 mgd. The system serves 4,530 customers. The plant, built in 1950, is a secondary treatment plant with a trickling filter. The treated effluent is discharged to Wolf Creek.

At this time, the City of Grass Valley is currently near design capacity. The City is looking at a proposal to increase capacity from 1.72 mgd to ~~3.5~~ **2.78 (average dry weather flows)** mgd that will extend capacity for over ~~ten~~ **20** years **(Golnick, 1995)**.

Table 4.10-6
Existing Wastewater Flows

Location	Existing Avg. Daily Flow (gpd)	Connections or EDUs	Avg. Flow per Connection (gpd)
COMMUNITY REGIONS			
Grass Valley	1,272,000	4,350	281
Nevada City	400,000	1,130	354
Alta Sierra			
Kingsbury Greens	3,500	45	78
Gold Creek Park	6,000	44	136
Lake Wildwood	450,000	2,472	182
Penn Valley	25,000	259	97
Lake of the Pines	400,000	1,987	201
RURAL REGIONS			
Cascade Shores	14,000	64	219
North San Juan	6,200	82	76
RURAL AREAS			
Mountain Lake	1,500	13	115
EASTERN COUNTY			
Truckee Sanitation	1,007,000	5,912	170
Donner Summit PU	520,000	545	952

SOURCE: Proposed General Plan, Volume 2 (1994).

Nevada County Department of Sanitation

The Nevada County Department of Sanitation operates and maintains sewage collection and treatment facilities for areas outside of Grass Valley and Nevada City that require such systems. Currently, there are nine systems or zones within the Nevada County Sanitation District No. 1. These zones are Lake Wildwood, Lake of the Pines, Kingsbury Greens, Gold Creek, Penn Valley, Mountain Lakes Estates, North San Juan, and Cascade Shores; The ninth zone in the Sanitation District is Glenbrook, which is provided sewerage through a County Sanitation District contract with the City of Grass Valley. Existing average daily flows to these facilities are identified in Table 4.10-6. Other areas, such as Alta Sierra Subdivision and La Barr Meadows, may need a collection/treatment system as population densities increase and leach fields degrade or groundwater and surface waters are contaminated.

Private Septic Tanks

According to 1990 census data, 46.7 percent, or 17,449 of the 37,353 housing units in the County were connected to public sewer systems. More than 50 percent of the units used septic tank-leachfield systems (19,588 total units). This is a result of the limited sphere of the existing wastewater collection systems.

The County Environmental Health officials are concerned about potential failures of septic systems, especially in older subdivisions where smaller lot sizes do not provide for adequate leach fields or area for leachfield repair or replacement. Currently, under the County Zoning Ordinance, minimum lot sizes are required when septic systems and/or private wells are necessary. A minimum of 1.5 acres is required for a lot with a septic system. If the lot is to have both a well and a septic system, the minimum lot size is 3.0 acres. For each, adequate space must be available for a minimum usable sewage disposal area, and a future repair or replacement area. Also, regardless of minimum requirement, there may be constraints to sewage disposal system siting that results in parcels larger than the minimum. Inadequate onsite disposal systems can contribute to increases in nutrient concentrations within surface waters, thereby adversely affecting their beneficial uses. The continued use of inadequate systems can add to existing water quality problems. However, there is insufficient information and data on long-term cumulative impacts of septic tank and leachfield failure available at this time. Generally, septic systems and leach fields are considered as only a temporary solution for medium to high density areas.

Eastern County

Truckee Sanitary District

The Truckee Sanitary District (TSD) is the only district within Nevada County that discharges to the Tahoe-Truckee Sanitation Agency (TTSA) wastewater treatment plant. The TSD was established in 1906 and currently collects and transports sewage from 5,912 connections to the TTSA Plant. Average daily dry weather flows in the system are 1.007 mgd with wet weather flow reaching 5.000 mgd. The District has approximately 200 miles of sewer line with a service area that currently encompasses approximately 31 square miles.

It is estimated that approximately 50 percent of the residences within the District are full-time residences with the remaining residences being used as second homes or part-time rentals.

Tahoe-Truckee Sanitation Agency

The Tahoe-Truckee Sanitation Agency was created in 1972 to provide wastewater treatment services for the Truckee area as well as portions of Placer County, including north and west shores of Lake Tahoe and Squaw Valley and Alpine Valley. The member districts are the Truckee Sanitary District, North Tahoe Public Utility District, Tahoe City Public Utility District, Alpine Springs Water District and Squaw Valley County Water District. In 1978, an advanced wastewater treatment plant was completed on the bank of the Truckee River approximately one mile east of downtown Truckee.

With an average increase of connections of 400 units per year, TTSA expects that expansion of the existing plant will not be needed until the year 2005. Most of the new connections will be in the Martis Valley, with little growth being allowed in the Tahoe Basin. The number of connections could be greatly increased if the Lahontan Regional Water Quality Control Board issues orders for existing residences with septic systems to connect to the TTSA system. There are approximately 1,367 units currently using septic systems within the TTSA District. It is anticipated that within five to ten years, most of these units will be required to connect to the sewer system.

The existing TTSA plant capacity is 7.4 mgd with the highest seven-day average flow of 5.41 mgd.

Currently TTSA discharges tertiary treated effluent to an underground disposal field. Spray irrigation facilities became operational in the summer of 1991. These facilities are capable of dispersing the full effluent flow from the plant. The irrigation system located on the TTSA property only functions during summer months and should greatly increase the lifetime of the underground disposal system aquifer.

The Lahontan Regional Water Quality Control Board has had a policy of requiring developed areas to connect to the regional wastewater collection and treatment system in the Truckee River Basin. There are several areas with small lots on the outskirts of Truckee that are still on septic systems. It is expected that within the next five to ten years that these areas will be required to connect this collection and treatment systems. **A RWQCB mandate for sewering of existing subdivisions would require adoption of Basin Plan amendments setting "zero discharge" prohibitions for these areas.**

Donner Summit Public Utility District

The Donner Summit Public Utility District (DSPUD) services 545 customers, a majority of which are single family residences. There are 172 connections available in the Soda Springs area. The sewage treatment system currently treats an average of 520,000 gpd with an additional 300,000 gpd available.

~~The Lahontan Regional Water Quality Control Board has had a policy of requiring developed areas to connect to the regional wastewater collection and treatment system in the Truckee River Basin. There are several areas with small lots on the outskirts of Truckee that are still on septic systems. It is expected that within the next five to ten years that these areas will be required to connect this collection and treatment systems.~~

RELEVANT PLAN POLICIES

All Proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of wastewater impacts are listed below.

Public Facilities and Services Element

Policies 3.1, 3.5, 3.6, 3.7, 3.8, 3.12, through 3.19.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a plan impact would be considered significant: 1) if plan wastewater flows exceed capacity of sewer lines or the treatment plant; 2) contribute significant increases in flows to existing impacted sewer lines; or 3) require substantial expansion of wastewater collection or treatment facilities. These standards are generally derived from portions of the CEQA Guidelines, including various sections and Appendix G and Appendix I. Some standards are derived from agency regulations or are professional standards commonly used to further define what actions may cause "significant effects" under CEQA.

Impact #43. *Buildout of proposed General Plan land uses would result in increased wastewater flows which would require expansion of wastewater collection and treatment facilities. This is considered to be a* ***significant, unavoidable*** *impact.*

Buildout of proposed General Plan land uses and associated population growth will result in an increased wastewater flows and demand for wastewater treatment. Wastewater flows associated with future growth can be estimated using representative flow factors which correspond to categories of land use. In general, wastewater flows tend to be approximately two-thirds of water flows. Therefore, wastewater generation rates identified in Table 4.10-7 below were estimated at two-thirds of the water rates identified in Table 4.10-4, above.

Buildout of proposed General Plan land uses and associated population growth, as identified in Table 3-3 of the Project Description section, would result in an average daily wastewater generation of 31.4 mgd and a maximum wastewater generation of 78.9 mgd (see Table 4.10-7). This buildout wastewater generation also includes existing wastewater flows in the County. As shown in Table 4.10-8, the majority of these wastewater flows will be associated with development in Community Regions, and therefore such flows will be handled via public sewer systems, as indicated in policies 3.1 and 3.5. Approximately 87 percent of employees will work in Community Regions (71 percent in the western portion of the County) and 61 percent of the population will live in Community Regions (41 percent in the western portion of the County).

Stormwater runoff does not currently enter the wastewater treatment plant for Grass Valley, according to the plan operator.

Average wastewater generation would be approximately 20.9 mgd in Community Regions with approximately 15 mgd of the total occurring in Community Regions located in the western portion of the County and 5.9 mgd of the total occurring in the Truckee Community Region. Wastewater treatment plant capacities for the various communities, will need to be expanded to provide for sufficient treatment capabilities to handle additional flows at buildout.

Table 4.10-7
Wastewater Flows Resulting from General Plan Buildout

Land Use	Average Flows		Maximum Flows	
	Rate[1]/ (gpcd)[2]	Average/ (MG/DAY)	Rate[1]	Maximum/ (MG/DAY)
Residential (175,760 persons)	153	26.9	384	67.5
Commercial				
• **Retail (29,570 jobs)**	15	0.4	37	1.1
• **Office (48,055 jobs)**	59	2.8	147	7.1
Industrial (17,480 job)	73	1.3	184	3.2
TOTAL FLOWS	**31.4** mg/day		**78.9** mg/day	

1.Wastewater rates are estimated at approximately two-thirds of water rates, as identified in Table 4.9-4.
2.gpcd: Gallons per capita per day.
SOURCE: Compiled from data presented in proposed General Plan, Volume 2 (1994).

Table 4.10-8
Wastewater Flows Resulting from Development in Community Regions and Rural Regions

Community Region[1]	Average Flows (MG/DAY)	Maximum Flows (MG/DAY)
Grass Valley	8.4	17.7
Nevada City	1.4	3.7
Lake Wildwood	1.2	3.1
Penn Valley	0.1	2.5
Higgins Corner/Lake of the Pines	1.2	3.1
New Town	2.7	6.9
Truckee	5.9	14.9
Community Region Total	20.9	51.9
Rural Regions[1] Total	10.5	27.0
Total Flows	31.4	78.9

[1] Total wastewater generation in Community Regions and Rural Regions was established based on buildout figures identified in Table 3-3 of the Project Description section of this EIR.

It is assumed for the purposes of this analysis that, proposed development in Rural Regions will rely on individual or community septic systems, as most development in these areas are outside of existing wastewater service areas. Providing collection and treatment systems to serve areas with large lots or scattered rural development is generally not feasible due to the cost of providing pipelines and pump stations to overcome distance and topographic difficulties. Therefore, an average of approximately 10.5 mgd of wastewater flows would be directed to such septic systems. Potential water quality impacts associated with the use of such systems is discussed in the Hydrology and Water Quality section of this EIR.

Proposed General Plan policies seek to guide provision of wastewater services and systems within Community and Rural Regions. Policies 3.1 and 3.5 indicate that development within Community Regions will be served by public sewer systems. Within Rural Regions development would be served by public or on-site community sewer systems in Rural Centers and by individual septic or on-site community septic systems in other areas (policy 3.1). Policies 3.2 through 3.4 further emphasize the need to concentrate growth in

Community Regions to allow for provision of public facilities in the most efficient and cost-effective manner possible.

The County shall provide for public sewer systems in accordance with Policy 3.1. Currently, the Department of Sanitation, Wastewater Division provides sewer service or on-site community septic/leachfield systems within 9 zones in the western portion of the County. The cost of such facilities in the future shall be supported by user fees. Additionally, as stated in policy 3.8 the County shall develop and adopt a comprehensive development impact fee program to offset the cost of growth-related infrastructure and facilities resulting from proposed General Plan buildout. Further, policies 3.6 and 3.7 indicate that a long-range Capital Facilities Plan and a Five-Year Capital Improvement Program will be developed based on the facilities needs identified in the development impact fee program.

Additionally, the County shall formally approach the cities of Grass Valley and Nevada City to consider jointly undertaking a long-range feasibility study for a Western Nevada County Collection and Treatment Facilities to serve the Community Regions in the western portion of the County (policy 3.9).

The County shall encourage all other districts providing sewer services to prepare and regularly update Master Service Plans based on growth that could occur as a result of proposed General Plan buildout (policy 3.12). The County shall also encourage these districts to adopt development impact fee programs to offset the costs of providing services to meet the needs of future growth (policy 3.13).

To ensure that the capacity of public facilities are coordinated with the timing of development, in approving discretionary permits the County shall require a determination of the adequacy of public facilities, or an impact fee program, to serve the proposed development (policy 3.14). Policy 3.15, further indicates that the County shall encourage and may require as conditions of project approvals, mechanisms to facilitate the funding of public improvements which are attributable to a given project. Such mechanisms could include creation of an independent district, service area, or community service district.

While implementation of the above policies would require that adequate wastewater services be provided to meet the needs of future growth, the long-range availability and timing of the provision of such facilities cannot be assured, particularly given the limited available capacity of existing facilities.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.1 through 3.9 and 3.12 through 3.14 would serve to reduce the impact but not to a *less-than-significant* level.

Other Mitigation Measures

Implementation of Mitigation Measure #39, below, would serve to further reduce the impact, and by limiting future development to that which is consistent with existing zoning, would limit the need for future expansion of existing systems. However, due to the expansion of facilities required to support even a reduced level of growth, the impact would be significant and unavoidable.

39. Revise the land use map within the unincorporated portions of the Community Regions to be consistent with existing County zoning.

SOLID AND HAZARDOUS WASTE

ENVIRONMENTAL SETTING

Solid Waste Disposal

Solid waste generated in Nevada County is currently disposed of at two Class III sanitary landfills outside of Nevada County. Wastes generated in the western portion of the County are disposed of at the Anderson Landfill located in Shasta County. Wastes generated in the eastern portion of the County are disposed of at the Eastern Regional Landfill in Placer County. Solid waste disposal for both the eastern and western portions of the County are discussed further below.

Western County

Prior to December of 1992, wastes generated in the western portion of the County were disposed of at the McCourtney Landfill, located in the western portion of Nevada County. However, this landfill was closed in late 1992 and is now the site of the McCourtney Road Transfer Station. Wastes generated in the western portion of the County, totaling approximately 36,000 to 40,000 tons per year, are collected at this transfer station prior to delivery to the Anderson Landfill in Shasta County.

Nevada County has a renewable contract with the Anderson Landfill which expires in December of 1997 (Bergman, personal communication, 1994). At that time the County could renew its contract with Anderson or consider other options. However, currently the County is not actively pursuing any in-county landfill options. In-county options that are

being employed or pursued include curbside recycling and the possibility for a some kind of waste transformation facility (Bergman, personal communication, 1994). However, it should be noted that the County appointed a citizens committee in 1990 and 1991 to perform an initial "in-County" site evaluation and selection study, but that the development of the selected "in-County" site was not economically or politically feasible at that time. However, future economic conditions may warrant revisiting the site selection study as a viable alternative to out-of-County disposal.

Eastern County

The Eastern Regional Landfill (ERL) is located three miles south of Truckee, west of Highway 89 in the Tahoe National Forest. The ERL currently accepts waste from Placer, Nevada, and El Dorado counties ~~which~~ currently account for approximately 42 percent of the landfill waste stream. The total capacity of the ERL is 1,420,000 tons or 2,840,000 cubic yards. The ERL is currently operating under a "notice of order" which allows for the disposal of a maximum of 250 tons per day.

Source Reduction and Recycling

The Integrated Waste Management Act, AB 939, requires that all local jurisdictions with solid waste programs reduce waste disposal rates by 25 percent by 1995 and by 50 percent by the year 2000. A Source Reduction and Recycling Element must be prepared by each city and county which demonstrates how the mandated recycling goals will be met.

~~Nevada County is currently in the process of revising its Source Reduction and Recycling Element, which was originally adopted by the Board of Supervisors in December 1991.~~ **Nevada County has completed the revision of the Source Reduction and Recycling Element (adopted by the Board of Supervisors on June 14, 1994).** Table 4.10-9, below, indicates that the County is currently diverting or recycling approximately 58 percent of the total wastes generated in the County. Therefore, the County is currently meeting the State mandated goal for the year 2000, as identified above.

Table 4.10-9
Diverted and Recycled Solid Waste

Solid Waste Handling Method	Total Tons/Year	Percent of Total
Wastes Diverted from Landfills	29,800	41 percent
Recycled Wastes	12,300	17 percent
Wastes Disposed of in Landfills	30,250	41 percent
Total Wastes Generated	**72,400**	**±100 percent**

SOURCE: 1992 data provided by the Nevada County Department of Sanitation (Bergman, personal communication, 1994).

Hazardous Waste

In 1988, Nevada County prepared a County Hazardous Waste Management Plan (CHWMP). The CHWMP addresses existing and projected hazardous waste generation from the residential, commercial, and industrial sectors. Types of treatment and disposal for such wastes are identified and possible locations for treatment and disposal facilities are discussed. The CHWMP also addresses emergency response programs, contaminated sites, and educational and administrative programs related to hazardous wastes. The County CHWMP has been adopted locally, but was not accepted by the Cal EPA, Department of Toxic Substance Control (DTSC).

Hazardous Waste Management Plan

The Nevada County Hazardous Waste Management Plan (HWMP) provides criteria that, when implemented, will minimize safety hazards associated with the use, transport, storage, and disposal of hazardous materials in the County.

The significance of hazardous materials to the environment, property, and human health depends on the type, location, and quantity of the material released. Certain areas of the County are at higher risk of encountering a hazardous material incident. Roadways, railways, waterways, and airways are frequently used for transporting hazardous materials. Areas with industrial facilities that use, store, or dispose of such materials all have an increased potential to exposure. Existing contaminated sites found within the County and transportation of hazardous materials in and through the County are discussed further below.

Contaminated Sites. In 1988, it was estimated that approximately 97 percent of the hazardous waste within Nevada County was generated by "small quantity generators" (SQGs), generating less than 2,200 pounds of waste per month. The HWMP states that the major contributor to the hazardous waste stream is "waste oil." Miscellaneous waste, which includes types of waste such as asbestos, metal dust, chemical toilet waste, and photoprocessing waste, is another major group. Other groups include non-halogenated solvents, dye and paint sludges, resins, and non-metallic inorganic liquids.

According to the HWMP, 43 contaminated sites were identified in Nevada County; 21 of which are known to have contaminated ground water. Sites contaminated with hydrocarbons (gasoline, diesel, and other fuels) are the most commonly found. Federally listed contaminated sites are not found in the County. There are two sites within the County previously identified on the State Superfund List; the Denson property in Nevada City and Auto Recovery Service in Grass Valley. These two sites have been declared clean by the County.

According to the California Department of Health and Safety County HWMP Guidelines, land use mechanisms for addressing hazardous materials issues may include: local zoning ordinances which restrict use of or establish buffer zones around contaminated sites; use of deed restrictions or moratoriums; and, coordination of site information with the issuance

of planning and building permits. As stated in the Nevada County HWMP, no such ordinances, guidelines, or coordination of site information currently exist within the County.

Transportation of Hazardous Materials. Interstate 80, the Southern Pacific Railroad, and the Southern Pacific pipeline are the three major transportation routes by which tons of hazardous material are transported through the County. Interstate 80 weaves in and out of the County from the State Route 20 interchange to the Nevada State line. It is within this corridor that the incident of an accidental release of hazardous material is most likely to occur. Traffic volumes, the weaving character of the Interstate, and snow and ice make this corridor especially dangerous during the winter months. In addition to the character of the Interstate, the remoteness of the County from outside help creates even a greater potential for a major incident. Assistance from areas outside the County would be unavailable for a period of one to four hours in the event of a hazardous materials spill.

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of solid waste impacts are listed below.

Public Facilities and Services Element

Policies 3.24 and 3.25.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. The plan would result in a significant impact if development under the plan would substantially alter the life of landfill capacity, or if adoption of the proposed plan would prevent achievement of source reduction and recycling goals mandated by AB 939. These standards are generally derived from portions of the CEQA Guidelines, including various sections and Appendix G and Appendix I. Some standards are derived from agency regulations or are professional standards commonly used to further define what actions may cause "significant effects" under CEQA.

Impact #44. *Buildout under proposed General Plan land uses would result in increased generation of solid waste. This is considered to be a* ***less-than-significant*** *impact as proposed Plan policies would provide for this increased waste.*

Buildout of proposed General Plan land uses and associated population growth would result in increased generation of solid waste in the County. This increase in solid waste generation associated with proposed General Plan buildout can be estimated as identified below.

The 1992 per capita waste generation rate in Nevada County was approximately 5 pounds of solid waste per person per day. This is based on the total wastes generated in 1992 and an estimated population of 83,700 for 1992 (California Department of Finance, Report 93 E-1). Using this rate, solid waste that could be generated by future growth allowed under the General Plan can be estimated. Plan buildout would increase the population by approximately 97,250. This population increase would result in approximately 486,250

pounds per day or 89,000 tons per year. With existing tonnage, this increase would result in a County-wide total of 161,400 tons per year. This represents a 145 percent increase over existing solid waste generation.

As discussed in the Environmental Setting section, solid waste generated in the County is currently disposed of at two landfills outside the County. While in the immediate future, solid waste will continue to be disposed of outside the County, policy 3.25 recognizes that this method of disposal may not be viable in the long term. Therefore, the County will develop a long-range plan for disposal of solid waste. Additionally, proposed General Plan policy 3.24 indicates that the County will continue to implement the County Integrated Waste Management Plan.

Implementation of these policies shall ensure that the County can provide adequate solid waste services to serve the needs of future growth.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.25 and 3.24 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #45. *Buildout of proposed General Plan land uses could result in conflicts with provisions of the Nevada County Hazardous Waste Management Plan related to potential public safety concerns. This is considered to be a* ***less-than-significant*** *impact as proposed plan policies would minimize such concerns.*

The use, storage, and transport of hazardous materials can pose a danger to public health and welfare. Hazardous materials include toxic metals, chemicals and gases, flammable and explosive liquids and solids, corrosive materials, infectious substances, and radioactive materials. Significant impacts may result when use and handling of these substances result in accidental spills, release, explosion, or contamination. The development anticipated by the proposed General Plan would probably introduce more hazardous materials into the County, increasing the possibility of such accidental release.

Proposed General Plan policy 10.19 indicates that in siting hazardous waste management facilities, the County shall follow the criteria and mitigation measures set forth in the Nevada County HWMP and the Final Environmental Impact Report, in order to minimize safety hazards associated with hazardous material and hazardous waste incidents. However it should be noted that future potential state approval of the HWMP may be dependent on the County modifying its criteria for the siting of such a facility.

The potential need to evacuate a threatened population in a specific area due to accidental release of hazardous materials during transport is addressed by policies 10.8 and 10.9. The Nevada County Emergency Operations Plan will continue to be implemented through the

local Office of Emergency Services (policy 10.8). The Plan identifies procedures and responsibilities for designating and preparing local evacuation routes on an area-specific and event-specific basis. Policy 10.9 indicates that routes designated on the General Plan land use maps as Interstates, freeways, highways, and other principal arterial routes shall be considered primary evacuation routes.

Implementation of the above policies should minimize risks associated with increased hazardous materials use in the County associated with General Plan buildout.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 10.8, 10.9 and 10.10 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

SCHOOLS

ENVIRONMENTAL SETTING

There are currently **12** ~~13~~ separate school districts serving Nevada County, including Tahoe-Truckee Unified School District, Pleasant Ridge Unified School District, Ready Springs Unified School District, Chicago Park School District, Clear Creek School District, Grass Valley School District, Nevada City School District, Pleasant Valley School District, Twin Ridges School District, Union Hill School District, ~~Special Education Consortium District,~~ Nevada Joint Union High School District and Sierra College Extension. The Placer County **Office of Education** ~~School Board~~ serves as an administrative body to Tahoe-Truckee Unified School District.

Table 4.10-10 provides 1993-94 capacity and enrollment data for each school or school district. This information indicates that many of the districts are nearing capacity or are over capacity. Temporarily, most overcrowded schools are accommodating students in portable classroom units. Nevada City also rents space from Champion Mine School.

Most of the school districts in Nevada County have plans to address existing overcrowding and future growth. Each District has its own Master Plan, uses different student yield rates, and accommodates growth up to years ranging from 1994 through 2015. School Districts that plan to add classrooms and/or remodel existing schools include: Clear Creek, Nevada City, Nevada Joint Union High School District, Pleasant Valley, and Union Hill. School Districts planning to build new schools include: Nevada City, Nevada Joint Union High School District, Pleasant Ridge, Pleasant Valley, and Tahoe-Truckee. At least two School Districts, Clear Creek and Pleasant Valley, have put classroom expansion plans on hold while awaiting state funding.

Table 4.10-10
Existing Enrollment and Capacity (1993-1994)

School Districts and Schools	Existing Capacity	Existing Enrollment	Remaining Capacity[1]
Chicago Park School District	185	192	<7>
Clear Creek School District	200	170	30
Grass Valley School District • Bell High School • Hennessy School • Scotten School • Lyman Gilmore	2,150	2,222	<72>
Nevada City School District • Nevada City Elementary • Gold Run Elementary • Deer Creek Elementary • Seven Hills Middle School	1,756	1,854	<98>
Nevada Jt. Union High School District • Bear River High School • Nevada Union High School • Sierra Mountain High School • Empire High School • Young Parent Project • Community School Project	3,206	3,794	<588>
Pleasant Ridge School District • Cottage Hill Elementary (K-1) • Alta Sierra (K-5) • Pleasant Ridge (2-5) • Magnolia (Intermediate)	2,250	2,325	<75>
Pleasant Valley School District • Pleasant Valley School • Williams Ranch School	1,012	890	122
Ready Springs School District	750	552	198
Special Education Consortium • Champion Mine	45	30	15
Tahoe Truckee Unified School District • Donner Trail Elementary • Kings Beach Elementary • Tahoe Lake Elementary • Truckee Elementary • Ride-out Elementary • Sierra Mountain Middle School • North Tahoe Intermediate • North Tahoe High School • Tahoe-Truckee High School • Sierra Continuation High School	4,557	~~4,419~~4,638	~~138~~<81>
Twin Ridges School District • Grizzly Hill • Malakoff • Oak Tree • Washington	407	371	36
Union Hill School District	600	518	82
TOTAL	**17,118**	**17,337**	**<219>**

[1] < > denotes schools that are operating over capacity.

SOURCE: Data collected in 1994 from school districts in Nevada County during the preparation of this EIR.

New or expanded facilities **might** ~~would~~ be funded through state funds (**i.e.,** Leroy Greene, Lease-Purchase Program), state matching programs with developer impact fees, and local general obligation bonds. Districts select the most appropriate type of funding. All Districts are now collecting developer impact fees at the rate of $1.65 per square foot of residential development. The districts are in the process of raising the rates to the state maximum of $1.72 per square foot of residential space. These fees can be used to fund capital facilities and equipment.

The Tahoe-Truckee Unified School District is currently operating at 102 percent of District capacity. However, in the Nevada County/Town of Truckee area, the District is currently at 126 percent of capacity. Since 1989/90, the Nevada County portion of the District grew by 551 K-12 students, a 21.5 percent increase.

The Tahoe-Truckee Unified School District has a new school currently under construction in the Glenshire area (due to open in September,1995). The opening capacity of that school will be 428 students. When Glenshire School opens, the District will still be 54 students over capacity within the existing Nevada County schools.

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of school impacts are listed below.

Public Services and Utilities Element

Policies 3.12, 3.13, and 3.14.

Education Element

Policies 7.1 through 7.9.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a plan impact would be considered significant if plan population would result in increased school enrollments that would substantially contribute to or create overcrowded conditions or require expansion of school facilities.

Impact #46. *Buildout of proposed General Plan land uses could result in the generation of 25,769 school-aged children. Existing facilities would not have the capacity to serve these children, and this is considered to be a* ***significant, unavoidable*** *impact.*

Buildout of proposed General Plan land uses and associated population would result in the generation of approximately 25,769 school-aged children, a 33 percent increase over the existing enrollment of 17,337 children. Of the total, 17,871 would be in grades K-8 and 7,898 would be in grades 9-12. This assumes a housing mix of 70 percent single family units, and 30 percent multi-family units.

This student generation is based on the student yield rate identified in Table 4.10-11. Student yield rates vary from district to district. This is due to varying mixes of multi-family to single-family residential, seasonal housing, varying estimates of development types and timing, and ever-changing economic conditions. However, a student yield rate study was performed for all Nevada County school districts in the fall of 1991. Based upon this study which surveyed 1,273 dwelling units and 190 multi-family units, average yield rates were established (Nevada City School District, Developer Fee Justification Study/Capital Improvement Plan, 1994). These yield rates form the basis for the estimates of school-aged children that would result from proposed General Plan buildout, contained in Table 4.10-11.

Table 4.10-11
School-Aged Children Resulting from General Plan Buildout

Housing Type	K-8		9-12		Total Students
	Yield	Students	Yield	Students	
Single Family DU (35,691 du)[1]	.43	15,347	.19	6,781	22,128
Multi-family DU (15,296 du)[1]	.165	2,524	.073	1,117	3,641
TOTAL STUDENTS	**17,871**		**7,898**		**25,769**

1. Total number of new single family and multiple family dwelling units that would result from buildout of the proposed General Plan.

Most of growth associated with General Plan buildout will occur in the Community Regions. School districts that would serve students in Community Regions would be more affected by development. These school districts include: Grass Valley, Nevada City, Tahoe-Truckee, and Nevada Joint Union High School District. Additionally, most of the multi-family development will occur in the Community Regions.

Table 4.10-12 provides an estimate of the number of classrooms and school facilities that would be required to accommodate this new student population. A total of approximately 27 new school facilities would be required to serve school-aged children associated with plan buildout. This would amount to the need for approximately 465 acres of land for new schools. This assessment was based on State Department of Education guidelines for maximum number of students per classroom, standard school sizes, and acres of land needed per student.

Table 4.10-12
Number of New Classrooms/Schools Required

Grade Level	Students Resulting From Plan Buildout	Maximum Students per Classroom[1]	Classrooms Required	New Schools[1]
K-8	17,871	33	542	23
9-12	7,898	28	282	4
TOTAL	**25,769**	---	**824**	**27**

1. Maximum students per classroom rates are based on State Service Level Guidelines from the California Department of Education. The number of new schools was estimated based on average school sizes for various grade levels, as also identified in the State Service Level Guidelines.

The Tahoe Truckee Unified School District has estimated that the District will need 4.61 new schools over the next ten years. Most of the proposed land use creating this need for new schools is located in the town of Truckee. However, there may be a need in the future to designate a school site within the County's jurisdiction. The estimated cost of these new schools, placement of portable classrooms and expansion of existing schools is estimated to cost $46,261,180 (Tahoe Truckee Unified School District, letter to Tom Miller, Nevada County Planning Department, 26 January 1995). While a number of revenue sources have been identified by the District to finance facility expansions, the District has identified a facility funding shortfall of $13,969,732. In order for the District to satisfy the shortfall, additional developer agreements will have to be obtained and a new General Obligation Bond will have to be approved.

Existing school facilities could accommodate some of the additional students. Additionally, existing school district plans may also provide facilities to accommodate some of the additional students. However, it is assumed that the majority of new students resulting from the plan would not be served by either existing or currently planned facilities. It should be noted, that most of the school facility plans address growth in 5 to 10 year increments. Whereas, buildout of the proposed General Plan could occur over a much longer period of time.

New or expanded facilities could be funded through state funds (Leroy Greene, Lease-Purchase Program). However, state funds are limited as the Lease-Purchase Program currently has an unfunded need of $8 billion state-wide. Other funding sources include, but are not limited to, developer impact fees, voter-approved General Obligation bonds, Mello-Roos Bonds, and landowner Mello-Roos Community Facilities Districts. With limited state funds, school facility financing has become a major concern for school districts attempting to meet the needs of existing and future populations. Local bonds are often controversial and difficult to pass and developer impact fees generally do not cover the total cost of school facilities needed to serve new growth. Often, as districts attempt

to acquire adequate funds to expand or construct new facilities, construction of planned facilities are delayed. Frequently, developer impact fees provide monies to purchase portable classrooms, which relieve overcrowded classrooms temporarily until funds for new/expanded facilities are available.

Proposed General Plan policies seek to cooperate with local school districts in providing for needed school facilities to serve new growth. Policy 7.3 indicates that the County shall encourage all school districts to develop and regularly update Facilities Master Plans based on realistic growth projections. Policy 7.5 indicates that the County will cooperate with school districts to explore methods of securing adequate funding for new school facilities. Further, policy 7.6 indicates that the County shall encourage school districts that are impacted by growth to develop an impact fee programs if they are not already in place.

Additionally, policy 7.7 indicates that in review discretionary projects for permit approval, the County shall determine whether the capacity of public facilities, are adequate to serve the proposed development. If the County determines that adequate school facilities are not available to serve the proposed development, the County will work with the school district in securing project-sponsored mitigation.

However, the large unfunded State need in education programs and the statutory limitations on local government in imposing development fees for education mean that implementation of these policies taken together would not necessarily ensure that adequate school facilities are provided to serve growth allowed under the proposed General Plan.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.12 through 3.14, 7.3, and 7.5 through 7.7 would serve to reduce the impact but not to a *less-than-significant* level.

Other Mitigation Measures

None available.

FIRE PROTECTION

ENVIRONMENTAL SETTING

Service Providers

California Department of Forestry (CDF) and the U.S. Forest Service, Tahoe National Forest (TNF) provide fire protection for the wildland areas within the County, during the fire season (June to October). These agencies are primarily responsible for wildland fires, not structural fires. However, they do provide second response support to local fire districts during structural fires. CDF fire stations and TNF fire stations that provide first attack wildland fire protection. These stations are fully staffed during the fire season between approximately June 15 and October 30.

There are currently 10 separate fire districts that provide structural fire protection in Nevada County. These include: Forty-Niner (in the process of consolidating with Penn Valley), Donner Summit, Higgins Area, Nevada County Consolidated, North San Juan, Rough and Ready, Truckee, Watt Park, Peardale-Chicago Park, and Ophir Hill. There are currently 32 fire stations within these districts. Most of the Nevada County fire districts rely on some or mostly volunteer fire-fighters in addition to their paid staff. **Additional fire protection services are provided by the Grass Valley and Nevada City fire departments.**

Due to the rural nature of the County, County fire districts generally do not use a minimum response time as a means of evaluating the adequacy of their service delivery, as is common in more urban areas. Some stations can respond to calls within five minutes. Other more rural stations respond within 10 to 25 minutes due to greater distances between stations and development. In general, the fire districts staffs indicated that overall provision of services and response times are adequate.

Fire Hazard

As demonstrated by the 49'er Fire of 1988, Nevada County has a high potential for wildland fires of devastating intensity. Based on a "Fire Hazard Severity Zone" map developed by the CDF, almost all of Nevada County has been placed in the "very high" category of severity. Figure 4.9-2 displays the hazard severity zones and fire district boundaries. Fire protection service provided by Fire Districts does not include wildland areas. The TNF and CDF provide fire protection for the wildland areas, and are legally responsible only for wildland fires, not structural fires, during the fire season. Therefore, as shown on Figure 4.10, most of the County does not have year-round fire protection. In addition, most of these districts are staffed with volunteers, making it difficult to coordinate with other agencies.

There are several factors that influence the potential for fire hazard including population growth, vegetation and slope, and weather. The CDF has stated that, "The rapid population increase of the County continues to compound the potential for wildfires with each fire season. During the 49'er Fire, the main problem encountered was the lack of adequate ingress and egress routes to the rural residential areas. The State Responsibility Area Fire Safe Regulations cover "basic wildland fire protection standards of the California Board of Forestry" for "future design and construction." These new standards and regulations do not apply to existing structures, roads, streets, and private lanes or facilities. According to the Office of Emergency Services (OES), there are no regulations that apply to existing conditions.

According to the "Be Fire Safe" guidelines, vegetative areas generally over eight percent in slope are defined as fire hazardous. Basically, the steeper the slope, the faster the fire climbs. The CDF has categorized vegetation based on fuel burning, or "fuel loading" characteristics. These are as follows:

- Light - flammable grass and annual herbs;
- Medium - scrub brush of lighter species; and

Figure 4.10-2 Fire Hazard Areas

Figure 4.10-2 Fire Hazard Areas (continued)

- Heavy - timber, woodland, and heavier brush species.

Weather also plays a critical role in determining fire hazard. According to the CDF, summers with little precipitation and low relative humidity dry out vegetation which increases the amount of fuel available for burning. The drying winds of the winter months also contribute to fire hazard in Nevada County.

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of fire protection impacts are listed below.

Public Services and Facilities

Policies 3.1, 3.2, 3.3, 3.4, 3.6, 3.7, 3.8, and 3.12 through 3.14.

Safety Element

Policies 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.8, 10.9, 10.10, 10.11, and 10.20.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a plan impact would be considered significant if the plan would require additional fire protection staff, equipment, and/or facilities to maintain acceptable response services; ~~or~~ if it would pose public health and safety hazards as a result of unsafe conditions for employees or surrounding neighborhoods**; or if it would interfere with emergency evacuation plans or emergency response plans**.

Impact #47. *Buildout of proposed General Plan land uses and associated population would result in an increased demand for structural fire protection services. This is considered to be a* ***less-than-significant*** *impact as proposed plan policies and local fire district programs shall ensure that adequate services are provided to serve new growth.*

Buildout of proposed General Plan land uses and associated population growth would result in an increase in the demand for structural fire protection services. Buildout of the Plan would result in a net increase of ~~97,987~~ **97,250** people and 50,987 dwelling units, which represents an approximately 140 percent increase over existing population and housing in the County. To provide for this increased demand additional stations, equipment, and staff would be needed by fire protection districts in the County, identified in the Environmental Setting section.

Fire districts in the County have established or are in the process of establishing or considering developer impact fee programs in accordance with requirements of AB 1600/SB327. Based on a survey of fire districts in the County, conducted for this EIR, AB 1600 studies have been prepared and fees are currently being collected from all districts except: Peardale-Chicago Park; Truckee; and Donner Summit Fire Protection Districts. These programs identify facilities and capital equipment needed to serve future growth and

associated costs. The costs are then assigned on a per square footage basis to development as it is proposed and permitted. Staffing needs and associated costs are not included. Developer impact fees vary from district to district depending on location, size of district, asset base, projected growth in an area, and an overall assessment of facility and equipment needs. Although, most districts assign fees to similar land use categories, including: residential and light industrial; moderate industrial and commercial; heavy industrial; and non-habitable buildings. Rates vary depending on whether the building/development is served by a hydrant and whether sprinklers are installed.

Monies obtained via development impact fees must be spent within five years of receipt. As it is difficult to project the rate of growth in a particular area over a given time frame, it is difficult to anticipate the level of funding that will be available to a district from these fees. Additionally, it can be difficult to accumulate sufficient funds from these fees to pay for needed facilities. However, the districts have other mechanisms available to raise revenues to help finance new capital expenditures. These can include: agreements with developers to partially supplement development fees collected in remote areas; additional taxes; and building new stations and using the AB1600 funds yet to be collected as credit.

Most fire districts have prepared plans which address accommodation of future growth. However, it is difficult for districts to forecast the type and time of growth and, therefore, when additional services would be required. Fire district plans and impact fees usually account for growth that has occurred in the recent past (four or five years) which is estimated on a square-footage basis for each structure type (Abby, personal communication, 1994). Fire districts that have plans for new stations include: Truckee, Donner Summit, Penn Valley (possibly two stations), and Rough and Ready. Nevada County Consolidated and Truckee have considered replacing or relocating existing stations.

Proposed General Plan policies support the use of development impact fees by special districts to pay for the increased costs associated with serving new growth (policy 3.13). The County shall also encourage special districts serving the County to development and regularly update Master Facilities Plans based upon buildout of the proposed General Plan. (policy 3.12). Additionally, policy 3.14 indicates that in review of proposed projects seeking discretionary permit approval, the County shall determine whether the capacity of public facilities, or an impact fee program, are adequate to serve the proposed development. If adequate facilities are planned, but not yet available to serve proposed development, the County may require that mitigating measures be undertaken by the project proponent. However, such measures would not be in lieu of development impact fees. Policy 3.15, further indicates that the County shall encourage and may require as condition of project approvals, mechanisms to facilitate the funding of public improvements which are attributable to a given project. Such mechanisms could include creation of an independent district, service area, or community service district.

Additionally, proposed General Plan policy 10.1 encourages the development of one uniform county-wide fire protection ordinance that maintains high fire protection standards for all private and public development, including adequate access and water flow standards. Local fire districts would be encouraged to adopt such an ordinance with allowance for minimal adjustments to reflect local circumstance. Through establishment of the office

of the County Fire Marshall or other appropriate means, the County shall coordinate and centralize firesafe reviews and implementation of fire safety programs, standards, and procedures (policy 10.4).

In order to facilitate delivery of services and reduce fire potential, site development standards related to fire safety would be adopted by the County as the basis for site plan review (policy 10.5). Such standards shall include: road and driveway standards to ensure that emergency service providers have adequate access; provision of secondary access to new projects where necessary for fire safety or emergency access; water supply standards; sign and address standards; and structural/wildland compatibility standards such as fuel modification, vegetation management, and building setbacks. Also, low-density land use designations (Rural or Forest) shall be maintained in areas outside Community Regions which are shown to have a high fire hazard and/or lack adequate fire protection facilities (policy 10.6).

While, buildout of the proposed General Plan would result in the need for additional fire protection staff/volunteers, equipment and/or facilities within local fire districts, implementation of the above policies and local fire district programs should ensure that adequate structural fire protection services are provided to serve growth allowed under the proposed General Plan.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.12 through 3.15, 10.1, and 10.4 through 10.6 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

Impact #48. *Buildout of proposed General Plan land uses and associated population growth would result in an increased exposure of persons and property to wildland fire. This is considered to be a* ***significant, unavoidable*** *impact. While proposed Plan policy and State standards would serve to reduce wildland fire hazards and associated need for increased fire protection services, these would not reduce the impact to a less-than-significant level.*

As discussed in the Environmental Setting section, Nevada County has a high potential for wildland fires of devastating intensity. As shown in Figure 4.10, the majority of the County falls within the "very high" fire hazard zone. Continued development in rural areas of the County will increase the wildland fire hazards which can endanger structures and human life. As development occurs in rural areas, there is increased danger of fire spreading from homes into the forest or from the forest into residential areas.

Increased development in rural areas of the County would result in increased exposure to wildfire hazards and an increased demand for fire protection services by CDF and TNF. While, the CDF and TNF are not technically responsible for structural fire protection, they

would be involved in response to calls involving structures if such calls were related to a wildland fire or potential wildland fire. Additionally, County fire districts provide a second line of response for CDF and TNF calls. Increased danger of wildland fires would also increase the demand on local fire districts.

Proposed General Plan policies provide direction with regard to wildland fire protection. Policy 10.1 encourages the development of one uniform county-wide fire protection ordinance that maintains high fire protection standards for all private and public development, including adequate access and water flow standards. Through establishment of the office of the County Fire Marshall or other appropriate means, the County shall coordinate and centralize firesafe reviews and implementation of fire safety programs, standards and procedures (policy 10.4).

In order to facilitate delivery of fire protection services and reduce fire potential, site development standards related to fire safety would be adopted by the County as the basis for site plan review (policy 10.5). Such standards shall include: road and driveway standards to ensure that emergency service providers have adequate access; provision of secondary access to new projects where necessary for fire safety or emergency access; water supply standards; sign and address standards; and structural/wildland compatibility standards such as fuel modification, vegetation management, and building setbacks. Also, low-density land use designations (Rural or Forest) shall be maintained in areas outside Community Regions which are shown to have a high fire hazard and/or lack adequate fire protection facilities (policy 10.6). However, while Rural and Forest land use designations are predominant in Rural Regions, Rural land use designations in very high severity fire zones under the proposed general plan include extensive areas with lot sizes as several as small as 3 to 5 acres. In comparison to low density rural development where 20 to 40 acre parcel sizes are required, development with 3 to 5 acre parcel sizes would potentially expose 6 to 8 times as many people to the highest severity of wildfire hazard. Such areas are located east and west of Nevada City; southeast of Lake Wildwood; east of Rough and Ready; and east, west and south of Grass Valley.

The potential need to evacuate a threatened population during a wildland fire, is addressed in the Nevada County Emergency Operational Plan, through the local Office of Emergency Services (policy 10.8). The Plan identifies procedures and responsibilities for designating and preparing local evacuation routes on a area-specific and event-specific basis. As identified in policy 10.9, the General Plan land use maps identify interstates, highways, and other principal arterial routes, which are considered to be the primary evacuation routes for the County. Further, minor arterials or major collectors designated on the General Plan land use maps are considered to be secondary evacuation routes. Policies 4.2, 4.7e, and 4.23 of the proposed General Plan along with Policy 10.5 provides direction for development of secondary and emergency access roads in discretionary projects through the development review process. This will ensure that emergency access will be considered in future development. Specific new emergency access roads are also identified on the General Plan Land Use and Circulation Maps in areas of known need for improved emergency access.

While, buildout of the proposed General Plan would result in the increased demand for wildland fire protection services, implementation of the above policies should minimize hazards to structures and human life associated with wildland fires.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 10.1, 10.4, 10.5, 10.6, 10.8, and 10.9 would serve to reduce the impact but not to a *less-than-significant* level.

Other Mitigation Measures

Mitigation measures #16 (see the Biotics section of this EIR) and #1 (see the Land Use section of this EIR) which respectively would reduce densities in portions of the Rural Regions and require clustering of development **in** ~~an~~ all Rural Regions ~~would serve~~ to further mitigate the effects of exposure to wildland fire hazard, but not to a *less-than-significant* level.

SHERIFF

ENVIRONMENTAL SETTING

The Nevada County Sheriff's Department provides law enforcement services for the entire County, including patrol, dispatch, investigations, search and rescue, boat patrol, correctional facilities, coroner, and court security services. The Department's main office is located at the Eric Rood Administration Building in western Nevada County. The Department also has offices at the Truckee Government Center. Sheriffs are dispatched and patrols are initiated from these locations.

The Department currently has a staff of 185 employees of which 77 are sworn officers and 58 are correctional officers who are sworn while on duty at the jail. The office provides a service level ratio of 0.86 officers per 1,000 people in unincorporated areas of the County. This ratio is based on a January 1993 population estimate of 85,500 (Rankin, personal communication, 1994). The Department considers this to be an unacceptable level of service because they cannot always conduct thorough investigations or spend very much time with victims, and they must prioritize calls. Although response time is not used as a criterion for level of service, the Department estimates their average response time is about 17 minutes. They would prefer an average response time of about 10 minutes. The Sheriff's office estimates that 1.5 officers per 1,000 people would provide an acceptable level of service for a rural county, especially given the low crime per capita in Nevada County (Rankin, personal communication, 1994).

The per capita ratio is often used to estimate the number of additional officers needed to serve population growth while maintaining the existing level of service. However, in order to accurately assess the need for new personnel or equipment other factors must be considered on an ongoing basis, including an area's existing criminal patterns, type of land use, accessibility to the area, population density, etc. Actual additional personnel and equipment needs would be adjusted by the Sheriffs Department based on these factors.

Grass Valley and Nevada City have primary responsibility for their own police protection. These cities and the County have mutual aid agreements to assist one another. Although Truckee recently incorporated, the County Sheriff's office provides law enforcement services.

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of law enforcement impacts are listed below.

Public Facilities and Services Element

Policies 3.1, 3.2, 3.3, 3.6, 3.7, 3.8, and 3.10.

Safety Element

Policies 10.10, 10.11, and 10.20.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a plan impact would be considered significant if it would require additional staff, equipment, and/or facilities to maintain acceptable service levels for law enforcement protection.

Impact #49. *Buildout of proposed General Plan land uses and associated population increase would result in an increase in demand for law enforcement services in Nevada County. This is considered to be a* ~~***less than***~~ ***significant*** *impact, as proposed General Plan policies would provide for needed facilities and equipment to serve new growth.*

Buildout of proposed General Plan land uses would result in a population of approximately 176,000, with a net increase of 97,987 people. This population will result in the need for 84 additional sworn officers to maintain the existing level of service of 0.86 sworn officers per 1,000 people. This would represent a 150 percent increase in sworn officers over existing conditions. To achieve the Sheriff's Department goal of 1.5 officers per 1,000 people, 147 additional sworn officers would be needed.

As discussed in the Environmental Setting section, the Department considers the existing staffing ratio of 0.86 sworn officers per 1,000 people to be an unacceptable level of service because they cannot always conduct thorough investigations or spend very much time with victims, and they must prioritize calls. Although response time is not used as a criterion for level of service, the Department estimates their average response time is about 17 minutes. They would prefer an average response time of about 10 minutes. The Sheriff's office estimates that 1.5 officers per 1,000 people would provide an acceptable level of service for a rural county, especially given the low crime per capita in Nevada County (Rankin, personal communication, 1994). The proposed General Plan level of service standards identified in policy 3.10 do not establish law enforcement service levels.

Additional facilities and equipment would also be needed to maintain service levels with growth allowed under the proposed General Plan. The Sheriff's Department noted that with buildout, they would need to construct a satellite station in Penn Valley and possibly one in the Combie/Lake of the Pines area. Furthermore, the Department indicated that an increase in population will require additional staffing resources to maintain the jail. Without more funding, this would result in further cut backs in investigative and patrol services (Rankin, personal communication, 1994). Additionally, based on the County Jail standard identified in policy 3.10 (1 inmate bed per 1,000 population), approximately 91 additional inmate beds would need to be provided to maintain this standard at buildout.

Currently, funding for the Sheriff's Department comes through the General Fund. Developer impact fees are not used by the Sheriff's Department at this time. Two additional officers were recently hired, but the Department is unsure of the possibility for adding staff in the future.

Proposed General Plan policies provide guidance for provision of law enforcement facilities and equipment to serve future growth, but not for law enforcement staff. Funding for law enforcement facilities and equipment needed to serve growth would be provided through inclusion of such facilities in the County's development impact fee program. Policies 3.8 and 10.10, indicate that the County shall adopt a comprehensive development fee impact program to offset the costs of growth-related infrastructure and facilities associated with proposed General Plan buildout. Further, a Capital Facilities Plan will be prepared for all facilities to be included in the development impact fee program, as well as existing facilities to solve existing deficiencies (policy 3.6). This would also include a funding and phasing program for providing facilities in not-less-than five-year increments through 2010. Additionally, the County shall prepare a Five-Year Capital Improvement Program (CIP) based upon the Capital Facilities Plan (policy 3.7). Priority will be given to improvements which resolve or decrease an existing deficiency.

Implementation of these policies would supply funds for new facilities or upgrading of existing facilities to serve new development. However, developer impact fees cannot be used to support staffing. The addition of new staff to maintain existing service levels, as identified above, would continue to rely on the availability of County General Fund monies.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.1, 3.6, 3.7, 3.8, 3.10, 10.10, 10.11, and 10.20 **as well as Mitigation Measure 40A below** would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

~~None warranted.~~

40A. Policy 3.10 should be amended to include the following standard for law enforcement service levels: County Sheriff - e. For Community and Rural Regions: 1.5 officers for each increase of 1,000 persons in countywide population.

PARK AND RECREATION

ENVIRONMENTAL SETTING

There are **three** ~~two~~ separate ~~park and~~ recreation **and park** districts in Nevada County: Western Gateway **Regional Recreation and** Park ~~and Recreation~~ District, ~~and~~ the Truckee Donner **Recreation and** Park ~~and Recreation~~ District**, and the Bear River Recreation and Park District.** ~~Additionally, a proposed regional park may be located in the Bear River area.~~ The Truckee Donner Park and Recreation District currently owns and operates approximately 53 acres, leases and operates approximately 12 acres, and owns 4 miles of shoreline with 27 piers on Donner Lake. The Western Gateway **Regional Recreation and** Park ~~and Recreation~~ District currently operates ~~a~~ **an 80-acre** park site in Penn Valley, which is leased to the District by Nevada County. **The Bear River Recreation and Park District was formed in 1994.**

Both districts are generally well staffed and equipped for the majority of the programs provided although Truckee Donner is in need of additional indoor space because of the seasonal variability of climate. It is currently looking into options to operate an additional 10-12 acres. Both districts have considerable undeveloped park acreage which has not yet been improved due to lack of available funding. These districts do not currently have adopted standards for providing parkland on a per population basis.

Nevada County owns no recreation land other than the park site in Penn Valley that is leased to Western Gateway Park and Recreation District, as noted above. The County does not operate any park or recreational facilities.

Quimby Act fees are collected by the County Department of Services for Transportation, Aviation, and Recreation (STAR) on new subdivision lots and are distributed to the cities, to existing park and recreation districts, to specific community recreational facilities, or to school districts for enhanced recreational opportunities. Development impact fees are not currently collected by the County or park and recreation districts.

In addition to Nevada County, the State of California, the U.S. Forest Service Tahoe National Forest (TNF), and the U.S. Bureau of Land Management (BLM) own public land in the County. State lands include Empire Mine State Park, Malakoff Diggins State Historical Park, Donner State Park, and the South Yuba Project. About one-half of the 11,000-acre Spenceville Wildlife Management and Recreation Area is located in the County.

The TNF covers approximately 169,045 acres (265 square miles) of land in Nevada County. TNF lands are located along the county's norther border, throughout the San Juan Ridge and Chalk Bluff Ridge and due east to the California-Nevada state line. The BLM administers some 20,000 acres of land in Nevada County. These areas are scattered throughout western Nevada County.

In addition to public lands, Nevada County supports a variety of private and commercial recreation facilities. These include ski areas and resorts, golf courses, and campgrounds.

Among the most extensive private facilities are those provided by the Tahoe Donner Association in the Truckee area, with a golf course, swimming, tennis, downhill and cross-country skiing facilities.

Camping and other passive recreational opportunities are provided by the USFS, BLM, Army Corps of Engineers, State Parks and Recreation, the Nevada Irrigation District, the two parks and recreation districts, and by the Pacific Gas and Electric Company in conjunction with hydroelectric power facilities. In addition, the County has about 2,500 campsites in private campgrounds and water-oriented facilities provided by parks and recreation districts and concessionaires on public lands.

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of park and recreation impacts are listed below.

Public Services and Facilities Element

Policies 3.6, 3.7, 3.8, 3.10, and 3.12 through 3.15.

Recreation Element

Policies 5.1 through 5.23.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. In accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a plan impact would be considered significant if plan population would require additional park and recreation facilities and services or if increased population would significantly impact existing facilities.

Impact #50. *Buildout of proposed General Plan land uses and associated population growth would result in the need for 292 acres of additional parkland and associated recreation facilities and services to meet the needs of the new growth. This is considered to be a* ***less-than-significant*** *impact as implementation of proposed General Plan policies would provide for development of this parkland acreage.*

Population growth associated with General Plan buildout would result in increased demand for park and recreational facilities and services. General Plan buildout would result in a net population increase of 97,987 people. Proposed General Plan policy 5.1 indicates that the County will develop a County park system with a focus on regional facilities serving the County-wide population. The County shall base park and recreational facility planning on a regional parkland standard of 3.0 acres of parkland per 1,000 population (policy 5.5). Given the level of population growth associated with General Plan buildout, this would result in the need for approximately 292 acres of regional parkland. Additionally, in order to achieve this standard, the County would need to provide an additional 236 acres of parkland to meet the needs of the existing population. As the County currently does not

operate a regional park system, approximately 528 acres of regional park land would need to be provided to achieve the parkland standard identified in policy 5.5.

Proposed policies address the provision of regional parkland to meet the needs of new growth. Policy 5.7 indicates that the County shall prepare an updated Master Parks and Recreation Plan reflecting buildout of the General Plan. The updated Plan shall identify land, facilities, and improvements needed to serve new development and to address existing deficiencies. Additionally, park and recreation facilities identified as necessary to meet the needs of new development will be included in the County's comprehensive development impact fee program, Long-range Capital Facilities Plan, and Five-Year Capital Improvement Program (policies 5.7, 5.8, and 5.9). The development impact fees shall be in amounts sufficient to offset the costs of improvements to serve future development. Additionally, policy 5.10 stipulates that a comprehensive and aggressive funding program will be implemented to ensure that all Federal, State and local funding sources are identified and utilized in meeting any funding shortfalls in providing for County park and recreation facilities.

Proposed General Plan policies support the formation of local park districts to provide neighborhood and community parks (policy 5.2). The County shall encourage such districts to prepare Park and Recreation Master Plans based upon buildout of the proposed General Plan and adopt specific levels of service for provision of parkland (policies 5.2 and 5.3). The County shall also encourage all affected special districts to adopt development impact fee programs to pay for the increased costs associated with serving new growth (policy 3.13). Additionally, policy 3.14 indicates that in review of proposed projects seeking discretionary permit approval, the County shall determine whether the capacity of public facilities, or an impact fee program, are adequate to serve the proposed development. If adequate facilities are planned, but not yet available to serve proposed development, the County may require that mitigating measures be undertaken by the project proponent. However, such measures would not be in lieu of development impact fees. Policy 3.15, further indicates that the County shall encourage and may require as condition of project approvals, mechanisms to facilitate the funding of public improvements which are attributable to a given project. Such mechanisms could include creation of an independent district, county service area, or community service district.

While buildout of proposed General Plan land uses would require additional park staff, equipment, and facilities, implementation of proposed policies would provide for development of adequate park and recreational facilities to meet the needs of growth allowed under the proposed General Plan.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.10, 3.12 through 3.15, 5.1, 5.2, 5.3, 5.5, and 5.7 through 5.15 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

LIBRARY SERVICES

ENVIRONMENTAL SETTING

Nevada County operates three branch libraries: the Truckee Library, the Grass Valley Library, and the Library located in the Eric Rood Administration Building in Nevada City. In addition, an outlet library, the Carnegie Library located in Nevada City contains a local history collection and is open one day per week. The combined square footage of the existing three branch libraries is 24,400. The County Library System does not currently have plans for expansion and is struggling to maintain existing services due to staffing limitations. Nevada County does not currently have a formal library level of service standard to evaluate the adequacy of existing library services.

RELEVANT PLAN POLICIES

All proposed General Plan and RTP policies are contained in Appendix A. Policies that are specifically relevant to the evaluation of library impacts are listed below.

Public Services and Facilities Element

Policies 3.6, 3.7, 3.8, 3.10, and 3.14.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. The California Environmental Quality Act does not have specific standards that address provision of library services. For the purposes of this analysis the proposed plan would have a significant impact if it would result in a substantial new need for library services in an area not currently served by a library facility of adequate size and capacity.

Impact #51. *Buildout of proposed General Plan land uses and associated population growth would incrementally increase the demand for library services. This is considered to be a* ***less-than-significant*** *impact as implementation of proposed General Plan policies would ensure that adequate library facilities are provided to adequately serve the new population.*

Population growth associated with General Plan buildout would result in increased demand for library facilities and services. General Plan buildout would result in a net population increase of 97,987 people. Proposed General Plan policy 3.10 indicates that the County shall establish a library standard of 300 square feet for each population increase of 1,000 persons. Given the level of new population growth associated with General Plan buildout, approximately 30,000 square feet of library facilities would need to be provided to achieve this standard in relation to new growth. The County is currently meeting this standard for the existing population.

Additional books, newspapers and periodicals, as well as professional and para-professional staff would also be needed to serve Nevada County residents. Level of service standards

such as the number of volumes and the ratio of paid professional and para-professional staff per 1,000 persons are not proposed to be used by the County.

Proposed General Plan policies provide guidance for provision of library facilities in the County. Funding for library facilities needed to serve new growth would be provided through inclusion of such facilities in the County's development impact fee program. Policy 3.8 indicates that the County shall adopt a comprehensive development fee impact program to offset the costs of growth-related infrastructure and facilities associated with proposed General Plan buildout. Further, a Capital Facilities Plan will be prepared for all facilities to be included in the development impact fee program, as well as existing facilities to solve existing deficiencies (policy 3.6). This would also include a funding and phasing program for providing facilities in not-less-than five-year increments through 2010. Additionally, the County shall prepare a Five-Year Capital Improvement Program (CIP) based upon the Capital Facilities Plan (policy 3.7).

Policy 3.14 indicates that in review of proposed projects seeking discretionary permit approval, the County shall determine whether the capacity of public facilities, or an impact fee program, are adequate to serve the proposed development. If adequate facilities are planned, but not yet available to serve proposed development, the County may require that mitigating measures be undertaken by the project proponent.

Implementation of these policies would supply funds for new facilities or upgrading of existing facilities to serve new development. However, developer impact fees cannot be used to support staffing. The addition of new staff to maintain existing service levels, as identified above, would continue to rely on the availability of County General Fund monies.

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 3.6 through 3.8, 3.10, and 3.14 would serve to reduce the impact to a *less-than-significant* level.

Other Mitigation Measures

None warranted.

ENERGY

ENVIRONMENTAL SETTING

Energy demand in Nevada County is associated with transportation, agriculture, street lighting, residences, and commercial and industrial operations. Transportation is generally the most significant single energy user in a county. In California, the transportation sector accounts for 41 percent of the total energy demand in the State and consumes 75 percent of the State's oil supplies (California Energy Commission, 1990). Almost 90 percent of energy uses in California are supplied by fossil fuels, while almost all transportation energy needs are supplied by petroleum (California Energy Commission, 1990).

Nevada County is served primarily by Pacific Gas and Electric Company (PG&E) for natural gas and electricity. The Truckee Donner Public Utility District also supplies electricity. Sources of electrical energy for PG&E include hydroelectric power, fossil fuel, geothermal, and nuclear fuel. **Propane is an additional fuel source used in Nevada County by individual homes and businesses.**

Energy demand fluctuates by season. Air conditioning creates the major demand in the summer and space heating accounts for much of the energy demand during the winter. The energy demand for single-family units is generally higher than that for multi-family units because of the larger size of the units, requiring more energy for space heating and lighting, and the greater number of residents in a single-family unit which results in a greater demand for hot water.

Residential Sector. Approximately 63 percent of average energy use in the residential sector is associated with space heating (26 percent), water heating (26 percent), and refrigeration (11 percent). Between 1987 and 2009, total statewide residential electricity use is expected to increase 50 percent, primarily due to population growth. Natural gas consumption is expected, in the same time period, to in crease only six percent. Tighter efficiency standards are expected to reduce natural gas consumption (California Energy Commission, 1990). Many houses built before 1977, when residential building efficiency standards took effect, use significantly more energy than those built after 1977.

Commercial Sector. Lighting represents about 29 percent of energy use in the commercial sector, while an additional 39 percent of commercial energy use is associated with cooling (15 percent), space heating g (9 percent), refrigeration (8 percent), and motors (7 percent). Energy use associated with office equipment is expected to grow as the sue of computers and related hardware increases (California Energy Commission, 1990).

Industrial Sector. Industrial energy use is variable depending on the industry. For example, food-processing industries (often found in agricultural areas) can require large amounts of hot water at temperatures maintained by solar water-heating systems, while a steel manufacturing industry requires high-temperature processes. Some industries can obtain large energy savings by co-generation.

RELEVANT PLAN POLICIES

Policies that are specifically relevant to increased energy demand are listed below.

Land Use Element

Policies 1.2, 1.9, 1.15, 1.18, 1.25, 1.26.

Circulation Element

Policies 4.26, 4.27, 4.28, 4.29, 4.30, 4.31, 4.34 and 4.35.

IMPACTS AND MITIGATION MEASURES

Standards of Significance. According the standards of significance identified in the CEQA guidelines, the Plan would result in significant energy impacts if it would use fuel or energy in a wasteful manner.

Impact #52. *Assuming that each new residence would require about 6,150 kilowatt hours (kwh) of electricity per year (California Energy Commission, 1988), new residences would require about 314 million kwh per year (for 51,000 new residences). In addition, 24 million therms of natural gas for space and water heating per year would be required, assuming an average of 470 therms per unit per year. This impact would be a potentially significant impact. Implementation of proposed General Plan policies would serve to potentially mitigate the impact.*

In addition to direct energy demands identified above, indirect energy would be required for construction of water and wastewater lines, roads, and other infrastructure. **Increased demand on nonrenewable resources such as fossil fuels could be offset by increased conservation and the use of alternative energy sources such as solar energy.**

Plan Policies that Serve as Mitigation

Implementation of proposed General Plan policies 1.2, 1.9, 1.15, 1.18, 1.25, and 1.26 would serve to reduce this impact to a less-than-significant level.

Other Mitigation Measures

The following Mitigation Measures (#40, #41 and #42) would further reduce the impact of future development on energy demand.

40. The County should adopt a Solar Access ordinance requiring the dedication of easements for solar access as a condition of subdivision map approval (as allowed by the 1978 Solar Rights Act of California).

41. The County should adopt a Retrofit Ordinance requiring specific energy conservation measures such as attic insulation before resale of residential units, which would have the greatest effect on older units.

42. During project approval and review, the County should evaluate and critique a project's attempt to promote alternative energy sources (e.g. passive solar design) and the incorporation of adequate tree cover on the west side of dwellings and along streets to help reduce the cooling demand during summer months.

43. Revise Policy 8.21 of the General Plan as follows:

Policy 8.21 Review all existing and future building codes to ensure the maintenance of those standards that reasonably provide for the public health,

welfare, safety, and energy efficiency, and to eliminate those standards that do not accomplish said goals.

The County should develop prescriptive building standards that supplement existing building codes for such items as alternative energy systems, building materials, and alternative sewage systems.

Impact #53. *Increased residential, commercial, and industrial development throughout the County would increase transportation energy demand, especially that associated with daily commutes and everyday commercial needs. This impact would be a less-than-significant impact.*

Plan Policies that Serve as Mitigation

Implementation of policies 4.26, 4.27, 4.28, 4.29, 4.30, 4.31, 4.34, and 4.35 would reduce this impact to a less-than-significant impact.

Other Mitigation Measures

None warranted.

5. *CEQA CONSIDERATIONS*

UNAVOIDABLE ADVERSE IMPACTS

For the purpose of this section, unavoidable significant adverse impacts are those effects of the project which would significantly affect either natural systems or other community resources, and cannot be mitigated to a less-than-significant level. The following significant unavoidable impacts were identified:

- Loss of open space;
- Conversion of agricultural land;
- Traffic impacts on state roads throughout the County which could operate at unacceptable levels with Plan buildout until adequate funds are identified and improvements constructed;
- Increased consumption of potable water and need for substantial expansion of treatment and distribution facilities;
- Need for substantial expansion of wastewater collection and treatment facilities;
- Need for significant expansion of school facilities; and
- Exposure of persons and property to wildland fire hazard.

IRREVERSIBLE ~~IMPACTS~~ CHANGES

For adoption of a planning document, CEQA requires a discussion of potential significant, irreversible environmental changes that could result. Examples include projects that generally commit future generations to similar uses; irreversible damage that may result from accidents associated with a project; or irretrievable commitments of resources,

The proposed project, including buildout of General Plan land uses and RTP road improvements will convert some of the existing open space land in the County to a variety of urban, suburban, and rural uses. As discussed in the Land Use section of this EIR, loss of open space is considered to be a significant and irreversible effect. As existing open space land will be committed to developed uses, it is unlikely that such lands would be returned to their natural state in the future. Likewise, development of uses identified above generally commit future generations to similar uses. Additionally, uses of nonrenewable resources during all phases of plan buildout may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely.

SHORT-TERM USES VERSUS LONG-TERM PRODUCTIVITY

CEQA requires a discussion of cumulative and long-term environmental effects that could result from adoption of a plan. Special attention should be given to impacts which narrow the range of beneficial uses of the environment or pose long-term risks to health or safety.

As the proposed General Plan designates substantial areas of land for development, the Plan thereby commits the environment to uses that may limit the long term productivity, particularly with respect to agricultural and timber production. The proposed Plan, however, does provide a framework for establishing a balance between competing values and interests. For example, the proposed General Plan land use map and goals, objectives, policies, and implementation measures provide for growth to occur in the County. However, they also provide for protection of natural resources in conjunction with that growth. Specifically, preparation and implementation of the Comprehensive Site Development Standards will provide a framework for the site review process and standards by which site development will occur in response to identified significant environmental features and natural constraints. Additionally, development allowed under the proposed General Plan would result in a long-term commitment of energy resources to build, operate, and maintain structures.

The sponsor of the project, the Nevada County Board of Supervisors, believes that the adoption of the General Plan is justified at the present time given the need for long-range planning and public services for the County and demands for increased development over the planning period.

GROWTH INDUCEMENT

CEQA requires that any growth-inducing aspect of a project be discussed in an EIR. This discussion should include consideration of ways in which the project could directly or indirectly foster economic or population growth in a surrounding area. Projects which could remove obstacles to population growth (such as a major public service expansion) must also be considered in this discussion. According to CEQA, it must not be assumed that growth in any area is necessarily beneficial, detrimental or of little significance to the environment.

Any General Plan that designates undeveloped land for future development can be defined as "growth inducing." One of the County's clear objectives in updating its General Plan is the promotion of economic development and accommodation of demand for residential growth. However, in promoting such development, the General Plan addresses the potentially adverse implications through policies, programs, etc. which would seek to provide adequate public services and infrastructure, promote a balance between jobs and housing, minimize conflicts between various types of land uses, and protect environmentally sensitive resources.

Growth inducing aspects of the proposed General Plan that are not necessarily foreseen in the Plan relate to the New Town Reserve and expansion of sewer and water treatment facilities, as discussed below. The New Town, once established could have growth inducing aspects if the Community Regions boundaries are not clearly limited. This could be accomplished by establishing permanent open space areas around the Community Region boundaries. Additionally, sizing public facilities (especially sewer and water systems) to serve only the planned population would serve to limit potential growth inducing aspects of the New Town.

Likewise, expansion of existing sewer and water systems to provide for proposed General Plan buildout could also be growth inducing if they were sized to serve more than the projected population. Sizing such facilities to serve only the planned population would also serve to limit potential growth inducing aspects of the proposed General Plan.

CUMULATIVE IMPACTS

An EIR on a comprehensive general plan constitutes an assessment of the cumulative impacts of development within the area covered by the plan, particularly in the case of a county general plan. This EIR evaluates the implications of buildout under proposed General Plan land uses. Land use buildout numbers reflect project buildout within the incorporated areas of Nevada City, Grass Valley, and Truckee. Therefore, this EIR provides an analysis of cumulative impacts associated with all growth in the County.

Throughout this EIR, the impacts are identified and evaluated on a topic-by-topic basis. The results of these impacts, taken together, may be a perceived change in the rural characteristics of the County. This change may be related to: loss of open space; conversion of agricultural land; changes in visual characteristics and/or views; traffic increases; the presence of a mix of land uses; and an awareness of greater numbers of people and associated demand for public and social services.

While this is the case, goals, objectives, policies, implementation measures, and the land use map of the proposed General Plan seek to protect the rural quality of the County to the extent possible. Additionally, mitigation measures identified throughout this EIR would further provide for the maintenance of the rural characteristics of the County.

PLAN ALTERNATIVES

This section evaluates alternatives to the proposed Nevada County General Plan as required by CEQA. The State CEQA Guidelines (Section 15126) require that an EIR describe and evaluate the comparative merits of a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project. The Guidelines further require that the discussion focus on alternatives capable of eliminating significant adverse impacts of the project, or reducing them to a level of insignificance even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. The discussion should also identify any

significant effects that may result from a given alternative. Furthermore, if the environmentally superior alternative is the "no project" alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives. According to the CEQA Guidelines, the range of alternatives required in an EIR is governed by "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative.

Summary of Significant Impacts from the Proposed Project

As indicated above, the alternatives analysis is intended to focus on eliminating or reducing in significance, those impacts identified as significant in the EIR. Significant unavoidable long-term impacts associated with this project include: loss of open space; conversion of agricultural land; **increased water demand and requirement for treatment/distribution facilities; required expansion of wastewater collection/treatment facilities, required expansion of school facilities; exposure of persons and property to wildland fire hazard;** and short-term traffic impacts on state roads which could operate at unacceptable levels with Plan buildout until adequate funds are identified and improvements constructed.

Significant project impacts that can be reduced to a less-than significant level with implementation of mitigation measures recommended in this EIR include: land use compatibility; seismic, landslide, and erosion hazards; flooding; stormwater runoff; surface and groundwater quality; loss/disturbance of wildlife habitat, deer range and migration corridors, oak trees, special status species, wetland habitat, and riparian habitat; cultural resources; and roadway and stationary noise.

Alternatives not Evaluated

The Nevada County Planning Commission at their meeting on July 30, 1992, adopted a Preferred Land Use Alternative to provide a basis for preparation of the Draft General Plan. This Preferred Alternative was the result of deliberations by the Nevada County General Plan Update Steering Committee in eight meetings from May 27, 1992 to July 20, 1992, and represented the culmination of a six-month long process which involved developing and evaluating five land use alternatives. An extensive community outreach program provided opportunities for public comment and a review of the land use alternatives by subcommittees appointed to represent functional and geographic areas was also undertaken to assist the Steering Committee in its evaluation and selection of a preferred alternative.

The Preferred Land Use Alternative designated areas of the County where growth would be directed based upon the establishment of Community and Rural Regions within the County. It also indicated recommended boundaries between Community and Rural Regions and the designation of areas within the Community Regions where growth will be directed.

The Preferred Land Use Alternative recommended by the Steering Committee was based on their central themes and concepts which are:

Central Themes

1. Fostering a rural quality of life;
2. Sustaining a quality environment;
3. Development of a strong diversified, sustainable local economy; and
4. Planned land use patterns will determine the level of public services appropriate to the character, economy and environment of each region.

Central Concepts

1. Direct growth to *Community Regions* and discourage growth in the *Rural Regions*;
2. Create distinct boundaries between *Community Regions* and *Rural Regions* which take into account natural features;
3. Minimize dependence on the automobile by clustering future growth;
4. Encourage the creation and enhancement of communities by providing for mixed uses contiguous to those areas;
5. Provide urban services only in areas with sufficient land use intensities or population densities;
6. Ensure that intensive growth will only be allowed concurrent with the provision of needed services;.
7. Ensure the long term quality of natural resource values at the same time ensuring the sustainability of agriculture, logging and mining activities;
8. Minimize conflicts due to incompatible land uses.

The development of these themes and concepts led, in turn, to the development of a philosophy which served as the underlying approach to the preferred alternative. This philosophy is: *The direction of growth to Community Regions and the limitation of growth in Rural Regions* and is expressed in the following:

1. Protect Rural Regions and discourage sprawl by increasing the minimum parcel size within *Rural Regions.*
2. Provide for future growth either within existing or new communities in a clustered fashion.
3. Use of a *Community Region Boundary* providing for a clear distinction between:
   - *Community Regions* where growth will be directed, and
   - *Rural Regions* where growth will be limited.
4. Provide for affordable housing by setting aside sufficient areas within existing or new communities at suitable densities.

5. Provide for economic development as an integral part of any alternative by allowing for a diverse mix of land use types which would facilitate economic diversification and viability.

The Preferred Land Use Alternative is based upon the concept of Community Regions and Rural Regions as elements which define the types and levels of future growth in the County. Those areas to which growth will be directed shall provide a range of places for people to live, work, shop and recreate. *Community Regions* could include *Cities, Towns, Villages and/or Community Areas* and shall be defined by a *Community Boundary*. Rural Regions would receive little new growth and that growth would be focused in *Rural Places*. The Preferred Land Use Alternative as recommended by the Nevada County Planning Commission identifies six community regions and seven rural places where growth would be directed within western Nevada County, as well as a New Town Reserve. As defined in the Preferred Alterative and as shown in Figure 2, these community regions and rural places would have the potential to accommodate a total of 32,350 additional population with 14,000 dwelling units and a potential for 19,000 new jobs. Additional population would be accommodated in the Rural Regions through development of existing parcels as well as new land divisions where consistent with the surrounding rural density.

Alternatives considered, but not evaluated, include the following: 1) Existing Zoning; 2) Project as Proposed without GPDs; and 3) Phased Growth. In terms of the first identified alternative, "Existing Zoning," there is not a need to discuss this alternative because it is so similar to the Final Draft General Plan. The Final Draft General Plan is based on existing zoning in Rural Regions and, to an extent, the cities' General Plans in Community Regions. In addition, a recommended mitigation measure (Mitigation Measure No. 39) reduces land use intensities in Community Regions to match existing zoning.

While viable, the "Project as Proposed Without GPDs" was not evaluated because Mitigation Measures 16 and 18 would effectively preclude the vast majority of the GPDs.

The "Phased Growth" alternative, while also considered viable, was added to the Final EIR as a new mitigation measure under the topic of traffic impacts.

Five alternatives were considered during this process, ranging from an increase of 12,700 persons above the existing County population, to an increase of 135,700 persons above the existing County population. The alternatives included various combinations of Community Regions, as well as consideration of a New Town, to provide for focused growth. While growth in the Rural Regions was limited under all of the five alternatives, the levels of growth ranged from development on existing parcels only, to significant potential growth based upon the 1980 County General Plan. A comparison of the five alternatives considered by the Steering Committee is contained in Appendix H.

Selected Alternatives

The following alternatives are evaluated in this section:

- Alternative 1A: No Project - No New Development
- Alternative 1B: No Project - Buildout Under Existing General Plan
- Alternative 2: Preliminary Draft General Plan
- Alternative 3: Planning Commission Alternative
- Alternative 4: Mitigated General Plan

Each discussion describes the alternative, indicates whether significant impacts of the proposed project would be eliminated or reduced, and identifies additional significant impacts arising from the alternative. Table 5-1 provides a comparison of the population, dwelling units, and employment that would occur under each alternative. Table 5-2 and 5-3 provide a summary of quantifiable impacts and compares the significance of impacts between the various alternatives. These tables are at the end of this section.

Alternative 1A: No Project - No New Development

Description. The identification and analysis of this alternative is required by the CEQA Guidelines. This "No Project" alternative would result in no new development in the County except for those projects in which permits have already been issued. Table 5-1 identifies the population, dwelling units, and employment that would occur under this alternative, based on 1990 Census data.

Environmental Impacts. In general, all identified impacts associated with the proposed General Plan, would be eliminated under this alternative. The environmental implications of this alternative constitute the existing environmental conditions in the County. These conditions are described throughout this document in the Existing Conditions portion of each topical section.

Alternative 1B: No Project - Buildout Under Existing General Plan

Description. This alternative would result in the continued implementation of the County's existing General Plan, adopted in 1980. Buildout under this alternative would result in 91,630 dwelling units, a population of 204,750 people, and 109,928 employees in the County. This level of growth is approximately 10 to 15 percent greater than would occur under the proposed General Plan. However, these populations buildout totals assume buildout of all existing General Plan designations to the maximum. A majority of lands have been zoned to less than the maximum allowed. This zoning is generally similar to the proposed General Plan in Rural Regions. However, buildout under the existing General Plan would result in a greater intensity of development in rural areas of the County if future development is built at maximum densities allowed by existing General Plan designations.

In general, buildout under the existing General Plan would allow for a lesser intensity of development in more developed areas, as compared to the proposed General Plan. Additionally, growth would be more broadly distributed throughout the County under this Alternative.

Environmental Impacts. Land use impacts related to loss of open space and conversion of agricultural land would be somewhat greater under this alternative. This is related to the greater level of growth that could occur under this alternative and the fact that development would be more broadly distributed throughout the County. These impacts would remain significant and unavoidable under this alternative. However, it should be noted that loss of open space associated with the proposed New Town SDA would not occur under this alternative.

Land use compatibility impacts could also be somewhat lessened due to the designation of less land area in the commercial and industrial land use designations under this alternative. Policies contained in the existing General Plan would not necessarily reduce these impacts to a less-than-significant level. However, implementation of proposed General Plan policies and revised policy 1.17 (Mitigation Measure #1) would serve to reduce this impact to a less-than-significant level. Land use impacts related to conflicts with other adopted environmental plans would be similar as those described for the proposed General Plan.

Geologic impacts associated with seismic, landslide, and erosion hazards would be somewhat greater under this alternative due to the fact that more residents could be exposed to such hazards. Policies contained in the existing General Plan would reduce these impacts to a less-than-significant level. Geologic impacts related to mineral resources would be similar to those described for the proposed General Plan.

Hydrologic impacts associated with flooding hazards would also be somewhat greater under this alternative due to the fact that more residents could be exposed to such hazards. Policies contained in the existing General Plan would not necessarily reduce these impacts to less-than-significant levels. However, implementation of proposed General Plan policies and revised policy 1.17 (Mitigation Measure #1) would serve to reduce this impact to a less-than-significant level. Surface and groundwater quality impacts would be greater due to the higher level of growth that would occur in rural areas under this alternative and associated greater reliance on septic systems. Policies contained in the existing General Plan would not necessarily reduce this impact to a less-than-significant level. However, implementation of proposed General Plan policies, revised policy 1.17 (Mitigation Measure #1), and Mitigation Measures #10, #11 and #12 would serve to reduce this impact to a less-than-significant level.

Biologic impacts related to loss or disruption of wildlife habitat, deer range and migration, oak trees, special status species, wetland habitat, riparian, and timber resources would be somewhat greater under this alternative due to the greater level of growth that could occur and the fact that development would be more broadly distributed throughout the County. Although densities in the urban areas (particularly in the vicinity of Grass Valley) would

be less under this alternative, overall development would still result in a greater area of land disturbance which would impact the biotic resources identified above. Policies contained in the existing General Plan would not necessarily reduce these impacts to a less-than-significant level. However, implementation of proposed General Plan policies, revised policy 1.17 (Mitigation Measure #1), and Mitigation Measures #14 through #18 would serve to reduce these impacts to less-than-significant levels. It should be noted that loss of habitat associated with the proposed New Town SDA would not occur under this alternative.

Cultural and historic resource impacts would be somewhat greater under this alternative due to the greater level of growth that could occur and the fact that development would be more broadly distributed throughout the County. This would result in greater area of land disturbance which could impact unidentified cultural resources. Policies contained in the existing General Plan would not reduce this impact to a less-than-significant level. However, implementation of proposed General Plan policies, revised policy 1.17 (Mitigation Measure #1), and Mitigation Measures #23 and #24 would serve to reduce this impact to a less-than-significant level.

Traffic and circulation impacts would be greater under this alternative as identified in traffic modeling results contained in Appendix G. The 1980 General Plan identifies LOS D as the standard for all roadways, and based upon this standard, the following roadways would not meet the minimum level of service:

- SR49 Alta Sierra Drive to McKnight Way
- Donner Pass Road - Northwoods Boulevard to Commercial Row.

However, utilizing the criteria in the proposed General Plan, this alternative would result in lower service along some roadway segments.

Specifically, the roadways identified below would not meet the minimum acceptable level of service (LOS) of C in Rural Regions and D in Community Regions, as identified in policies 4.1 and 4.3 of the proposed General Plan. These LOS standards would apply except where existing LOS is less than identified above, in which case, existing LOS should not decrease.

- SR 20 - Pleasant Valley Road to SR 49;
- SR 49 - Placer County line to Alta Sierra Drive;
- SR 49 - Alta Sierra Drive to McKnight; and
- Pleasant Valley Road - Lake Wildwood to SR 20.

Additionally, the roadways that would not meet minimum acceptable LOS standards under the proposed alternative would probably not meet such standards under this alternative using the same criteria. However, it should be noted that SR 49 north bound and south bound ramps, McCourtney Road, and Allison Ranch Road were not included in the modeling performed for this alternative. Therefore, it is unknown what the effect of this

alternative would have. However, as buildout under this alternative would generally result in lower LOS along roadways, it can be assumed that these roads would operate below the minimum acceptable LOS utilizing the same criteria, as for the proposed General Plan.

Policies contained in the existing General Plan would not reduce this impact to a less-than-significant level as they acknowledge that impacts on State highways could exist until funding is available and improvements constructed. This impact remains significant and unavoidable under this alternative.

Air quality and climatology impacts would be somewhat greater under this alternative. This is related to the greater level of growth, resulting in more automobiles, which could occur under this alternative. Additionally, development would be more broadly distributed throughout the County, increasing vehicle miles traveled and air emissions from automobiles. However, this impact would remain less-than-significant under this alternative due to the decrease in air emissions that will occur in the future do to improved technology in automobiles.

Noise impacts would also be somewhat greater under this alternative due to higher levels of traffic and decreased levels of service that would occur on County roadways. Policies contained in the existing General Plan would not necessarily reduce this impact to a less-than-significant level. However, implementation of proposed General Plan policies, and revised policies 9.10 and 9.11 (Mitigation Measures #36 and #37), would serve to reduce this impact to a less-than-significant level.

Public service impacts related to water, sewer, solid waste, schools, fire protection, law enforcement, parks and recreation, and library services would be somewhat greater under this alternative. This is related to the greater level of growth and the fact that development would be more broadly distributed throughout the County. Table 5-2 provides a summary of water demand, wastewater flows, school-aged children, number of new schools, number of new sheriffs, park acreage, and library space that would result from buildout under the alternative. Policies contained in the existing General Plan would not necessarily reduce these impacts to less-than-significant levels nor would public service policies contained in the proposed General Plan.

Alternative 2: Preliminary Draft General Plan

Description. This alternative would result in buildout of the County under the Preliminary Draft General Plan, prepared by Harland Bartholomew & Associates (August 1993). This would result in 82,175 dwelling units, a population of 176,005 people, and 98,430 employees in the County. This level of growth is approximately 1 to 3 percent greater than would occur under the proposed General Plan.

This Preliminary Draft Plan established the concept of development within Rural Regions and Community Regions as identified for the proposed General Plan. However, this Preliminary Draft Plan provided for a somewhat greater level of development in

Community Regions and a somewhat lesser level of development in Rural Regions than is provided for in the proposed General Plan. In Community Regions, the Preliminary Draft Plan would result in approximately 58,035 dwelling units, 127,365 population, and 85,423 employees. This represents a level of growth in Community Regions approximately 15 percent greater than provided for in the proposed General Plan. Some of this additional growth in Community Regions is associated with identification of Alta Sierra as a Community Region in the Preliminary Draft Plan. Whereas, in the proposed General Plan, Alta Sierra is within the Rural Regions of the County.

Likewise, in Rural Regions, the Preliminary Draft Plan would result in approximately 24,140 dwelling units, 48,395 population, and 10,022 employees. This represents a level of growth in Rural Regions of approximately 25 to 30 percent less than provided for in the proposed General Plan.

In developing the Preliminary Draft General Plan, HBA reviewed approximately 170 applications from property owners and/or their representatives requesting specific general plan designations (GPDs). HBA provided recommendations on these requests as part of the development of the Preliminary Draft Plan. The Nevada County Planning Commission and Board of Supervisors independent review of these GPDs, and other land use map elements, resulted in the Planning Commission Alternative (Alternative 3 below) and the proposed General Plan, which is the subject of this EIR.

The primary differences in the policies presented in the Preliminary Draft General Plan as compared to the proposed General Plan are as follows. The Preliminary Draft General Plan would provide for: mandatory clustering of development to protect environmental features and to maintain open, pastoral character of the County; and level of service for roadways would be LOS D in Community Regions and LOS C in Rural Regions, regardless of whether existing LOS is less than the standards identified above.

Environmental Impacts. Land use impacts related to loss of open space and conversion of agricultural land would be somewhat less under this alternative. While growth under this alternative is similar to that projected for the proposed General Plan, a greater level of growth would occur in Community Regions and a lesser level of growth would occur in Rural Regions under this alternative. While, mandatory clustering provided for in the Preliminary Draft Plan would reduce the loss of open space on a site-by-site basis, these impacts would remain significant and unavoidable under this alternative.

Land use compatibility impacts could be somewhat greater due to the greater density of development that would occur in Community Regions under this alternative. Policies contained in the Preliminary Draft General Plan would not reduce these impacts to a less-than-significant level. However, implementation of revised policy 1.17 (Mitigation Measure #1) would serve to reduce this impact to a less-than-significant level. Land use impacts related to conflicts with other adopted environmental plans would be similar as those described for the proposed General Plan.

Geologic impacts associated with seismic, landslide, and erosion hazards would be somewhat less under this alternative due to the fact that fewer residents would be exposed to such hazards in Rural Regions. Policies contained in the Preliminary Draft General Plan would not necessarily reduce these impacts to a less-than-significant level. However, implementation of revised policies 1.17 (Mitigation Measure #1) and 10.13 (Mitigation Measure #2) would serve to reduce these impacts to less-than-significant levels. Geologic impacts related to mineral resources would be similar to those described for the proposed General Plan.

Hydrology impacts related to surface and groundwater quality would be somewhat less under this alternative due to the lower level of growth that would occur in Rural Regions under this alternative and associated lower reliance on septic systems. Policies contained in the Preliminary Draft General Plan would not necessarily reduce this impact to a less-than-significant level. However, implementation of revised policy 1.17 (Mitigation Measure #1) and Mitigation Measures #10, #11 and #12 would serve to reduce this impact to a less-than-significant level. Hydrologic impacts associated with flooding hazards would be similar to those described for the proposed General Plan.

Biologic impacts related to loss or disruption of wildlife habitat, deer range and migration, oak trees, special status species, wetland habitat, riparian, and timber resources would be somewhat less under this alternative due to the lesser level of growth that would occur in Rural Regions of the County under this alternative. This would result in less land disturbance impacting biotic resources identified above. Mandatory clustering provided for in the Preliminary Draft Plan would reduce the land area disturbed under this alternative. However, overall policies contained in the Preliminary Draft General Plan would not necessarily reduce these impacts to a less-than-significant level. Implementation revised policy 1.17 (Mitigation Measure #1), and Mitigation Measures #14 through #18 would serve to reduce these impacts to less-than-significant levels.

Cultural and historic resource impacts would be somewhat less under this alternative due to the lesser level of growth that would occur within Rural Regions of the County under this alternative. This would result in less land disturbance which could impact unidentified cultural resources. Policies contained in the Preliminary Draft General Plan would not necessarily reduce this impact to a less-than-significant level. However, implementation of revised policies 1.17 (Mitigation Measure #1) and 19.6 (Mitigation Measure #23), and Mitigation Measure #24 would serve to reduce this impact to less-than-significant level.

Traffic and circulation impacts would be somewhat less for some roadways and somewhat greater for other roadways under this alternative as identified in traffic modeling results contained in Appendix G. Buildout under this alternative would result in lower LOS along some roadways. However, there are some roadways that would experience higher LOS due to the greater level of development that would occur in Community Regions under this alternative. Specifically, the roadways identified below would not meet the minimum acceptable level of service (LOS) of C in Rural Regions and D in Community Regions, as identified in policies 4.1 and 4.3 of the proposed General Plan. These LOS standards

would apply except where existing LOS is less than identified above, in which case, existing LOS should not decrease.

- SR 49 - Alta Sierra Drive to McKnight;
- Pleasant Valley Road - Lake Wildwood to SR 20; and
- Rough & Ready Highway - Bitney Springs to Ridge Road.

It is unclear whether the roadways that would not meet minimum acceptable LOS standards under the proposed General Plan, would meet the standards under the Preliminary Draft Plan. SR 49 north bound and south bound ramps, and Allison Ranch Road were not included in the modeling performed for this alternative. Therefore, it is unknown what the effect of this alternative would have on these roadways, in comparison to the proposed General Plan. McCourtney Road would be consistent with minimum acceptable LOS standards under this alternative. Whereas, under the proposed General Plan the road would not meet such standards. **However, due to the unique traffic pattern due to the nonstandard access to and from State Route 20, there would be LOS difficulties, especially at the Mill/McCourtney intersection.**

Policies contained in the Preliminary Draft General Plan would not reduce this impact to a less-than-significant level as they acknowledge that impacts on State highways could exist until funding is available and improvements constructed. This impact remains significant and unavoidable under this alternative.

Air quality and climatology impacts would be similar to those described for the proposed General Plan. This impact would remain less-than-significant under this alternative.

Noise impacts may be somewhat greater along some roadways and somewhat less along other roadways. As discussed above, traffic volumes would be greater along some roadways and less along others, due to the greater level of growth that would occur in Community Regions and correspondingly lower level of development that would occur in Rural Regions under this alternative. Policies contained in the existing General Plan would not necessarily reduce this impact to a less-than-significant level. However, implementation of proposed General Plan policies, and revised policies 9.10 and 9.11 (Mitigation Measures #36 and #37), would serve to reduce this impact to a less-than-significant level.

Public service impacts related to water and sewer would be somewhat greater under this alternative due to the greater level of development that would occur in Community Regions and associated greater demand for water and sewer services. Public service impacts related to solid waste, schools, fire protection, law enforcement, parks and recreation, and library services would be similar as those described for the proposed General Plan. Table 5-2 provides a summary of water demand, wastewater flows, school-aged children, number of new schools, number of new sheriffs, park acreage, and library space that would result from buildout under the alternative. Policies contained in the Preliminary Draft General Plan would not necessarily serve to reduce these impacts to a less-than-significant level.

Alternative 3: Planning Commission Alternative

Description. This alternative would result in buildout of the County under the Planning Commission Alternative, developed in late 1993 by the Nevada County Planning Commission, as their recommendation to the County Board of Supervisors. This alternative would result in approximately 84,612 dwelling units, a population of 181,916 people, and 104,224 employees in the County. This level of growth is approximately 3 percent greater, with regards to the number of dwelling units and associated population, and 9 percent greater, with regards to employment generation, than would occur under the proposed General Plan.

This alternative was developed through the Planning Commission review and recommendation on GPD applications and other recommended land use map changes. The increased growth relates to Planning Commission recommendations on GPD applications that would result in greater density of development in various locations throughout the County. The major difference between the proposed General Plan and the Planning Commission Alternative with regards to the land use map, relates to two Special Development Areas (SDAs), that were recommended by the Commission. These SDAs are located outside the Penn Valley and Grass Valley Community Regions and included the following:

- Stonebrook Special Development Area, located in the southern part of the County, adjacent to Lake of the Pines. This SDA is related to GPD application 91-164. Buildout of this SDA would result in approximately 3,000 dwelling units, a population of 6,450, and 1,300 employees.

- Osceola Ridge (Deadman's Flat) Special Development Area, located in the central part of the County, westerly to the City of Grass Valley. This SDA is related to GPD application 91-050. Buildout of this SDA would result in approximately 600 dwelling units, a population of 1,290, and 7,595 employees.

- Northstar Special Development Area, located in the central part of the County. This SDA does not relate to a GPD application. Buildout of this SDA would result in approximately 1,670 dwelling units, a population of 3,591, and 4,177 employees. This SDA area is also included in the proposed General Plan. However, this Planning Commission recommendation for this SDA would result in approximately 1,750 more employees than would result from the proposed General Plan. Additionally, the Planning Commissions recommendation would also result in a greater density of development.

These areas taken together would result in 5,270 dwelling units, a population of 11,691, and 13,072 employees. Whereas, the proposed General Plan land use map for these areas contemplates 2,060 dwelling units, a population of 4,429 people, and 2,429 employees.

Environmental Impacts. Land use impacts related to loss of open space and conversion of agricultural land would be greater under this alternative. This is related to a higher level of growth that could occur throughout the County under this alternative. Additionally, the Stonebrook and Osceola Ridge SDAs would result in a greater loss of open space areas than would occur under the proposed General Plan. These impacts would remain significant and unavoidable under this alternative.

Land use compatibility impacts could be greater due to the greater level of development that could occur under this alternative. More development, population, and associated traffic can increase the likelihood that land use compatibility issues would arise. Policies contained in the Planning Commission Alternative would not reduce these impacts to a less-than-significant level. However, implementation of revised policies 1.17 and 1.18 (Mitigation Measure #1) would serve to reduce this impact to a less-than-significant level. Land use impacts related to conflicts with other adopted environmental plans would be similar as those described for the proposed General Plan.

Geologic impacts associated with seismic, landslide, and erosion hazards would be greater under this alternative due to the fact that more residents and structures would be exposed to such hazards. Policies contained in the Planning Commission Alternative would not necessarily reduce these impacts to a less-than-significant level. However, implementation of revised policies 1.17, 1.18 (Mitigation Measure #1) and 10.13 (Mitigation Measure #2) would serve to reduce these impacts to less-than-significant levels. Geologic impacts related to mineral resources could be somewhat greater under this alternative as a greater level of development could preclude or conflict with the extraction of minerals. Policies contained in the Planning Commission Alternative would serve to reduce this impact to a less-than-significant level.

Hydrologic impacts associated with flooding hazards would also be greater under this alternative due to the fact that more residents could be exposed to such hazards. Policies contained in the Planning Commission Alternative would not necessarily reduce this impact to a less-than-significant level. However, implementation of proposed General Plan policies and revised policies 1.17 and 1.18 (Mitigation Measure #1) would serve to reduce this impact to a less-than-significant level. Surface and groundwater quality impacts would be greater due to the higher level of growth that would occur in both Community and Rural Regions under this alternative and associated greater use of septic systems and higher level of urban runoff. Policies contained in the Planning Commission Alternative would not necessarily reduce these impacts to less-than-significant levels. However, implementation of proposed General Plan policies, revised policies 1.17 and 1.18 (Mitigation Measures #10, #11 and #12) would serve to reduce these impacts to less-than-significant levels.

Biologic impacts related to loss or disruption of wildlife habitat, deer range and migration, oak trees, special status species, wetland habitat, riparian, and timber resources would be greater under this alternative due to the greater level of growth that would occur throughout the County, especially in Rural Regions, under this alternative. This would result in greater land disturbance impacting biotic resources identified above. Additionally, the Stonebrook

and Osceola Ridge SDAs would result in a greater land disturbance than would occur under the proposed General Plan, which would further impact biotic resources identified above. Policies contained in the Planning Commission Alternative would not necessarily reduce these impacts to a less-than-significant level. Implementation revised policies 1.17 and 1.18 (Mitigation Measure #1), and Mitigation Measures #14 through #18 would serve to reduce these impacts to less-than-significant levels. It should be noted that, implementation of Mitigation Measures #4 through #6 would result in the redesignation of the Stonebrook and Osceola Ridge SDAs to 20 to 40 acre minimum parcel sizes, if existing parcelization allows for this designation.

Cultural and historic resource impacts would be greater under this alternative due to the greater level of growth that would occur within the County under this alternative. This would result in more land disturbance which could impact unidentified cultural resources. Policies contained in the Planning Commission Alternative would not necessarily reduce this impact to a less-than-significant level. However, implementation of revised policies 1.17 (Mitigation Measure #1) and 19.6 (Mitigation Measure #23), and Mitigation Measure #24 would serve to reduce this impact to less-than-significant level.

Traffic and circulation impacts would be greater under this alternative as identified in traffic modeling contained in Appendix G. Buildout under this alternative would result in higher traffic volumes and lower LOS along roadways. Specifically, the roadways identified below would not meet the minimum acceptable level of service (LOS) of C in Rural Regions and D in Community Regions, as identified in policies 4.1 and 4.3 of the proposed General Plan. These LOS standards would apply except where existing LOS is less than identified above, in which case, existing LOS should not decrease.

- SR 49 - north bound and south bound ramps;
- SR 20 - Pleasant Valley Road to SR 49;
- SR 49 - Alta Sierra Drive to McKnight;
- Allison Ranch Road - McCourtney Road to SR 49;
- Alta Sierra Drive - SR 49 to Bell Road; ~~and~~
- Combie Road - SR 49 to Magnolia Road~~.~~**; and**
- **McCourtney Road - from Old Auburn to Mill Street.**

~~McCourtney Road would be consistent with minimum acceptable LOS standards under this alternative. Whereas, under the proposed General Plan the road would not meet such standards.~~

Policies contained in the Planning Commission Alternative would not reduce this impact to a less-than-significant level as they acknowledge that impacts on State highways could exist until funding is available and improvements constructed. This impact remains significant and unavoidable under this alternative.

Air quality and climatology impacts would be greater under this alternative. This is related to the greater level of growth, resulting in more automobiles, which could occur under this

alternative. However, this impact would remain less-than-significant under this alternative due to the decrease in air emissions that will occur in the future due to improved technology in automobiles.

Noise impacts would also be greater under this alternative due to higher levels of traffic and decreased levels of service that would occur on County roadways. Policies contained in the Planning Commission Alternative would not necessarily reduce this impact to a less-than-significant level. However, implementation of proposed General Plan policies, and revised policies 9.10 and 9.11 (Mitigation Measures #36 and #37), would serve to reduce this impact to a less-than-significant level.

Public service impacts related to water, sewer, solid waste, schools, fire protection, law enforcement, parks and recreation, and library services would be greater under this alternative. This is related to the greater level of growth that would occur throughout the County. Table 5-2 provides a summary of water demand, wastewater flows, school-aged children, number of new schools, number of new sheriffs, park acreage, and library space that would result from buildout under the alternative. Policies contained in the Planning Commission Alternative would not reduce these impacts to less-than-significant levels.

Alternative 4: Mitigated General Plan

Description. This alternative constitutes the proposed General Plan as modified in accordance with mitigation measures identified throughout this EIR. This alternative assumes full implementation of all identified mitigation measures. The following description identifies the significant impacts of the project and discusses the implications of the mitigation measures proposed in terms of land use map and policy changes.

As described above, under the "Summary of Significant Impacts of the Proposed Plan," significant unavoidable impacts would relate to: loss of open space; conversion of agricultural land; traffic impacts on state highways until adequate funds are identified and improvements construction; increased consumption of potable water; need for expansion of water treatment and distribution facilities; need for expansion of wastewater treatment and distribution facilites; expansion of school facilities; and exposure of persons and property to wildlife hazard. Significant project impacts that can be reduced to less-than-significant levels with implementation of mitigation measures recommended in this EIR include: land use compatibility; seismic, landslide, and erosion hazards; flooding; storm-water runoff; surface and groundwater quality; loss/disturbance of wildlife habitat, deer range and migration corridors, oak trees, special status species, wetland habitat, and riparian habitat; cultural resources; and roadway and stationary noise.

Significant impacts that require mitigation relating to changes in the land use map, include: loss/disruption of wildlife habitat; and loss/disruption of deer range and migration corridors. Mitigation contained in this EIR indicates that the proposed General Plan land use map should be revised to provide for 20- to 40-acre minimum parcel sizes, in Rural Regions of western county, where existing parcelization would allow for such designations (see

Mitigation Measures #14 through #18). Implementation of these Mitigation Measures would serve to accommodate growth while minimizing loss to wildlife habitat.

The remainder of the significant impacts identified throughout the EIR could be mitigated through implementation of proposed General Plan policies as revised in Mitigation Measures #1 (policies 1.17 and 1.18), #2 (policy 10.13), #23 (policy 19.6), #36 (policy 9.10), and #37 (9.11). Specifically, Mitigation Measure #1 (revised policies 1.17 and 1.18) stipulates a program for the preparation and implementation of Comprehensive Site Development Standards, which would ensure that: effective standards are prepared; appropriate land use, siting, and design tools are applied; and project approval occurs in accordance with defined conditions. Implementation of this revised policy would allow for growth to occur throughout the County, while providing for adequate standards and implementation procedures to minimize impacts related to land use, geologic, hydrologic, biologic, and cultural resources on a site-by-site basis.

Implementation of both land use map changes and revised policy as identified above and recommended throughout this EIR would result in a lesser level of development throughout the County, especially in Rural Regions. For example, implementation of Mitigation Measure #14 **and #16** could result in the redesignation of the New Town Reserve to 20-acre minimum parcel sizes. This change would result in the elimination of approximately 4,935 dwelling units, 11,932 people, and 10,960 employees from the buildout totals identified in Table 3-3 in the Project Description section of this EIR. Other land use map changes that could occur as a result of the implementation of Mitigation Measures #14 through #18, and #39 would further decrease the level of development that would occur.

Environmental Impacts. Implementation of both land use map changes and revised policy as identified above and recommended throughout this EIR would reduce all significant impacts to a less-than-significant level, with the exception of impacts related to: loss of open space; conversion of agricultural land; **increased water demand and requirement for treatment/distribution facilities; required expansion of wastewater collection/treatment facilities; required expansion of school facilities; exposure of persons and property to wildland fire hazard;** and impacts on state highways related to growth in the County, which would remain significant and unavoidable. Mitigation measures would help to reduce overall loss of open space. However, loss of open space is considered to be an inevitable and irreversible effect of future development. Likewise, mitigation measures would help to reduce overall conversion of agricultural land. However, agricultural land conversion would continue to take place as a result of increasing land values in the County, which can stimulate subdivision of land and associated development. Short-term impacts on State highways related to County growth cannot be mitigated as the funding and construction of improvements on such highways is outside the jurisdiction of the County.

It should also be noted that implementation of land use map changes identified in Mitigation Measures #14 through #18 and #39 could provide adequate commercial and industrial land to achieve the County's identified jobs/housing balance of 1.2 jobs per

dwelling unit, identified in policy 2.5. This would be related to the reduction of residential development densities both in the Rural and Community Regions, which would balance the elimination of commercial, business and office, and industrial designated land in the New Town Reserve and other areas.

Environmentally Superior Alternative

CEQA requires that an environmentally superior alternative to the proposed project be identified. In general, the environmentally superior alternative as defined by CEQA is supposed to minimize adverse impacts that could result from the project. The alternatives discussed above may be considered environmentally superior in some respects, but generally involve other trade-offs. Of the alternatives considered, the no project (**Alternative 1A - No Project - No New Development**) alternative does not create any new impacts. Therefore, it is environmentally superior to a project which proposes to change existing conditions. However, in accordance with the CEQA Guidelines, if the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

None of the alternatives presented above, including Alternative 4, the Mitigated General Plan, would reduce all significant impacts to less-than-significant levels. However, it should be noted that these significant unavoidable impacts would occur under all alternatives presented above and that under the Mitigated General Plan (Alternative 4), the degree of impact would be less than for other alternatives. Therefore, Alternative 4 is considered to be the environmentally superior alternative.

Comparative Summary of Plan Alternative

Tables 5-1, 5-2, and 5-3 below provide a comparative summary of General Plan alternatives discussed above. These tables should be used in conjunction with a thorough reading of the preceding analysis.

Table 5-1
Comparison of Buildout Under Project Alternatives
(Net Increase over Existing)

Alternative	Dwelling Units	Population	Employment
Proposed General Plan	~~51,000~~ **44,393**	~~97,200~~ **97,250**	~~61,500~~ **64,970**
Alternative 1A: No Project - No New Development	0	0	0
Alternative 1B: No Project - Buildout Under Existing General Plan	60,900	126,200	76,000
Alternative 2: Preliminary Draft General Plan	51,400	97,500	64,500
Alternative 3: Planning Commission Alternative	53,800	103,400	70,300
Alternative 4: Environmentally Superior Alternative	39,000	71,600	61,500

Table 5-2
Summary of Quantifiable Impacts of Plan Alternatives

Impact Issue	Proposed GP	Alt 1A	Alt 1B	Alt 2	Alt 3	Alt 4
Daily Automobile Trips	887,400	~~2,968,582~~ **373,409**	849,578	936,306	--	698,526
Vehicle Miles Traveled	6,517,672	~~373,409~~ **2,968,582**	6,629,707	6,632,165	6,627,716	5,896,722
Average Water Demand (mgd)	47.2	20.4	54.7	47.4	49.1	41.8
Average Wastewater Flows (mdg)	31.4	13.6	36.7	31.7	32.9	27.8
School-Aged Children	43,069	17,300	47,320	43,254	44,302	37,470
Number of New Schools	27	0	32	27	28	21
Number of New Sheriffs	84	0	108	84	89	62
Park Acreage	292	236	379	292	310	215
Library Space (sq.ft.)	30,000	0	37,900	30,000	31,000	21,500

ALT 1A = No Project - No New Development
ALT 1B = No Project - Buildout Under Existing General Plan
ALT 2 = Preliminary Draft General Plan
ALT 3 = Planning Commission Alternative
ALT 4 = Environmentally Superior Alternative

Table 5-3
Comparison of Impacts of Plan Alternatives
(Pre-Mitigation/Post-Mitigation)

Impact Issue	Proposed GP	Alt 1A	Alt 1B	Alt 2	Alt 3	Alt 4
Land Use						
• loss of open space	SU	--	SU+	SU-	SU+	SU-
• conversion of agricultural land	SU	--	SU+	SU-	SU+	SU-
• land use compatibility	S/LS	--	S+/LS	S+/LS	S+/LS	LS
Geology/Soils						
• seismic hazards	S/LS	--	S+/LS	S-/LS	S+/LS	LS
• landslide hazards	S/LS	--	S+/LS	S-/LS	S+/LS	LS
• erosion hazards	S/LS	--	S+/LS	S-/LS	S+/LS	LS
Hydrology and Water Quality						
• flooding	S/LS	--	S+/LS	S-/LS	S+/LS	LS
• water quality	S/LS	--	S+/LS	S-/LS	S+/LS	LS
Biotic Resources						
• loss/disruption of wildlife habitat	S/LS	--	S+/LS	S-/LS	S+/LS	LS
• loss/disruption of deer range	S/LS	--	S+/LS	S-/LS	S+/LS	LS
• loss/disruption of oaks, special status species, wetland and riparian habitat	S/LS	--	S+/LS	S-/LS	S+/LS	LS
Cultural Resources	S/LS	--	S+/LS	S-/LS	S+/LS	LS
Traffic and Circulation						
• short-term impacts on state hwys	SU	--	SU+	SU	SU+	SU-
Air Quality	LS	--	LS+	LS	LS+	LS
Noise						
• increase in traffic-related noise	S/LS	--	S+/LS	S/LS	S+/LS	LS
• stationary noise impacts	S/LS	--	S+/LS	S/LS	S+/LS	LS
Public Services	LS	--	LS+	LS+	LS+	LS

ALT 1A = No Project - No New Development
ALT 1B = No Project - Buildout Under Existing General Plan
ALT 2 = Preliminary Draft General Plan
ALT 3 = Planning Commission Alternative
ALT 4 = Environmentally Superior Alternative

LS = Less-than-significant Impact
S = Significant Impact
SU = Significant Unavoidable
+ = Greater than proposed project
- = Lesser than proposed project

6. REFERENCES

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APPENDIX A. Proposed General Plan and RTP Policies

SUMMARY OF GOALS, OBJECTIVES AND POLICIES

NEVADA COUNTY GENERAL PLAN

Goals and objectives are statements of aims and desired future conditions relating to land use in Nevada County. The policies identify the direction and actions which the County will pursue to achieve the goals and objectives. The goals, objectives, and policies contained in thefollowing pages are presented tas they appear in the respective Chapters of the General Plan. Policies are identified as Action Policies or as Directive Policies. Action policies *are those which require a specific action or actions to implement the policy, such as adoption of an ordinance.* Directive policies *provide direction or guidance for decisions relating to future growth and development within the County. References are included to relevant policies in other Chapters of the General Plan.*

CHAPTER 1: LAND USE

Goal 1.1 **Promote and encourage growth in *Community Regions* while limiting growth in *Rural Regions*.**

Objective 1.1 **Define and maintain a distinct boundary between *Rural* and *Community Regions*.**

Directive Policies

Policy 1.1 The General Plan divides the County into *Community Regions* and *Rural Regions*. All of the land area of the County is placed in one of these regions. Within the *Rural Regions*, growth is limited to those types and densities of development which are consistent with the open, rural lifestyle, pastoral character and natural setting and surrounding land use patterns which exists in these areas. Within the *Community Regions*, balanced growth is encouraged to provide managed housing, employment, shopping and cultural opportunities appropriate to each community, located for convenience, efficiency and affordability.

The General Plan Land Use Maps delineate specific boundaries for *Community Regions*. All portions of the County not within a *Community Region* shall be considered to be in a *Rural Region*.

Policy 1.2 Within Nevada County, the *Community Regions* are established as the areas of the County within which growth should be directed to provide compact, areas of development where such development can be served most efficiently and effectively with necessary urban services and facilities.

The *Community Regions* are defined by Community boundaries generally based upon the following criteria:

a. Existing development patterns reflecting higher intensity and density of use and need to provide land area to accommodate a balanced pattern of development in the County;
b. Existing and potential service areas for major services such as public sewer and water;
c. Location of major topographic patterns and features;
d. Major transportation corridors and travel patterns;
e. Ability to provide and maintain appropriate transitions at Community boundaries.

In addition to the Town of Truckee, Grass Valley and Nevada City *Community Regions* which are defined by the spheres of influence of the respective cities, *Community Regions* are established for Higgins Corner/Lake of the Pines, Lake Wildwood and Penn Valley. Boundaries for the *Community Regions* are shown on the General Plan Land Use Maps.

In addition the New Town Reserve, as provided in Policy 1.16, shall be considered as a *Community Region* upon approval of a specific plan designating the community boundary.

See: Policy 1.36

Also see: ***Chapter 3: Public Facilities and Services***
Policy 3.4; Policy 3.5

Goal 1.2 **Recognize and allow for a range of land uses that preserve the qualities of each *Rural* and *Community Region* and *Rural Place*.**

Objective 1.2 **Provide an appropriate range of land use designations to serve the needs of the residents of the County and with an adequate amount of land in each designation to provide a balanced pattern of development.**

Directive Policies

Policy 1.3 To provide for an appropriate range of land use types and densities within the County, the following General Plan land use designations are established:

a. Urban High Density Residential (20 dwelling units per acre maximum)
b. Urban Medium Density Residential (6 dwelling units per acre maximum)
c. Urban Single Family Residential (10,000 square foot minimum parcel size)
d. Residential (1.5 acre minimum parcel size)
e. Estate (3 acre minimum parcel size)
f. Rural-5 (5 acre minimum parcel size)
g. Rural-10 (10 acre minimum parcel size)
h. Rural-20 (20 acre minimum parcel size)
i. Rural-30(30 acre minimum parcel size)
j. Rural 40 (40 acre minimum parcel size)
k. Rural-160 (160 acre minimum parcel size)
l. Neighborhood Commercial
m. Community Commercial
n. Highway Commercial
o. Service Commercial
p. Rural Commercial
q. Office-Professional
r. Business Park
s. Industrial
t. Recreation
u. Forest
v. Public
w. Open Space
x. Water Area
y. Special Development Area
z. Planned Development

aa. Planned Residential Community

The location and extent of each of the land use designations is shown on the General Plan Land Use Maps. Boundary lines for the various land use designations, as shown on the General Plan Land Use Maps, are intended to portray the relative location and extent of land use areas, generally following known physical features such as watercourses, roads and parcel lines.

Policy 1.4 The General Plan is intended to provide for the development of Nevada County as a balanced community with adequate amounts of land designated in each land use category to achieve a balance among housing, employment, retail and commercial services, recreation, and public facilities.

The amount of land provided in the land use designations on the General Plan Land Use Maps provide a balance between types of housing units based upon the following criteria for the County as a whole:

Residential Density

a. Multiple Family Residential (Urban High Density and Urban Medium Density) - 30 percent of total dwelling units
b. Single Family Residential (including Urban Single Family, Residential, Estate, Rural-5 to Rural-160, and Forest) - 70 percent of total dwelling units

The General Plan Land Use Map designations also provide a balance between housing and employment based upon criteria of a jobs/housing ratio of 1.2:1 for the County as a whole.

To achieve this jobs/housing balance, and to provide for an appropriate amount of land for commercial and related uses to serve the County's population, the amount of nonresidential land provided in the land use designations on the General Plan land use maps is based upon the following criteria for the County as a whole:

Non-Residential Land Ratios

a. Local Commercial (Neighborhood Rural) - 2 acres per 1000 population
b. Combined Community and Service Commercial - 5 acres per 1000 population
c. Highway Commercial - No specific criteria
d. Office and Professional - 1 acre per 1000 population
e. Combined Business Park and Industrial - 15 acres per 1000 population

The General Plan Land Use Map designations also promote a balanced future growth in population and employment in relation to infrastructure and environmental capabilities and constraints through balanced consideration of the following:

a. location within a defined *Community Region*, *Rural Place*, *Village Center*, or *Rural Center*;
b. need for availability and future availability of public water and sewer systems;
c. topography (erosion hazard)
d. soil capabilities;
e. important flora and fauna habitat areas;
f. commercial timberland;
g. important agricultural areas;
h. important mineralized areas;
i. future capacity of the transportation system;
j. existing land use pattern;
k. watersheds and stream corridors;
l. important historical; archaeological sites;
m. known historical faults; and
n. need for new roads and circulation patterns that promote safety and reduce vehicular concentration at existing intersections.

In considering any General Plan amendment, the criteria contained in this policy shall be used to evaluate the appropriateness of the amendment.

See: Policy 1.36

Policy 1.5 The General Plan provides for future development in accordance with the following criteria for the various land use designations:

a. Urban High Density Residential (UHD) is intended to provide for residential uses, including single- and multi-family housing types at higher densities, of up to 20 dwelling units per acre, in locations with a high degree of access to transportation facilities (including arterial and major collector roads and public transit), shopping and services, employment, recreation and other public facilities. Areas of Urban High Density Residential use are intended to provide locations appropriate for the development of affordable housing due to the higher density allowed and resulting cost efficiency in costs of land development and provision of services. Locations which are adjacent to or in close proximity to Community Commercial, Business Park or Industrial areas are considered appropriate for this designation.

b. Urban Medium Density Residential (UMD) is intended to provide for residential uses, including affordable single-family dwellings on smaller lots, and multi-family housing types at moderate densities, of up to 6 dwelling units per acre, in locations with convenient access to transportation facilities (including arterial and major collector roads and public transit), shopping and services, employment, recreation and other public facilities. Areas of Urban Medium Density Residential use may provide locations appropriate for the development of affordable housing through clustering of single-family residences or other design techniques. Locations

which are adjacent to or in close proximity to Community Commercial, Business Park or Industrial areas are considered appropriate for this designation, as are locations which create a transition between higher density and lower density residen al development, and locations which have good accessibility, but which are located within or adjacent to areas of environmental constraints.

c. Urban Single-Family Residential (USF) is intended to provide for single-family residential uses (and for other dwelling unit types with a conditional use permit) at densities of up to 4 dwelling units per acre. Locations within *Community Regions* where a full range of services and local access to transportation, shopping and services, employment, recreation and other public facilities can be provided are considered appropriate for this designation.

d. Residential (RES) is intended to provide for lower density single-family residential uses at densities at a minimum lot size of 1.5 acres per dwelling unit in locations within or adjacent to *Community Regions* where limited services such as either public water and sewer (but not both) are available; or to reflect existing development patterns or where provision of transition from more intensive urban uses to less intensive rural uses is desirable. In keeping with the rural character, agricultural operations and natural resource related uses, including the production of timber, are also appropriate in this designation.

e. Estate (EST) is intended to provide for low density residential development at a minimum lot size of 3 acres per dwelling unit in areas which are essentially rural in character, but are adjacent to Community boundaries or near *Community Regions* and therefore are more accessible to shopping, employment and services. In keeping with the rural character, agricultural operations and natural resource related uses, including the production of timber, are also appropriate in this designation.

f. Rural (RUR) designations are intended to provide for development of compatible uses within a rural setting. Such uses may include rural residential at maximum densities ranging from 5 to 160 acres per dwelling (depending upon the specific development pattern and character of an area; availability of public facilities and services; and environmental constraints), agricultural operations and supporting agricultural production, natural resource production and management, and low-intensity recreation.

g. Neighborhood Commercial (NC) is intended to provide for local needs of nearby neighborhoods within *Community Regions* or as part of the development of *Rural Centers*. This designation should have not more than 10 acres of land area in any single location and development should be grouped as a

clustered and contiguous center to preclude strip development. Locations of this designation shall provide for convenient, controlled access to arterial or collector roads:

h. Community Commercial (CC) is intended to provide a wide variety of commercial uses to serve large geographic areas with a wider range of goods and services than are available in Neighborhood Commercial areas. Community Commercial designations shall be located within *Community Regions* although they may serve areas outside the *Community Region*. This designation shall contain 10 acres or more of land area with development grouped as a contiguous center to preclude strip development, with convenient, controlled access to arterial or major collector roads.

i. Highway Commercial (HC) is intended to provide for the retail and service needs of both highway-related and tourist populations, including automotive and travel-related services, recreation, dining, and lodging. Development within this designation should be grouped as a contiguous center to preclude strip development, and with convenient, controlled access to Interstate, freeway or primary arterial routes.

j. Service Commercial (SC) is intended to provide for specialized intensive repair and related service uses which may have extensive storage needs and which require access to serve large geographic areas. Such designations shall be located only in *Community Regions*, where a high degree of convenient, controlled access to arterial or major collector roads can be provided.

k. Rural Commercial (RC) is intended to provide for limited day-to-day retail and service needs for local residents, or for uses of limited scale and intensity providing goods and services to support local agricultural, natural resource or recreational operations. Such designations should have not more than 10 acres in a single location, and convenient, controlled access to an arterial or major collector roadway.

l. Office-Professional (OP) is intended to provide for office uses, including business, medical, dental and other professional, as well as supporting business services, at intensities of development, which complement other commercial centers and are compatible in scale with nearby residential neighborhoods. Such designations shall be located only in *Community Regions* or *Rural Centers* and shall have convenient, controlled access to arterial or collector roads.

m. Business Park (BP) is intended to provide for a variety of related and mutually supporting manufacturing, distribution, processing, service, and research and development uses. Development within this designation shall consist of light industries and supporting business and service activities, which are conducted within enclosed structures and do not

create external vibration, noise, glare or other hazard. Accessory uses typical for such development may include residences required for on-site security, dining, or recreational facilities for employees. These uses are contained within a planned environment which has a "campus" character providing a high level of on-site amenities. A comprehensive master plan for the entire site shall be required prior to approval of any development.

To provide for employment in proximity to residents outside the major employment centers of the County, development of Village or *Rural Center* Business Parks (BP-V or BP-RC) is also included within this designation. Such development shall be located within a designated *Village Center* or *Rural Center*, with an emphasis on smaller scale processing, service, and research and development uses which are more compatible with the character of Village and *Rural Centers*. Business Park development within these centers is also intended to provide for "cottage" industries with residential use for the owner/operator on the premises.

n. Industrial (IND) is intended to provide for areas in which goods are produced, distributed and warehoused, along with supporting business and service uses. Locations within this designation should be able to provide buffering from adjacent land uses to minimize incompatibility, and should have convenient, controlled access to arterial or major collector roads without passing through residential areas.

o. Forest (FOR) is intended to provide for production and management (including timber harvesting and related operations) of timber resources, and compatible recreational and low density residential uses. Within the Forest designation, the minimum parcel size should be 40+ acres, in order to provide for preservation of the timber resource and protection of resource management needs and opportunities.

Also see: ***Chapter 6: Open Space***
Policy 6.4

p. Recreation (REC) is intended to provide for a wide range of recreation uses and supporting services. Such uses may include destination resorts, including country clubs; ski resorts; golf clubs and golf courses; marinas; campgrounds proving a full range of services; and other similar uses. Because such uses are likely to attract significant vehicular trips, such uses should be in close proximity to a major highway or arterial road, but with controlled or indirect access. Also such uses may have significant impact on environmental resources and require careful site design and development. Therefore a comprehensive master plan for the entire site shall be required prior to approval of development.

q. Public (PUB) is intended to provide for land in public or quasi-public ownership, including cemeteries, schools and other public and quasi-public buildings and uses in locations which are necessary to provide services to *Community Regions* and *Rural Regions*.

r. Open Space (OS) is intended to provide for land, primarily in public ownership, which is dedicated to recreation, resource preservation, and protection of environmental resources, and which typically allows only recreation or very low-intensity limited uses. This designation shall also provide for the designation of land in private ownership which is permanently devoted to open space though clustering or other open space requirements.

s. Water Area (WA) is intended to recognize the importance of large bodies of water to the visual environment of the County, and their importance as a source of water based recreation.

t. Planned Development (PD) is intended to designate planned developments in locations where a mix of uses is desirable. The "PD" designation may allow a variety of land uses, including single-family and multi-family, residential, commercial, industrial, open space, and/or other land uses consistent with the capability and constraints of the land. Primary emphasis shall be placed on clustering intensive land uses to minimize impact on various natural and man-made resources, minimize public health concerns, and minimize aesthetic concerns.

   Such developments require a high degree of accessibility to the arterial and major collector road system, and should have internal vehicular and pedestrian circulation designed to provide safe and convenient linkage between the various uses. A comprehensive master plan for the entire site shall be required prior to approval of development.

   Uses for Planned Developments shall be permitted as shown on the General Plan Land Use Maps for each specific Planned Development designation. Change in the specified area of the permitted uses, except for Open Space, may be allowed to accommodate site-specific conditions identified in the comprehensive master plan, provided that the cumulative change in area of any permitted use does not exceed 5 percent.

u. Special Development Area (SDA) is intended to provide for the development of large land holdings as an integrated planned environment providing significant employment generation, along with supporting commercial, housing, public facilities, recreation and open space.

   The SDA designation shall be applied only to land holdings which occupy 400 acres or more, are in contiguous single ownership (except for intervening public rights-of-way), or

capable of being developed as a specific entity and are substantially undeveloped or vacant. Within an SDA designation, a sufficient amount of land to establish a positive contribution to the County job-housing balance shall be allocate for employment generating uses, such as Business Parks, and sufficient land shall be allocated as Urban High Density or Urban Medium Density to ensure that at least 25 percent of the housing shall be constructed as affordable housing to accommodate the needs of local wage earners.

Development within an SDA shall require implementation of a Specific Plan and will normally require execution of development agreements to ensure conformance with the Specific Plan, provision of infrastructure and other requirements. The Specific Plan shall address environmental, infrastructure, circulation and land use elements of the SDA. Prior to such implementation, this designation shall be implemented by the "IDR" Interim Development Reserve district of the County zoning regulations.

Uses for Special Development Areas shall be permitted as shown on the General Plan Land Use Maps for each specific SDA designation. Change in the specified area of the permitted uses, except for Open Space, may be allowed to accommodate site-specific conditions identified in the comprehensive master plan, provided that the cumulative change in area of any permitted use does not exceed 5 percent.

v. Planned Residential Community (PRC) is intended to designate existing residential communities in the County which are developed as a single entity under an overall Master Plan. These Planned Residential Communities are Lake Wildwood, Alta Sierra and Lake of the Pines in western Nevada County and the Tahoe-Donner area in eastern Nevada County. The PRC designation is intended to provide for residential development in accordance with the approved Master Plan and also for community support facilities, including recreation, which are operated by a resident's association or similar mechanism.

Goal 1.3 **Within *Rural Regions*, maintain and enhance the County's pastoral character, existing land use patterns, rural lifestyle, and economy in their natural setting.**

Objective 1.3 **Provide for a land use pattern compatible with preservation of pastoral character, environmental values and constraints, and the form and orderly development of *Rural Places*.**

Directive Policies

Policy 1.6 Within these *Rural Regions*, growth is provided for only those types and densities of development which are consistent with the open, pastoral character which exists in these areas.

Future development within the following land use designations shall be considered appropriate within *Rural Regions*:

a. Estate (3 acre minimum parcel size)
b. Rural-5 (5 acre minimum parcel size)
c. Rural-10 (10 acre minimum parcel size)
d. Rural-20 (20 acre minimum parcel size)
e. Rural-30 (30 acre minimum parcel size)
f. Rural-40 (40 acre minimum parcel size)
g. Rural-160 (160 acre minimum parcel size)
h. Forest (40 acre minimum parcel size)
i. Rural Commercial
j. Highway Commercial
k. Public
l. Recreation
m. Open Space
n. Water
o. Planned Development

These uses require and support lower levels of service and through low density and intensity of use provide mutual benefits for the maintenance of a rural character and preservation of natural resources.

Policy 1.7 Within the *Rural Regions*, *Rural Places* are established to define places as centers of activity for the surrounding rural areas. *Rural Places* are established for Alta Sierra, Cascade Shores, Cedar Ridge, Chicago Park, Red Dog/You Bet, Rough and Ready, North San Juan, Washington, Soda Springs, and Hirschdale.

The pattern of development for each *Rural Place* as shown on the General Plan Land Use Maps shall reflect its specific character providing for recognition of the existing focus and function. This focus shall recognize:

a. the function as multi-purpose *Rural Centers* of Cedar Ridge, Chicago Park, Rough and Ready, North San Juan and Washington, all of which provide goods and services to the surrounding areas;

b. the primarily residential character of Cascade Shores in its orientation to water-based recreation, with limited supporting services; and

c. the focus of Red Dog/You Bet in relation to its historic development as a mountain agricultural and mining community incorporating the two historic town sites, and maintaining a rural land use pattern without a commercial center.

d. the primarily residential character of Alta Sierra.

See: Policy 1.36

Policy 1.8 *Rural Region* Area Plans are an optional planning tool whose purpose is to allow a more specific treatment of a *Rural Region* area, especially its unique characteristics. Each *Rural Region* Area Plan must contain at least one *Rural Place* and related territories based upon topographical and watershed boundaries. *Rural Region* Area Plans are to complement and assist in the further implementation of the goals, objectives, and policies of the General Plan.

Policy 1.9 *Rural Centers* are intended to provide for the development, within *Rural Places*, of existing centers to provide a focus within *Rural Regions*. Such centers should have a mix of uses which may include residential, commercial, office, business park, and public or institutional uses, grouped together and interrelated to form a functional and cultural center, and to create a visual identity related to the rural character of the region.

To achieve a desired mix of activities within the *Rural Center* and to ensure that adequate land area is maintained for commercial uses serving the *Rural Regions*, the following are considered to be typical desirable ratios for these uses in relation to the total area of the *Rural Center*:

a. Residential - 20 percent
b. Commercial - 50 percent
c. Business Park - 10 percent
d. Public and Institutional (including recreation and dedicated open space) - 20 percent.

However, the actual ratios of land use in each *Rural Center* may be varied to reflect its particular needs and character.

Within the *Rural Center*, pedestrian ways and green ways should link areas internally and also provide external links to pedestrian and trail systems. The *Rural Center* should have convenient, controlled vehicular access from arterial or major collector roads. Provision of water and sewer service through public or on-site community systems is also desirable to serve the ultimate planned development of the centers. Two *Rural Centers* are established for Alta Sierra and *Rural Centers* are established for Cedar Ridge, Chicago Park, Rough and Ready, North San Juan, Washington, and Soda Springs.

Future development of *Rural Centers* may require the formation of an entity, such as an area service district, to provide for the necessary services. Where appropriate in conjunction with the formation of such an entity, a Specific Plan may be required to ensure that comprehensive planning is accomplished for the overall future development of the Center.

Also see: ***Chapter 3: Public Facilities and Services***
Policy 3.15; Policy 3.16; Policy 3.17

Policy 1.10 Future development within the following land use designations shall be considered to be appropriate within *Rural Centers*.

a. Neighborhood Commercial
b. Office-Professional
c. Business Park
d. Urban Medium Density Residential
e. Urban Single Family Residential
f. Residential
g. Public

These uses provide the opportunity for mutually supporting development in a focused center to provide goods, services and employment for residents of *Rural Places* and the surrounding *Rural Regions*. The grouping of such uses in compact, defined centers also provides the opportunity for more efficient provision of public services than would be possible in a more dispersed pattern.

Policy 1.11 Areas of Residential, Urban Single Family And Planned Residential Community land use designations are also located in *Rural Regions*. These designations are intended to reflect the existing areas of platted and developed parcels at densities greater than otherwise allowed in *Rural Regions*. These areas are not extensive, and are not intended to dictate the future character of development outside the limited areas of such designations.

Policy 1.12 To encourage resource management in subdivisions in the Rural General Plan designations, agricultural and timber production uses shall be considered appropriate uses within said subdivisions, and the tentative map approval process shall encourage clustering to support grazing, forest management, and crop production coexistent with residential uses.

See: Policy 1.6

Objective 1.4 **Encourage future improvements of public and private facilities/services to that which will enhance the specific character and lifestyle of *Rural Regions*.**

See: Policy 1.6; Policy 15.3; Policy 16.9

Also see: *Chapter 3: Public Facilities and Services*
Policy 3.1

Objective 1.5 **In *Rural Regions*, development shall be driven and determined by land use designations and the need to provide additional road circulation in areas where there is inadequate secondary safety access rather than infrastructure availability.**

See: Policy 1.6

Also see: *Chapter 3: Public Facilities and Services*
Policy 3.1

Goal 1.4 **Within *Community Regions*, provide for an adequate supply and broad range of residential, employment-**

generating, and cultural, public and quasi-public uses located for convenience, efficiency, and affordability while protecting, maintaining, and enhancing communities and neighborhoods.

Objective 1.6 **Maintain a land use pattern based upon criteria that establish the amount of land use types necessary to meet the needs of the population/employment levels, while recognizing the unique character of each *Community Region*.**

Directive Policies

Policy 1.13 Future development within the following land use designations shall be considered to be appropriate within *Community Regions*:

a. Urban High Density Residential
b. Urban Medium Density Residential
c. Urban Single Family Residential
d. Residential
e. Estate
f. Neighborhood Commercial
g. Community Commercial
h. Highway Commercial
i. Service Commercial
j. Office-Professional
k. Business Park
l. Industrial
m. Recreation
n. Public
o. Open Space
p. Water Area
q. Special Development Area
r. Planned Development
s. Planned Residential Community

Concentration of these uses within *Community Regions* require and support the highest level of service and access, and create mutual benefits through interdependency and proximity of more intensive uses.

Policy 1.14 Development within the *Community Regions* shall be consistent with the overall rural quality of life in the County, as demonstrated through sensitivity to resource constraints, provision of interwoven open space as a part of development, and community design which respects the small town or village character of the *Community Regions*. These criteria shall be accomplished through application of the Comprehensive Site Design Standards in review of discretionary and ministerial projects.

See: Policy 1.17

Policy 1.15 *Village Centers* are intended to provide for the development of new centers to provide a focus within *Community Regions*. Such centers

should include residential, commercial, office, business park, and public or institutional uses, grouped together and interrelated to form a functional and cultural center, and to create a visual identity for the Community.

The core area within the *Village Center* should contain the principal commercial uses serving the community. These uses should provide for a wide variety of good and services, but with a scale that reflects the desired Village character with a lower intensity of use. Within the core area of the *Village Center*, secondary residential and office uses should be allowed and encouraged only above the ground floor to maximize the pedestrian scale and function of the core. Within the balance of the *Village Center*, there should be a mix of residential (predominantly multi-family), secondary commercial, business park and public or institutional uses.

To achieve a desired mix of activities within the *Village Center*, the following are considered to be typical desirable ratios for these uses in relation to the total area of the *Village Center*:

a. Residential (High Density) - 20 percent
b. Residential (Medium Density) - 20 percent
c. Commercial - 25 percent
d. Business Park - 15 percent
e. Public and Institutional (including recreation and dedicated open space) - 20 percent

However, the actual ratios of land uses in each *Village Center* may be varied to reflect the particular needs and character of its location.

Within the *Village Center*, and particularly within the core area of the *Village Center*, pedestrian ways and green ways should link areas internally and also provide external links to adjacent neighborhoods and to pedestrian and trail systems throughout the community. The *Village Center* should be accessible from all parts of the community with convenient, controlled vehicular access from arterial or major collector roads. Local roads within *Village Centers* should provide for internal access within the center without using the arterial road system.

Village Centers are established within the Higgins Corner/Lake of the Pines, and Penn Valley *Community Regions*. The boundaries of these *Village Centers* are shown on the General Plan Land Use Maps.

Also see: ***Chapter 3: Public Facilities and Services***
Policy 3.4; Policy 3.5

Policy 1.16 A Special Development Area in the southwestern part of the County, in the vicinity of McCourtney and Spenceville Roads is shown on the General Plan Land Use maps for the purpose of establishing a New Town Reserve. Development within this New Town Reserve, shall require implementation of a Specific Plan. Also, a specific *Community Region* boundary shall be established as part of this process. Prior to such time, this designation shall be implemented by

the "IDR" Interim Development Reserve district of the County zoning regulations.

The Specific Plan shall require a finding that:

a. Development of the New Town Reserve necessary to assure a long-term, job/housing balance and adequate supply of affordable housing for the unincorporated areas of Nevada County;
b. Development will provide affordable housing to meet the County's demonstrated housing needs concurrent with the creation;
c. Development will provide a significant positive increase in the County's jobs/housing ratio and that mechanisms to ensure phased development of employment preceding or concurrent with housing are assured;
d. A substantial portion of the area within the New Town Reserve will be preserved as open space for vegetation, habitat, and natural resource protection, and for passive recreation with mechanisms to insure that such open space is permanently maintained. This open space will be distributed in such a manner that it provides a significant buffer between the New Town and adjacent lands. The open space shall provide for protection of landmark groves and heritage trees as well as wildlife corridors sufficient to maintain the existing biodiversity of the site;
e. A multimodal circulation system will be provided which encourages the use of modes other than the private automobile; and
f. Adequate public facilities and services can be provided to serve the development on a self sustaining basis through formation of a Community Services District or comparable mechanism, and without imposing a financial burden on the other areas of the County.

See: Policy 1.4; Policy 1.5u

Objective 1.7 **Encourage land use patterns which minimize use of the automobile and allow for viable alternative transportation modes.**

See: Policy 1.13; Policy 1.15; Policy 1.16

Also see: ***Chapter 4: Circulation***

Objective 1.8 **Designate a diversified compatible mix of land uses in close proximity to residential uses.**

See: Policy 1.13; Policy 1.15; Policy 1.16

Objective 1.9 **Utilize housing densities to encourage the use of alternative transportation modes and increase the efficiency of public services and facilities.**

See: Policy 1.13; Policy 1.15; Policy 1.16

Also see: ***Chapter 4: Circulation***
Policy 4.30; Policy 4.31

Goal 1.5 **Within *Community Regions*, ensure that development reflects our small-town character, the characteristics of the land and the natural environment.**

Objective 1.10 **Establish a land use pattern which provides for open space, environmentally sensitive land, resource management areas and appropriate transitions.**

See: Policy 1.13; Policy 1.14; Policy 1.18

Also see: ***Chapter 6: Open Space Policy 6.1; Policy 6.2; Policy 6.3***

Chapter 13: Wildlife and Vegetation
Policy 13.1

Objective 1.11 **Implement development standards which incorporate open space, protect environmentally sensitive land, and allow for resource management.**

Action Policy

Policy 1.17 The County shall prepare and adopt flexible Comprehensive Site Development Standards which shall be applicable to all development projects in *Community Regions* and *Rural Regions* and protective of the County's unique character. These standards shall identify the basic requirements for site development in the County, including, but not limited to the following:

a. protection of environmentally sensitive resources;
b. provision of open space as part of site development;
c. prevention and elimination of fire hazards;
d. maintenance and enhancement of vegetation and landscaping;
e. prevention and elimination of flood hazards;
f. transitions between uses and multiple-use site development;
g. community design;
h. buffering and screening to mitigate adverse effects; and
i. incentives to provide for access to public resources and open space values.

Also see: ***Chapter 3: Public Facilities and Service***
Policy 3.27

Chapter 6: Open Space
Policy 6.5; Policy 6.9

Chapter 10: Safety
Policy 10.5; Policy 10.11; Policy 10.12; Policy 10.13

Chapter 11: Water
Policy 11.7

Chapter 13: Wildlife and Vegetation
Policy 13.2; Policy 13.3; Policy 13.8

Chapter 14: Air Quality
Policy 14.2

Chapter 15: Forest
Policy 15.6

Chapter 18: Aesthetics
Policy 18.1; Policy 18.3

Chapter 19: Cultural Resources
Policy 19.1; Policy 19.4; Policy 19.5

Directive Policy

Policy 1.18 Clustering of development shall be encouraged for all discretionary projects (except for a two lot land division) within the Estate, Rural-5, Rural-10, and Rural-20 General Plan land use designations, in order to maintain the open, pastoral character of development which gives definition to the *Rural Regions*, and to protect environmental features by preserving areas containing such features as open space.

In all other residential and rural land use designations, clustering shall be encouraged to maintain viable open space on-site or contribute to open space linkages through and between land use areas. Clustering in these land use designations shall be encouraged for all discretionary projects:

a. where the following significant environmental features are present

   1. Critical wildlife areas, including:
      (a) Alpine meadows and wetlands
      (b) Deer migration corridors
      (c) Winter deer range, and fawning areas;
      (d) Landmark groves and oaks;

   2. Rare, threatened or endangered plant and animal species;

   3. Significant water courses, wetlands, and riparian areas.

b. where timberland resources are present in Rural and Forest designations.

c. where residential development in Rural designatións abuts an "AE" district.

In addition to preserving and/or conserving significant environmental features, clustering shall be designed to preserve and/or conserve on-site areas which exhibit other natural constraints such as:

a. Steep slopes (greater than 30%) and areas vulnerable to avalanche;
b. Soil with high erosion potential;
c. Flood plains;
d. Ground water recharge areas;
e. Sensitive visual or aesthetic resources; and
f. Timber production and agricultural lands.

Clustering may be achieved by building site clustering with creation of permanent open space; restriction of buildable area on individual lots; or other means which are consistent with the protection of the natural resources and environmental characteristics on the site.

No specific amount or ratio of open space shall be required; however, the amount of open space shall not be less than the amount of land area on the site subject to significant environmental features as defined in this policy. Where the entire site is affected by significant environmental features, clustered development shall occur on the least sensitive habitat or resource area as defined by an environmental analysis. Within such defined areas, maximum subdivision parcel size shall be limited to that needed to meet water and sewage disposal standards as determined by the Department of Environmental Health.

Open space created through clustering shall be assured of permanent maintenance as open space by mechanisms such as, but not limited to dedication, permanent easement, irrevocable trust, deed restrictions or other mechanism assuring its permanent status.

The allowable number of dwelling units for any clustered development shall not exceed the number of units determined by dividing the total acreage of a parcel by the maximum permitted density specified in Policy 1.22 for the land use designation in which the parcel is located.

Also see: ***Chapter 13: Wildlife and Vegetation***
Policy 13.1

Goal 1.6 Allow for growth while protecting, maintaining and enhancing communities and neighborhoods.

Objective 1.12 **Provide land uses which protect, enhance, and complement existing communities and neighborhoods.**

Action Policy

Policy 1.19 The General Plan Land Use Designations shall be implemented through adoption and application of compatible zoning districts of the County Zoning Regulations consistent with the following Land Use Designation Compatibility Matrix, and through adoption of zoning district maps consistent with the land use designations.

General Plan Land Use Designation Compatibility Matrix

Land Use Designation	Zoning District																			
	AE	A1	RA1	R2	R3	DP	C1	C2	CH	BP	C3	M1	M2	REC	FR	P	TPZ	OS	DR	PD
Urban High Density Residential	-	-	-	-	-	•	-	-	-	-	-	-	-	-	-	•	-	•	-	•
Urban Medium Density Residential	-	-	-	-	•	-	-	-	-	-	-	-	-	-	-	•	-	•	-	•
Urban Single Family Residential	-	-	-	•	-	-	-	-	-	-	-	-	-	-	-	•	-	•	-	•
Residential	-	•	•	•	-	-	-	-	-	-	-	-	-	-	-	•	-	•	-	•
Estate	•	•	•	•	-	-	-	-	-	-	-	-	-	-	-	•	•	•	-	•
Rural-5 (5 acre min parcel size)	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	•	•	•	-	•
Rural-10 (10 acre min parcel size)	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	•	•	•	-	•
Rural-20 (20 acre min parcel size)	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	•	•	•	-	•
Rural-30 (30 acre min parcel size)	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	•	•	•	-	•
Rural-40 (40 acre min parcel size)	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	•	•	•	-	•
Rural-160 (160 acre min parcel size)	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	•	•	•	-	•
Neighborhood Commercial	-	-	-	-	-	•	•	-	-	-	-	-	-	-	-	•	-	•	-	•
Community Commercial	-	-	-	-	-	•	•	•	-	-	-	-	-	-	-	•	-	•	-	•
Highway Commercial	-	-	-	-	-	-	-	•	•	-	-	-	-	-	-	•	-	•	-	•
Service Commercial	-	-	-	-	-	-	-	-	-	•	-	•	-	-	-	•	-	•	-	•
Rural Commercial	-	-	-	-	-	•	•	-	-	-	-	-	-	-	-	•	-	•	-	•
Office-Professional	-	-	-	-	-	•	-	-	-	-	-	-	-	-	-	•	-	•	-	•
Business Park	-	-	-	-	-	-	-	-	-	•	-	-	-	-	-	•	-	•	-	•
Industrial	-	-	-	-	-	-	-	-	-	•	-	•	•	•	-	•	-	•	-	•
Recreation	-	-	-	-	-	-	-	-	-	-	-	-	-	•	-	•	-	•	-	•
Forest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•	•	•	•	-	•
Public	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Open Space	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•	-	•
Water Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•	-	•
Special Development Area	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Planned Development	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Planned Residential Community	-	-	•	•	•	•	•	-	-	-	-	-	-	-	•	-	•	-	•	•

The designation (•) means that the zoning district is consistent with the General Plan land use designation; the designation (-) means that the zoning district is not consistent with the General Plan land use designation. Some areas may have an interim zoning designation until the area is ready to be developed in accordance with the General Plan land use designation.

See: Policy 1.3; Policy 1.5

Objective 1.13 **Boundaries between regions may be changed and new regions and places may be established only in accordance with criteria established by this plan.**

See: Policy 1.2; Policy 1.7

Objective 1.14 **Direct development to areas that can create the opportunity to provide acceptable levels of public facilities and services.**

See: Policy 1.1; Policy 1.2; Policy 1.13; Policy 1.15, Policy 1.16

Objective 1.15 **Discourage incompatible land uses in proximity to public facilities and institutional uses.**

Directive Policies

Policy 1.20 Where possible, industrial uses should not be placed adjacent to public facilities or institutional uses. New or expanded industrial uses that abut a public facility or institutional use should provide a buffer area so as to mitigate visual, noise, light and glare, and other adverse impacts. However, these criteria do not apply to uses which abut a public or institutional uses of an industrial character, such as the corporation yard.

See: Policy 1.17

Policy 1.21 Public facilities and institutional uses in areas designated for Industrial use on the General Plan Land Use Maps should establish buffers from the surrounding industrial sites, through additional setbacks, landscaping, fencing and other screening, except where the public or institutional use is intended to serve the industrial area or is of an industrial character.

Goal 1.7 **Coordinate land use planning within the *Community Regions* and *Rural Regions*.**

Objective 1.16 **Provide for specific densities for residential uses in the Community and *Rural Regions*.**

Directive Policy

Policy 1.22 The General Plan shall provide for the following population densities in the respective land use designation based upon the maximum number of dwelling units or persons per acre for the minimum parcel area per dwelling.

The densities shown are the maximum provided for in the respective General Plan designations. The maximum density may not be achieved for all development, either in the short term or in the long term, due to site specific conditions.

General Plan Designation	Maximum Units Per Acre	Maximum Residents Per Acre
Urban High Density esidential	20	48
Urban Medium Density Residential	6	14.4
Urban Single Family Residential	4	9.6
Residential	0.66	1.584
Estate	0.33	0.792
Rural-5 (5 acre minimum parcel size)	0.2	0.48
Rural-10 (10 acre minimum parcel size)	0.1	0.24
Rural-20 (20 acre minimum parcel size)	0.05	0.12
Rural-30 (30 acre minimum parcel size)	0.033	0.0792
Rural-40 (40 acre minimum parcel size)	0.025	0.06
Rural-160 (160 acre minimum parcel size)	0.00625	0.015
Neighborhood Commercial	4	9.6
Community Commercial	4	9.6
Highway Commercial	4	9.6
Service Commercial	4	9.6
Rural Commercial	4	9.6
Office-Professional	4	9.6
Business Park	4	9.6
Industrial	4	9.6
Recreation	4	9.6
Forest	0.025	0.06
Public	NA	NA
Open Space	NA	NA
Water Area	NA	NA
Special Development Area	(1)	(1)
Planned Development	(1)	(1)
Planned Residential Community	4	9.6

NOTES

NA - Not applicable

(1) Population and dwelling units density within Special Development Areas and Planned Developments shall conform to the densities for the land use designations shown on the General Plan Land Use Maps for each specific Special Development Area or Planned Development.

In addition to the densities allowed in the above table, an increased number of dwelling units for housing for lower income and senior citizen households through the density bonus provision of Policy 8.2 may be allowed.

Objective 1.17 **Provide for specific intensities of use for non-residential uses in the *Community* and *Rural Regions*.**

Directive Policy

Policy 1.23 The General Plan shall provide for the following building intensities in the respective land use designations. Impervious surface shall include all land covered by structures or paved surfaces (including gravel surfaces).

General Plan Designation	Maximum Impervious Surface in %	Maximum Building Height
Urban High Density Residential	60	3 stories or 45'
Urban Medium Density Residential	50(1)	3 stories or 45'
Urban Single Family Residential	40(1)	3 stories or 45'
Residential	30(1)	3 stories or 45'
Estate	20	3 stories or 45'
Rural-5 (5 acre minimum parcel size)	10	3 stories or 45'
Rural-10 (10 acre minimum parcel size)	10	3 stories or 45'
Rural-20 (20 acre minimum parcel size)	10	3 stories or 45'
Rural-30 (30 acre minimum parcel size)	10	3 stories or 45'
Rural-40 (40 acre minimum parcel size)	10	3 stories or 45'
Rural-160 (160 acre minimum parcel size)	10	3 stories or 45'
Neighborhood Commercial	85	3 stories or 45'
Community Commercial	85	4 stories or 60'
Highway Commercial	85	4 stories or 60'
Service Commercial	85	3 stories or 45'
Rural Commercial	85	3 stories or 45'
Office-Professional	60	3 stories or 45'
Business Park	50	4 stories or 60'
Industrial	85	4 stories or 60'
Recreation	10	4 stories or 60'
Forest	5	3 stories or 45'
Public	85	3 stories or 45'
Open Space	5	3 stories or 45'
Water Area	5	NA
Special Development Area	(2)	(2)
Planned Development	(2)	(2)
Planned Residential Community	40(1)	3 stories or 45'

NOTES

NA - Not Applicable

(1) Maximum impervious surface may be increased to 60% for conditionally permitted support uses.

(2) Intensity of use within Special Development Areas and Planned Developments shall conform to that for the land use designations shown on the General Plan Land Use Maps for each specific Special Development Area or Planned Development.

Objective 1.18 **Provide flexibility in the General Plan land use provisions so that variations in land use patterns and activities are permitted within**

the land use framework established for *Rural Regions* and *Community Regions*.

Action Policies

Policy 1.24 The County shall recognize the need and allow for certain types of extended family support services and institutional uses in areas in which residential uses are allowed in the General Plan land use designations in both *Community Regions* and in *Rural Regions*.

While allowing for the establishment of such support services, this policy will protect the residential areas by only allowing the establishment of such support services with a conditional use permit requiring a finding that the establishment of the uses:

a. will provide support for the neighborhood or surrounding community;
b. is in keeping with the residential or rural character;
c. will not require the extension of public sewer or water outside a *Community Region* boundary; and
d. will have no significant adverse effect on the surrounding property.

For uses of greater intensity as measured by traffic generation, high peak hour traffic volumes, extended hours of operation, or greater building height or bulk, additional on-site buffering or other site or use modifications shall be required to mitigate adverse effects.

Uses which are recognized to be consistent with this policy are those that provide a direct service to the family and/or community and include medical clinics and medical support services, educational institutions, day care services, places of worship, community and group meeting center, fire stations, libraries, public utility facilities, other public facilities, and recreation facilities.

These uses are considered to be compatible with the following General Plan land use designations in addition to the Public land use designation:

a. Urban High Density Residential
b. Urban Medium Density Residential
c. Urban Single Family Residential
d. Residential
e. Estate
f. Rural
g. Forest

Policy 1.25 The County strongly supports home occupations and cottage industries in both *Community and Rural Regions* as a means of providing convenient employment opportunities and decreasing dependence on the auto. To ensure home occupations are in keeping with the residential or rural character of the neighborhood or area, home occupations shall be subject to administrative permits; whereas, cottage industries shall be subject to conditional use permits.

See: Policy 1.17

Policy 1.26 The County shall allow on-site residential development as an integral part of the primary building for all commercial and office-professional development, provided that such residential development is consistent with applicable provisions of the Comprehensive Site Development Standards.

See: Policy 1.17

Policy 1.27 Attached dwelling units may be allowed in the Urban Single Family (USF) designation subject to a conditional use permit, and provided that:

a. there are no more than 4 dwelling units to a building;
b. the density does not exceed that permitted by the USF designation;
c. the buildings are clustered on the site; and
d. adequate buffering and screening is provided for adjacent uses in conformance with the Comprehensive Site Development Standards.

See: Policy 1.17

Directive Policies

Policy 1.28 Commercially operated facilities for storage of goods, machinery, equipment, or personal property are prohibited in all areas of the County other than in areas designated primarily for commercial or industrial land uses. No expansion shall be permitted of any existing storage facilities except for facilities already in areas so designated as commercial or industrial.

Policy 1.29 The County shall provide for facilities for the management of hazardous waste produced on-site in the Commercial, Business Park, Industrial, and Public land use designations, and shall provide for facilities for the management of hazardous waste produced on or off-site in the Industrial and Public land use designations. All facilities shall be located in a manner consistent with criteria established in the State-approved Nevada County Hazardous Waste Management Plan approved by the County.

Policy 1.30 Notwithstanding other policies, the County shall provide for development on an existing legally established lot which does not conform to the minimum parcel size of the General Plan land use designation and implementing zoning district provided that all other current development standards are met.

Policy 1.31 Notwithstanding other policies, no land subject to "X" combining district zoning shall be further subdivided nor shall further lot splits be created. The "X" Combining District shall be used to mitigate cumulative impacts of successive land divisions, by zoning property "X" where the division creates the maximum number of parcels allowed by the General Plan designation. The "X" Combining

District may also be used where allowable density is transferred to another parcel.

Policy 1.32 Notwithstanding other policies, minor lot line adjustments may be allowed for existing substandard size parcels provided that no new building site are created.

Policy 1.33 Minimum parcel sizes requirements for the respective General Plan land use designations shall not apply to parcels occupied by Governmental bodies or to parcels owned and occupied by public or investor owned utilities.

Policy 1.34 Land divisions may be allowed at parcel sizes smaller than the minimum requirements for the respective General Plan land use designations where the primary purpose of the division is to allow for the parcelization of legally existing dwellings on one parcel and no new building sites will be created. A legally existing dwelling shall be defined as one built in compliance with all applicable laws in effect at the time of construction.

Objective 1.19 Provide measures to amend and update the General Plan.

Action Policy

Policy 1.35 A review and potentially a revision of the General Plan shall be completed not less than every five years. This review shall be coordinated with the State mandated updates of Plan Elements, and should normally be commenced at least one year prior to the required completion date and may include but not limited to:

a. An updated Housing Element based upon the revised regional housing allocation and incorporating an updated housing needs assessment.
b. An assessment of current land use needs in order to maintain a balanced growth pattern in the County, particularly related to the jobs/housing balance.
c. A review and assessment of new or updated available data, including population, economic and natural resource data.
d. An assessment of infrastructure capabilities and constraints and their relationship to the land use pattern.
e. A review and update of the AB 1600 studies conducted by the County as a basis for evaluation of the development impact fee program.
f. An assessment of land use trends and effects of growth on service capabilities and natural resources.
g. New legislation/laws enacted since the last General Plan Update/Review.

Directive Policy

Policy 1.36 The County recognizes that amending the Plan through individual General Plan amendments for specific site changes may not be compatible with a comprehensive and internally consistent plan.

Where General Plan amendments are considered on an individual basis, the following shall apply:

The proposed amendment must be found to be:
a. in the public interest; and
b. consistent with the General Plan's central themes, goals, objectives, and policies.

Goal 1.8 **Coordinate with the cities/town in land use planning and development within their spheres of influence.**

Objective 1.20 **Encourage compatibility and coordination of land use designations.**

Directive Policies

Policy 1.37 The County shall continue to work closely with the municipalities within the County concerning planning and development of land within the municipalities' spheres of influence.

Policy 1.38 Within the City/Town spheres, the Nevada County General Plan Land Use Maps will generally reflect the City's/Town's General Plan land use mapping. In some instances, the County may provide for a less intensive land use due to infrastructure capability, environmental constraints or effect on land use and development patterns outside the city's sphere. However, the County's Plan will not preclude implementation of the City's/Town's Plan by providing for a significantly more intensive land use than the City's/Town's Plan.

Policy 1.39 For all discretionary projects within a City's/Town's sphere, the County shall first request that the City/Town determine whether or not it desires to annex the project. If the City/Town does desire annexation, the applicant will be directed to the City/Town. If the City/Town does not desire annexation, the application will be referred to the City/Town for review and comment.

Policy 1.40 While recognizing its own responsibilities and obligations, the County will cooperate, to the extent feasible, in the development and/or revision of the City and Town General Plans. The County may amend its General Plan within the City/Town Spheres to reflect said updates and/or revisions, unless there is a compelling land use conflict.

Objective 1.21 **Encourage and coordinate with Cities/Town compatibility of design and development standards, and funding programs.**

Directive Policies

Policy 1.41 The County will cooperate in the joint preparation of design and development standards applicable to development projects in the County and Cities.

Policy 1.42 The County will actively pursue development of a coordinated development impact fee program, including mechanisms for sharing of development impact fees where the provision of facilities to serve new development extends across joint boundaries.

Objective 1.22 **Provide for a comprehensive and equitable distribution of revenues for all annexations.**

Directive Policy

Policy 1.43 The County will actively pursue formal agreements to share annexation revenues with the Cities/Town based upon the cost of providing facilities and services in the annexation area.

Objective 1.23 **Cooperate with Cities/Town regarding shared responsibilities for improving and maintaining infrastructure.**

See: Policy 1.42

On March 23, 1993, the Town of Truckee officially incorporated, creating a new jurisdiction in Eastern Nevada County. The Town as of that date assumed responsibility for planning functions within its boundaries, which encompass most of the more intensively developed areas of Eastern Nevada County. The following policies apply specifically within the Truckee Incorporation Boundaries, and not generally within Eastern Nevada County.

Policy T1.1 *Planned development, incorporating permanent open space retention, shall be used to protect sensitive site hydrology and significant wetland, stream and riparian habitats while providing development of urban high and/or medium density and highway commercial uses of the Teichert* Cold Stream *Property.* (Truckee Policy)

Policy T1.2 *No intensive development shall be permitted at the Interstate 80/Prosser Village Interchange. This access will remain unimproved.* (Truckee policy)

Policy T1.3 *At the existing Interstate 80/Highway 267 North interchange, all structures shall be substantially screened from sight from the interchange. All development in the immediate vicinity of the existing and ultimate intersections shall be subject to design control.* (Truckee policy)

Policy T1.4 *Through use of Site Design Standards in the project review process designate significant buffers for any development along the north side of Interstate 80 from Highway 89 North to the Central Truckee Exit to substantially screen views of any development north of Interstate 80.* (Truckee policy)

Policy T1.5 *Development within forested areas north of Interstate 80 and east of Highway 89 (to west boundary of Section 6) shall be completely screened by the forested areas from highway views.* (Truckee Policy)

Policy T1.6 *To avoid development on excessive slopes and protect scenic values, the forested hillside areas on the north side of Donner Pass Road,*

from the Central Truckee Exit *to Highway 89 South, shall be designated for low intensity land uses.* (Truckee Policy)

Policy T1.7 *Retain the scenic views from Donner Pass Road (Old Highway 40) of Donner Lake and the valley. Limit additional development in the area west of Donner Lake and south of Interstate 80 by maintaining Forest* land use designations *(160 acre minimum parcel size) along Donner Pass Road west of the lake to the summit.* (Truckee Policy)

Policy T1.8 *Place all developable lands within Community Regions (outside of the 100-year flood plain) in immediate proximity to the Truckee River within the "D" Design Combining District. Other areas which influence the appearance of the river, such as those on the north side of East and West River Streets, shall also be placed within the "D" Design Combining District.* (Truckee policy)

Policy T1.9 *Request the Truckee-Donner Recreation and Park District and State Department of Parks and Recreation develop, in cooperation with residents at* Donner Lake, *a Donner Lake Operation and Use Plan to ensure recreational uses and protect natural resource values of the Lake.* (Truckee policy)

Policy T1.10 *Encourage the Truckee-Donner Public Utility District and the Northern Sierra Air Quality Management District to study the feasibility of providing natural gas service for both space heating and vehicle fuel use to eastern Nevada County. This study should:*

1. *Assess community interest in natural gas service;*
2. *Identify costs of* infrastructure *construction and system installation, operation and maintenance;*
3. *Develop mechanisms for implementation and potential funding sources; and*
4. *Document air quality and economic benefits.*

(Truckee policy)

Policy T1.11 *Highway Commercial land use designations shall be provided at locations that now serve those uses such as:*

a. *Cold Stream/Donner Pass Road/Interstate 80 intersection;*
b. *North-west corner at the southern terminus of the Highway 267 Bypass (intersection with Old Brockway and Highway 267 South);* (Truckee policy)

Policy T1.12 *Provide for neighborhood commercial uses at Donner Lake, oriented to the needs of residents and tourists at this area. No outdoor storage, vehicle storage and repair or vehicle parts/equipment sales shall be allowed or permitted at either area. Recreational uses and businesses will be conditionally allowed, where compatible with existing residential uses and consistent with local aesthetic values. To ensure compatibility with the historic and aesthetic values of these areas, design review shall be required for development of neighborhood commercial uses.* (Truckee policy)

Policy T1.13 *Designate the south side of East and West River Streets for development to allow gradual in-fill and change to office and commercial uses. To encourage people-oriented, pleasant and attractive development incorporating open space, river access, parks or park-like settings, all projects shall be subject to design control and prohibit it from outdoor storage.* (Truckee policy)

Policy T1.14 *Provide for professional office and/or commercial uses on the north side of West River Street, from Highway 267 to locations south of the west end of Brickeltown. Development of these uses shall be subject to design control to ensure compatibility with the area.* (Truckee policy)

Policy T1.15 *The downtown mill site and adjacent area to the east shall be designated for public and open space uses in the west-most ten acres and mixed use development over the remainder of the site. A Mill Site* Specific Plan, *funded by site developers, shall be prepared for development of this land, providing for retail, professional office, and high-density residential uses in combination with a ten acre park/town center and downtown public parking lot. The* Specific Plan *shall comprehensively address environmental and* infrastructure *constraints upon site development (including noise and hazardous materials), and identify architectural motifs and aesthetic characteristics consistent and complimentary to old Downtown Truckee. All alteration and development of this site and easterly adjacent area shall implement the findings and directives of the Mill Site* Specific Plan. (Truckee policy)

Policy T1.16 *Encourage Caltrans to construct the SR 267 Bypass (both Phase 1 and 2 of the project) and other road improvements that will reduce regional traffic trips through* downtown Truckee. (Truckee policy)

CHAPTER 2: ECONOMIC DEVELOPMENT

Goal 2.1 **Provide for a strong economic base while protecting and maintaining communities and neighborhoods.**

Objective 2.1 **Develop, with broad community input, a County Economic Policy that coordinates and integrates with the General Plan.**

Action Policies

Policy 2.1 The County shall establish an economic advisory body to assist the County in the development of an economic development strategy for the County.

Policy 2.2 With the assistance of the economic advisory body, develop and implement a County Economic Policy that focuses relevant elements of the County's administrative, regulatory, financial and planning resources and powers in an integrated framework, as a vehicle for the retention and expansion of existing businesses as well as the attraction of new businesses to provide a sustainable economic base for the County.

The Economic Policy shall include a five-year strategic plan for economic development and an annual action program to implement the strategic plan. The policy shall provide mechanisms for monitoring and reporting progress, and for updating the Policy on at least an annual basis.

Objective 2.2 **Achieve a positive balance between the job growth rate and the population growth rate through land use and related policies.**

Action Policy

Policy 2.3 In support of the County Economic Policy, collect and disseminate information to existing and prospective businesses regarding demographics, labor force characteristics, availability of transportation and services, and other factors relevant to business location or expansion decisions.

Directive Policies

Policy 2.4 As part of the County Economic Policy, establish a mechanism to monitor, and report on at least an annual basis, the net increase in jobs in the County and the net increase in dwelling units in the County.

In establishing plans and programs to increase jobs, and as resources permit, the County's options may include (but not be limited to):

a. Implementing incentives and tax credits to local businesses based upon new jobs created;

b. Implementing additional or expanded business outreach, recruitment and marketing programs;
c. Strongly encourage "turnkey" facilities to attract and support new or expanded business in the County; and
d. Sponsoring creation of a local development corporation to provide "startup" financing and other services to attract new or expanded business.
e. As a part of the information base, encourage the Chambers of Commerce to compile and maintain a directory of lands and buildings suitable for business use, including an inventory of available public facilities and services for each site.

Policy 2.5 In the General Plan Land Use maps, provide a balance between land designated for commercial, business and industrial use, and land designated for residential development to provide for a County-wide jobs to housing ratio at buildout of 1.2 jobs per dwelling unit. In addition, the General Plan is intended to provide appropriate land use designations for balanced resource management and production, including agriculture, timber production, and mining, through designation of rural and forest land use areas as well as mineral resource zones. The County shall monitor the balance of land uses through its annual review of the implementation of the General Plan, and shall consider the effect on such balance in review of all General Plan amendments.

Also see: ***Chapter 1: Land Use Policy 1.4; Policy 1.35***

Action Policy

Policy 2.6 The County shall require an economic analysis as an integral part of all General Plan amendments, addressing the impact on the County Economic Policy and its supporting policies and programs. The analysis shall particularly address impact on the short-term and long-term jobs/housing balance including the land use designations of the General Plan intended to achieve a jobs/housing balance.

Directive Policy

Policy 2.7 Provide an adequate supply of properly zoned land, in accordance with the land use designations in the General Plan, to support a broad range of economic development opportunities and to promote a balanced economy.

Also see: ***Chapter 1: Land Use Policy 1.5, Policy 1.19***

Objective 2.3 **Develop land use and related policies to foster and encourage retention of existing jobs in the County.**

Directive Policy

Policy 2.8 In support of the County Economic Policy, develop and implement an on-going, proactive business retention program to support existing

businesses and foster their expansion. As part of the business retention program, establish a business outreach program aimed at enhancing communication between existing businesses and the County.

Objective 2.4 **Encourage economic development which favors a high economic multiplier effect.**

Directive Policies

Policy 2.9 In support of the County Economic Policy, develop and implement an ongoing, aggressive business recruitment and marketing program featuring the County's strengths in areas such as education and quality of life. Target the program to prospective types of business (particularly those that are entrepreneur-oriented) that are best suited to provide significant long-term job opportunities in industries such as biotechnology, electronics and communications, and energy-related products.

Policy 2.10 The County will continue to place a high priority on the establishment of higher education facilities and programs in the County. The County will support the location of a campus of Sierra College in the County, and will also explore incentives and marketing programs to attract an accredited four-year college or university facility to the County.

Also see: ***Chapter 7: Education***
Policy 7.8

Objective 2.5 **Encourage economic development which increases the percentage of total personal income spent in the County.**

Directive Policy

Policy 2.11 Within areas designated in the General Plan Land Use maps for commercial development, the County shall encourage the location of a broad range of retail, service and support businesses providing additional goods and services that are not now available in the County.

Also see: ***Chapter 1: Land Use***
Policy 1.5

Objective 2.6 **Within *Community Regions*, provide adequate public services and facilities to employment-generating uses.**

Action Policy

Policy 2.12 In support of the County Economic Policy, develop and implement a program that analyzes the existing and potential public services available to all job-generating land uses. Where the analysis determines a lack of a facility or service that restricts development potential, an action program to provide the needed facility or service shall be implemented.

Also see: ***Chapter 3: Public Facilities and Services***
Policy 3.7

Directive Policy

Policy 2.13 Coordinate County capital improvement programs, including the Road Improvement Program, with the Economic Policy to ensure that public facilities and services are appropriately located and sized, and properly timed to support the desired economic development.

Also see: ***Chapter 3: Public Facilities and Services***
Policy 3.7

Chapter 4: Circulation
Policy 4.7

Objective 2.7 **Encourage the provision of adequate housing to meet existing and future needs of wage earners.**

Directive Policy

Policy 2.14 As part of the County Economic Policy, identify opportunities for investment in affordable housing for local wage earners, as well as for the maintenance of the long-term affordability of such housing.

Objective 2.8 **Implement a program which increases the efficiency of the development review process.**

Directive Policy

Policy 2.15 As part of the County Economic Policy, consider alternatives to increase the efficiency of the development review process, and incorporate recommendations for improvements in the strategic plan and annual action programs.

Objective 2.9 **Encourage retail development that provides for revitalization of the historic downtown areas.**

Directive Policy

Policy 2.16 The County recognizes the central commercial function of the historic downtown areas in Grass Valley, Nevada City and Truckee, and the amount and location of land designated in the General Plan for Community Commercial use shall reflect a balance with the retention of the central commercial function.

Objective 2.10 **Provide for home occupations.**

Also see: ***Chapter 1: Land Use***
Policy 1.25

Objective 2.11 **The County will encourage the employment of county residents.**

Directive Policy

Policy 2.17 As part of the County Economic Policy, encourage incentives to local businesses for reducing unemployment and converting unskilled to skilled labor, and incorporate recommendations for such incentives in the strategic plan and annual action programs.

Objective 2.12 **Support County programs that promote and assist in the identification and marketing of local products.**

Directive Policy

Policy 2.18 The County will continue to support the efforts of the Chambers of Commerce and other groups to increase local spending through tourism and "shop local" campaigns.

Objective 2.13 **Support programs that provide or lead to sources of capital for local business development.**

See: Policy 2.4

Objective 2.14 **Encourage protection and enhancement of the natural scenic beauty of this County in support of the tourist trade.**

Directive Policy

Policy 2.19 The County will support the Scenic Byways program, and particularly the establishment of the Yuba-Donner Scenic Byway, to further the promotion of tourism in the County.

Also see: ***Chapter 18: Aesthetics***
Policy 18.8; Policy 18.9

Goal 2.2 **Promote and provide for the arts as a cultural and economic asset.**

Objective 2.15 **Encourage economic development and tourism through the performing and visual arts.**

Directive Policies

Policy 2.20 As part of the County Economic Policy, incorporate measures to encourage the development of the performing and visual arts through programs and facilities which will support tourism and otherwise contribute to the retention and creation of job opportunities.

Policy 2.21 The County shall, where feasible, identify and support local groups in the performing and visual arts, such as the Arts Council.

Objective 2.16 **Encourage protection, maintenance and restoration of historic facilities and venues used for cultural and art activities.**

See: Policy 2.20

CHAPTER 3: PUBLIC FACILITIES AND SERVICES

Goal 3.1 **Provide for public facilities and services commensurate with development type and intensity.**

Objective 3.1 **Public facilities and services shall be directed as follows: a higher level to *Community Regions* and a lower level to *Rural Regions*.**

Directive Policies

Policy 3.1 The levels of service and provision of public facilities in *Community Regions* shall be based upon improving the capacity of public facilities to serve higher levels of development directed to *Community Regions*. The levels of service and provision of public facilities in *Rural Regions* shall be based upon limiting the amount of development to ensure that adequate facilities are available. Planning for future public facilities and services in *Community and Rural Regions* shall be based upon the following criteria:

COMMUNITY REGIONS

a. public water and sewer
b. retention of existing emergency response time
c. intercommunity-transit

RURAL REGIONS

Rural Centers
a. public or on-site community water and sewer systems
b. decreased emergency response times

Rural Areas
a. individual septic and wells or on-site community water and sewer systems
b. decreased emergency response time
c. no transit

Policy 3.2 The County shall encourage development within *Community Regions* where higher density development can more efficiently be provided with a full range of public facilities and services.

Policy 3.3 The land use pattern reflected in the Nevada County General Plan Land Use Map is correlated with the future provision of public facilities to adequately serve said land uses based upon the service criteria and levels of service identified in Policy 3.1 and Policy 3.10. All General Plan amendments shall be required to show that the public facilities and services necessary to serve the proposed development are also correlated with the future provision of facilities and services according to the same criteria.

Policy 3.4 To enable public services to be provided with the greatest degree of efficiency and cost-effectiveness, development within *Community Regions* shall be encouraged at the maximum density under the respective land use designations shown on the General Plan Land Use maps, consistent with environmental, infrastructure and other site constraints.

Policy 3.5 Within *Community Regions* with existing public sewer and water systems, all new non-residential development and all new residential land divisions shall be required to connect to public sanitary sewer and water systems. Temporary use of private on-site systems may be allowed where public systems are not yet available but where a specific improvement plan and funding mechanisms are in place. A legally binding mechanism shall be required to insure that the development will connect to the public systems when available, and that the private systems will be discontinued and removed.

Objective 3.2 **Ensure that the capacity, financing and capability of public services and facilities are coordinated with the timing of development.**

Action Policies

Policy 3.6 The County shall prepare a long-range Capital Facilities Plan for all facilities to be included in the development impact fee program, as well as facilities to solve existing deficiencies, including a funding and phasing program for provision of facilities in not less than five-year increments thorough the year 2010.

Policy 3.7 Based upon the long-range Capital Facilities Plan, the County shall prepare and adopt a Five-Year Capital Improvement Program (CIP) for facilities for which it is responsible, and shall encourage the other affected agencies to also adopt a Five-Year CIP for facilities for which they are responsible.

In preparing the CIP, the County shall give priority to improvements which resolve or decrease an existing deficiency. To the maximum extent feasible, improvement projects shall support development of the following:

a. employment generating uses
b. affordable housing
c. circulation/safety needs

Policy 3.8 Based upon the adopted level of service standards, the County shall adopt a comprehensive development fee impact program meeting the requirements of AB 1600 and SB 327 in order to offset the costs of growth-related infrastructure and facilities based upon buildout of the General Plan.

The County shall impose comprehensive development fees in amounts sufficient to offset the costs identified as the appropriate share of the public facility improvements necessary to serve future development. The comprehensive development fee structure shall

ensure that future growth fully mitigates its direct and cumulative impacts upon the County.

Policy 3.9 The County shall formally approach the Cities of Grass Valley and Nevada City to consider jointly undertaking a long-range feasibility study for a Regional Wastewater Treatment System to serve the *Community Regions* in the western part of the County. The study should identify possible options for the future development of a regional system with consideration given to its long-term effect on water quality and ability to meet future water quality standards; long-term cost in relation to expansion and upgrading of existing systems; and potential financing for a regional system.

Directive Policies

Policy 3.10 The following specific level of service standards shall be applicable to *Community Regions* and *Rural Regions* for public facilities which the County has responsibility for providing:

Overall County Services and Human Services

a. For *Community and Rural Regions*:
2,500 square feet for each increase of 1,000 persons in county-wide population

County Jail

b. For *Community and Rural Regions*
1 inmate bed per 1,000 of the county-wide population

County Library

c. For *Community* and *Rural Regions:*
300 square feet for each increase of 1,000 persons in county-wide population

County Parks (Regional)

d. For *Community and Rural Regions*:
3.0 acres of land for each increase of 1,000 persons in county-wide population
(Local parks to be provided by municipalities or local districts; Regional parks may be separate from local parks or an expansion of such facilities)

County roads (other than local roads, as identified on the County Road Functional Classification Plan).

Recognize existing LOS, including segment and intersection deficiencies, and at a minimum, maintain the following minimum LOS:

e. For *Community Regions*
Level of Service (LOS) "D", except where the existing LOS is less than "D". In those situations, do not let the LOS further decline.

f. For *Rural Regions*
Level of Service (LOS) "C", except where the existing LOS is less than "C". In those situations, do not let the LOS further decline.

These standards shall be used by the County as a basis for the long range Capital Facilities Plan.

Policy 3.11 Implement a comprehensive and aggressive funding program that ensures that all Federal, State and local funding sources are identified, analyzed and used to the maximum extent possible in meeting the funding needs in providing public facilities.

Policy 3.12 Encourage all other districts serving the County (including school, utility, cemetery, park, and fire districts) to develop and to regularly update a Master Service Plan based on realistic growth which specifies a district's policies and requirements for facilities based upon buildout of the County's General Plan. The County shall review all proposed facility sites in the districts' Facilities Master Plans for consistency with the General Plan.

Policy 3.13 The County shall encourage all affected districts within the County to adopt an impact fee program to offset the costs identified as the appropriate share of the capital improvements necessary to serve future development.

Policy 3.14 In order to ensure that capacity of public facilities is coordinated with the timing of development the County shall require for any development requiring a discretionary permit, and for any General Plan amendment, a determination of the adequacy of public facilities, or an impact fee program, to serve the proposed development.

The adequacy of public facilities shall be determined upon the available capacity in existing facilities, plus the net additional capacity to support new development resulting from construction of the improvements in the Five-Year CIP of the County and other affected local agencies, the County 5-Year Road Improvement Program, and the State Transportation Improvement Program.

Additional capacity provided by such improvements to resolve existing deficiencies shall not be counted in the basis for determining capacity available to serve new development. Where adequate public facilities are planned, but not yet available to serve a proposed

development, the County may require that mitigating measures be undertaken by the proponent of the development. Such measures shall not be in lieu of development impact fees; such measures may include, but are not limited to, alteration in the timing or phasing of the proposed development, construction of temporary improvements, or construction of off-site improvements necessary to serve that development.

Policy 3.15 The County shall encourage and may require, where appropriate and feasible, that mechanisms be provided as a condition of discretionary project approval to facilitate the funding of public improvements which are attributable to that project. Such mechanisms may include, but not be limited to, creation of an independent or dependent entity (independent district, dependent district, county service area, community service district).

Policy 3.16 Where community sewer or water systems are installed or required as a condition of development, there shall be a contract, development agreement, formation of an area service district, or other legally enforceable mechanism to insure long term maintenance of the community system.

Policy 3.17 The use of community sewer and/or water systems are encouraged where such systems are economically feasible for the intended service area.

Policy 3.18 All proposed land divisions shall be connected to a public water supply if the initial and long-term cost of extending the public water system to serve the land division is less than the installation of individual water supply system.

Policy 3.19 Maintain the existing requirement for minimum lot sizes for single-family residential uses based upon type of water and sewer facilities as follows:

a. Public domestic treated water and public sewage system - 10,000 square feet, except for low/moderate income or cluster housing where the lot size may be reduced.
b. Public domestic treated water and individual sewage disposal system - 1.5 acres.
c. Ground water well and public sewerage system - 1.5 acres.
d. Ground water well and individual sewage disposal system - 3 acres.

These minimum requirements may be increased where other considerations, including adverse soil, geologic or topographic conditions may warrant larger parcel sizes.

Objective 3.3 **Emphasis shall be placed upon the development of sustainable job-generating uses when extending public facilities and services within *Community Regions*.**

Directive Policy

Policy 3.20 The County will consider the creation of programs that will allow the use of "recapture" provisions to recover costs through subsequent connections for planned extension of infrastructure to new job generating land uses, and will encourage the use of such programs by other public or quasi-public agencies.

See: Policy 3.7

Objective 3.4 **Develop and operate public facilities and services in an environmentally sound way.**

Directive Policies

Policy 3.21 Where water, sewer, and other underground utilities are extended through undeveloped natural areas, consideration shall be given to restoration of areas of cut, back-fill, and grading. All surfaces shall be revegetated with appropriate ground covers and plant materials.

Policy 3.22 The County shall encourage the purveyors of aerial public utilities to install said utilities underground, pursuant to PUC rules.

Policy 3.23 The visual affects of telephone transmission lines and high voltage utility transmission lines shall be mitigated wherever feasible so that they are inconspicuous from Scenic Highways and viewsheds.

Policy 3.24 The County, in cooperation with other affected agencies, shall continue to implement the County Integrated Waste Management Plan. Preparation of a comprehensive long-range facilities plan for the County shall consider the need for transfer stations, composting sites, hazardous waste collection facilities, and other solid waste disposal facilities.

Action Policy

Policy 3.25 It is recognized that for the immediate future, solid waste is being disposed of outside the County. However, this method of disposal may not be viable in the long term. Therefore, the County will develop a long-range plan for disposal of solid waste.

Objective 3.5 **Develop a telecommunication program that ensures community access.**

Directive Policy

Policy 3.26 In approval of all proposed land divisions, the County shall consider the need for easements to provide for potential access to telecommunication systems, and require that such easements be provided where necessary.

Action Policy

Policy 3.27 Standards for telecommunications facilities shall be included in the Comprehensive Site Development Standards, including but not limited to standards for setback, screening, angle of sight requirements, and visual compatibility.

Also see: ***Chapter 1: Land Use***
Policy 1.17

CHAPTER 4: CIRCULATION

Goal 4.1 **Coordinate the circulation systems, existing and potential, with the land use patterns and locate major roadway routes on the land use maps.**

Objective 4.1 **In *Rural Regions*, establish and maintain a desired level of service that minimizes growth and development.**

Directive Policy

Policy 4.1 The minimum level of service allowable in the *Rural Regions* of the County, as identified in the General Plan, shall be Level of Service (LOS) C, except where the existing LOS is less than C. In those situations, the LOS shall not be allowed to be less than the existing. Level of service shall be based on the typical highest peak hour of weekday traffic. Special events may be permitted which temporarily exceed this minimum level of service.

Also see: ***Chapter 1: Land Use***
Policy 1.1

Chapter 3: Public Facilities and Service

Policy 3.10

Objective 4.2 **In *Community Regions*, ensure a desired level of service that supports the current circulation system and provide for future circulation improvements.**

Directive Policies

Policy 4.2 Improve non-regional circulation systems for safety and general circulation purposes by identification of potential connections/improvements and implementation of such during the land development process.

Policy 4.3 The minimum acceptable level of service (LOS) for areas identified as *Community Regions* in the General Plan shall be LOS D, except where the existing LOS is less than D. In those situations, the LOS shall not be allowed to be less than the existing. Level of service shall be based on the typical highest peak hour of weekday traffic.

Also see: ***Chapter 1: Land Use***
Policy 1.1

Objective 4.3 **Maintain desired levels of service by balancing development of the circulation system with land use and development in the County.**

Directive Policy

Policy 4.4 The land use pattern reflected in the Nevada County General Plan Land Use Map is correlated with the future ability of the transportation system, including the major roadway network, to adequately serve said land uses based upon the service criteria and levels of service identified in Policy 4.1, Policy 4.3, Policy 3.1 and Policy 3.10. All General Plan amendments shall be required to show that the proposed development is also correlated with the future provision of transportation facilities and levels of service according to the same criteria.

See: Policy 4.5; Policy 4.6; Policy 4.7; Policy 4.8; Policy 4.9; Policy 4.10

Action Policies

Policy 4.5 Monitor the County and State road system to work toward timely solutions to documented safety problems and appropriate improvements for those components of the road system that are either at or approaching a level of service below D in *Community Regions* and a level of service below C in *Rural Regions*. Monitoring shall occur through a report from the Nevada County Department of Transportation to the Board of Supervisors and Planning Commission, timed to complement each biennial update of the Nevada County Regional Transportation Plan (RTP).

Policy 4.6 The County Road Improvement Program (RIP) shall be maintained and updated annually. Such update shall demonstrate consistency with the Nevada County General Plan and shall identify and establish a schedule for needed improvement projects and identify sources of funding for each improvement, as the basis for determining the roadway capacity available to support new development.

Directive Policies

Policy 4.7 Consistent with legal and funding constraints the following types of road improvement projects shall be emphasized in the County Road Improvement Program:

a. Projects needed to maximize the safety of the road system on high accident road segments and intersections, including, but not limited to additional road widths and turn lanes, realignments, shoulder improvements, bridge improvements, hazard elimination and hazard control devices;

b. Projects needed to improve rideability, including, but not limited to, pavement extension and rehabilitation;

c. Projects needed to improve capacity and travel speed, particularly in *Community Regions*, and including, but not limited to, interchange improvements, additional road lanes and/or widths, turn lanes, signalization, and bridge improvements; and

d. Projects needed to improve the use of other modes of transportation, including, but not limited to, public transportation facilities (transit facilities and stops), park and ride facilities, bikeways, non-motorized trails, and pedestrian facilities.

e. Improve local circulation to address safety and emergency service needs.

To the extent feasible, road improvement projects shall support development of the following:

a. employment generating uses
b. affordable housing
c. circulation/safety needs

Policy 4.8 Where it is determined by the County that a County road, road segment or intersection no longer provides the desirable-acceptable level of service as defined in Policy 4.1 and Policy 4.3, the County shall take action to ensure compatibility between future growth and the road system.

Solutions to local road system problems may include funding of transportation-related facilities, transportation management techniques, or development limitations or restrictions.

Policy 4.9 Relative to the State highway system, Nevada County recognizes the major funding limitations that exist within the State system and finds that as a matter of legislative policy, additional growth and development may be allowed within the County, notwithstanding the adverse impacts which may result in the short term by this growth and development. Therefore it shall be the policy of the County to:

a. Encourage the existing partnership between Nevada County and the State in working together to solve State Highway problems and funding limitations.

b. Commit local moneys, when available, in the partial funding of critical State highway improvements. As a part of this commitment, the County shall continue to pursue the use of development fees from private development as a funding source.

c. Acknowledge that short-term adverse impacts to the State highway system resulting from growth and development within the County will occur until adequate funding is made available and improvements made through projects identified in the adopted State Transportation Improvement Program.

d. Monitor State activities in responding to the needs of the State system within the County.

e. Solutions to State road system problems shall include County review and input to the State Transportation Improvement Program, formal County requests for specific improvements and/or facilities, and requests for inclusion of said improvements and/or facilities within the Nevada County Regional Transportation Improvement Program.

f. Should critical State highway improvements not be identified in the adopted State Transportation Improvement Program, the County may review its policies to determine if additional growth and development should be curtailed in the impacted areas.

Policy 4.10 In the absence of an approved plan and funding program to provide needed roadway improvements, and where the County has determined that there is no feasible project mitigation, the County -may deny those amendments to the General Plan that exacerbate an identified deficiency in local or State roads or highways.

Objective 4.4 Implement funding strategies for the development and maintenance of circulation facilities and services that will allow the development and expansion of the transportation system concurrent with County Growth.

Action Policy

Policy 4.11 Implement a comprehensive program that imposes development fees in amount sufficient to mitigate the cumulative impact of development on the regional (non-local) highway and roadway network as defined in the Nevada County Road Functional Classification Plan and as shown on the Nevada County Land Use Maps.

The comprehensive development fee structure shall ensure that future growth fully mitigates its direct and cumulative impacts upon the County and, where possible, the State transportation system.

Directive Policies

Policy 4.12 New roads not shown on the General Plan Land Use Maps as part of the regional and non-through access local road systems identified in the Nevada County Road Functional Classification Plan shall not be constructed at public expense, but shall be provided as site improvements for each development project as necessary to provide safe, appropriate access.

Policy 4.13 Transportation infrastructure required for a project shall be constructed or secured in another manner, or shall be a part of the Nevada County Road Improvement Program to ensure construction in a timely manner.

Objective 4.5 Provide for long-term, ongoing roadway maintenance.

Directive Policies

Policy 4.14 To ensure the most effective expenditure of funds, maintenance shall emphasize the arterial and major collector segments of the road system.

Policy 4.15 Nevada County shall work towards coordinated improvement standards and maintenance programs with all incorporated cities and towns within the County.

Also see: ***Chapter 1: Land Use Policy 1.41; Policy 1.42***

Goal 4.2 Provide for the safe and efficient movement of people and goods in a manner that respects the rural character of Nevada County.

Objective 4.6 Design the transportation system to facilitate transportation of people and goods and services in support of the General Plan and the local economy.

Directive Policy

Policy 4.16 The Nevada County Road Functional Classification Plan and the Nevada County Road Standards shall be the basis for implementing the recommended roadway network identified in the General Plan. The Plan shall provide for a major road system including a comprehensive County road system that will complement the State highway system. This major road system shall consist of Interstate Highway, freeway, principal arterial, minor arterial, major collector and minor collector segments consistent with the Nevada County Road Functional Classification Plan and shown on the Land Use and Circulation Plan maps:

a. Interstates and Freeways - Limited access highways.

b. Principal Arterials - Major roadways providing access from rural to urban areas and access to freeways.

c. Minor Arterials - Roads providing through service to industrial and commercial areas and between cities and/or providing access to principal arterials and freeways.

d. Major Collectors - Roads that provide service within major land use areas or provide access to the arterial roads from local collector and local roads.

e. Minor Collectors - Roads that provide service within major land use areas or neighborhoods, and provide access from local streets to the major road system.

Action Policy

Policy 4.17 Prepare and implement a comprehensive Transportation System Management program, to increase the number of people carried by the local road system without increasing the designed capacity of the system through consideration of measures including but not limited to:

a. traffic operations control measures (e.g. re-striping, turn lanes, one-way streets, ramp meters, meter bypass lanes, computerized signals, changeable message signs, etc.).
b. measures for the local and State road system, coordinated with Caltrans, designed to maintain circulation during high traffic flow events and holidays and to warn drivers of changing road conditions during inclement weather (use of radio, telephone, and signage).
c. transportation management techniques related to existing and proposed employers (e.g., mandatory employer carpool and/or rideshare programs, business contribution to local public transit, flexible work hours, etc.).

Objective 4.7 **Ensure that the transportation system serving regional destinations maintains desired levels of service without inducing growth along system corridors that is inconsistent with land use patterns.**

Directive Policies

Policy 4.18 It is the policy of the County to place new roadways in areas which have the combined most favorable impact on existing neighborhoods and the environment. Along system corridors, land use, access and implementing zoning shall be consistent with the function and design capacity of the roadway.

Policy 4.19 Maintain the function and integrity of arterial and major collector roads by limiting access wherever possible. For all new development, allow access via the lowest roadway classification, consistent with safe operation of the roadways and environmental constraints.

Objective 4.8 **Encourage the Nevada County Department of Transportation and other responsible agencies to coordinate local and regional road and street systems with respect to local land use patterns and the street network.**

Directive Policy

Policy 4.20 In the review of all discretionary permits, the County shall consider the effect of the proposed development on the area-wide transportation network and the effect of the proposed development on the road network and other transportation facilities in the immediate vicinity of the project site.

Objective 4.9 **Coordinate with the cities, town, Nevada County Transportation Commission, adjacent counties and Caltrans for the development of an integrated regional circulation system.**

Directive Policies

Policy 4.21 The County will encourage and support the role of the Nevada County Transportation Commission as the primary forum for coordinating regional transportation planning issues.

Policy 4.22 Nevada County shall continue to work through the Nevada County Transportation Commission towards an integrated intracounty and intercounty regional transportation system.

Objective 4.10 **Provide for alternative routes for efficient service and for emergency access.**

Directive Policies

Policy 4.23 As determined with input from providers of fire, police and emergency services, ensure that alternative access is provided where needed for all discretionary projects.

Policy 4.24 Local roads serving new development shall be aligned with and connected to existing local roads on abutting properties to provide continuity in the local road system.

Objective 4.11 **Reduce spot accident rates for all transportation modes.**

Directive Policy

Policy 4.25 New local roads which intersect arterial or collector roads shall be aligned with existing local roads across the arterial or collector roads wherever possible.

Goal 4.3 **Reduce dependence on the automobile.**

Objective 4.12 **Increase the availability of alternative modes of transportation.**

Action Policies

Policy 4.26 Require consideration of the feasibility of providing transit alternatives to automobile transportation in all discretionary project review. As part of the development review process, require consideration of ways to reduce dependence on the auto in all discretionary and ministerial non-residential projects. For projects generating 50 or more employees, an analysis shall be prepared by the applicant documenting means to reduce auto dependence. Wherever feasible, measures documented in the analysis shall be incorporated into the project. This process shall be coordinated with the applicable Transportation Management Association (TMA) or successor agencies.

Policy 4.27 Nevada County shall cooperate with the Nevada County Transportation Commission, to prepare and implement a Pedestrian Master Plan that provides for a comprehensive system of sidewalks, pathways and trails within established Community Boundaries that are designed to encourage pedestrian use. Emphasis will be placed on connecting residential areas to commercial and industrial areas; development of direct, efficient, safe and aesthetically pleasing routes; and practical mechanisms for utilizing existing public and quasi-public rights-of-way for pedestrian use.

The Plan shall be implemented through (but not limited to) the development review process to ensure that:

a. Routes are analyzed and designed in relation to a project's neighboring uses and development pattern;
b. Convenient and pre-existing access is retained and improved, if feasible; and
c. New development adjacent to or including any designated pedestrian facility shall, as a condition of project approval, provide on-site construction and maintenance of all improvements made pursuant to the Master Plan.

Policy 4.28 Nevada County shall cooperate with the Nevada County Transportation Commission to update and implement the Nevada County Bicycle Master Plan. The updated Master Plan shall include practical mechanisms for utilizing existing public and quasi-public fees; and be implemented through (but not limited to) the development review process to ensure that:

a. Routes are analyzed and designed in relation to a project's neighboring uses and development pattern;
b. Convenient and pre-existing access is retained and enhanced; and
c. New development adjacent to or including any designated bicycle facility shall, as a condition of project approval, provide on-site construction and maintenance of all improvements made pursuant to the Master Plan.

Objective 4.13 **Decrease vehicle miles traveled while encouraging increased ridership and vehicle occupancy.**

Directive Policy

Policy 4.29 Nevada County, through the Department of Services for Transportation, Aviation, and Recreation (STAR), shall work with local Transportation Management Associations (TMAs) to increase opportunities for ridesharing, transit use and other means of reducing demand for additional roadway capacity.

See: Policy 4.17; Policy 4.23; Policy 4.24

Objective 4.14 **Provide a land use pattern which minimizes the need for new roadways and encourages the use of alternative transportation modes.**

Directive Policies

Policy 4.30 Minimize the need to commute by:

a. Providing for an adequate amount of residential, commercial, and industrial designations in proper balance, as shown on the General Plan Land Use Maps.

b. Encouraging Economic Development and Public Facility policies which support local employment opportunities.

Also see: ***Chapter 2: Economic Development***
Policy 2.7; Policy 2.12; Policy 2.13

Chapter 3: Public Facilities and Services
Policy 3.1; Policy 3.8

Policy 4.31 Encourage the development of transit to serve *Community Regions and Rural Centers* by:

a. clustering growth to maximize the efficiency of the transit system; and
b. providing commuter-oriented transit to serve employment centers.

Objective 4.15 **Sidewalks, bicycle facilities and paths must be provided where necessary, and on an equitable basis with roadway improvements.**

Directive Policies

Policy 4.32 For all discretionary permits within *Community Regions*, as defined in Policy 1.1 and as shown on the General Plan Land Use Maps, sidewalks are encouraged as frontage improvements for all non-residential projects, and for all residential projects with an overall density greater than one dwelling unit per gross acre, or pedestrian use shall be included within the roadway prism.

Policy 4.33 All development projects which abut bicycle routes identified in the Nevada County Bicycle Master Plan shall construct frontage improvements consistent with the Plan.

Policy 4.34 County road improvement projects shall incorporate improvements consistent with the Nevada County Pedestrian and Bicycle Master Plans. Impact fees shall be adopted to offset costs of constructing these facilities.

Policy 4.35 Additional sources of funding to enhance the development of bicycle facilities shall be actively sought. Funding for facilities which enhance recreational bicycle use shall be sought from appropriate sources.

Policy 4.36 Bridges and other public road facilities that are designated as components of or connections for non-vehicular trails and pathways, as shown on the Bicycle, Pedestrian or Non-Motorized Trail Master Plans, shall be designed and constructed to ensure the safety and security of all users.

Goal 4.4 **Minimize adverse impacts of the circulation system on the natural and historic environment.**

Objective 4.16 **Protect the natural environment in development and maintenance of the transportation system.**

Directive Policies

Policy 4.37 Nevada County shall continue to require environmentally sound practices for transportation facility construction and maintenance. New roads or improvements to the existing road system and all trails and pathways shall be located, constructed and maintained in a manner compatible with the environment.

Policy 4.38 Encourage Caltrans' efforts to reduce impacts to vegetation, wildlife and water quality through the use of salt substitutes, or other environmentally compatible materials for road de-icing.

Policy 4.39 Recognize and protect, to the extent feasible, existing historical districts and other historical features during the development of roadway systems.

CHAPTER 5: RECREATION

Goal 5.1 **Provide a variety of active and passive recreational opportunities.**

Objective 5.1 **Provide a diverse range of recreational opportunities at a regional, district, community, and neighborhood level.**

Directive Policies

Policy 5.1 Development of parks and recreation facilities in the County park system will focus upon regional facilities providing County-wide services, or serving large areas of the County including *Community Regions* and *Rural Regions*. Design of the regional parks should focus on natural resources, environmental education, and provide areas for diverse recreation interest. Regional parks should provide for both active and passive uses which may include open play, picnicking, walking, cycling, nature enjoyment, cultural activities and historic interpretation. Use of environmentally sensitive areas should be limited to open space or low-intensity passive activities.

Policy 5.2 The County shall encourage the formation of local park districts to provide neighborhood community and district parks within *Community Regions* and *Rural Regions*, which are responsive to the diverse recreational needs in the different regions. The County shall encourage such districts to adopt specific levels of service for local park and recreation facilities.

Policy 5.3 Encourage all park districts serving the County to develop and to regularly update a Park and Recreation Master Plan which specifies the districts' policies and requirements for facilities based upon buildout of the County's General Plan. The County shall review all proposed facility sites in the districts' Facilities Master Plans for consistency with the General Plan.

Policy 5.4 The provision of linear parks or greenways within *Community Regions* is encouraged to provide linkages between park facilities and from residential areas to parks. Inclusion of bikeways and pathways should be considered for all linear parks and greenways, and where possible greenways should be utilized to link *Community Regions* to the County-wide trail system.

Objective 5.2 **Acquire, develop and maintain park lands to serve the needs of Nevada County.**

Directive Policies

Policy 5.5 The County shall base park and recreation facility planning on the following level of service standard for County park land to provide regional parks serving both *Community Regions* and *Rural Regions*:

- 3.0 acres of park land for each increase of 1,000 persons in county-wide population.

Policy 5.6 Planning for acquisition and development of regional park and recreation facilities shall be based upon development of a comprehensive system of open space, linked to County Bicycle and Non-Motorized Trails Master Plans. The system should also be based upon serving multiple functions, including provision of active and passive recreation opportunities, preservation of natural features, and enhancing the aesthetic character of Nevada County.

See: Policy 5.15; Policy 5.16; Policy 5.17

Objective 5.3 **Maintain and implement a Parks and Recreation Master Plan to guide the acquisition, development and management of county-operated recreation facilities.**

Action/Policy

Policy 5.7 The County shall prepare an updated Master Parks and Recreation Plan reflecting buildout of the General Plan. The updated Plan shall identity land, facilities and improvements needed to serve new development and to address existing park and recreation deficiencies for inclusion in the County's long-range Capital Facilities Plan and in the Five-Year Capital Improvement Program.

Directive Policy

Policy 5.8 The County will include park sites in a long-range program to acquire land needed for future public sites or expansion of existing sites in conjunction with the development impact fee program and Capital Facilitation Plan. This program will involve identification of site areas designated for acquisition in the Park and Recreation Master Plans of the County.

See: Policy 5.9

Also see: ***Chapter 3: Public Facilities and Services***
Policy 3.7; Policy 3.10

Objective 5.4 **Implement funding strategies for the acquisition, development, and maintenance of park and recreation facilities.**

Directive Policies

Policy 5.9 Park and recreation facilities shall be included in the County's comprehensive impact fee program. The comprehensive development fees shall be in amounts sufficient to offset the costs identified as the appropriate share of the park and recreation facility improvements necessary to serve future development. The comprehensive development fee structure shall ensure that future growth fully mitigates its direct and cumulative impacts upon the County.

Policy 5.10 Implement a comprehensive and aggressive funding program that ensures that all Federal, State and local funding sources are identified, analyzed and used to the maximum extent possible in meeting the funding shortfall in providing County park and recreation facilities.

Objective 5.5 **Coordinate future park and trail planning with other responsible agencies.**

Directive Policies

Policy 5.11 Cooperate with other public and private entities providing recreation activities to coordinate activities in the County and eliminate duplication of recreational services. The County shall encourage those agencies providing recreational programs and activities to continue those programs and activities.

Policy 5.12 The joint use of facilities (such as public schools and public and private open spaces) and the joint location of school-park sites shall be encouraged to efficiently use all areas offering recreation potential.

Policy 5.13 Encourage cooperation among local, state and federal agencies to maximize the use of public land and facilities for public use and recreation.

Objective 5.6 **Implement a comprehensive, and where possible integrated, county-wide trail system.**

Directive Policies

Policy 5.14 Provide a county incentive program which encourages retention of private open space by including such incentives as, but not limited to, tax incentives, insurance programs, and public ownership of open space easements.

Policy 5.15 The County shall provide for the inclusion of bikeways, walkways, and non-motorized trails in appropriate locations within parks. Where feasible, park sites shall be integrated with the County Bicycle Master Plan and with the Non-Motorized Multi-Purpose Trails Master Plan.

Policy 5.16 The County shall continue to implement the County Bicycle Master Plan for its recreational value, as well as to provide for non-motorized access to park and recreation facilities.

Policy 5.17 The County shall implement the Non-Motorized Multi-Purpose Trails Master Plan to provide multi-purpose recreational opportunities throughout extensive areas of the County, and to improve access to other recreational opportunities for residents in both *Community Regions* and *Rural Regions*.

Objective 5.7 **Preserve and encourage water based recreational opportunities.**

Directive Policies

Policy 5.18 Cooperate with other public agencies to provide public access to the lakes and impoundments in the County, consistent with their ability to support water based recreation.

Policy 5.19 Cooperate with other public and private agencies to provide public access to the rivers in the County, with emphasis at road and highway bridges so as to assure access for police and emergency vehicles.

Policy 5.20 Encourage proper operation and environmental standards for private facilities on lakes, impoundments, and rivers.

Objective 5.8 **Recognize the Yuba River Canyon as a recreational resource.**

Directive Policy

Policy 5.21 Recognize the South Yuba River canyon as an important resource in terms of recreation, tourism, aesthetics, water resource, mineral resource, water quality, and wildlife habitat through the following actions:

a. Designate publicly owned lands physically adjoining the river as open space in the General Plan Land Use Maps.
b. Encourage the recreation master planning and development activities by the State Department of Parks and Recreation

Objective 5.9 **Provide for recreational opportunities for visitors while preserving rural character.**

Directive Policies

Policy 5.22 Encourage the development of private recreation facilities within the Recreation land use designation of the General Plan, including food services, motels/ hotels, resorts, day camps and overnight camps.

Policy 5.23 Allow the development of limited recreational uses in Rural and Forest land use designations.

Also see: ***Chapter 15: Forest***
Policy 15.6

Chapter 16: Agriculture
Policy 16.12

CHAPTER 6: OPEN SPACE

Goal 6.1 **Encourage that land use patterns and site development reflect ope space values.**

Objective 6.1 **Integrate open space consideration in the establishment of land use patterns.**

Directive Policies

Policy 6.1 The General Plan recognizes the importance of open space serving one or more of the following purposes:

a. Preservation of natural resource areas;
b. Conservation of open spaces for the managed production of resources;
c. Maintenance of areas with importance for outdoor recreation;
d. Delineation of open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions; and
e. Provision of open spaces to create a buffer which may be landscaped to minimize the adverse impact of one land use on another.

The General Plan includes an Open Space land use designation, which is intended to provide for lands, serving one or more of the above purposes, which is either in public ownership, or permanently preserved as open space through easements or other restrictive mechanisms. The uses of land under the Open Space designation and implementing zoning are limited to those which have minimal impact on the natural character and environmental features of the land.

In addition, the Rural, Forest and Recreation designations of the General Plan also provide visual and functional open space, including open space for production of resources and provision of recreation opportunities.

Also see: ***Chapter 5: Recreation***
Policy 5.14

Policy 6.2 The County may utilize clustering of development, as provided in the Land Use policies, to preserve open space within the *Rural Regions* and to encourage creation of open space which will enhance visual, habitat and other open space values. Such open space may be permanently secured and preserved as open space through permanent easements, dedication to a public agency, permanent trust or other irrevocable means.

Also see: ***Chapter 1: Land Use***
Policy 1.18

Policy 6.3 Maintain the density of development allowed in the Rural and Forest land use designations as shown on the General Plan Land Use Maps in order to provide for low density development in *Rural Regions* which preserves an open, rural character and complements the permanent public and private open space.

Policy 6.4 Protect areas supporting renewable natural resources from incompatible or disruptive development or land uses through very low density General Plan designation. High site and public timber resources shall be designated for forest uses at the 160 acre minimum parcel size or greater, except for areas of fragmented parcelization. Identified lakes and reservoirs shall be designated as water areas in the General Plan.

Policy 6.5 Within all Village and *Rural Centers*, as well as multi-family, commercial, business park and industrial development, the County shall require that appropriate areas be provided for urban open space in accordance with applicable zoning regulations and the Comprehensive Site Development Standards. Recreational use of urban open space shall be designed to minimize impact on sensitive environmental and/or biological values.

Policy 6.6 Provide for, where feasible, continued access to open space and public resources by ensuring that all discretionary projects are consistent with development of the Nevada County Non-Motorized Trails Master Plan.

Policy 6.7 Nevada County encourages the location and development of motorized off-road facilities on lands where such use can be accommodated. The location and development of such facilities shall include consultation with the State Department of Fish and Game as well as other responsible agencies.

Policy 6.8 Encourage the local recreation and park districts and/or an appropriate private entity to obtain open spaces (on environmentally constrained lots or land, lots with relatively low construction potential) and neighborhood parks within existing residential subdivisions and areas.

Objective 6.2 **Implement development standards that incorporate open space values.**

Action Policy

Policy 6.9 Development standards for project design, grading, construction and use, established through the Comprehensive Site Development Standards, shall be used in project review of all discretionary project permits to determine open space requirements for each project.

These standards shall provide for consideration of non-disturbance of, and open space setbacks from identified sensitive environmental, biological, or cultural resources, e.g. 100-year floodplains, wetlands, slopes in excess of 30% (excepting access across slopes up to 30%), lakes; ponds, significant historic or archaeological sites/resources, critical wildlife areas, minimization of land disturbance, consistency

with the landforms and aesthetic context of the site, temporary and permanent erosion and sedimentation controls, and vegetation retention, replacement and enhancement.

Also see: ***Chapter 1: Land Use***
Policy 1.17

Chapter 5: Recreation
Policy after 5.14

Chapter 13: Wildlife and Vegetation
Policy 13.1

CHAPTER 7: EDUCATION

Goal 7.1 **Facilitate the development and maintenance of schools and educational facilities to ensure the economic and cultural vitality of the County.**

Objective 7.1 **Support and encourage public schools that are physically and functionally integrated with their surrounding neighborhoods or service areas.**

Directive Policies

Policy 7.1 The County will encourage location of future school sites which are physically and functionally integrated with their surrounding neighborhoods and community, and will cooperate with school districts and other governmental agencies to coordinate school facilities planning and site acquisition.

Policy 7.2 The County will encourage consideration of appropriate access in the location of new school sites, so that elementary and middle schools have access from collector or local streets, while high schools have access from arterial streets. The County will encourage the location of new school sites so that they can be linked with planned bikeways, greenways and pedestrian access wherever possible.

Objective 7.2 **Encourage coordinated school facilities planning and site acquisition among school districts and other local government agencies.**

Directive Policies

Policy 7.3 Encourage all school districts serving the County to develop and to regularly update a Facilities Master Plan which specifies a districts' policies and requirements for facilities based upon realistic school growth projections. The County shall review all proposed facility sites in the school districts' Facilities Master Plans for consistency with the General Plan.

Policy 7.4 The County will encourage the joint use of school and park facilities to provide more efficient educational and recreational services.

Objective 7.3 **Support service levels that are equal to or exceed state standards for classroom size, school enrollment and school size, for all schools.**

See: Policy 7.3

Objective 7.4 **Cooperate in securing adequate funds to construct and/or renovate schools to keep pace with growth and enrollment.**

Directive Policies

Policy 7.5 The County will cooperate with the school districts and municipalities in the County, to the extent feasible, to explore methods for securing adequate funding of new school facilities. This may include the development of local funding mechanisms, as well as the utilization of state fund. when available. Local resources to be considered may include the reservation or dedication of school sites, developer fees, development agreements, Mello-Roos CFDs, assessment districts, redevelopment funds, general obligation bond proceeds, special taxes, and other legal funding mechanisms.

Policy 7.6 The County shall encourage all school districts within the County which are impacted by growth to do appropriate studies, based on realistic school growth projections, and develop an impact fee program, if found to be necessary, providing for the maximum school fee permitted under the School facilities law, or applicable portion thereof, to offset the costs identified as the appropriate share of the school facility capital improvements necessary to serve future development.

Objective 7.5 **Coordinate, to the extent allowed by law, the capacity, financing and availability of school facilities with the timing of new development.**

Directive Policy

Policy 7.7 For any development requiring a discretionary permit, where the affected district determines adequate school facilities are not available to serve the proposed development, the County will work with affected school districts in securing project-sponsored mitigation.

Objective 7.6 **Encourage higher education programs and facilities be made available to the Nevada County area to serve the community's needs.**

Directive Policies

Policy 7.8 The County will continue to place a high priority on the establishment of higher education facilities and programs in the County including a four-year college campus. In addition to supporting the location of a campus of Sierra College in the County, the County will cooperate in the consideration of joint reciprocal use of facilities, equipment and personnel resources to establish mini-college centers in the County to provide additional access to higher education.

Policy 7.9 The County strongly encourages school districts to fully mitigate the impacts of their facility improvement projects on public services and facilities which include, but are not limited to, roads and water and sewer facilities.

CHAPTER 8: HOUSING

Goal 8.1 **Provide for adequate housing opportunities for all segments of the community.**

Objective 8.1 **Ensure an adequate supply of affordable housing for all economic segments of the community, especially lower income households. Such housing should include not only multiple family but also single family opportunities.**

Action Polices

Policy 8.1 The County shall work to provide housing for all households in accordance with the following Quantified Objectives for Housing Development through July 1, 1997:

Household Income Category	Quantified Objective		
	New Construction	Rehab	Conservation
Very Low-Income	2,048	50	596
Low-Income	992	75	594
Moderate-Income	1,286	127	0
Above-Moderate Income	2,195	127	0
Total	6,522	379	1,190

The quantified objectives are based upon the following assumptions:

a. **New Construction:** See Housing Analysis, Volume II of the General Plan, Section 2: Chapter 4, Housing Needs Projection. The Quantified Objective for unincorporated Nevada County assumes that the Town of Truckee will provide for future housing units consistent with its allocation as shown in the 1993 Draft Regional Housing Allocation Plan.

b. **Rehabilitation:**
   1. The County will continue to receive funds from the State for CDBG, California Housing Rehab Program for Owner Occupied Housing (CHRP-O), and California Housing Rehab for Renters (CHRP-R).
   2. The County will receive the maximum amount of funds from the above programs.
   3. Rehab for moderate and above moderate-income assumes an equal distribution for the total minus very low and low-income.

c. **Conservation:** Total number of Section 8 certificates and vouchers will increase by 25 new units per year of which one-half would be for certificates for lower income and one-half for vouchers for very low income.

Policy 8.2 Encourage variety and adequate amounts of housing through the following:

a. Mobile homes and factory-built housing built to Federal standards shall be allowed anywhere in the County that conventionally built housing is allowed, provided that such housing is permanently installed.

b. Continue the current granny, handicap and other second dwelling unit distinctions of the county permit process and specifically allow granny and handicap units as a permitted use, regardless of General Plan or zoning density.

   Encourage the construction of this housing type by promoting development by the Nevada County Housing Authority and local housing assistance organizations and providing building plans approved by the Nevada County Building Department. All second units shall comply with site development and building standards applicable to the primary dwelling on the site, including but not limited to water supply, sanitary waste disposal, vehicular access and fire safety.

c. Encourage the construction of multi-family and single-family housing units for very low and lower-income households and senior citizens by providing for projects qualifying under California Government Code Section 65915 by providing: (1) a bonus of at least 25%, but not more than 50% over density allowed by the General Plan Land Use Map and implementing zoning and (2) additional concessions and incentives provided by items d. and e. of Policy 8.4, consistent with the provisions of California Government Code Section 65915. These bonuses and other incentives equal or exceed those required by Government Code Section 65915. Assurance shall be made that said projects will continue to be made available to said income groups.

d. Provide for self-sufficient seasonal or permanent housing above that density allowed by the General Plan for employees and operators engaged in resource based production or resource management, including mineral extraction, timber harvesting and agriculture, subject to a conditional use permit (CUP) and findings that:
   1. Such housing units are not subdivided from the primary parcel.
   2. Such housing is clearly subordinate to and incidental to resource production or management on the site.
   3. All employees occupying such housing are employed on the site or on another site under the same ownership within Nevada County.
   4. Such housing is constructed and maintained to conform to the minimum standards approved by

the State Department of Housing and Community Development.

5. The use will not require the extension of sewer or potable water. .
6. All housing in excess of the maximum density permitted in the applicable zoning district shall be subject to restrictions limiting its use to employees or immediate family of the farm operator.

e. Provide a density bonus for multiple-family and congregate housing for disabled persons within the Urban Medium and Urban High Density land use designations if it can be demonstrated that the density bonus will not result in greater impacts than would result from a conventional multiple-family housing project.

f. To encourage the construction of affordable housing for moderate income households, the County may provide a bonus to qualifying projects of not more than 25% over the density allowed by the General Plan Land Use Map and implementing zoning. Housing provided under this density bonus shall be made available to moderate income households as defined in the General Plan Glossary. Additional concessions and incentives as defined under items d. and e. of Policy 8.4 may also be provided by the County for such housing.

Policy 8.3 Utilize conventional planning and zoning tools to encourage the production of housing.

Policy 8.4 Decrease those governmental constraints associated with processing housing development without compromising other General Plan policy, through the following:

a. Continue the function of the Nevada County Planning Department as the County's "Permit Information Center." This center will facilitate the one-stop permit approval process that will reduce the uncertainty and costs associated with said process.

b. Continue the function of the Nevada County Planning Director as the County's Zoning Administrator. Said Administrator shall hear residential variances and "minor" use permits and site plans.

c. To make available residential building plans approved by the Nevada County Building Department providing for affordable housing.

d. The following shall be provided for all portions of construction projects that provide housing for very low and lower-income households and for senior citizens. These exemptions, reductions in standards and waivers may also be provided by the County to other qualifying projects providing

affordable housing for moderate income households pursuant to Policy 8.2f.:

1. Architectural design standards of the "D" Design, "SC" Scenic Corridor, and "HP" Historic Preservation Combining Districts;

2. Reduction by 50 percent in the proportional open space retention standards of the County by a ratio equal to the number of affordable housing units to total housing units within a given project, provided some form of outdoor recreation is included in the project;

3. Waiver of parking lot standards for guest parking by a ratio equal to the number of affordable units to total units within a given project;

4. Reduction by 50 percent in the proportional site and parking lot landscaping standards by a ratio equal to the number of affordable housing units to total housing units within a given project;

5. Establishment of site and building setbacks that do not exceed the Fire Safe Standards required by the State Department of Forestry;

6. Exemption from building height limits unless required to comply with airport height restriction areas or fire district limitations; and

7. Reduction by 50 percent in all limitations on lot coverage for multi-family housing projects.

These exemptions, reductions in standards, and waivers are provided as an incentive for all qualifying construction projects, as well as those requesting a density bonus pursuant to Policy 8.2c and California Government Code Section 65915. Assurance shall be made that said projects will continue to be made available to said income groups.

e. Reduce by 50% all county permit fees for projects that develop housing for lower-income and senior citizen households, housing for the disabled, and second residential unit housing. This waiver is provided as an incentive for all development projects, as well as those requesting a density bonus pursuant to Policy 8.1 and California Government Code Section 65915. Assurance shall be made that said projects will continue to be made available to said income groups. This waiver may also be provided by the County to other qualifying projects providing affordable housing for moderate income households pursuant to Policy 8.2f.

f. Streamline the review of multi-family housing projects of up to and including, twenty-four (24) units by consideration of such projects as ministerial. Process all other permits for production of affordable housing within time limits specified by the Permit Streamlining Act.

g. All subdivisions within the UHD, UMD, USF, and RES General Plan Land Use Map designations shall have a mandatory density bonus of 10 percent applied to the number of building sites in the proposed project and rounding-up any fraction of a dwelling unit to one additional unit.

Bonus lots or dwelling units constructed on bonus lots shall be made available only to moderate income, lower income, senior citizen or disabled households. The County shall offer incentives where necessary, as provided in the policies of this chapter, to ensure that these projects are economically feasible.

This policy shall be implemented through the parcel and tentative map review process, and monitored by the Nevada County Housing Authority. Assurance shall be made that any units made available to lower income households will continue to be made available to said income groups.

h. Encourage the purveyors of public facilities and services to reduce connection and associated fees for all residential development projects that provide housing for lower-income and senior citizen households. The County may also encourage such purveyors to provide reduced connection and associated fees to other qualifying projects providing affordable housing for moderate income households pursuant to Policy 8.2f. Assurance shall be made that said projects will continue to be made available to said income groups.

Policy 8.5 Continued affordability shall be ensured in accordance with not less than the state mandates.

Policy 8.6 Maintain active involvement in Federal and State housing grant and loan programs. On an annual basis, the County shall apply for such grants or loans unless other overriding concerns dictate otherwise. Emphasis shall be placed on providing loans to the senior citizen and lower-income families for housing rehabilitation and/or assistance.

Policy 8.7 Continue to strongly support the current housing weatherization programs and Energy Crisis Intervention Program within Nevada County.

Policy 8.8 Provide for annual monitoring of Housing policy implementation. Substantial non-attainment or ineffective implementation of these policies shall be determined by comparing the actual number of housing units approved, constructed, rehabilitated, or conserved during each year of the period from July 1, 1992 to July 1, 1997 with a yearly 20% amortization of all quantified objectives. Actions to

resolve non-attainment or ineffective implementation shall be identified and incorporated into an annual action program to be adopted by the County.

Incorporate the results of the monitoring of the jobs/housing balance provided by Policy 2.4 and Policy 2.5, in the annual monitoring program of Housing policy implementation monitoring so that a coordinated balance is maintained between employment and housing opportunities.

Policy 8.9 Provide that all areas of the County shown as Urban High Density and Urban Medium Density on the General Plan land use map can be appropriate sites for subsidized housing. Nothing in this policy should be construed to imply that subsidized housing cannot occur in other locations nor that non-subsidized housing cannot occur in the above-mentioned land use designations.

Policy 8.10 Recognize, encourage, and assist all private non-profit and for-profit organizations in the development, rehabilitation, and conservation of affordable housing within Nevada County.

Policy 8.11 Designate the Nevada County Department of Housing and Community Services as the primary County agency responsible for the construction, rehabilitation, conservation, and management of affordable housing, and as the County's housing information center. This Center can assist developers in providing low-and moderate-cost housing projects and provide information on various housing loan and grant programs available to the elderly and low-income families.

Policy 8.12 Encourage the use of the Section "8" rental assistance housing program.

Policy 8.13 Encourage an adequate supply of emergency shelter housing or housing that provides an immediate short-term solution to homelessness, by allowing such housing within the following General Plan land use map designation:

a. Community Commercial
b. Neighborhood Commercial
c. Highway Commercial
d. Office-Professional
e. Urban High Density
f. Urban Medium Density
g. Public
h. Planned Development
i. Special Development Area

Policy 8.14 Encourage an adequate supply of transitional housing, or housing intended to remove the basis for homelessness through counseling programs and integration into other social services to assist in the transition to self-sufficiency, by allowing such housing within the following General Plan land use map designations:

a. Urban High Density

b. Urban Medium Density
c. Urban Single Family Density
d. Residential
e. Estate
f. Public
g. Planned Development
h. Special Development Area

Policy 8.15 Use of recreational vehicles or mobile homes during the construction of a permanent residence may be allowed throughout the County.

Policy 8.16 Fund and operate the Nevada County Housing Authority to effectively address the affordable housing issue in Nevada County. If practicable, encourage transformation of the Housing Authority into a Joint Authority with the incorporated municipalities within Nevada County.

Policy 8.17 Ensure an adequate supply of land to meet the County's share of regional lower-income housing needs during the period from July 1, 1992 to July 1, 1997 by providing sites at a capacity-to-need ratio of 2.3:1. UHD and UMD lands are also located in other areas of the County, such as the *Rural Centers* and the New Town Reserve, to allow for the provision of affordable housing, including housing for moderate-, low- and very low-income households in these areas.

The Urban High Density (UHD) land use designation shall be used on the General Plan Land Use Maps to identify appropriate sites for lower-income housing, at the rate of fifteen residential units per acre (strongly encouraged by Policy 8.19). The General Plan Land Use Maps shall designate additional lands for Urban Medium Density (UMD), which will provide for development of affordable housing at the rate of six residential units per acre (minimum density strongly encouraged by Policy 8.19).

Location of UHD and UMD lands are based upon maximizing the possible locations within *Community Regions* outside Grass Valley and Nevada City, and within other *Community Regions* with the greatest available urban infrastructure capacity (e.g. Higgins Corner/Lake of the Pines, and Penn Valley). UHD and UMD lands are also located in other areas of the County, such as the *Rural Centers* and the New Town Reserve, to allow for the provision of affordable housing, including housing for low- and very-low income households in these areas.

Objective 8.2 **Strongly discourage all forms of housing discrimination.**

Action Policy

Policy 8.18 The County shall promptly refer any report or complaint of discrimination in the sale, rental or occupancy of housing to the appropriate State or Federal agency. The County shall maintain documentation of all such reports or complaints, and shall include data on the County's action in the annual monitoring of Housing policy implementation.

See: Policy 8.22

Objective 8.3 **Provide for a balance between jobs and housing with consideration given to wage levels, housing affordability, and commute distance.**

See: Policy 8.17; Policy 8.19

Objective 8.4 **Ensure an adequate supply of housing by type.**

Action Policy

Policy 8.19 Maximize utilization of projected residential density on lands designated as Urban High Density (UHD) and Urban Medium Density (UMD), after considering environmental and public service constraints upon, and County development standards for each proposed project. The County shall strongly encourage the minimum density standards of fifteen dwelling units per acre for lands designated as Urban High Density (UHD), and six dwelling units per acre for lands designated as Urban Medium Density (UMD). Where legally and fiscally possible, the County shall make every effort possible to mitigate constraints upon multi-family development projects rather than under-utilize planned build-out.

See: Policy 8.17

Objective 8.5 **Ensure and facilitate efficient processing of housing development without compromising other General Plan policy.**

Action Policy

Policy 8.20 As part of the annual monitoring of Housing policy implementation, consider alternatives to increase the efficiency of the development review process for all housing developments, and incorporate recommendations for improvements in the annual action programs.

See: Policy 8.22

Objective 8.6 **Provide for the construction and maintenance of all types of housing based on standards that maintain public health and safety and conserve natural resources without necessarily increasing the cost of housing.**

Action Policies

Policy 8.21 Review all existing and future building codes to ensure the maintenance of those standards that reasonably provide for the public health, welfare, safety and energy efficiency, and to eliminate those standards that do not accomplish said goals.

Policy 8.22 Provide for the maintenance and improvement of existing housing through the enforcement of all building codes.

Objective 8.7 **Provide for a variety of alternative housing options and the use of alternative, innovative, and appropriate technology.**

Action Policies

Policy 8.23 Adopt a solar access ordinance that establishes development standards to protect and maximize solar access in all new residential development.

Policy 8.24 Encourage the innovative design of all land divisions that assist in the development of low-and moderate-cost housing and energy efficient housing (i.e., planned developments, clustered parcels, south-facing parcels, etc.).

Policy 8.25 Subject to a conditional use permit (CUP), allow various housing arrangement types, including construction of more than one primary residence on a parcel, community trust and co-housing (shared use of common areas) and multi-family residences within those land use map designations that permit residential development and are consistent with General Plan and zoning density.

Objective 8.8 **Ensure that appropriate types, densities and amounts of housing development are directed to *Community Regions* and *Rural Regions* and that development of housing in the *Community Regions* is encouraged to the maximum extent possible.**

See: Policy 8.17; Policy 8.19

CHAPTER 9: NOISE

Goal 9.1 **Provide for the health, safety, and welfare of the people of Nevada County through a set of polices designed to encourage an environment free of unnecessary and annoying noise.**

Objective 9.1 **Determine the existing noise environment and continue to reassess this environment so that a realistic set of noise standards can be developed reflecting the varying nature of different land uses.**

Directive Policies

Policy 9.1 The following noise standards, as performance standards and land use compatibility standards, shall apply to all discretionary and ministerial projects excluding permitted residential (including tentative maps) land uses.

Exterior Noise Limits				
Land Use Category	Zoning Districts	Time Period	Noise Level, dBA	
			L_{eq}	L_{max}
Rural	"A1" "TPZ" "AE" "OS" "FR" "IDR"	7 am - 7 pm 7 pm - 10 pm 10 pm - 7 am	55 50 40	75 65 55
Residential and Public	"RA" "R2" "R1" "R3" "P"	7 am - 7 pm 7 pm - 10 pm 10 pm - 7 am	55 50 45	75 65 60
Commercial and Recreation	"C1" "C11" "CS" "C2" "C3" "OP" "REC"	7 am - 7 pm 7 pm - 7 am	70 65	90 75
Business Park	"BP"	7 am - 7 pm 7 pm - 7 am	65 60	85 70
Industrial	"M1" "M2"	any time	80	90

a. Compliance with the above standards shall be determined by measuring the noise level based on the mean average of not less than three (3) 20 minute measurements for any given time period. Additional noise measurements may be necessary to ensure that the ambient noise level is adequately determined.

b. Where two different zoning districts abut, the standard applicable to the lower, or more restrictive, district plus 5 dBA shall apply.

c. The above standards shall be measured only on property containing a noise sensitive land use as defined in Policy 9.8 and may be measured anywhere on the property containing said land use. However, this measurement standard may be

amended to provide for measurement at the boundary of a recorded noise easement or as determined in a recorded letter of agreement between all effected property owners and approved by the County.

d. If the measured ambient level exceeds that permitted, then the allowable noise exposure standard shall be set at 5 dBA above the ambient.

e. Because of the unique nature of sound, the County reserves the right to provide for a more restrictive standard than shown in the Exterior Noise Limits table contained in this policy. The maximum adjustment shall be limited to be not less than the current ambient noise levels and shall not exceed the standards of this policy or as they may be further adjusted by Policy 9.1b.. Imposition of a noise level adjustment shall only be considered if one or more of the following conditions are found to exist:

    1. Unique characteristics of the noise source:

    (a). The noise contains a very high or low frequency, is of a pure tone (a steady, audible tone such as a whine, screech, or hum), or contains a wide divergence in frequency spectra between the noise source and ambient level.

    (b). The noise is impulsive in nature (such as hammering, riveting, or explosions), or contains music or speech.

    (c). The noise source is of a long duration.

    2. Unique characteristics of the noise receptor when the ambient noise level is determined to be 5 dBA or more below the Policy 9.1 standard for those projects requiring a General Plan amendment, rezoning, and/or conditional use permit. In such instances, the new standard shall not exceed 10 dBA above the ambient or the Policy 9.1 standard, whichever is more restrictive.

f. The above standards shall not apply to those activities associated with the actual construction of a project or to those projects associated with the provision of emergency services or functions.

g. The standards of this policy shall be enforced through compliance inspections and/or complaints.

h. Recognizing that this chapter must work toward the solution to existing noise problems, those land uses that are inconsistent with the above standards and are therefore non-conforming in

nature, shall comply with said standards as these land uses are upgraded or intensified or after abandonment through the use permit or site plan process. Said standards shall apply only to that portion of the land use requiring approval. In any event, the use or portion subject to a land use permit must meet the standards in the Exterior Noise Limits table in this policy and cumulatively the noise generated from the entire site must be equal to or less than the pre-land use permit ambient noise level. All such projects will require a comprehensive noise analysis per Policy 9.10 and the Nevada County Noise Element Manual.

Policy 9.2 The Nevada County Planning Department shall be the lead agency responsible for coordination of all local noise control activities and intergovernmental group activities and subsequent enforcement efforts.

Policy 9.3 The County will continue an ongoing County-wide noise monitoring program. The purpose of this program is to assess the changing noise environment in the County in terms of the existing ambient noise level for typical rural, residential, commercial and industrial areas and to ensure that the Policy 9.1 standards realistically reflect the current needs of the County.

Action Policy

Policy 9.4 This chapter of the General Plan shall be implemented, in part, through the incorporation of the Policy 9.1 noise standards within the Land Use and Development Code and the adoption of the Noise Element Manual providing detailed direction and implementation measures. This Manual is adopted as a part of the Plan and can be found in Volume 2, Section 3-Noise Analysis, Appendix A.

Objective 9.2 **Encourage public awareness of noise and its hazards and means to minimize its existing and future impacts.**

Directive Policies

Policy 9.5 Encourage heavy truck traffic to those routes outside residential areas.

Policy 9.6 Encourage cities within Nevada County to adopt noise control programs compatible with County efforts.

Objective 9.3 **Develop a realistic policy framework designed to function as a guide to planning for appropriate land uses in relation to hazardous and annoying noise.**

Directive Policies

Policy 9.7 Strongly discourage those General Plan amendments and zone changes that would likely create land use conflicts relative to noise.

Policy 9.8 Strongly encourage future noise sensitive land uses, including residences, schools, hospitals, nursing homes, churches, and libraries,

to those location of the County where the impact of noise generators is limited so that compliance with standards found in Policy 9.1 will be maintained. This policy shall apply to the approval of all tentative maps for residentially zoned parcels. As an additional guide in evaluating land use compatibility, those standards as found in Figure 1 shall be used.

Policy 9.9 Limit future noise generating land use to those location of the County where their impacts on noise sensitive land uses will be minimized, consistent with the standards found in Policy 9.1.

Policy 9.10 Require the preparation of a comprehensive noise study for all land use projects determined to have to potential to create noise levels inconsistent with those standards found in Policy 9.1. This study should normally include an analysis of existing pre-project ambient noise levels, frequency spectra, frequency of occurrence, and duration of typical sounds..

Policy 9.11 Provide for adequate design controls to assist in minimizing the impacts of future noise generating land uses through increased setbacks, landscaping, earthen berms, and solid fencing.

Policy 9.12 Strictly enforce the noise insulation standards for new construction as required by Title 24 of the California Administrative Code.

Policy 9.13 Minimize the noise impact from automobiles, trucks, motorcycles, and off-road vehicles by continuing to request enforcement of those sections of the California Vehicle Code relative to vehicle exhaust system maintenance by the County Sheriff and State Highway Patrol.

Policy 9.14 Where realistically possible, encourage noise sensitive land uses away from railroad operations.

Policy 9.15 The routing and design of new or expanded transportation facilities by the County shall incorporate feasible measures necessary to mitigate increases in noise levels.

Policy 9.16 Encourage the minimization of noise emission from all County-controlled activities consistent with Policy 9.1 standards.

Objective 9.4 **Protect the safety and general welfare of people in the vicinity of the Truckee-Tahoe Airport and Nevada County Airpark by promoting the overall goals and objectives of the California Airport Noise Standards (California Administrative Code, Title 21, Section 5000 et seq.) and the California Noise Insulation Standards (California Administrative Code, Title 25, Section 28), to prevent the creation of new noise-generated complaints around the two airports, and to minimize the public's exposure to excessive aircraft-generated noise.**

Directive Policies

Policy 9.17 Ensure the development of compatible land uses adjacent to the Nevada County Airpark-Airport through the approval of development

consistent with the land use maps of the General Plan, recommendations of the Airport Land Use Commission, and the continued enforcement of the Airport Land Use Noise Compatibility Criteria as found in the Nevada County Airpark Master Plan.

Policy 9.18 Ensure the development of compatible land uses adjacent to the Truckee-Tahoe Airport through the approval of development consistent with the land use maps of the Nevada County General Plan, recommendations of the Airport Land Use Commission, and by encouraging the implementation of the Truckee-Tahoe Airport Master Plan.

Policy 9.19 The County shall enforce noise standards consistent with the airport noise policies included in the Foothill Airport Land use Commission Comprehensive Land Use Plans for the Truckee-Tahoe Airport, adopted on December 3, 1986, and for the Nevada County Airpark, adopted on June 3, 1987, as those standards are in effect and may hereafter be amended.

CHAPTER 10: SAFETY

Goal 10.1 **Develop and maintain a high level of safety for people and property.**

Objective 10.1 **Encourage fire protection agencies to determine appropriate levels of fire protection facilities and services for both *Community* and *Rural Regions*.**

Directive Policies

Policy 10.1 Encourage the development of one uniform county-wide fire protection ordinance that maintains high fire protection standards for all public and private development, including adequate access and water flow standards. Also encourage local districts to adopt/accept said uniform ordinance with minimal adjustments to reflect local circumstances.

Policy 10.2 Encourage the upgrading of facilities within existing fire protection districts, and encourage the expansion of existing districts where warranted by the population density allowed under the General Plan.

Policy 10.3 Cooperate with the California Department of Forestry, U.S. Forest Service, and local fire districts in fire prevention programs.

Objective 10.2 **Land use patterns and development standards shall minimize fire hazard.**

Action Policies

Policy 10.4 Through establishment of the office of the County Fire Marshal or other appropriate means, the County shall coordinate and centralize firesafe reviews which will include coordination of development with respect to fire prevention and safety, and implementation of County fire safety programs, standards and procedures.

Policy 10.5 The following shall be included in Comprehensive Site Development Standards to be adopted by the County as the basis for site plan review:

a. Standards for roads and private driveways which will enhance the ability of emergency service providers to respond to structural and wildland fires, and calls for medical and law enforcement emergency assistance. The standards shall provide for secondary road access to new projects where necessary for fire safety or emergency access.

b. Water supply standards which will provide necessary on-site water supply for fire protection.

c. Sign and address standards which will provide for easy identification of roads, streets, driveways and buildings by emergency service providers.

d. Standards to reduce hazards associated with the structural and wildland intermix including:

1. Fuel modification and vegetation management procedures adjacent to structures;
2. Vegetation management adjacent to roads and driveways to provide safe travel of residents and fire fighting personnel; and
3. Building setbacks.

Also see: ***Chapter 1: Land Use***
Policy 1.17

Directive Policy

Policy 10.6 In those areas outside *Community Regions*, which are clearly shown to have a high fire hazard and/or lack adequate year-round fire protection facilities, maintain low-density land use designations (Rural or Forest) in order to minimize the potential fire hazard.

Objective 10.3 **Maintain land use and development patterns in the vicinity of airports that reflect and are consistent with airport safety zones.**

Directive Policy

Policy 10.7 Through appropriate zoning regulations, the County shall enforce airport ground and height safety areas, and land use compatibility standards, consistent with the Comprehensive Land Use Plans (CLUPs) adopted by the Foothill Airport Land Use Commission for the Truckee-Tahoe Airport and the Nevada County Airpark, as those plans are currently in effect. Changes in the CLUPs shall be reflected in the General Plan

Objective 10.4 **Provide for adequate evacuation routes in areas of high fire hazard, high potential for dam failure, earthquake, seiches, avalanche, flooding or other natural disaster.**

Directive Policies

Policy 10.8 Promote the continued effectiveness and public awareness of the Nevada County Emergency Operational Plan, through the local Office of Emergency Services, as the focus for planning for emergency evacuation of threatened population. The Plan identifies procedures and responsibilities for designating and preparing local evacuation routes on a area-specific and event-specific basis.

Policy 10.9 Consistent with the Emergency Operational Plan, the routes designated on the General Plan Land Use Maps as Interstates, freeways, highways, and other principal arterial routes shall be considered primary evacuation routes on a county-wide basis. Such

routes provide the highest levels of capacity and contiguity and serve as the primary means for egress from the County.

The routes designated on the General Plan Land Use Maps as minor arterial or major collector routes shall be considered secondary evacuation routes on a county-wide basis. These routes supplement the primary evacuation routes, and provide egress from local neighborhood and communities.

Objective 10.5 **Maintain appropriate levels of safety and protection services and facilities on land and water for both *Community* and *Rural Regions*.**

Directive Policy

Policy 10.10 County public safety facilities shall be included in the County's development impact fee program, as provided in Policy 3.8 to provide for new facilities or upgrading of existing facilities necessary to serve new development.

Action Policy

Policy 10.11 The following shall be included in Comprehensive Site Development Standards to be adopted by the County as the basis for site plan review:

a. Standards to enhance the ability of the County law enforcement personnel to protect multi-family, commercial, industrial, and business park uses, including but not limited to:
   1. exterior building and parking area lighting
   2. trimming and maintenance of on-site vegetation to provide adequate view of parking areas, building entrances, and other areas accessible to the public

b. Standards to ensure adequate site and building access for fire and emergency medical access.

Objective 10.6 **Land use patterns and development standards shall minimize hazards resulting from flooding, earthquake, slope failure, avalanche, and other natural occurrences.**

Action Policies

Policy 10.12 Avoid potential increases in downstream flooding potential by protecting natural drainage and vegetative patterns through project site plan review, application of Comprehensive Site Development Standards, use of clustered development and project subdivision design. The Comprehensive Site Development Standards shall include measures applicable to all discretionary and ministerial projects to avoid downstream flooding resulting from new development. Such measures, shall include, but not be limited to:

a. Avoidance of stream channel modifications,

b. Avoidance of excessive areas of impervious surfaces; and
c. Use of on-site retention or detention of storm water.

Policy 10.13 Continue to cooperate with the State Division of Mines and Geology, the State Office of Emergency Services and other appropriate Federal, State and local agencies and incorporate the most current data concerning the following as the basis for the County's Site Development Standards, and project site plan review:

a. geologic hazards; and
b. seismic hazard data for sensitive land uses such as schools, medical facilities, high-density residential uses, and intensive commercial uses.

The project review shall consider the need to mitigate development in such areas in accordance with Federal, State and local standards.

As part of the project site review process, require sufficient soils and geologic investigations to identify and evaluate the various seismic hazards that may exist for all proposed development, including subdivisions, shall be required within an area determined to be seismically active by the State Division of Mines and Geology.

Directive Policies

Policy 10.14 Continue to work with appropriate local, State and Federal agencies (particularly FEMA) in maintaining the most current flood hazard and flood plain information as a basis for project review in such areas in accordance with Federal, State and local standards.

Policy 10.15 Continue to participate in the National Flood Insurance Program.

Policy 10.16 Carry out the requirements of the Uniform Building Code, particularly with regard to seismic design.

Policy 10.17 Coordinate with the State Office of Emergency Services for wildfire, earthquake, seiche, avalanche and other natural disaster and encourage public awareness of implementation of State programs. The local earthquake preparedness plan shall be coordinated with regional plans for earthquake preparedness through the local and State Office of Emergency Services.

Policy 10.18 Require that underground utility lines, particularly water and natural gas mains, are designed to withstand seismic forces.

Objective 10.7 **Provide means for the identification, safe use, storage, transport, and disposal of hazardous materials.**

Directive Policy

Policy 10.19 In siting on and off-site hazardous waste management facilities, the County shall follow the criteria and mitigation measures set forth in the Nevada County Hazardous Waste Management Plan (HWMP), and attendant Final Environmental Impact Report, in order to

minimize safety hazards associated with hazardous material and hazardous waste incidents.

Objective 10.8 **Existing and future land use patterns shall provide for alternative routes for emergency access.**

See: Policy 10.5; Policy 10.9

See: Circulation Maps

Also see: ***Chapter 4: Circulation***
Policy 4.23

Objective 10.9 **Encourage appropriate levels of consolidated services to provide for efficiency and cost containment.**

Directive Policy

Policy 10.20 The County will encourage joint service agreements and consolidation of police, fire, and emergency services between the County, cities, and service districts.

CHAPTER 11: WATER

Goal 11.1 **Identify, protect and manage for sustainable water resources and riparian habitats.**

Objective 11.1 **Promote and provide for conservation of domestic and agricultural water.**

Action Policy

Policy 11.1 Adopt water conservation standards, consistent with State guidelines, for multi-family, commercial and industrial development encouraging installation and use of low-flow plumbing fixtures, drip irrigation systems, and drought-tolerant landscape plantings.

Directive Policy

Policy 11.2 Encourage the protection of resources which produce water for domestic and agricultural consumption.

Also see: ***Chapter 13: Wildlife and Vegetation***
Policy 13.1

Chapter 16: Agriculture
Policy 16.14

Directive Policy

Policy 11.3 To promote protection of water quality where water is transported in open canals, the County shall support reasonable protective regulations adopted by public water purveyors in the processing of subdivision and discretionary permit applications.

Objective 11.2 **Preserve surface and sub-surface water quality and, where feasible, improve such quality.**

Directive Policies

Policy 11.4 Cooperate with State and local agencies in efforts to identify and reduce to acceptable levels all sources of existing and potential point- and non-point-source pollution to ground and surface waters, including leaking fuel tanks, discharges from storm drains, auto dismantling and dump sites, sanitary waste systems, parking lots, roadways, logging and mining operations.

Also see: ***Chapter 12: Soils***
Policy 12.1

Chapter 17: Minerals Management
Policy 17.11; Policy 17.12; Policy 17.15

Policy 11.5 Maintain the operation of the Nevada County Water Agency Advisory Council in order to promote continuing communication and cooperation between public water purveyors and other public agencies in protecting and enhancing the County's water resources.

Policy 11.6 The County shall continue to enforce its regulations concerning the installation and operation of private sanitary waste disposal systems in order to protect the quality of surface and ground water.

Also see: ***Chapter 3: Public Facilities and Services***
Policy 3.19

Objective 11.3 **Preserve and, where economically feasible, restore the density and diversity of water-dependent species and continuous riparian habitats based on sound ecological principles.**

Action Policy

Policy 11.7 Through the development and application of Comprehensive Site Development Standards, and project environmental review, establish and enforce minimum building setback lines (defined as average high water mark) of perennial streams and significant wetlands, that are adequate to permanently protect stream and wetland resource values.

Also see: ***Chapter 1: Land Use***
Policy 1.17

Chapter 13: Wildlife and Vegetation
Policy 13.1

Directive Policy

Policy 11.8 Utilize voluntary clustering of development to preserve stream corridors, riparian habitat, wetlands, and floodplains.

Also see: ***Chapter 1: Land Use***
Policy 1.18

Chapter 13: Wildlife and Vegetation
Policy 13.1

Objective 11.4 **Preserve the integrity and minimize the disruption of watersheds and identified critical water courses.**

Directive Policy

Policy 11.9 Within *Rural Regions*, maintain the low densities of development allowed in the Rural and Forest General Plan Land Use Designations, in order to protect existing watersheds.

Also see: ***Chapter 1: Land Use***
Policy 1.22

Objective 11.5 **Support the acquisition, development, maintenance and restoration, where clearly consistent with General Plan policies, of habitat lands for wildlife enhancement.**

Directive Policies

Policy 11.10 Cooperate with State and Federal agencies and public and quasi-public organizations and agencies in the acquisition, restoration, and maintenance of habitat lands.

Also see: ***Chapter 13: Wildlife and Vegetation***
Policy 13.1

Policy 11.11 Cooperate with and encourage the USFS and BLM to restore/maintain habitat areas on existing owned lands.

CHAPTER 12: SOILS

Goal 12.1 **Minimize adverse impacts of grading activities, loss of soils and soil productivity.**

Objective 12.1 **Minimize earth movement and disturbance.**

Directive Policies

Policy 12.1 Enforce Grading Ordinance provisions for erosion control on all new development projects by adopting provisions for ongoing monitoring of project grading. Project site inspection shall be required prior to initial site disturbance and grading to ensure all necessary control measures, including proper staking and tree protection measures, are in place. The installation, maintenance, and performance of erosion and sedimentation control measures shall be monitored by County or District staff (or their designee) and completely funded by a project applicant. All County projects shall comply with this policy.

Policy 12.2 Enforce Grading Ordinance requirements for grading or vegetation removal not associated with a development project. Exempted from this requirement are actions necessary for evaluation of soils and other environmental characteristics, and for control of fire fuels, and for agricultural and timber production.

Policy 12.3 Cooperate with and encourage the activities of the Nevada County Resource Conservation District.

Objective 12.2 **Minimize erosion due to road construction and maintenance.**

Directive Policies

Policy 12.4 Require erosion control measures as an element of all County contracts, discretionary projects, and ministerial projects.

Policy 12.5 Encourage the efforts of the Resource Conservation District and other related agencies to educate and assist the general public about techniques and practices to minimize private road maintenance related erosion.

Also See: ***Chapter 1: Land Use***
Policy 1.17

Objective 12.3 **Minimize vegetation removal.**

Also See: ***Chapter 13: Wildlife and Vegetation***
Policy 13.2 Policy 13.3; Policy 13.8

CHAPTER 13: WILDLIFE AND VEGETATION

Goal 13.1 **Identify and manage significant areas to achieve sustainable habitat.**

Objective 13.1 **Discourage intrusion and encroachment by incompatible land uses in significant and sensitive habitats.**

Directive Policy

Policy 13.1 Where significant environmental features, as defined in Policy 1.18, are identified during review of projects, the County shall require all portions of the project site that contain or influence said areas to be retained as non-disturbance open space through clustered development on suitable portions of the project site, or other means where mandatory clustering cannot be achieved.

The intent and emphasis of such open space designation and non-disturbance is to promote continued viability of contiguous or inter-dependent habitats by avoiding fragmentation of existing habitat areas and preserving movement corridors between related habitats. Vegetation management for the benefit of habitat preservation or restoration shall be considered consistent with the intent of this policy.

Also see: ***Chapter 1: Land Use***
Policy 1.18

Chapter 6: Open Space
Policy 6.2

Chapter 11: Water
Policy 11.3; Policy 11.4

Chapter 15: Forest
Policy 15.3

Action Policies

Policy 13.2 As part of the Comprehensive Site Development Standards, include standards to minimize removal of existing vegetation and require installation and long-term maintenance of landscaping in setbacks and buffer areas. These standards shall be applicable to all discretionary projects and to all ministerial projects other than a single-family residence located on an individual lot. Tree removal may be allowed where necessary to comply with public right-of-way development or dedication, or development of required site access and public utilities. Individual trees or groups of trees shall be protected during construction to prevent damage to the trees and their root systems.

Vegetation in proximity to structures shall conform to applicable fire protection standards.

Also See: ***Chapter 1: Land Use***
Policy 1.17

Chapter 10: Safety
Policy 10.5

Policy 13.3 As part of the Comprehensive Site Development Standards, require at least the partial use of drought tolerant native and/or site-appropriate plant species for landscaping of all new multi-family residential, commercial, and industrial projects.

Also See: Chapter 1: Land Use
Policy 1.17

Directive Policy

Policy 13.4 Encourage long-term sustainability and maintenance of landscaped areas.

Objective 13.2 **Minimize impacts to corridors to ensure movement of wildlife.**

See: Policy 13.1

Objective 13.3 **Provide for the integrity and continuity of wildlife environments.**

See: Policy 13.1; Policy 13.2

Objective 13.4 **Support the acquisition, development, maintenance and restoration, where feasible, of habitat lands for wildlife enhancement.**

Directive Policy

Policy 13.5 Participate in all bio-regional planning councils, initiated by Federal or State agencies, that involve lands within the jurisdiction of Nevada County. County representatives on such councils shall be appointed by the Board of Supervisors. The purpose of participation shall be to ensure the policies of the General Plan are complemented by and incorporated into any bio-regional plan encompassing all or part of Nevada County.

See: Policy 13.1

Objective 13.5 **Support, where feasible, the continued diversity and sustain ability of the habitat resource through restoration and protection.**

Directive Policy

Policy 13.6 Monitor, through the input of other agencies, the sensitive wildlife and habitat resources of Nevada County to ensure the continued validity and effectiveness of General Plan policies intended to protect,

preserve and enhance these resources. Results of monitoring shall be incorporated into the General Plan Update process.

Also see: ***Chapter 1: Land Use***
Policy 1.35

Action Policy

Policy 13.7 Require a Conditional Use Permit (CUP) for alteration of significant environmental features (as defined in Policy 1.18) not associated with a development project for parcels planned for subdivision or for multi-family residential, commercial or industrial development. Exempted from this requirement are actions necessary for evaluation of environmental characteristics, and for control of fire fuels.

Also see: ***Chapter 1: Land Use***
Policy 1.18

Objective 13.6 **Discourage significant adverse environmental impacts of land development, agricultural, forest and mining activities on important and sensitive habitats.**

See: Policy 13.1

Also see: ***Chapter 1: Land Use***
Policy 1.17; Policy 1.18

Chapter 15: Forest
Policy 15.1

Chapter 17: Mineral Management
Policy 17.15

Objective 13.7 **Identify and preserve heritage and landmark trees and groves where appropriate.**

Directive Policy

Policy 13.8 As part of the Comprehensive Site Development Standards, include measures applicable to all discretionary and ministerial projects to minimize disturbance of heritage and landmark trees and groves. These measures shall include, but are not limited to, requirements for on-site vegetation inventories and mandatory clustering of development in areas likely to support such vegetation or habitat.

See: Policy 13.2

Also see: ***Chapter 1: Land Use***
Policy 1.17

Objective 13.8 **Minimize removal or disturbance of low elevation oak habitat.**

See: Policy 13.8

CHAPTER 14: AIR QUALITY

Goal 14.1 **Attain, maintain and ensure high air quality.**

Objective 14.1 **Establish land use patterns that minimize impacts on air quality.**

Directive Policy

Policy 14.1 Cooperate with the Air Quality Management District (currently the NSAQMD), during review of development proposals. As part of the site plan review process, require applicants of all subdivisions, multi-family, commercial and industrial development projects to address cumulative and long-term air quality impacts, and request the District enforce appropriate land use regulations to reduce air pollution.

Also See: ***Chapter 4: Circulation***
Policy 4.30

Objective 14.2 **Implement standards that minimize impacts on and/or restore air quality.**

Action Policy

Policy 14.2 Include the following as part of the Comprehensive Site Development Standards:

a. Encourage maximized solar access, where feasible, and consistent with the maintenance of scenic values, in new subdivision designs to optimize energy efficiency;

b. Require all installations of solid fuel-burning devices comply with the current Federal EPA emission standards;

c. Require installation of masonry and zero-clearance fireplaces in new construction to comply with the current EPA Phase particulate emission limits;

Also See: ***Chapter 1: Land Use***
Policy 1.17

Chapter 4: Circulation
Policy 4.25

Directive Policies

Policy 14.3 Where it is determined necessary to reduce short-term and long-term cumulative impact, the County shall require all new discretionary projects to offset any pollutant increases. Wherever possible, such offsets shall benefit lower-income housing.

Policy 14.4 Encourage and cooperate with the Northern Sierra Air Quality Management District, or any successor agency, to:

a. Work with the County, local public utility districts, other public agencies and the private sector to encourage the development and implementation of educational and incentive program to encourage energy conservation, house weatherization, solar energy use in new and existing buildings, and provide air quality monitoring and advisory programs (e.g. daily standard air pollution index data);

b. Develop a community chipping program in cooperation with the Nevada County Department of Sanitation and existing homeowner associations, and provide incentives for chipping in-lieu of outdoor burning and/or provide alternatives to outdoor burning;

c. Adopt control measures to reduce pollutant emissions from open burning;

d. Develop a program to regulate and control fugitive dust emissions from construction projects; and

e. Identify and establish visibility standards for air quality in the County.

Policy 14.5 Encourage and cooperate with the Northern Sierra Air Quality Management District, or any successor agency, to develop and implement a long term monitoring program to quantify air quality in the County. The County shall work with the District to identify areas for monitoring and to develop an implementation program to begin on-site monitoring upon project application where a proposal will result in an increase of more than 25 tons per year of non-attainment pollutants (or precursors). The County will also cooperate with the District in developing a monitoring program for carbon monoxide emissions at key intersections as a basis for consideration of short- to long-term air quality in the preparation of the County Road Improvement Program.

Policy 14.6 For new construction, the County shall prohibit the installation of non-EPA certified and non-EPA exempt solid fuel burning devices.

Policy 14.7 The County shall cooperate with all appropriate agencies and other regional transportation agencies that include surrounding counties to develop programs designed to maximize the participation of employers in employer-operated van pool and/or ride sharing for employees, and mass transit service for both employees and customers.

Also see: ***Chapter 4: Circulation***
Policy 4.7; Policy 4.16; Policy 4.25; Policy 4.28

Objective 14.3 **Identify regional impacts and coordinate with other agencies to achieve attainment.**

Directive Policy

Policy 14.8 Consider adoption of Joint Powers Agreements or similar legal mechanisms with other counties located within Nevada County's regional sphere to comprehensively address regional air quality impacts as a result of development in each County.

CHAPTER 15: FOREST

Goal 15.1 **Identify and maintain sustainable timber lands and resources.**

Objective 15.1 **Identify and protect significant timber lands from conversion to unrelated residential and other non-timber-related uses.**

Directive Policies

Policy 15.1 Maintain a low density of allowable development in the Forest land use designation as shown on the General Plan Land Use maps, in order to protect the major areas of potential timber resources in the County from conversion to other more intensive uses.

Policy 15.2 Limit the provision of public facilities and services in important timber areas, except where necessary to address public health or safety problems.

Policy 15.3 Encourage the clustering of development in timberland areas within the Rural and Forest land use designation as shown on the General Plan Land Use Maps, to preserve timber resources for productive use.

Also see: ***Chapter 1: Land Use***
Policy 1.18

Chapter 13: Wildlife and Vegetation
Policy 13.1

Objective 15.2 **Promote and provide for the continued diversity and sustainability of the forest resources including timber, watersheds, wildlife habitat, aesthetics and recreation.**

Directive Policies

Policy 15.4 The Forest and Open Space land use designations are the major timber producing land use designations; however, other land uses also provide opportunities for timber management and production.

Also See: ***Chapter 1: Land Use***
Policy 1.5; Policy 1.19

Policy 15.5 Encourage and provide for use of the Timberland Production Zone ("TPZ") provisions of the County zoning regulations in the Estate, Rural and Forest land use designations, for those lands which have significant commercial timber value.

Action Policy

Policy 15.6 Recognize the need and importance in the Forest land use designation of managing forest products, and of managing natural resources to

enhance outdoor recreation. Recognize the importance for providing for an efficient and cost effective means of harvesting and using forest lands.

Recognize that the forested areas have a need for certain commercial support uses which should be allowed in a manner which is consistent with the forest use and outdoor recreation areas.

Uses which are consistent in the Forest land use designation may include:

a. the processing of forest products and natural resources;
b. campgrounds; and
c. outdoor recreation activities.

Comprehensive Site Development Standards shall be implemented to ensure that such development is consistent with the character of the area, will not adversely impact resource management, and is sensitive to environmental constraints.

Also see: ***Chapter 1: Land Use***
Policy 1.17

Objective 15.3 **Provide for both on-site and off-site forest-related industries while minimizing conflicts with adjacent uses.**

See: Policy 15.1; Policy 15.6

Also see: ***Chapter 1: Land Use***
Policy 1.17

CHAPTER 16: AGRICULTURE

Goal 16.1 **Encourage the use of significant agricultural lands and operations in *Rural Regions*.**

Objective 16.1 **Identify and encourage the use of significant agricultural lands based on soil type and suitability for various forms of agriculture.**

Directive Policies

Policy 16.1 Agriculture is strongly encouraged in *Rural Regions* and allowed in *Community Regions*. Agricultural land shall include all those land areas of Nevada County now used for agricultural operations, or upon which agricultural operations may be established in the future in conformance with applicable zoning regulations.

Policy 16.2 Agricultural operations shall include, but not be limited to:

a. Cultivation and tillage of the soil
b. Dairying
c. Production, irrigation, frost protection, cultivation, growing, harvesting, storage, and processing of any agricultural commodity, including production of timber, trees, shrubs, flowers, herbs and all other plants
d. Viticulture, including vineyards
e. Horticulture
f. Apiculture
g. Raising of livestock, fur-bearing animals and all other kinds of animal husbandry
h. Culture or breeding of poultry, fish, marine life, mollusks, and all other types of animal or plant life
i. Commercial practices performed incidental to or in conjunction with such agricultural operations, including selling, processing, packing, preparation for market, delivery to storage, market or to carriers for transportation to market.

Policy 16.3 Allow aquaculture (the raising, harvesting and production of fish) on lands zoned for agricultural use on the same basis as land-based agricultural operations.

Objective 16.2 **Maintain and encourage agriculture on lands zoned for agricultural use, especially those which border *Community Regions*, while minimizing conflicts with adjacent nonagricultural lands.**

Directive Policy

Policy 16.4 In *Rural Regions*, maintain existing agricultural zoning on lands designated as Rural on the General Plan Land Use maps, including land in the RA, A1, AE, FR and TPZ districts, to allow for the continuation of existing agricultural operations, as well as the

introduction of new agricultural operations consistent with the regulations of the respective districts.

Action Policy

Policy 16.5 All new residential land divisions adjacent to important agricultural lands shall require a setback of not less than 100 feet to minimize potential land use conflicts. All such development will require the recording of a declaration acknowledging proximity of agricultural resources and the potential for conflict.

Objective 16.3 Minimize and reduce pressures to convert lands zoned for agricultural use to more intensive uses.

Action Policy

Policy 16.6 Amend the Right to Farm Ordinance to provide for notice to buyers of land in the RA, A1, AE and FR zoning districts describing normal agricultural practices which may occur in such districts and informing buyers of the right to continue such practices in conformance with the applicable district regulations.

Directive Policy

Policy 16.7 Support efforts by private conservation organizations to utilize voluntary conservation easements as a means of preserving land in agricultural use.

Objective 16.4 Identify the appropriate parcel sizes on lands zoned for agricultural use that provide for a range of agricultural operations that may be carried on in those zones.

Directive Policies

Policy 16.8 Allow new development in *Rural Regions* outside of *Rural Centers* only for those land use types which are consistent and compatible with the rural agricultural character of these areas. Compatible land use types are those defined in the following General Plan land use designations:

a. Estate 0.3 du/acre (3 ac/du)
b. Rural -5 0.2 du/acre (5 ac/ du)
c. Rural-10 0.1 du/acre (10 ac/du)
d. Rural-20 0.05 du/acre (20 ac/du)
e. Rural-30 0.03 du/acre (30 ac/du)
f. Rural-40 0.025 du/acre (40 ac/du)
g. Rural-160 0.00625 du/acre (160 ac/du)
h. Highway Commercial
i. Rural Commercial
j. Public
k. Open Space
l. Forest
m. Water Area
n. Planned Development

Also see: ***Chapter 1: Land Use Policy 1.6***

Policy 16.9 Clustering of new residential development in *Rural Regions* shall be encouraged and utilized in accordance with Policy 1.18 to reduce potential conflicts between agricultural operations. Such clustering shall provide for a natural or man-made buffer between the residential development and adjacent agricultural uses.

Also see: ***Chapter 1: Land Use Policy 1.18***

Objective 16.5 On all lands zoned for agricultural use, allow and provide for on-site and off-site support facilities, services and uses that further local agricultural production and marketing.

Action Policy

Policy 16.10 Allow permanent facilities for marketing of products grown or processed on-site; agricultural support services; and visitor-serving uses and facilities, and lodging facilities for visitors on all lands zoned for agricultural use with a Conditional Use Permit (CUP), which addresses but is not limited to the following:

a. The use clearly supports local agricultural production and promotes or markets agricultural products grown or processed in Nevada County; is clearly subordinate and incidental to agricultural production; and does not substantially detract from agricultural production on-site or in the area.
b. The use will not require the extension of sewer or potable water.
c. The use does not create a concentration of commercial uses in the immediate area.
d. There shall be no significant adverse effect on the surrounding area.

Agricultural support services shall include processing services, maintenance and repair of farm machinery and equipment, veterinary clinics, custom farming services, agricultural waste handling and disposal services and other similar services.

Directive Policy

Policy 16.11 Support efforts by the Nevada County Department of Agriculture and other sponsoring agencies to develop and promote a marketing program for products to be recognized as originating in Nevada County.

Objective 16.6 Allow housing for agricultural workers and their families on lands zoned for agricultural use, to serve seasonal requirements.

Action Policy

Policy 16.12 Allow housing for the farm operator and employees of the farm operator and their families (including temporary or permanent housing for seasonal employees) on all lands zoned predominantly for agricultural use provided that:

a. Housing units are not subdivided from the primary agricultural parcel.
b. Housing is clearly subordinate to and incidental to agricultural production on the site.
c. All employees occupying such housing are employed on the site or on another site under the same ownership within Nevada County.
d. Housing is constructed and maintained to conform to the minimum standards approved by the State Department of Housing and Community Development.
e. The use will not require the extension of sewer or potable water.
f. All housing in excess of the maximum density permitted in the applicable zoning district shall be limited to use by employees or immediate family of the farm operator.

To facilitate the approval of employee housing, the County shall establish appropriate standards and pre-approved plans for temporary dormitory or trailer housing for seasonal agricultural employees in conformance with the minimum standards approved by the State Department of Housing and Community Development.

Also see: ***Chapter 8: Housing***
Policy 8.2d

Goal 16.2 Promote a strong and sustainable local agricultural economy.

Objective 16.7 **Allow marketing of products grown or processed on-site in all areas zoned for agricultural uses.**

See: Policy 16.10

Objective 16.8 **Facilitate the placement of significant agricultural lands in the Williamson Act.**

Directive Policy

Policy 16.13 Continue participation in the Williamson Act program.

Objective 16.9 **Promote new means for the recycling of waste that could be used by agricultural operations.**

Directive Policy

Policy 16.14 Cooperate with wastewater generators in establishing programs for voluntary agricultural reuse of treated water in a manner which would be economically beneficial to agriculture, including investigations of reuse alternatives and establishment of a wastewater irrigation district.

Goal 16.3 Provide for and protect agricultural water supplies.

Objective 16.10 **Support the provision of adequate water for agricultural irrigation in Nevada County, while encouraging conservation in its use.**

Directive Policies

Policy 16.15 Encourage the Nevada Irrigation District and the Nevada County Resource Conservation District in their efforts to implement water conservation and greater efficiency of water use by agricultural as well as urban users through measures such as:

a. Development of an irrigation system that could supply water on an "as needed" basis.
b. Continued efforts to line existing canals.
c. Increased use of sprinklers and drip irrigation.
d. Monitoring of water usage through the use of current technology such as tensiometers and gypsum blocks.

Policy 16.16 Encourage multiagency participation in water projects where such coordination may facilitate providing affordable irrigation water to areas of the County which have water deficiencies.

Also see: ***Chapter 11: Water***
Policy 11.5

CHAPTER 17: MINERAL MANAGEMENT

Goal 17.1 **Recognize and protect valuable mineral resources for current and future generations in a manner that does not create land use conflicts.**

Objective 17.1 **Protect valuable mineral deposits from intrusion by incompatible land uses that will impede or preclude mineral extraction or processing. Promote the proper management of all mineral resource activities in the County and minimize the impact of extraction and processing on neighboring activities and the environment in general.**

Recreational Mining

Directive Policy

Policy 17.1 Recreational mining as defined herein shall not require a County use permit; however, certain Federal or State regulations and local building and sanitation regulations may apply.

Exploration

Directive Policies

Policy 17.2 Exploration is conditionally permitted in compatible General Plan designations. A conditional use permit shall be required if:

a. Overburden or mineral deposits in excess of 1,000 cubic yards are disturbed, or
b. The operation in any one location exceeds one acre in size, or
c. De-watering will occur or water will be discharged from the site as a result of the operation.

Exploration is conditionally permitted in incompatible General Plan designations providing:

a. Methods of geological survey, geophysical, or geochemical prospecting are used, or
b. Bore holes and trial pits not exceeding 100 cubic yards of overburden or other mineral disturbance per acre may be done.
c. No explosives may be used other than geophysical; there may be no drifting or tunneling and de-watering or water discharge is not allowed.

Policy 17.3 All exploratory operations shall require a reclamation plan unless:

a. Less than 1,000 cubic yards of overburden are disturbed, and
b. The size of the operation in any one location is one acre or less.

In those instances where a reclamation plan is not required, an erosion control plan, approved by the Nevada County Planning Department, and a grading permit shall be required for those operations in which 50 cubic yards or more of overburden are disturbed.

Mine Development and Operation

General

Directive Policies

Policy 17.4 All operations shall comply with the Nevada County General Plan Noise Chapter standards.

Policy 17.5 Nevada County hereby recognizes, accepts, and adopts by reference those State Classification Reports as found in Appendix A of this Chapter providing information on the location of significant mineral deposits within the County.

The General Plan land use map shall include a Significant Mineral Deposit identification reflecting MRZ-2 areas as determined in the Reports and similar studies. At any time a Classification Report is presented to the County, said map shall be amended to reflect the Report within 12 months. When it is necessary, due to the lack of specificity, to clarify the exact location of this identification, said Reports shall be used.

Policy 17.6 Encourage extraction of mineral resources in compatible areas prior to intensified urbanization or conversion to other incompatible land use development.

Policy 17.7 Use permit time limits for each project shall be established on a case-by-case basis. Time limits shall be based on the reasonably expected life of the mining operation and potential conflicts with future neighboring land uses. Each project shall have a periodic review for compliance with the use permit by the Planning Agency. In no case shall such review time period exceed five years. Said review shall be funded by the applicant.

Policy 17.8 A reclamation plan, consistent with the State Surface Mining and Reclamation Act standards, is required for all mining operations. Reclamation shall:

1. Prevent, mitigate, or minimize adverse effects on the environment.
2. Encourage the production and conservation of minerals.
3. Provide for the protection and subsequent beneficial use of mined and reclaimed land.
4. Eliminate residual hazards to the public health and safety.

5. Ensure that mined lands are reclaimed on a timely basis to a usable condition that is readily adaptable for alternative land uses.

6. Avoid the environmental and legal problems created by improperly abandoned mines.

Policy 17.9 Encourage the mining of previously mined land, if such land still contains economically mineable minerals, so the land can be reclaimed for alternative uses.

Policy 17.10 Consider the socio-economic impacts associated with proposed mining operations.

Policy 17.11 Recognize the importance of water conservation and quality for the present and future needs of the County by:

1. Requiring the conservation of on-site water during mining operations.

2. Requiring that off-site water discharge complies with State water quality standards.

3. Requiring that any increase or decrease of off-site discharge is not detrimental to the downstream environment or downstream water users.

Policy 17.12 In approving mining projects which according to expert opinion may threaten the existing quality or quantity of surface or subsurface water which supply adjacent homes and businesses, the County shall require the operator to guarantee a comparable supply of water to such homes or businesses through accessible forms of security or alternate sources of water.

Where water quantity and quality problems occur, an immediate water supply shall be provided by the operator until the source of the problem is determined. The burden of proof shall be on the operator to show that the mining operation did not create the water problem. If it is determined that the operator is at fault, impacted owners shall be compensated by the operator.

Policy 17.13 The County shall require satisfactory forms of accessible security, including irrevocable letters of credit, cash deposits, escrowed negotiable securities, or performance bonds, from all mining projects to cover all such damages which may stem from the projects.

Policy 17.14 Already existing development - commercial, residential, and community - as well as undeveloped private lands, shall be protected from adverse environmental effects caused by mining through enforced use permit conditions and mitigations measures, or denial of the projects. The County shall be the enforcement agency.

Surface Mining

Action Policies

Policy 17.15 Surface mining is conditionally permitted only in compatible General Plan designations as defined herein and on parcels zoned "ME". Said mining shall be allowed only after impacts on the environment and nearby land es have been adequately reviewed and found to be in compliance with CEQA

Of particular importance shall be the impact of the operation on nearby land uses, water quantity and quality, noise and vibration impacts, and traffic associated with the operation. All other related impacts shall also be addressed.

Policy 17.16 Upon acceptance of the State Classification Reports by the County, all existing and subsequent property owners of MRZ-2 lands shall be notified by the County of the existence of significant mineral deposits and the potential for mining in that area.

Directive Policies

Policy 17.17 The County shall use the "ME" Mineral Extraction Combining District as a means to provide for the public awareness of the potential for surface mining to occur where it has been established that important minerals are present. The "ME" District shall be used only on those lands which are within any of the compatible General Plan designations and which are not residentially zoned.

Policy 17.18 Incompatible land uses relative to surface mining should be discouraged in all areas designated both compatible and MRZ-2.

Policy 17.19 Any proposed residential development, including land divisions and dwelling unit construction, located within 1,000 linear feet from an area zoned "ME" shall be developed to ensure that said development is located as far removed from the area zoned "ME" as is reasonably possible.

Policy 17.20 Zone changes removing the "ME" district from the base district shall be considered by the County only when specific studies similar in nature to State Classification Reports prove that a significant mineral deposit no longer exists.

Policy 17.21 To ensure the protection of significant aggregate deposits, the County may zone "ME" all such identified and potential deposits within compatible General Plan designations and non-residential zoning districts.

Policy 17.22 Aggregate extraction may be allowed in rivers and floodplains provided environmental impacts associated therewith are addressed through the CEQA process.

Action Policies

Policy 17.23 Prepare a comprehensive plan for river and flood plain development that ensures aggregate operations within rivers and floodplains which

have the least impact on the environment are developed before more environmentally-sensitive areas are approved and to also ensure that the environmental impacts of proposed aggregate operations within rivers and floodplains may be more readily assessed.

Subsurface Mining

Directive Policy

Policy 17.24 Regardless of the General Plan designation, subsurface mining shall be conditionally permitted throughout the County. Said mining shall be allowed only after impacts on the environment and affected surface land uses have been adequately reviewed and found to be in compliance with CEQA. Of particular importance shall be the impact of the operation on surface land uses, water quantity and quality, noise and vibration, land subsidence, and traffic associated with surface access. All other related impacts shall also be addressed.

Surface Access to Subsurface Mining

Directive Policies

Policy 17.25 Surface access to subsurface mining is conditionally permitted only in compatible General Plan designations as defined herein. However, vent and escape shafts are conditionally permitted in incompatible General Plan designations where surface disturbance is minimal.

Policy 17.26 Surface plants for underground mines differ greatly in complexity and areal extent so evaluation on an individual project basis is required to assess impact on the environment. The simplest case is a mine portal or shaft collar from which ore and waste are removed from the site for treatment and disposal elsewhere. As a result, the impact on the environment could be minimal. The most complex cases involve stockpiles, crushing and grinding facilities, concentrators and other processing units, shops, warehouses and offices, waste disposal areas, tailings ponds and extended infrastructure. Such operations shall receive the same evaluation as large surface mines.

CHAPTER 18: AESTHETICS

Goal 18.1 **Promote and provide for aesthetic design in new development which reflects our existing character.**

Objective 18.1 **Develop appropriate community design guidelines to ensure aesthetic design in new development.**

Action Policy

Policy 18.1 The County shall prepare Community Design Guidelines applicable to the various General Plan Designations and zoning classifications, and adopt such guidelines as part of Comprehensive Site Development Standards, to be used in the project site review of all discretionary and ministerial project permits. The guidelines may include, but not be limited to the following:

a. Community identity
b. Preservation of natural landforms
c. Protection and management of viewsheds
d. Protection and management of river corridors and other significant streams

These Guidelines shall be the base design standards applicable to all projects. Area-specific Design Guidelines, where adopted by the County pursuant to Policy 18.2, shall be applicable in addition to the base guidelines within the specified area.

Directive Policy

Policy 18.2 The County may adopt Specific Design Guidelines for areas within *Community Regions* to provide for the maintenance of community identity, scenic resources and historic sites and areas.

The Specific Design Guidelines may include, but not be limited to standards which:

a. Reflect the distinctions among and transitions between different areas within *Community Regions*;
b. Reflect and retain the historic character of the area by requiring designs consistent with historic buildings, areas and sites related to a project;
c. Reflect and retain the rural and small-town character of the County;
d. Address building height and bulk at locations of visual sensitivity;
e. Encourage consistent thematic use of building materials and design elements appropriate to the visual and scenic qualities of specific areas;
f. Encourage cluster-type development of office, commercial uses, and residential uses to enhance open space;

g. Encourage office and commercial development provide safe, functional and attractive pedestrian connections and, where appropriate, social places (e.g. seating, landscaped patio areas, etc.);
h. Locate parking areas out of view from road traffic where conditions permit and provide measures to reduce the impacts of large paved areas;
i. Encourage building designs which provide customer entrance from pedestrian and parking areas, with customer-friendly store fronts facing pedestrian areas; and
j. Provide uniform criteria for project design review.
k. Encourage landscape treatment to enhance the built environment, including the preservation, long-term maintenance, and use of drought-tolerant native species.

Specific Design Guidelines shall be implemented through the regulations of the "D" Design Combining District of the County zoning ordinance.

Goal 18.2 **Protect and preserve important scenic resources.**

Objective 18.2 **Develop standards to protect scenic resources and viewsheds.**

Action Policies

Policy 18.3 The County shall establish standards for the protection of large-scale views and viewsheds and shall incorporate such standards in the Comprehensive Site Development Standards. The standards shall provide an inventory of sensitive views and viewsheds within Nevada County, and specify protective measures and impact controls applicable through the project site review process.

See: Policy 18.1; Policy 18.2

Policy 18.4 Nevada County shall not permit the use of billboards due to unmitigable, significant adverse effects upon aesthetic values and upon scenic values which contribute to the value of tourism to the local economy. The County shall adopt regulations requiring the removal of existing billboards on a five-year amortized basis.

Policy 18.5 Nevada County shall not permit the continued use of non-conforming signs. The County shall adopt regulations requiring the removal of existing non-conforming signs on a five-year amortized basis.

Directive Policies

Policy 18.6 Discretionary development in *Rural Regions* and in *Community Regions* near the Community Boundary shall, wherever possible, preserve natural landmarks and avoid ridge-line placement of structures.

See: Policy 18.1

Policy 18.7 Encourage protection of scenic corridors wherever feasible.

See: Policy 18.1

Objective 18.3 **Promote the conservation of scenic roads and highways.**

Action Policies

Policy 18.8 The County shall amend the "SC" Scenic Corridor Combining District Regulations to require design review of all proposed development within the district.

Policy 18.9 To encourage a system of scenic roads, the County shall adopt standards and procedures for protection of scenic corridors and shall prepare a Scenic Corridor plan which may include, but not be limited to, State Scenic Highways.

Directive Policies

Policy 18.10 New and replacement road system lighting shall utilize fixtures and light sources that minimize night-time light pollution, without compromising traffic safety.

Policy 18.11 New Commercial, Industrial and Multiple Family development shall utilize fixtures and light sources that minimize night time light pollution.

Also See: ***Chapter 1: Land Use***
Policy 1.18

Chapter 2: Economic Development
Policy 2.19

CHAPTER 19: CULTURAL RESOURCES

Goal 19.1 **Identify and protect and where economically feasible restore significant archaeological and historic resources.**

Objective 19.1 **Encourage the inventory, protection and interpretation of the cultural heritage of Nevada County, including historical and archaeological landscapes, sites, buildings, features, artifacts.**

Action Policy

Policy 19.1 Enact a Cultural Resources Ordinance to ensure effective preservation, protection and management of cultural resources.

Directive Policies

Policy 19.2 Encourage the inclusion of significant sites or districts in the Federal or State Historical Register based on the recommendation of local historical societies.

Policy 19.3 Encourage and cooperate with the private sector in the implementation of innovative techniques intended to preserve archaeological and historic sites by gift, private conservancies and easements.

Objective 19.2 **Implement development standards, including the preservation of open space, to protect identified significant cultural sites.**

Directive Policies

Policy 19.4 Incorporate cultural and historic resource management standards in the Comprehensive Site Development Standards, for use in project review of all discretionary project permits. These standards shall provide for the use of clustering and restricted building sites as techniques for the preservation of significant cultural resources.

See: Policy 1.18; Policy 18.1

Policy 19.5 In order to maintain a definition of community character and enhance local economies and tourism through adaptive reuse, include guidelines for preservation, maintenance and enhancement of the exterior design elements of structures and districts of local historic or architectural interest, as part of the Nevada County Community Design Guidelines.

These guidelines shall encourage and provide for the adaptive reuse of historic buildings in order to preserve such buildings and to enhance local economies. The guidelines shall be advisory in nature and integrated with the Comprehensive Site Development Standards in the project review process.

See: Policy 18.1

Directive Policy

Policy 19.6 Require all applications for discretionary project permits, and all applications for ministerial project permits except single family residences on individual lots shall be accompanied by a Site Sensitivity Literature Review, prepared by a qualified archaeologist or entity such as the North Central Information Center, Department of Anthropology, California State University at Sacramento.

Where review indicates significant archaeological or historical sites or artifacts are, or are likely, present, on-site field review by a registered archaeologist shall be required.

Objective 19.3 Include in the development review process consideration of historic, cultural, and Native American concerns and values.

Directive Policy

Policy 19.7 Cooperate with local historical societies and the Native American Indian community to protect significant historical, cultural and archaeological artifacts, improve access to and interpretation of unrestricted resources and archaeological history by involving them in the development review process.

Goals Objectives and Policies
Nevada County Regional Transportation Plan

The purpose of the Policy Element of the Nevada County Regional Transportation Plan is to set a policy framework by which the County's mobility needs are identified and met. The goals, objectives and policies listed below are the result of an extensive public participation program associated with the Nevada County General Plan Update process, as well as direction received from the various decision-making entities in the County.

Goal 1.0 Provide for the safe and efficient movement of all residents, visitors and goods.

Objectives

1.A Reduce accident rates on the transportation system.
1.B Reduce travel time required for the movement of persons and goods on the transportation system.
1.C Maintain level of service C on all "rural" roads and level of service D on all "urban" roads.
1.D Increase the efficiency of automobile use.

Policies

1.1 Transportation facilities should be compatible with adjacent land uses.
1.2 Construction of additional streets and roads with public funds should be secondary to improving, maintaining, and realigning the existing streets and roads.
1.3 Limit the construction of new roads for recreational purposes.
1.4 Improving and maintaining existing roads utilized by the tourists should be secondary to roads used primarily by locals.
1.5 Private timber sales should be required to mitigate their impact on public roads.
1.6 Work with both the public and private sectors to enhance transit, ridesharing, and other means of reducing congestion on the regional roadway network.

Goal 2.0 Reduce adverse impacts on the natural, social, cultural, and historical environment and the quality of life.

Objectives

2.A Minimize the consumption of non-renewable resources.
2.B Increase the mileage of "scenic highways".
2.C The transportation system should be consistent with management and conservation strategies of regional resources contained in the General Plans

Policies

2.1 Establish and protect "scenic highways" through the use of land use controls.

2.2 The adverse environmental impacts of each transportation system element should be fully analyzed prior to implementation, and either totally avoided or minimized.
2.3 Assist the Northern Sierra Air Quality Management District with the development of transportation control measures that will be needed to meet the req ed emission reductions of the California Clean Air Act.
2.4 Assist in the implementation of transportation control measures as requested by the Cities of Grass Valley and Nevada City and Nevada County.

Goal 3.0 Develop an economically feasible transportation system.

Objectives

3.A Minimize the capital and operating costs of transportation improvements.
3.B User charges should recover as much of the cost as possible and still provide the service.

Policies

3.1 Seek and develop alternative funding sources for transportation improvements.
3.2 The implementation program for each mode shall be within the financial means of government.
3.3 Require new development to mitigate impacts to the transportation system.
3.4 Solicit contributions to mitigate the cumulative impact of development on the functionally classified road system.
3.5 New development should consider existing and planned facilities for streets and roads, mass transit, pedestrians and bicycles; and provide for appropriate facilities to implement said plans as a part of the proposed project.
3.6 Local governments should be encouraged to spend their traffic fines and forfeitures on transportation facilities.
3.7 The "farebox return" (percent of total operating expenses paid by revenue from the fares collected) is set at a minimum of 16 percent as a planning and programming guideline with a goal of increasing the percent collected upward, depending upon the growth of the base demand for the service.
3.8 Federal legislation increasing funds available for transit system operating expenses should be supported.
3.9 An increased gas tax and/or a local sales tax should be considered for the development of a balanced transportation system that reflects the goals of the region.
3.10 Encourage responsible agencies to consider formation of assessment districts for assisting in the financing of projects and programs included in the Regional Transportation Plan, when feasible.
3.11 Agree among the County and the Cities of Grass Valley and Nevada City upon an equitable basis for distribution of STP funds under new Federal legislation.

3.12 The fares on all public transportation systems should be set to minimize the subsidy per ride, provided the amount of the fare does not cause major reductions in ridership.

3.13 Fares collected under the various public transportation programs should be set at levels relative to the level and type of service provided; i.e., fares set higher for demand responsible service than for a fixed route service.

3.14 Support state budget appropriations consistent with the adopted Nevada County Transportation Improvement Program.

3.15 Support continued return of fair share of motor vehicle fuel taxes to local agencies in Nevada County.

Goal 4.0 Create and maintain a comprehensive, multi-modal transportation system to serve the needs of the County.

Objectives

4.A Reduce dependence on the automobile.

4.B Increase transit use.

4.C Increase bicycle and pedestrian travel.

Policies

4.1 Existing general aviation facilities should be maintained and improved. Planning for the development of commercial air service should begin when it is shown that such service is economically viable.

4.2 The use of rail service along existing tracks should be encouraged as a form of mass transportation.

4.3 Pedestrian facilities should be considered and encouraged in the high density areas.

4.4 Solicit the input of the public in determining the need for new and enhanced facilities.

4.5 The continued effort of the volunteer Gold Country Trails Council to construct equestrian and bicycle trails should be encouraged.

4.6 Create an express bus service along the Highway 49 corridor between Grass Valley/Nevada City and Sacramento.

4.7 Improve the comfort, convenience and reliability of the transportation system for transit services and goods movement.

4.8 General public transportation services should be maintained and improved within Grass Valley and between Grass Valley and Nevada City.

4.9 Specialized transportation services directed for the elderly and handicapped should be maintained and improved in Nevada County.

4.10 The local governing jurisdictions should provide public transportation as described in policy numbers 4.6 and 4.7.

4.11 The public transportation services in western Nevada County should be provided under the general direction of the Operational Policy Committee, a joint powers agency, with funding provided by each of the two Cities and the County.

4.12 Continue marketing strategy and re-assess "image".

4.13 Develop a schedule for periodic trip checks and on-board surveys.

4.14 All schedule timepoints should have benches and signs.

4.15 Adjust running time between schedule timepoints.

4.16 Coordinate with the Western Nevada County and Truckee-North Tahoe TMAs to improve existing rideshare programs.

4.17 For the purpose of making "Unmet Transit Needs Findings" in accordance with Section 99401.5 of the Public Utilities Code, the following definitions of the terms "Unmet Transit Needs" and "Reasonable to Meet" are adopted:

Unmet Transit Needs: Those transportation or specialized transportation services that are identified in the Regional Transportation Plan, or proposed during the annual transit needs hearing process, which have not been implemented or funded.

Reasonable to Meet: New, expanded, or revised transportation service that meets the following criteria:

(A) Service which if implemented or funded would not cause the responsible operator or claimant to incur expenditures in excess of the maximum amount of Local Transportation Funds or State Transit Assistance Funds available to that entity.

(B) Service which if implemented or funded would result in the responsible operator or claimant meeting farebox and other performance indicators adopted by the Nevada County Transportation Commission.

(1) Operators in Nevada County shall maintain a ratio of fare revenues to operating cost, at least equal to 0.16. The terms, fare revenues and operating cost, are set forth in sections 99205.7, 99247(a), 99268.16, and 99268.17 of the Public Utilities Code.

(2) Expansions to existing services will be considered reasonable if the projected passengers per hour and farebox recovery ratio are at least 80% of the system average.

(3) Implementation of new service will be considered reasonable if the projected net costs, passengers per mile, passengers per hour, and ratio of fare revenues to operating costs are within 50 percent of system average as shown in the Annual Transit Needs Assessment, Attachment A.

"Reasonable" is defined as being not extreme or excessively expensive, but rather, sensible and sane.

"Reasonable to Meet" may take into consideration such factors as equity, timing, feasibility, community acceptance, economy (short-term and long-term), cost effectiveness and other factors related to transit service deemed appropriate by the Commission.

Goal	**5.0**	**Support the goals of the Cities and the County, and consider other responsible agencies.**
Objectives	5.A	The transportation system should support the planned development of the region in a coordinated manner within the framework of the General Plans.
Policies	5.1	The Regional Transportation Plan shall be adopted as, or within, the circulation element of the County's and the Cities' General Plan within two years; or the local entities may submit to the Commission, within this time frame, specific proposed Regional Transportation Plan amendments.
	5.2	The Commission must withhold Transportation Development Act Fund allocations to a local entity, if that entity's proposed expenditures are not in conformity with the Regional Transportation Plan.

APPENDIX B. Notice of Preparation and Responses

COUNTY OF NEVADA

PLANNING DEPARTMENT

Eric Rood Adm. Bldg.
950 Maidu Avenue
Nevada City, CA 95959-8617
(916) 265-1440

April 25, 1994

TO: Interested Agencies

FROM: Thomas Miller, Acting Planning Director Thomas Miller

SUBJECT: Notice of Preparation - Final Draft Nevada County General Plan

Please find enclosed the Notice of Preparation for the Final Draft Nevada County General Plan. This Draft is the latest in a series of drafts relative to the comprehensive update to the Nevada County General Plan. It represents those changes made to the Preliminary Draft Plan during the latter part of 1993 as a part of the Nevada County's public review process and will be the project upon which the Draft Environmental Impact Report will be prepared.

If you have comments or suggestions relative to the preparation of the Draft EIR, I would appreciate your input. Please do not hesitate to contact me or Patrick Norman of the Planning Department staff at (916) 265-1440.

TM:jj

Enclosure

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NOTICE OF PREPARATION

PROJECT TITLE: Nevada County General Plan Update

LEAD AGENCY DATA:

Agency: Nevada County Planning Department

Address: 950 Maidu Ave., Nevada City, CA 95959

CONTACT: Thomas Miller, Acting Nevada County Planning Director

PROJECT DESCRIPTION:

The project involves the comprehensive update to the Nevada County General Plan, adopted in 1980, and the Martis Valley General Plan, adopted in 1975. This includes a revised text, including goals, objectives, policies, and implementation measures, and revised land use maps for the unincorporated County.

The Plan is made up of the following parts:

1. Volume 1: Goals, Objectives, Policies, and Implementation Measures,
2. Volume 2: Background Data and Analysis
3. Land use maps (diagrams):
    a. 1"=5,000' Western County
    b. 1"=5,000' Eastern County
    c. 1"=1,200' Penn Valley/Lake Wildwood area
    d. 1"=1,200' Nevada City area
    e. 1"=1,200' Scotts Flat Reservoir area
    f. 1"=1,200' Grass Valley area
    g. 1"=1,200' Alta Sierra area
    h. 1"=1,200' Lake of the Pines area
    i. 1"=1,200' Truckee, Donner Lake, Martis Valley, Donner Summit areas
    j. 1"=5,000' Western County Circulation
    k. 1"=5,000' Eastern County Circulation

The primary tenets of the Plan include:

1. Foster a rural quality of life,
2. Sustain a quality environment,
3. Develop a strong, diversified, sustainable local economy,
4. Planned land use patterns will determine the level of public services appropriate to the character, economy, and environment of each region,
5. Reduce dependence on the auto by clustering growth,

6. Encourage the creation and enhancement of communities by providing for diverse and viable centers,
7. Provide urban services only in areas with sufficient land use intensities,
8. Ensure that intensive growth will only be allowed concurrent with public services,
9. Ensure the long term quality of natural resource values and, at the same time, ensuring the sustainability of agriculture, logging and mining.
10. Minimize conflicts due to incompatible land uses.
11. Direct urban growth into Community Regions that can effectively provide urban services.
12. Prevent the "partial suburbanization" of rural and natural areas.
13. Allow some margin of flexibility in the Plan as to various land use arrangements.
14. Preserve the natural environment.

These tenets are effectuated through Plan policies and land use maps that divide the County into **Community Regions,** where growth is directed, and **Rural Regions,** where growth is provided for only those types and densities of development which are consistent with the open, rural lifestyle, pastoral character, and natural setting which exists in these areas. **Community Boundaries** provide a clear distinction between regions.

Community Regions include the following:

1. Grass Valley
2. Nevada City
3. Lake Wildwood
4. Penn Valley
5. Lake of the Pines
6. Truckee

In addition, a New Town Reserve south of Penn Valley provides the potential for an additional Community Region.

The attached Tables 1 through 7 provide basic land use characteristics for the entire County and each Community Region at buildout of the Plan. They show a buildout County population of approximately 176,000, 95,000 of which will be within the Community Regions and 81,000 of which will be within the Rural Region. Within the Rural Region population there is a proposed new town with a buildout population of 14,000.

Also included in the project are:

1. Revision of up to 157 zoning district maps needed to implement the updated Plan,
2. Adoption of 3 additional zoning districts:

b. "BP" Business Park District - providing for a variety of related and mutually supporting manufacturing, distribution, processing service, and research and development uses normally associated with light industry, as well as a variety of support uses.
c. "REC" Recreation District - providing for a wide range of recreation uses and supporting uses.

3. Comprehensive update to the Nevada County Regional Transportation Plan. This Plan provides for the analysis of the County's regional transportation system, with emphasis on determining the system's future year deficiencies and prioritizing system improvements. Goals, objectives, and implementing policies are also included.

ANTICIPATED EFFECTS:

Because the Plan will allow for growth and development to occur within the unincorporated areas of the County, it is anticipated there will be a variety of potential environmental impacts as a result of the adoption and implementation of the Plan. These potential impacts include:

1. Changes in existing land uses and population density and distribution.
2. Increases in demand for public facilities and services, including schools, parks, police, and fire protection.
3. Changes in topography and hydrology
4. Increases in soil erosion.
5. Degradation of air quality.
6. Decreases in the number and diversity of flora and fauna.
7. Visual degradation.
8. Cultural resources degradation.
9. Increases in exposure to fire, geologic, and other hazards.
10. Increases in noise levels.
11. Increases in wild land fire hazard.
12. Increases in traffic and degradation of levels of service to the road system.
13. Degradation of surface and ground water quality and quantity.
14. Increases in use of fuel and energy sources.
15. Increases in agricultural land conversion to non-agricultural use.

PROJECT ALTERNATIVES:

The following are Plan alternatives to be considered:

1. No project (existing Nevada County and Martis Valley General Plans)
1. Preliminary Draft General Plan as prepared by the Plan consultant.
2. Preliminary Draft Plan as amended by the Planning Commission.
4. Environmentally-superior alternative that reflects additional or amended policies and implementation measures and revised land use patterns.

LOCATION: Nevada County's location is shown in Figure 1-1.

DOCUMENT AVAILABILITY/QUESTIONS: All documents can be reviewed in the Nevada County Planning Department, 950 Maidu Ave., Nevada City, CA 95949. Any questions concerning this notice can be asked at (916)265-1440.

WRITTEN INPUT: Written comments on the scope and content of the EIR should be mailed to the above address not less than 30 days from receipt of this notice.

gpnop.doc

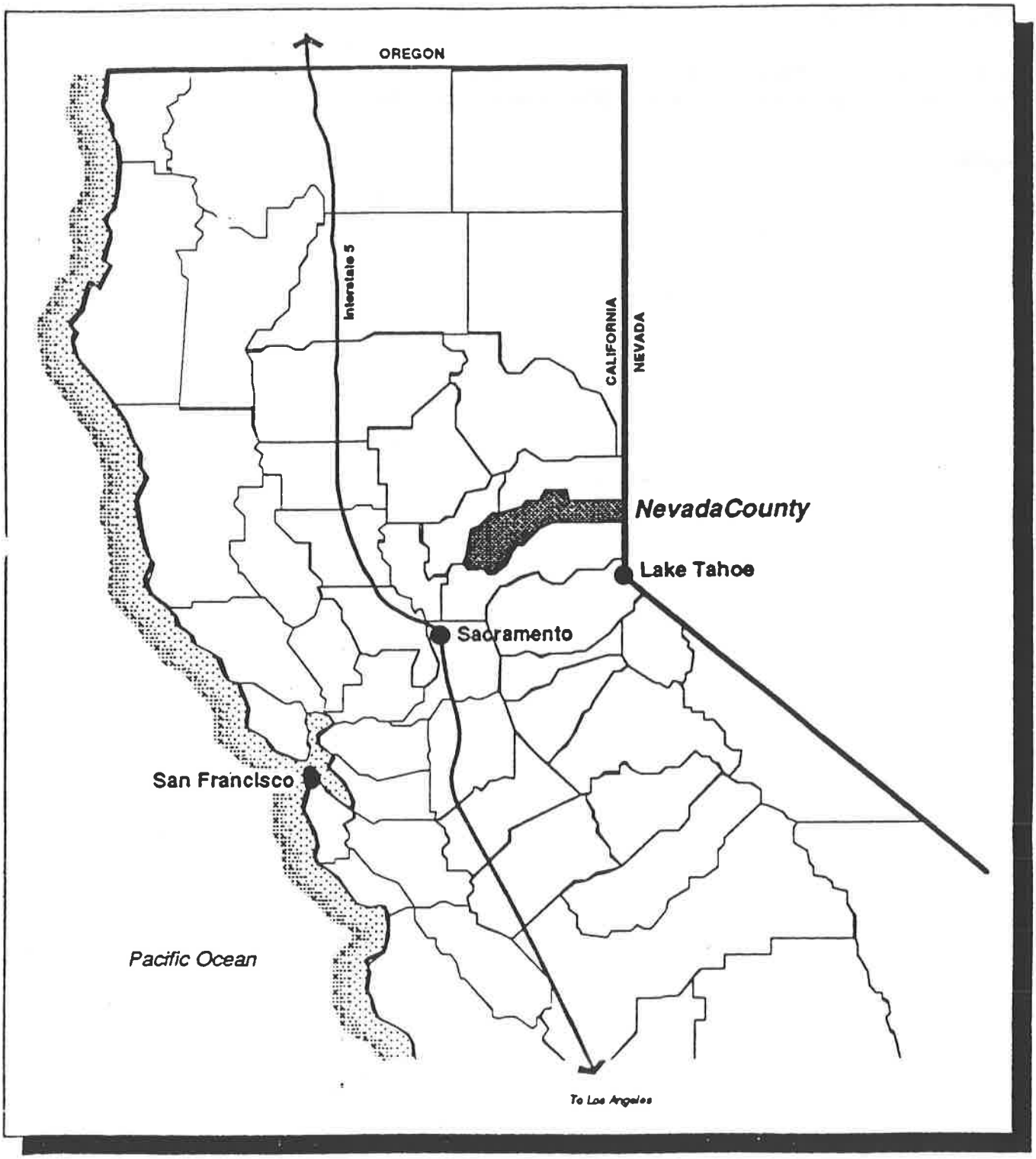


Figure 1-1
Location Map

Table 1
Land Use Characteristics
Nevada County Total

Land Use Designation	Acres	Dwelling Units	Population	Employment
Urban High Density Residential	805	14,490	31,155	
Urban Medium Density Residential	1,750	9,450	20,320	
Urban Single Family Residential	6,910	14,685	31,575	
Planned Residential Community	10,980	13,590	29,220	
Residential	9,740	5,465	11,750	
Estate	23,335	6,545	14,070	
Rural-5	43,905	7,905	16,995	
Rural-10	47,610	4,285	9,215	
Rural-20	33,710	1,515	3,260	
Rural-30	19,980	595	1,280	
Rural-40	37,065	835	1,795	
Rural-160	1,720	10	20	
Neighborhood Commercial	390			5,310
Community Commercial				
• Downtown	80			3,265
• Other	1,080			14,635
Highway Commercial	315			4,290
Service Commercial	45			615
Rural Commercial	90			1,225
Office-Professional	305			6,640
Business Park	1,930			41,820
Industrial	1,615			17,480
Forest	333,750	2,375	5,105	0
Public	5,000			
Recreation	1,365			
Open Space	37,810			
Water Area	4,635			
TOTAL	625,920	81,745	175,760	95,280

Table 2
Land Use Characteristics
Grass Valley Community Region

Land Use Designation	Acres	Dwelling Units	Population	Employment
Urban High Density Residential	270	4,860	11,665	
Urban Medium Density Residential	425	2,295	5,510	
Urban Single Family Residential	1,840	3,910	9,385	
Planned Residential Community	0	0	0	
Residential	2,865	1,605	3,850	
Estate	355	100	240	
Rural-5	0	0	0	
Rural-10	0	0	0	
Rural-20	0	0	0	
Rural-30	0	0	0	
Rural-40	0	0	0	
Rural-160	0	0	0	
Neighborhood Commercial	25			340
Community Commercial				
• Downtown	55			2,245
• Other	575			7,825
Highway Commercial	0			0
Service Commercial	0			0
Rural Commercial	0			0
Office-Professional	160			3,440
Business Park	1,075			23,415
Industrial	695			7,570
Forest	0	0	0	0
Public	635			
Recreation	0			
Open Space	1,155			
Water Area	0			
TOTAL	10,130	12,770	30,650	44,835

Table 3
Land Use Characteristics
Nevada City Community Region

Land Use Designation	Acres	Dwelling Units	Population	Employment
Urban High Density Residential	0	0	0	
Urban Medium Density Residential	140	755	1,810	
Urban Single Family Residential	515	1,095	2,625	
Planned Residential Community	0	0	0	
Residential	780	435	1,045	
Estate	1,935	540	1,295	
Rural-5	0	0	0	
Rural-10	0	0	0	
Rural-20	0	0	0	
Rural-30	0	0	0	
Rural-40	0	0	0	
Rural-160	0	0	0	
Neighborhood Commercial	0			0
Community Commercial				
• Downtown	12			490
• Other	37			505
Highway Commercial	33			450
Service Commercial	37			505
Rural Commercial	0			0
Office-Professional	29			630
Business Park	240			5,225
Industrial	62			675
Forest	0	0	0	0
Public	270			
Recreation	30			
Open Space	300			
Water Area	0			
TOTAL	4,420	2,825	6,785	8,480

Table 4
Land Use Characteristics
Lake Wildwood Community Region

Land Use Designation	Acres	Dwelling Units	Population	Employment
Urban High Density Residential	0	0	0	
Urban Medium Density Residential	22	132	315	
Urban Single Family Residential	234	440	1,055	
Planned Residential Community	2,010	2,842	6,820	
Residential	0	0	0	
Estate	0	0	0	
Rural-5	0	0	0	
Rural-10	0	0	0	
Rural-20	0	0	0	
Rural-30	0	0	0	
Rural-40	0	0	0	
Rural-160	0	0	0	
Neighborhood Commercial	18			245
Community Commercial				
• Downtown	0			0
• Other	0			0
Highway Commercial	0			0
Service Commercial	0			0
Rural Commercial	0			0
Office-Professional	0			0
Business Park	0			0
Industrial	0			0
Forest	0	0	0	0
Public	40			
Recreation	0			
Open Space	85			
Water Area	0			
TOTAL	2,409	3,414	8,190	245

Table 5
Land Use Characteristics
Penn Valley Community Region

Land Use Designation	Acres	Dwelling Units	Population	Employment
Urban High Density Residential	20	360	865	
Urban Medium Density Residential	130	700	1,680	
Urban Single Family Residential	570	1,210	2,905	
Planned Residential Community	0	0	0	
Residential	0	0	0	
Estate	855	245	585	
Rural-5	0	0	0	
Rural-10	0	0	0	
Rural-20	0	0	0	
Rural-30	0	0	0	
Rural-40	0	0	0	
Rural-160	0	0	0	
Neighborhood Commercial	4			55
Community Commercial				
• Downtown	0			0
• Other	65			750
Highway Commercial	0			0
Service Commercial	0			0
Rural Commercial	0			0
Office-Professional	7			150
Business Park	9			195
Industrial	50			545
Forest	0	0	0	0
Public	30			
Recreation	80			
Open Space	25			
Water Area	0			
TOTAL	1,845	2,515	6,035	1,695

Table 6
Land Use Characteristics
Higgins Corner/Lake of the Pines Community Region

Land Use Designation	Acres	Dwelling Units	Population	Employment
Urban High Density Residential	15	270	650	
Urban Medium Density Residential	120	650	1,555	
Urban Single Family Residential	0	0	0	
Planned Residential Community	1,310	1,900	4,560	
Residential	590	330	790	
Estate	0	0	0	
Rural-5	0	0	0	
Rural-10	3	0	0	
Rural-20	0	0	0	
Rural-30	0	0	0	
Rural-40	0	0	0	
Rural-160	0	0	0	
Neighborhood Commercial	13			175
Community Commercial				
• Downtown	0			0
• Other	37			505
Highway Commercial	0			0
Service Commercial	0			0
Rural Commercial	0			0
Office-Professional	20			435
Business Park	50			1,090
Industrial	0			0
Forest	0	0	0	0
Public	205			
Recreation	0			
Open Space	11			
Water Area	0			
TOTAL	2,374	3,150	7,555	2,205

Table 7
Land Use Characteristics
Truckee Community Region

Land Use Designation	Acres	Dwelling Units	Population	Employment
Urban High Density Residential	305	5,490	9,880	
Urban Medium Density Residential	495	2,675	4,810	
Urban Single Family Residential	1,690	3,590	6,465	
Planned Residential Community	3,915	6,100	10,980	
Residential	1,255	705	1,265	
Estate	4,045	1,135	2,040	
Rural-5	0	0	0	
Rural-10	930	85	150	
Rural-20	0	0	0	
Rural-30	0	0	0	
Rural-40	0	0	0	
Rural-160	1,730	10	20	
Neighborhood Commercial	140			1,905
Community Commercial				
• Downtown	0			0
• Other	300			4,085
Highway Commercial	155			2,110
Service Commercial	10			135
Rural Commercial	0			0
Office-Professional	75			1,635
Business Park	95			2,070
Industrial	195			2,125
Forest	1,910	10	20	0
Public	380			
Recreation	100			
Open Space	2,510			
Water Area	825			
TOTAL	21,060	19,800	35,630	14,065

The land use, population and employment data as shown in Tables 1 through 7 provides the basis for the circulation and infrastructure analysis contained in the following sections.

STATE OF CALIFORNIA

PETE WILSON, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LAHONTAN REGION
2092 LAKE TAHOE BOULEVARD
SOUTH LAKE TAHOE, CALIFORNIA 96150
FAX (916) 544-2271
(916) 542-5400

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JUN 0 2 1994

NEVADA COUNTY
PLANNING DEPARTMENT

May 27, 1994

Pat Norman
Nevada County Planning Department
950 Maidu Avenue
Nevada City, CA 95959-8617

Dear Mr. Norman:

REVIEW OF NOTICE OF PREPARATION OF FINAL DRAFT NEVADA COUNTY GENERAL PLAN

Thank you for giving us the opportunity for early consultation on Nevada County's final General Plan update. Regional Board staff have reviewed your Notice of Preparation (NOP). As described in the notice, the new General Plan will cover unincorporated areas in both Community Regions, where growth is directed, and rural Regions, where growth is restricted.

The Lahontan Regional Board's jurisdiction covers only those portions of Nevada County within the Truckee River watershed. This includes the Truckee Community Region. The Board will not be issuing any permits as a direct result of the General Plan update. However, we have a variety of comments as a "trustee agency" under the California Environmental Quality Act (CEQA) for potentially affected waters.

The Lahontan Regional Board's policies are defined in the North Lahontan Basin Plan (Basin Plan). You should be aware that there are significant differences between this document and that for the Central Valley Regional Water Quality Control Board which should be reflected in General Plan policy for the eastern portion of the County. The Regional Board has updated the Basin Plan. The new Basin Plan will take effect in late 1994 after it receives necessary state and federal approvals. The updated Basin Plan includes revisions in regionwide water quality objectives, and an interpretation of waste discharge prohibitions and exemption criteria applicable within Nevada County. It also includes additional emphasis on protection and restoration of wetlands and of watersheds in general, and on control of toxic substances.

The discharge prohibitions and exemption criteria applicable to onsite waste water disposal in the Truckee River watershed could significantly affect projected buildout development density in subdivisions there. This has been described in detail in our letter of August 4, 1993. A copy of these comments is enclosed for your reference.

The Basin Plan contains prohibitions regarding development within the 100-year flood plain of the Truckee River and its tributaries. Exemption criteria is listed in Appendix K of the 1987 reprint of the Basin Plan. Because the Regional Board applies these prohibitions to all tributaries, new development affecting stream courses may be significantly affected.

The Lahontan Regional Board will consider issuing waste discharge permits for future projects within its jurisdiction which are carried out under the General Plan. CEQA documents containing project-level detail on potential water quality impacts and mitigation measures will be required before such permits can be adopted. If any of these projects are expected to use CEQA documents tiered off the General Plan EIR, that EIR should include commitments to prepare subsequent or supplemental environmental documents with the required detail. If any future projects in the Lahontan Region are expected to be exempt from further CEQA review because of their conformance with the General Plan, it is very important that the General Plan EIR provide a detailed, project level discussion of water quality impacts and mitigation measures for such projects.

A number of relatively recent changes in state and federal regulations and activities will affect water quality permitting in the Truckee area. The preparers of the General Plan and its supporting EIR should be aware of the following:

1. Once total population increases above 100,000, a municipal NPDES permit will probably be required for Nevada County; permitting may need to be handled jointly by the Lahontan and Central Valley Regional Boards. Statewide stormwater NPDES permits now apply to existing and future industrial projects and to some larger construction projects. The Regional Board has the option of issuing individual or an areawide general stormwater NPDES permits where necessary to protect water quality. In early 1993, statewide Best Management Practices (BMP) Handbooks for stormwater NPDES permits were approved.

2. Recent amendments to CEQA (Section 21092.6) require lead agencies to disclose whether a project site is on the "Cortese List" of hazardous waste sites maintained by the California Environmental Protection Agency pursuant to Government Code Section 65962.5.

3. The U.S. Forest Service has begun study of the Truckee River for possible inclusion as a "recreational river" in the federal wild and scenic rivers system.

4. Results of recent sampling of fish tissue and sediment in the State Water Resources Control Board's Toxic Substances Monitoring Program indicate additional problems with metals and organic chemicals in the Truckee River watershed. Additional erosion and stormwater controls, and possibly local cleanup efforts, may be necessary to address these problems.

5. The State Water Resources Control Board has denied, without prejudice, state water quality certification for all U.S. Army Corps of Engineers Nationwide Section 404 Permits statewide, pending the adoption of a state wetlands policy. Although the Resources Agency has recently announced a proposed policy, the State Board's schedule for reconsideration of the Nationwide Permits is uncertain. This means that any proposed wetland disturbance in the Truckee River watershed will, at least in the short term, require an individual Corps permit, with state water quality certification.

If you have any questions regarding this matter, please call me at (916) 542-5434 or T. Jerrold Peacock at (916) 542-5435.

Sincerely,

Lauri Zander

Lauri Zander
Section Lead, Regulation and Enforcement Unit

Attachments: August 4, 1993 letter

TJP/sh

cc: Office of Planning and Research
Regional Board members

PETE WILSON, Governor

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—
LAHONTAN REGION
2092 LAKE TAHOE BOULEVARD
SOUTH LAKE TAHOE, CALIFORNIA 96150
(916) 544-3481 FAX (916) 544-2271

August 4, 1993

Mr. Norm Greenberg
Nevada County Department of Environmental Health
P.O. Box 6100
Nevada City, CA 95959-6100

Dear Mr. Greenberg:

CLARIFICATION OF THE REGIONAL BOARD'S PROHIBITION AND EXEMPTION CRITERIA FOR SEWAGE DISPOSAL WITHIN THE TRUCKEE RIVER HYDROLOGIC UNIT

There has been recent confusion regarding the application of the Regional Board's septic tank prohibitions and criteria in the Truckee River Hydrologic Unit. The Regional Board has two separate prohibition criteria that are to be applied in the hydrologic unit. They are discussed briefly below. The enclosed flowchart can be used to determine the County's permitting authority for proposed septic systems.

On October 16, 1980, the following prohibitions became effective for the Truckee River and Little Truckee River Hydrologic Units. The prohibition area is defined as all areas where underlying groundwaters are tributary to the Truckee River or any of its tributaries above the confluence of the Boca Reservoir outlet and the Truckee River.

"1. Discharge of wastewater or wastewater effluent resulting in an average total nitrogen concentration in the (undiluted) wastewater exceeding 9 mg-N/liter entering the Truckee River or any of its tributaries above the Boca Reservoir outlet confluence is prohibited. [The Regional Board staff is currently in the process of clarifying these prohibitions in the Basin Plan rewrite. It will be proposed that the 9 mg-N/liter limit be applied at the point of effluent discharge. Thus, any discharge from a wastewater treatment plant or from septic system leachfield lines (the points of effluent discharge) must comply with the 9 mg-N/liter limit.]

"3. No discharge of domestic wastewater to individual facilities such as septic tank-leachfield systems shall be permitted for any subdivisions (as defined in the Subdivision Map Act) which did not discharge prior to October 16, 1980.

The enclosed Board Order (6-81-7) provides the variance criteria to the 1980 prohibition. For any proposed land division since the prohibition date, a point system is used to evaluate the suitability of an individual waste disposal system on the property. A minimum of both 2.5 acres per Equivalent Dwelling Unit (EDU) and 10 points is required before the Regional Board Executive Officer can consider issuing a variance to the waste disposal prohibition for the parcel. The point system is based upon average lot size, distance to an existing sewer line, total single family dwelling equivalents, distance to the critical section of the Truckee River, and the formation of a public entity.

The variance criteria is applied equally to all types of development for lots that have been, or will be, divided after the prohibition date. Non-single family residential development projects that propose multiple EDU's for a parcel that was recorded prior to the prohibition date is treated as if the parcel was being divided into a parcel per each proposed EDU. Again, no more than 1 EDU per 2.5 acres on a parcel will be approved by the Regional Board Executive Officer.

Any lot that is not part of a subdivision and was recorded prior to the prohibition date is exempt from the 1980 prohibition for the development of a single family dwelling unit.

On January 14, 1988, the Regional Board adopted revisions to the "Guidelines for Waste Disposal From Land Developments," in conjunction with the "Regional Board Guidelines for Implementation of Criteria for Individual Waste Disposal Systems." These implementation guidelines list general and specific provisions in considering exemptions to the maximum density criteria (2 EDUs per acre) for individual waste disposal systems in both new and existing land developments. These provisions also apply to domestic wastewater discharges from new commercial and industrial development with wastewater discharge volumes exceeding two EDU per acre density (500 gallons/day/acre, based on 250/gallons/day/EDU). Memorandums of Understanding have been signed with both Nevada and Placer Counties to define the County's role in applying the criteria.

The 1988 criteria apply to the entire Lahontan Region except within existing waste discharge prohibition areas that are more stringent. The 1980 prohibition area therefore supersedes the 1988 criteria. However, lots that are exempt from the 1980 prohibition would then need to comply with the 1988 guidelines since these would then become the most restrictive requirements. Therefore, the 1988 guidelines are to be applied only to the area of Nevada, Placer, and Sierra Counties where: (1) a parcel is located in the 1980 prohibition area which was granted an exemption to the prohibition by the Regional Board; (2) a parcel located in the defined 1980 prohibition area which was in existence prior to October 16, 1980; or (3) the underlying groundwaters are tributary to the Truckee River below the confluence of the Boca Reservoir outlet and the Truckee River.

The Regional Board allows for variances to the 1988 prohibitions as well. Waiver of one or more of the criteria specified in the 1988 prohibition may occur if the following conditions are satisfied:

a. The area beneath the proposed septic system discharge has no significant amount of groundwater having present or future beneficial uses.

b. It can be proven that no pollution, nuisance, or unreasonable degradation of either surface or groundwaters will occur as a result of the proposed septic system density when considered individually or cumulatively with other discharges in the area.

c. Construction of a community collection, treatment, and disposal system is imminent. Short term, interim use of individual waste disposal systems may be allowed.

However, only the Regional Board or the Regional Board Executive Officer is authorized to grant an exemption to the 1988 criteria - not the local agency.

In addition, parcels located in the following subdivisions are exempt from both the 1980 and the 1988 Regional Board prohibitions:

Nevada County Subdivisions	
Olympic Heights	52 lots
Prosser Lakeview Estates	373 lots
Ponderosa Palisades	56 lots
Sierra Meadows	123 lots

Placer County Subdivisions	
Ponderosa Palisades - Unit 1	4 lots
Ponderosa Palisades - Unit 2	6 lots
Ponderosa Palisades West	20 lots
Ponderosa Palisades South	16 lots
Sierra Meadows - Unit 4	15 lots

The County's Planning Department maintains a list of the Assessor Parcel Numbers for these subdivisions which received exemptions. The County should therefore consult this list before referring applicants to the Regional Board for septic system approval. The County is authorized to issue building permits which incorporate septic system use for these parcels.

The enclosed flowchart will help identify where the lot in question falls within the existing regulations. Note that it is helpful to have the Assessor's Parcel Number of the lot in question so that some of the answers to your questions can be verified through the County's Assessors Office.

Remember, however, that although the flowchart should be helpful in understanding the regulations, there is no substitution for knowing the regulations themselves.

Please do not hesitate to contact Eric J. Taxer or David G. Himebaugh of my staff if you have any further questions regarding this matter.

Sincerely,

Robert Walsh

for Harold J. Singer
EXECUTIVE OFFICER

Enclosures (3)

cc: (with enclosures)
. Placer County Planning Department/Bill Combs
Nevada County Planning Department/Randy Wilson
Mr. Ian Winger

STATE OF CALIFORNIA - THE RESOURCES AGENCY

PETE WILSON, Governor

DEPARTMENT OF CONSERVATION
DIVISION OF ADMINISTRATION
DIVISION OF MINES AND GEOLOGY
DIVISION OF OIL AND GAS
DIVISION OF RECYCLING

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NEVADA COUNTY
PLANNING DEPARTMENT

801 K Street
SACRAMENTO, CA 95814-3514

Telecommunications
Device for the Deaf
(916) 324-2555
Correspondent's Telephone
(916) 445-8733
Fax
(916) 324-0948

June 6, 1994

Mr. Pat Norman
Nevada County Planning Department
950 Maidu Avenue
Nevada City, CA 95959

Dear Mr. Norman:

Subject: Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Nevada County General Plan Update. **SCH# 94042073**

The Department of Conservation monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act. The Department has reviewed the NOP listed above and recommends that the DEIR for the County's General Plan Update include a discussion of the following issues.

Loss of Prime Agricultural Land

The loss of any prime agricultural land should be identified and treated as a significant environmental impact of the project. The California Code of Regulations (Section 15000 et seq., Appendix G (y)) states that a project will normally have a significant effect on the environment if it will convert prime agricultural land to non-agricultural use or impair the agricultural productivity of prime agricultural land.

Agricultural Character of the Project Site and Surrounding Area

- Maps of agricultural preserves in the project area and the number of acres and type of land in each preserve.
- Types and relative yields of crops grown in the affected areas or in areas of similar soils under good agricultural management.
- Agricultural potential of the area's soils, as defined by the Department of Conservation's Important Farmland Series map designations.

Williamson Act Issues

- The location of Williamson Act contracts on lands within and adjacent to the project area.
- A discussion of the effects that cancellation of any Williamson Act contracts would have on nearby properties also under contract.

- A discussion of the specific findings and public hearing requirements for contract cancellations (Government Code Sections 51282 and 51284).

Farmland Conversion Impacts

- The type, amount and location of farmland conversion that would result from implementation of the project.
- The impact on current and future agricultural operations.
- The cumulative and growth-inducing impact of the project on farmland in the project and surrounding area.

Mitigation Measures and Alternatives

Public Resources Code Section 21081.6 requires a public agency to adopt reporting or monitoring programs for adopted project changes which mitigate or avoid significant environmental effects. Some of the possibilities are:

- Directing urban growth to lower quality soils in order to protect prime agricultural land.
- Increasing densities or clustering residential units to allow a greater portion of the site to remain in agricultural production.
- Protecting other, existing farmland of equivalent or better quality through planning and use of the Williamson Act.
- Establishing buffers such as setbacks, berms, greenbelts and open space areas to separate farmland from urban uses.
- Implementing right-to-farm ordinances to diminish nuisance impacts neighboring urban and agricultural operations may impose on one another.
- Adopting a farmland protection program utilizing land use planning tools such as transfer of development rights and purchase of development rights or conservation easements.

The Department appreciates the opportunity to comment. If I can be of further assistance, please feel free to call me at (916) 445-8733.

Sincerely,

Jason Marshall
Environmental Analyst

cc: Ken Trott
Office of Land Conservation

Chauncey Posten, President
Nevada County RCD

5/19/94

STATE OF CALIFORNIA—THE RESOURCES AGENCY PETE WILSON, Governor

DEPARTMENT OF FISH AND GAME
GION 2
1701 NIMBUS ROAD, SUITE A
RANCHO CORDOVA, CA 95670

(916) 355-7020

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MAY 16 1994
NEVADA COUNTY
PLANNING DEPARTMENT

May 10, 1994

Mr. Thomas Miller, Acting Planning Director
Nevada County Planning Department
950 Maidu Avenue
Nevada City, California 95959-6100

Dear Mr. Miller:

The Department of Fish and Game (DFG) has reviewed the Notice of Preparation of a Draft Environmental Impact Report (EIR) for the Final Draft Nevada County General Plan. This document is part of an update process to the Nevada County General Plan. We have provided a series of comments to Nevada County on various portions and versions of the Draft General Plan beginning in June of 1992. Our concerns and recommendations are addressed in those letters, and we recommend you refer to prior correspondence for specifics.

The Draft EIR should address and mitigate for the following:

1. The project's impact upon fish and wildlife and their habitats and water quality.

2. The project's impact upon significant habitat such as, but not limited to, wetlands, stream and riparian areas, large blocks of undeveloped habitat, animal movement areas, and critical migratory deer areas.

3. The project's impact to special status species including State- and Federally-listed plant and animal species.

4. The project's growth inducing and cumulative impacts upon fish, wildlife, water quality, and vegetative resources.

Additionally, the Draft EIR should provide an analysis of specific alternatives which reduce impacts to fish, wildlife, water quality and vegetative resources such as, but not limited to, clustering, retention of large parcel sizes in critical areas (e.g., 40-acre minimum parcel sizes in critical migratory deer ranges), extensive nondevelopment buffers along stream environments, and density transfers.

Pursuant to Public Resources Code Sections 21092 and 21092.2, the DFG requests written notification of proposed actions and pending decisions regarding this project. Written notifications should be directed to this office.

Thank you for the opportunity to review this project. If the DFG can be of further assistance, please contact Mr. Jeff Finn, Associate Wildlife Biologist, at (916) 477-0308 or Mr. David Zezulak, Acting Environmental Services Supervisor, at (916) 355-7030.

Sincerely,

L. Ryan Broddrick
Regional Manager

cc: Mr. Jeff Finn
Department of Fish and Game
Rancho Cordova, California

Mr. Dave Zezulak
Department of Fish and Game
Rancho Cordova, California

STATE OF CALIFORNIA—THE RESOURCES AGENCY PETE WILSON, Governor

DEPARTMENT OF FISH AND GAME
:GION 2
,701 NIMBUS ROAD, SUITE A
RANCHO CORDOVA, CALIFORNIA 95670
(916) 355-7020

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SEP 0 7 1993
NEVADA COUNTY
PLANNING DEPARTMENT

September 3, 1993

Mr. Thomas Miller
Acting Planning Director
Nevada County Planning Department
950 Maidu Avenue
Nevada City, California 95959-6100

Dear Mr. Miller:

The Department of Fish and Game (DFG) has reviewed the Preliminary Draft General Plan and Land Use Maps. We have provided prior comments to Nevada County regarding previous drafts of this document.

We recommend the following comments be addressed:

Volume 1 - Page II-35, Policy 1.17:

As noted in prior correspondence, the need to identify large blocks of undeveloped habitats as a Critical Wildlife area is fundamental to many of the goals and objectives within this General Plan. Failure to protect valuable blocks of undeveloped habitat, principally oak woodland habitats in the western portion of the County could result in protection of corridors with a failure to protect significant habitat areas that are needed for those species that the corridors were intended to protect. There must be some recognition of the significant values of large blocks of undeveloped habitat to the integrity of wildlife in Nevada County and the past and potential future impacts to those values.

This policy, as written, is inconsistent with many of the goals, objectives and policies within this plan including but not limited to Goal 13.1, Objective 13.1, Policy 13.1, Objective 13.2, Objective 13.3, Objective 13.5, Objective 13.6, Policy 13.7 and Objective 13.8. Modification to incorporate large blocks of undeveloped habitat as critical wildlife areas would preserve the internal consistency of this General Plan.

Page III-144, Policy 11.6, paragraph 2:

Setbacks as described are only applicable to existing individual lots and must not be applied to future development proposals. This should be clarified.

Page III-144, Policy 11.6, paragraph 3:

The U.S. Corps of Engineers is not responsible for the determination of the environmental significance of wetlands. The California Environmental Quality Act (CEQA) identifies Trustee Agencies as responsible agencies to inform lead agencies of the significance of environmental impacts. The last sentence in this paragraph is inaccurate and inappropriate and should be deleted.

Page III-154, Goal 13.1, Objective 13.1 and Policy 13.1:

We concur and support the concepts of these statements. However, the failure to include large blocks of undeveloped habitat as a significant environmental feature as identified in Policy 1.17 is inconsistent with these goals, objectives, and policies. Failure to include large blocks as a critical wildlife habitat in Policy 1.17 may result in significant long term environmental impacts to the wildlife resources of Nevada County that could be protected through the identification of large blocks as critical and therefore assure continuity of habitats and preclude significant direct and cumulative habitat fragmentation.

Page III-157, Policy 13.7:

"Heritage and landmark trees and groves" must be defined in this document.

Volume 2 - Page IV-22, paragraph 3:

Although many species rely upon riparian zones for animal movement areas, many do not. Deer, within the context of this paragraph, utilize and rely upon habitats as movement zones that are completely unrelated to riparian systems. Many other species also rely upon habitats other than riparian and stream environments as movement corridors. As noted in prior correspondence, the reliance upon riparian and stream environments as the sole source for protection of wildlife movement zones is inaccurate and misleading. This paragraph should be clarified to reflect these facts.

Page V-18 through V-23:

Implicit within this discussion of Wildlife Habitats, Migratory Deer Ranges and Riparian Corridors is the need to protect any one of these constraints from significant and unnecessary encroachment. Failure to protect either corridors for travel or large blocks of undeveloped valuable habitat areas that animals travel to and from will result in significant

fragmentation of wildlife habitats and diminishment of wildlife populations within Nevada County. Merely providing protection measures for corridors but failing to protect large blocks of significant habitat areas dooms the entire system to failure. Both corridors and blocks of valuable habitat require significant levels of protection. Large blocks of undeveloped habitat have been identified here as important but have not been identified within Policy 1.17 of the General Plan as a Critical Wildlife Area requiring protection.

Land Use Maps:

The proposed maps and the 169 requests for changes in General Plan Designations (GPD) must be consistent with the Goals, Objectives and Policies of this General Plan. Community boundaries and proposals to create new Communities within Rural areas are critical to the success of the goals, objectives and polices of the General Plan. At this time we are unable to review the GPD evaluations or the Land Use Maps.

Thank you for the opportunity to review this project. If the DFG can be of further assistance, please contact Mr. Ron Bertram, Senior Biologist, at (916) 355-7010 or Mr. Jerry Mensch, Environmental Services Supervisor, at (916) 355-7030.

Sincerely,

L. Ryan Broddrick
Regional Manger

cc: Mr. Ron Bertram
Department of Fish and Game
Rancho Cordova, California

Mr. Jerry Mensch
Department of Fish and Game
Rancho Cordova, California

STATE OF CALIFORNIA—THE RESOURCES AGENCY

PETE WILSON, Governor

DEPARTMENT OF FISH AND GAME

REGION 2
701 NIMBUS ROAD, SUITE A
RANCHO CORDOVA, CA 95670

(916) 355-7020

RECEIVED

APR 12 1993

NEVADA COUNTY
PLANNING DEPARTMENT

April 8, 1993

Mr. Bob Leggett, Acting Planning Director
Nevada County Planning Department
950 Maidu Avenue
Nevada City, California 95959-6100

Dear Mr. Leggett:

The Department of Fish and Game (DFG) has reviewed the March 24, 1993, Administrative Draft Nevada County General Plan. Many issues discussed in a January 12, 1993 letter to you regarding a prior draft of this General Plan (submitted to the DFG on December 18, 1992) have been sufficiently addressed in this current revision. Several have not.

We recommend the following specific comments be incorporated into the General Plan to assure that fish, wildlife and water quality resources will be provided protection and mitigation as a function of future development projects within Nevada County:

Volume 1:

Policy 1.2, page II-18: This policy remains inconsistent with the Central Themes and Concepts and many of the goals, objectives and policies of the General Plan. The area proposed for the New Town Reserve is one of the last remaining areas of large undeveloped hardwood habitat within the County and thus would be considered a significant wildlife habitat area. The area is outside of the proposed Community Boundaries of Penn Valley and, if developed as suggested within this policy, would remain surrounded by large, rural parcels. We recommend, therefore, that this policy be deleted from this General Plan and only considered in subsequent General Plan updates.

New TW Oakwood land

Policy 1.17, Page II-34: Rural-30 and Rural-40 should be added to the list of designations that require clustered development thus assuring protection of environmental features. Remaining large blocks of nonfragmented wildlife habitat should be included within the list of ecologically sensitive areas on page II-35.

Policy 1.17, page II-35 and policy 13.1, page III-148: Resident wildlife populations must be defined and clarified.

Policy 1.17, page II-35 and policy 13.1, page III-148: Resident wildlife populations must be defined and clarified.

Policy 1.17, page II-35 and policy 13.1, page III-148: Implicit within this General Plan is that nearly all impacts to fish, wildlife and water quality can be mitigated through mandatory clustered development within rural areas. We strongly support this policy. This concept does provide significant opportunity to reduce direct and cumulative impacts to fish, wildlife, and water quality resources. However, retention of critical wildlife values, within those areas identified within this general plan as providing significant or critical wildlife areas, can best be achieved through maintenance of large parcels regardless of the opportunity to cluster design.

Animals requiring large blocks of undeveloped habitat or large areas for movement zones may be significantly impacted without adequate zoning and General Plan designations. We recommend that all designated critical migratory deer winter ranges and migratory corridors be restricted to 40-acre minimum parcel sizes and all designated noncritical migratory deer winter range be restricted to 20-acre minimum parcel sizes where those parcel sizes or greater currently exist. This will assure that clustered design will provide adequate resource protection for deer and associated species.

Proposed land use maps and all requests for changes as a function of this General Plan Update process should be considered with this recommendation as a constraint. This recommendation is similar to Policy 16.10, page III-166 requiring parcels of 40 acres or more that are identified as State Important Farmlands to be precluded from further subdivision.

Page II-47, Chapter 2: We continue to recommend that a policy be added to this chapter that reflects the significant economic contribution of fish and wildlife, from both consumptive and nonconsumptive use, to Nevada County (page 2 of our January 12, 1993 provides support for such a policy).

Page III-146, paragraph 1, second to last sentence: Animal movement is not at all limited to "riparian corridors an/or low-lying saddles" as this sentence states. Animal movement is species specific and highly variable. This statement should be modified. Riparian systems and saddles do provide a critical location to allow for animal movement for many species within partially developed areas and as such must be identified as locations requiring special consideration in this General Plan.

Page III-150, policy 13.2: Measures to protect and maintain the hardwood resource should be required rather than determined as part of Comprehensive Site Design Standards and should not be limited to impacts within setbacks or buffer areas, within which no impact should occur in the first place. Impacts to hardwoods

as a function of project design should be identified and fully mitigated. Mandatory clustering with mitigation as described in this policy would assure that General Plan Goals and Objectives are achieved.

Page III-151, Policy 13.5: As previously recommended, this policy should describe the mechanism by which this policy will be implemented and by whom.

Volume 2

Page IV-22, paragraph 1: Any large, undeveloped, area within the county would be deemed to provide important habitats to both resident and migratory wildlife populations and should be identified within this document as important. Paragraph 1 of this section should be modified to indicate that those habitats listed are only some of the "important or unique" habitats within the county.

Page IV-22, paragraph 3: See comment above directed toward Volume I, page III-146, paragraph 1 and modify accordingly.

Page V-19, "General Plan Compliance": We do not concur that those measures identified within this General Plan are adequate for deer conservation. Clustering alone will not provide adequate resource protection. Retention of large parcels, from 20 to 40 acre minimums, as suggested above, must be included within this document within critical deer winter and migratory areas, to assure resource protection and conservation.

If the DFG can be of further assistance, please contact Mr. Ron Bertram, Senior Biologist or Mr. Jerry Mensch, Environmental Services Supervisor, telephone (916) 355-7030.

Sincerely,

L. Ryan Broddrick
Regional Manager

cc: Mr. Ron Bertram
Department of Fish and Game
Rancho Cordova, California

Mr. Jerry Mensch
Department of Fish and Game
Rancho Cordova, California

nevcogp.nev

PETE WILSON, Governor

STATE OF CALIFORNIA—THE RESOURCES AGEN

DEPARTMENT OF FISH AND GAME
REGION 2
1701 NIMBUS ROAD, SUITE A
RANCHO CORDOVA, CALIFORNIA 95670
(916) 355-7020

RECEIVED
JAN 15 1993
NEVADA COUNTY
PLANNING DEPARTMENT

January 12, 1993

Mr. Bob Leggett, Acting Planning Director
Nevada County Planning Department
950 Maidu Avenue
Nevada City, California 95959-6100

Dear Mr. Leggett:

The Department of Fish and Game (DFG) has reviewed Volumes 1 and 2 of the Administrative Draft Nevada County General Plan that you provided to us at a December 18, 1992 meeting in Nevada City.

We recommend the following specific comments be incorporated into the General Plan to assure that fish, wildlife and water quality resources will be provided protection and mitigation for future development projects within Nevada County:

Volume 1:

Chapter 1:

Page II-17, Policy 1.8: This policy is inconsistent with the Central Themes and Concepts and many of the goals, objectives and policies of the General Plan. The area proposed for the New Town Reserve is one of the last remaining large areas of undeveloped habitat within the County and thus would be considered a significant wildlife habitat area. The area is outside of the proposed Community Boundaries of Penn Valley and, if developed as suggested within this policy, would remain surrounded by large, rural parcels. Subsequently, this proposal adds a new community that the General Plan does not support in concept. Lack of specific exclusion of a new major road system linking this New Town area to the adjacent metropolitan areas in Yuba and Sacramento Counties suggests that this proposal is growth inducing. Considering alternative Special Development Areas proposed for the Northstar and Loma Rica sites, the New Town site is the environmentally inferior alternative. We believe that this policy is in direct conflict with the General Plan and that the policy is inconsistent with the Board of Supervisors' direction of September 29, 1992 for the New Town project. As proposed in this policy, the project will have unmitigated significant environmental impacts to the county's vegetation and wildlife for which substantiation for overriding findings has not been provided. We recommend, therefore, that this policy be deleted from this General Plan and should only be considered in subsequent General Plan updates.

Page II-19, Policy 1.12: First, clustering should be defined in this document. Additionally, Rural -30 and Rural-40 should be added to the list of designations that require clustered development thus assuring protection of environmentally sensitive features. Remaining large blocks of non-fragmented wildlife habitat should be included within the list of ecologically sensitive areas on page II-20.

Page II-22, Policy 1.22: Principles of sound habitat and wildlife management should be added to the list of uses encouraged within large lot rural subdivisions.

Chapter 2

Nevada County provides significant consumptive and non-consumptive uses of local resources such as bird watching, hiking, skiing, wildlife viewing, photography and hunting. These activities provide a significant economic return to local businesses. We recommend that a policy be added that provides support for programs that encourage both consumptive and non-consumptive use of the county's natural resources, based on sound ecological principles, for their economic benefits to county residents.

Chapter 4:

We recommend that a policy be added that directs new road systems to avoid impacts to environmentally sensitive areas and to minimize stream crossings. We also recommend a policy that encourages the use of common driveways on new developments.

Chapter 6:

Page II-53, Policy 6.2: This policy should state that it is to be applied within both Rural and Community Regions. This policy should not wholly exclude vegetation management within Open Space (policy states "non-disturbance") that would be deemed beneficial to those objectives for which the Open Space was designed. Enhancement of stream and wetland environments or the restoration of decadent habitats, for which the Open Space was designed to preserve, should be allowed, encouraged, and in some cases, required of project proponents and resolved during project review.

Chapter 11:

Page III-2, Policy 11.1: All streams, whether identified on USGS maps or not, that function to protect water quality or to provide wildlife and fishery habitat values should be

protected with minimum building setbacks. This policy should be revised accordingly. The DFG recommends that the policy also include the establishment of minimum setbacks from stream and wetland habitats. We recommend that a minimum 100-foot or the width of riparian habitat if greater building setback be established above all perennial water or wetland bodies and a 50-foot or the width of riparian habitat if greater building setback be established above all intermittent water or wetland bodies.

Page III-4, Policy 11.7: Canal encasement can often have significant impacts to wildlife and fishery habitats. Projects required to encase canals under this policy would also be required to identify potential impacts to wildlife and fishery values and identify mitigation measures designed to offset potential impacts during project review under CEQA Guidelines. This policy should be appropriately modified.

Chapter 13:

Page III-8, Policy 13.1:

We recommend that all large blocks of undeveloped habitat be added to the list of critical wildlife areas.

All water courses are considered significant regardless of identification on USGS maps or whether they are perennial or intermittent, and this policy should be modified to reflect this change.

Clustering of project development may not be adequate to protect significant resources if zoning allows for densities that will preclude dedication of an Open Space area of adequate size. Animals requiring large blocks of undeveloped habitat or large areas for movement zones may be significantly impacted without adequate zoning and General Plan designations. We recommend that all designated critical migratory deer winter ranges and migratory corridors be restricted to 40-acre minimum parcel sizes and all designated noncritical migratory deer winter range be restricted to 20-acre minimum parcel sizes. This will assure that clustered design will provide adequate resource protection for at least this species.

The opportunity should be retained for vegetation management within Open Space, however, all activities within Open Space should be restricted to those beneficial to the resource values for which the Open Space was identified to protect. This policy should be modified to reflect this change.

Page III-9, Policy 13.3: This policy should describe the mechanism by which this policy will be implemented and by whom.

Page III-9, Policy 13.4: This policy provides no substantive value to wildlife, fish or vegetation and should be placed in Chapter 18.

Page III-10, Policy 13.5: This policy provides no substantive value to wildlife, fish or vegetation and should be placed in Chapter 18. A policy should be drafted that encourages the use of native vegetation for all landscaping on individual parcels and requires the use of native vegetation for all projects required to perform restoration work as mitigation for project impacts. Included should be specific requirements for oak mitigation based on the attached Oak Protection Guidelines.

Page III-10, Policy 13.6: This policy must define "heritage, and landmark trees and groves, and low elevation oak habitat". Large blocks of undeveloped hardwood habitats, as found within portions of western Nevada County, should be included as critical wildlife areas as defined in Policy 13.1. Measures to protect and maintain the hardwood resource would be required rather than determined as part of Comprehensive Site Design Standards. Mandatory clustering with mitigation as described in the attached Oak Protection Guidelines would assure that General Plan Goals and Objectives are achieved.

Chapter 20:

The document does not clarify if all prior goals, objectives and policies are incorporated into the Eastern Nevada County area. We assume that this chapter includes measures in addition to those for the county as a whole. The preamble should resolve this issue.

Page IV-10, Objective 20.12.1: Winter deer range does not occur within the eastern portions of Nevada County.

Page IV-18, Policy 20.28: Change "hydrophilic" to hydrophytic.

Page IV-18, Policy 20.29: This policy is confusing and should be rewritten.

Volume 2, Section 4:

Page 20: The discussion of "Important and Unique Wildlife Habitat Zones" needs to be clarified. Nevada County supports many more additional "important and unique" habitats than those identified. Any large, undeveloped area within the county would be deemed to provide important habitats to both resident and migratory wildlife populations. Paragraph 1 of this section should be modified to indicate that those habitats listed are only some of the "important or unique" habitats within the county. Additionally, discussion of movement corridors as they relate to many wildlife species and as they relate to migratory deer corridors must be clarified. The issue of movement corridors is complex and requirements vary by species and habitat type. Very little quantitative technical data are available for most species, but you have included that information known for deer within Nevada County. This section must be written to differentiate requirements for deer and the myriad of other important and unique species in Nevada County. For example, the use of creeks and saddles as movement zones is critical to many species including deer, but deer and many other species also utilize ridgetops or southern exposures as movement zones.

The value of stream systems for fishery and riparian habitat values and for their value as movement zones for many wildlife species cannot be underestimated, however for many species additional habitats and areas are required to facilitate unhindered movement.

Page 24: The section on "Stream and Riparian Corridors" should clarify the distinction between the values of streams as fish habitat, as they affect water quality, as they provide riparian habitat, and as they function as movement corridors for many species. Discussion of fragmentation of stream zones and stream corridors via road crossings, habitat modifications or adjacent land uses is appropriate in this section and should be included.

Page 25: Protective corridors along major streams within the county as recommended within the Open Space section is inadequate to provide for the retention of values and to assure continued animal movement among habitats and watersheds. All intermittent stream systems within the county should be provided protective corridors. Additionally, protecting only those stream systems that are identified on USGS Quads is an inadequate means by which to identify and evaluate habitat value since many stream systems of high value to fish, water quality or wildlife are not identified on USGS maps.

Thank you for the opportunity to review this project. If the DFG can be of further assistance, please contact Mr. Ron Bertram, Senior Biologist, or Mr. Jerry Mensch, Environmental Services Supervisor, telephone (916) 355-7030.

Sincerely,

James D. Messersmith
Regional Manger

Attachment

cc: Mr. Ron Bertram
Department of Fish and Game
Rancho Cordova, California

Mr. Jerry Mensch
Department of Fish and Game
Rancho Cordova, California

RECEIVED
6/10/94

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY PETE WILSON, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 3
P.O. BOX 911
MARYSVILLE, CA 95901
TDD Telephone (916) 741-4509
FAX (916) 741-5346
Telephone (916) 741-4539

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JUN 0 9 1994
NEVADA COUNTY
PLANNING DEPARTMENT

June 7, 1994

FNEV050
03-NEV-49 PM 0/32.6
Nevada County General
Plan Update, New Data
NOP SCH#94042073

Mr. Pat Norman, Planner
Nevada County Planning Department
950 Maidu Avenue
Nevada City, CA 95959-8617

Dear Mr. Norman:

Thank you for the opportunity to review and comment on the above referenced document which consists of Page 1-1, Figures 1-1, and Pages V1-6 through 12, Tables 1 though 7.

COMMENTS:

If Tables 1 through 7 (Chapter 1: Land Use Characteristics, V1-6 through V1-12) are for Buildout only, they should be identified as such. The revised land use and population data should be used to update the Circulation Element.

A Land Use Characteristics Table should also be provided for the New Town southwest of Penn Valley. The New Town's population should be included in the Community Region totals, not the Rural Regions (as in the enclosed legal notice).

If any community areas share boundaries, such as Grass Valley and Nevada City, they should be analyzed as one community. This should also apply to the Martis Valley, even though part of Martis Valley is in Placer County.

A population of 2.15 per dwelling unit has been assumed for all residential land use densities in Table 1 (Chapter 1: Land Use Characteristics, V1-6). What is the basis of this assumption? How does this density rate compare to similar counties, such as Placer and El Dorado?

The Environmental Impact Report (EIR) should address the degree of balance planned for each community in terms of production and attraction of trips. A good balance would reduce impacts on the regional transportation system.

All road classifications used to determine Level of Service (LOS) should be thoroughly described, with typical sections provided.

The EIR should clearly state whether a roadway will require reconstruction in order to operate according to its classification. Each road segment should be analyzed for the highest volume on that segment. Accident rates and safety standards should be considered in determining whether reconstruction will be necessary.

JUN-21-1994 07:45 FROM NEVADA CO.PLANNING DEPT.

received 6/1/94

PETE WILSON, Governor

STATE OF CALIFORNIA

STATE LANDS COMMISSION

LEO T. McCARTHY, *Lieutenant Governor*
GRAY DAVIS, *Controller*
RUSSELL S. GOULD, *Director of Finance*

EXECUTIVE OFFICE
1807 - 13th Street
Sacramento, CA 95814-7187

ROBERT C. HIGHT
Executive Officer

May 25, 1994

File Ref.: SCH #94042073

Mr. Pat Norman
Nevada County Planning Department
950 Maidu Avenue
Nevada City, CA 95959

RECEIVED
MAY 31 1994
NEVADA COUNTY
PLANNING DEPARTMENT

Dear Mr. Norman:

Staff of the State Lands Commission (SLC) has received the Notice of Preparation (NOP) of a draft Environmental Impact Report (DEIR) for the Nevada County General Plan Update, SCH #94042073.

The State Lands Commission has jurisdiction over all State owned filled and unfilled tidelands, submerged lands and beds of navigable waterways. The State acquired ownership of all such lands within its boundaries upon its admission to the United States in 1850. The State holds these lands for the benefit of all its people for the public trust purposes of water related commerce, navigation, fisheries, water oriented recreation, and open space.

In addition, shortly after becoming a State, California was also granted Sections 16 and 36 (2 square miles), or lands in lieu thereof, out of each township (36 square miles) then held by the federal government. The lands, classified as "School Lands", were given to the State to help support public education. While many of the School Lands were sold off over the years, the State retains an interest in approximately 1.3 million acres of mostly desert and forest lands. State legislation has mandated that revenues from these school lands accrue to the State Teachers Retirement System. The SLC also has jurisdiction and authority over School Lands and lieu lands.

The SLC should be consulted regarding any specific uses proposed for such lands. Inquiries may be submitted to the State Lands Commission, Division of Land Management, 1807 13th Street, Sacramento, California 95814, telephone (916) 445-1012.

Thank you for the opportunity to comment.

Sincerely,

Mary Griggs

MARY GRIGGS
Environmental Services
Division of Environmental
Planning and Management

cc: Dwight E. Sanders
Jane Sekelsky

5/28/94

CITY OF NEVADA CITY

CALIFORNIA

Nevada City
A Bicentennial
Community

May 23, 1994

Mr. Thomas Miller
Acting Planning Director
County of Nevada
P. O. Box 6100
Nevada City, CA 95959

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MAY 2 4 1994

NEVADA COUNTY
PLANNING DEPARTMENT

RE: Response to Notice of Preparation - Final Draft, Nevada County General Plan

Dear Tom:

Thank you for the opportunity to comment on the Notice of Preparation for the General Plan EIR. I would appreciate your forwarding copies of the City's correspondence to the EIR author and incorporating them into our formal comments on the NOP.

Our primary environmental concern continues to be development of the area east of Nevada City served by both Boulder Street and Willow Valley Road. We continue to support a General Plan land use map and development policies that would minimize further development in these areas unless or until suitable alternatives access is presented.

It is my understanding that the County still anticipates receiving money for study purposes from the Stonebridge project. Perhaps completion of this study would settle one and for all whether a Boulder Street bypass is viable. As you will see in the other comments that I referenced above, dealing with this issue will be critical to mitigate the potential adverse impacts on Nevada City of implementing the new General Plan.

Sincerely,

Andrew R. Cassano
City Planner

ARC/cs

cc: City Staff
City Council
City Planning Commission

CITY OF NEVADA CITY

CALIFORNIA

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Community

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OCT 1 4 1993

NEVADA COUNTY
PLANNING DEPARTMENT

October 14, 1993

Board of Supervisors
COUNTY OF NEVADA
950 Maidu Avenue
Nevada City, CA 95959

RE: Nevada County General Plan Update

Honorable Board Members:

The City Council of the City of Nevada City discussed the current draft of the proposed General Plan update. Following discussion at their meeting of October 12, 1993, the Council directed me to express the following comments and requests:

1. The Council reaffirmed our comments from January 12, 1993, a copy of which is attached.

2. The Council requests that scenic highway designations be extended through our Sphere of Influence to the existing City limits. This designation within our sphere is consistent with our General Plan, which requires special design control within 300 feet of Highways 49 and 20.

3. The Council requests that the Plan not show a connection between Boulder Street and Willow Valley Road. The Board will recall that a decision was made not to make this connection during the Stonebridge project hearings. It was determined that this connection between impacted roadways would be of little value.

4. The Council reiterated its concern over any regional sewer program, which could result in substantial urbanization around both cities, with little land use control by the cities. Further, we have a substantial investment in our wastewater treatment plant and hope that it will meet the public sewer treatment of our Sphere of Influence through buildout of the area.

5. The Council is very concerned with the possibility of density increases east of Nevada City, in areas where new growth will be served only by City streets. Please see comment 3 in the attached letter. Although alternative access routes have been discussed in concept, no studies have been completed to date which thoroughly evaluate their effectiveness, environmental effects, and funding options. I believe that the Board remains aware of the considerable traffic, noise, air pollution, and safety impacts which currently exist on Boulder Street and other streets. Not only City, but also County residents are currently impacted. Even under existing zoning, a considerable number of vacant lots exist which will further increase traffic levels as they build out. The City appreciates the Board's conditions of the Stonebridge project to study alternatives, and asks that no density increases occur unless or until suitable traffic alternatives and funding are firmly established. From our standpoint, the Board should even consider a reduction in potential density based on the considerable existing traffic constraints.

   At an absolute minimum, we request that the Board hold existing zoning in accordance with your direction to HBA earlier this year. You will not be denying or reducing existing property rights. You will simply be holding the status quo until traffic constraints are addressed.

   As the EIR is prepared for the General Plan, we will be taking a close look at the discussion and mitigation for traffic and other considerations for this area east of Nevada City as well as other areas around the City.

Finally, we appreciate the draft policies which call for a high level of cooperation between the City and County. Surely, our mutual commitment to solving the issues facing Western Nevada County will provide the best benefit to our citizens.

Sincerely,

Andrew R. Cassano
City Planner

ARC/cs
Attachment
cc: City Council
City Planning Commission

CITY OF NEVADA CITY

CALIFORNIA

Nevada City
A Bicentennial
Community

RECEIVED
APR 12 1993
NEVADA COUNTY
PLANNING DEPARTMENT

April 12, 1993

Mr. Pat Norman
Planning Department
County of Nevada
P. O. Box 6100
Nevada City, CA 95959

RE: Revised Administrative Draft, Nevada County General Plan

Dear Pat:

I apologize for responding a day late to your request for comments on the above referenced documents. I have distributed copies of applicable sections to the Nevada City Council and Planning Commission. However, we have not had time for an official policy maker review. Therefore, the comments herein should be viewed as my own comments serving as a technician for Nevada City. The City will reserve its right to continue commenting on the General Plan during the update process.

General

In general, the revised documents appear to be far more responsive to Nevada City's concerns. The policy amendments go further in protecting the City's right to be involved in the sphere of influence decision making. We would have preferred the more precise policies suggested in our earlier correspondence. However, I recognize it is difficult to include this level of detail in the document without providing a policy section for every community center.

The most alarming premise of the current draft General Plan as recognized by several articles in The Union, appears to be the assumption that many area roadways can be expanded to multi-lane facilities. It seems essential that such road improvements be reviewed by the decision makers in each area to determine whether they are conceptually appropriate. It appears that many of the road improvements

CITY HALL • 317 BROAD STREET • NEVADA CITY, CA 95959 • (916) 265-2496

CITY OF NEVADA CITY

CALIFORNIA

Nevada City
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January 12, 1993

RECEIVED

JAN 14 1993

NEVADA COUNTY
PLANNING DEPARTMENT

Mr. Patrick Norman
Planning Department
COUNTY OF NEVADA
950 Maidu Avenue
Nevada City, CA 95959

REGARDING: Nevada City's Comments on the Administrative Draft Nevada County General Plan Update.

Dear Pat:

Thank you for the opportunity to review and comment on the administrative draft of the County's proposed General Plan update. Our staff and City Council have made a cursory review of the document within the time frame available. As with other agencies and citizens, we will reserve the right to further comment on the document during the upcoming public review process.

On behalf of the City, I would like to thank your Department and the consultant for your efforts to closely match the City's General Plan. As you know, we have had a committee working on the possibility of an update of our General Plan within the Sphere of Influence areas. The City Council, upon reviewing the committee's work and holding a public hearing on the matter, has decided to not proceed with a formal General Plan Amendment. This decision was driven in part by fiscal constraints affecting most local governments this year.

At this time, following the Council's discussion, we offer comments below regarding the administrative draft text and land use map. As a general comment, it appears that additional review of land and community constraints may be appropriate to reduce growth potential around Nevada City to reasonably mitigatable levels. Special "GPD" requests affecting the City should be reviewed with these constraints in mind.

1. The existing County policy 23 for sphere of influence properties should be retained and strengthened as much as possible. We offer these suggestions:

   Policy 23: ~~To work with the incorporated areas and special districts of the County in determining their potential~~ The spheres of influence~~. Once developed, these~~ boundaries shall form the basis of a close working relationship between the County and the affected cities and districts. When any ~~major public or private~~ development that would result in the construction of 5,000 square feet or more of floor area is proposed within the unincorporated area of the County and also a

sphere of influence of another public entity, the County shall request comments from the affected entity. ~~If the decision by the County is inconsistent with the recommendations of the affected entity, the County shall make findings or specific economic, social, or other considerations as the basis of their decision.~~ The decision of the County shall be consistent with the comments of the affected entity. (see also new draft policy 1.23 and our discussion of "impact spheres" in item 7 below.)

2. We suggest that it may be necessary to develop policies specific to each city to reflect their particular philosophies and concerns. The following policies are suggested specifically for Nevada City:

   a. Development within the Sphere of Influence of Nevada City shall be consistent with the four major principles of the Nevada City General Plan:

      -PRESERVE THE SENSE OF WOODED ENCLOSURE by protecting views from the highways and by maintaining rural densities surrounding a tight urban cluster.

      -ENHANCE THE HISTORIC CORE by appropriate complimentary development such a visitor accommodations and infill residential.

      -REINFORCE EXISTING COMMERCIAL CONCENTRATIONS and strongly limit additional commercial locations.

      -CREATE OPPORTUNITIES FOR EMPLOYMENT and revenue generators tucked away in wooded surroundings but tied closely to the highways.

   b. Minimum lot sizes within the Sphere of Influence of Nevada City shall be considered an absolute minimum with larger minimum sizes required at the time of a specific development proposal if necessary to protect the public's health safety and welfare, based on any and all applicable constraints including site limitations, access, traffic impacts, tree removal, steep slopes, existing surrounding lot patterns and the nature of the surrounding properties.

   c. Tree removal for projects within the Sphere of Influence of Nevada City is encouraged to be limited to a total of 20% of trees over 8" d.b.h., with an absolute maximum not to exceed 40%.

d. Grading or building within the Sphere of Influence of Nevada City shall be prohibited within 25' of a seasonal drainage or within 100' of a perennial water course or water body, with the exception of access roadway crossings where no other alternative exists.

e. Within the Sphere of Influence of Nevada City, all new development shall be setback a minimum of 100' from Highways 49 and 20, except where this is not possible based on lot size or other limitations. The setback area shall be left in its natural state except for approved access road and trail systems. Where necessary to screen development projects, additional landscaping with native species shall be required.

f. The PD-Planned Development areas, as well as commercial and industrial areas, shown on the land use map in the Nevada City Sphere of Influence are critical to Nevada City's fiscal management and scenic corridor protection. The City has requested that these properties be referred to them for consideration of annexation and development. Any County application on these properties shall be accompanied by a letter from the City of Nevada City indicating that development has been denied after the processing of a land use application through Nevada City. (Should the County need to provide more definitive development direction for the PD-areas, the City would appreciate the opportunity to provide recommendations.)

g. Along the interface between the Spheres of Influence of Nevada City and Grass Valley, the land use map should provide for a buffer area of open space and/or low density residential to maintain the separate identities of the two cities.

3. We ask that you identify areas that are specifically served only by roadways that directly enter Nevada City. Land within these areas should be designated for appropriate low densities until acceptable alternative accesses and funding mechanisms have been identified. The Boulder Street/Red Dog Road area is the most recognized example of this situation, but there are other areas as well, including, but not limited to, Willow Valley Road, Nevada Street, and the Gold Flat interchange area.

4. We ask that you identify zones of benefit where future development is likely to rely heavily on City parks and include policy that would direct Quimby Act funds to the City. Our staff could work with you on the Capital Improvement Program to

include appropriate information. Perhaps these zones could coincide with traffic mitigation fee zones.

5. The City remains committed to cooperating with other jurisdictions in a regional transportation capital improvement and fee program (traffic mitigation fees) and our staff will be available through the Technical Advisory Committee to the Nevada County Transportation Commission to assist with this effort. We will also be seeking specific mitigations within our "impact sphere" (see item 7 below) as identified in specific project CEQA reviews.

6. We would appreciate clarification of draft policy 3.12, regarding connection to public sewer systems. Does this mean that development will not occur unless sewer is reasonably available? Does it mean that land within a particular distance of the sewer system will be required to annex? Our policy is identical to that of Grass Valley, in that no public sewer connections will be allowed to the City's system without annexation. We would favor a requirement to annex for PD, commercial, and industrial lands and other lands within a reasonable distance of existing sewer infrastructure.

7. We would like to establish an "impact sphere" boundary beyond our adopted sphere of influence boundary, where the City will be notified of projects and given a chance to submit weighted comments. Our impact sphere would include areas that generate traffic and recreation needs directly to the City, and where grading, tree removal, and new lighting would impact Nevada City's viewshed. Again, we propose that we receive notice of any project within our "impact sphere" that could result in the construction of 5,000 square feet or more of floor area. For subdivisions, any project greater than a two-way lot split could exceed this magnitude. We would appreciate your consultant showing a proposed impact sphere on the next draft of the plan. The area could include traffic model zones served through Nevada City plus any additional areas needed to include ridgelines visible from Nevada City. Projects within the sphere should mitigate all impacts as identified in regional plans and any specific impacts identified during the CEQA review.

8. We are concerned that draft policy 4.2 may be saying that it is acceptable to allow traffic impacts without mitigation in Nevada City. Our position is that where "aesthetic, community value, or historic considerations" are significant, this should be considered a traffic constraint that will limit the density of the areas served by those streets.

9. Finally, the City Council considered the administrative draft land use map. A number of options were discussed, following considerable testimony at two advertised public hearings. Testimony was divided between two groups: one supporting our existing general plan designations, and the other requesting reductions in density to reduce potential long term adverse impacts. The Council voted to send the following position with respect to the draft County land use map:

> "We are opposed to the proposed designations as drawn and hereby request that the land use map in our Sphere be amended to reflect existing County zoning (not general plan designations) except where your constraints analysis indicates that larger minimum parcel sizes should be utilized."

The Council's intent was aimed at residential designations only. Non-residential lands, including PD properties, should remain consistent with our existing general plan.

Thank you once again for this opportunity. We look forward to working with you as the planning continues and to continuing to strengthen our cooperative efforts on land use regulation.

Sincerely,

Andrew R. Cassano

Andrew R. Cassano
City Planner

cc: Nevada City Planning Commission
Nevada City Council
Bill Roberts, City of Grass Valley

(42:ncgp.com)

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OF NEVADA COUNTY
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NEVADA COUNTY
PLANNING DEPARTMENT

Notice of Preparation
Comments on

DRAFT NEVADA COUNTY GENERAL PLAN
ENVIRONMENTAL IMPACT REPORT
May 24, 1994

Introduction

The following comments are in response to the Notice of Preparation of the Environmental Impact Report on the draft Nevada County General Plan. The comments were prepared by the Research Team of the Rural Quality Coalition. They represent our organization's key concerns rather than an exhaustive set of possible impacts and mitigation measures. We expect that a full treatment of the issues per the California Environmental Quality Act will be conducted in the EIR.

Impact Thresholds

1. Concern: Use of thresholds appropriate to Nevada County.

Background ~ A number of environmental problems currently exist in the County In these cases, the threshold for impact significance should be low (*Kings County Farm Bureau v. City of Hanford* (5th Dist. 1990)). In addition, use of environmental thresholds which are appropriate to Nevada County has been a discussion point throughout the General Plan process.

Analysis Needed ~

a. Clear environmental thresholds should be created.

b. Where existing conditions have resulted in significant impacts which are not being mitigated, Plan-related additive impacts should be considered unmitigable.

c. Local thresholds should be created which are based, where appropriate, on perceptible change in conditions which might not be acceptable in rural and small town environments. For example, this approach is particularly appropriate in the areas of:

- Noise
- Quality of Life in residential areas related to traffic impacts
- Water Quality
- Visual Impacts
- Crime Levels
- Police/Fire Response Rate

Mitigation Measures

In many cases, policies are weakly worded or do not have an accompanying implementation measure and, thus, cannot be expected to assure mitigation. This issue should be explored in each impact discussion area. Where individual policies are considered mitigative in nature, their assured effectiveness must be evaluated. In some cases, reliance on a very generic policy can essentially defer mitigation to a future time which was considered a deficient approach in *Citizens for Quality Growth v. City of Mt. Shasta* (3rd Dist. 1988).

All available mitigation measures should be discussed even if not selected (*CEQA §15126(c)*). This will expand our ability to participate in the discussion.

Alternatives

This section is of particular importance to our organization. Evaluation of a range of alternatives in sufficient detail to compare to the proposed Plan are important to both the public's and the decision makers' understanding of the relative impacts of various land use options. Our key concerns are listed below.

1. Concern/Background: Range of Alternatives

Background ~ A range of alternatives is needed which will produce information sufficient to permit a reasonable choice of alternatives so far as environmental aspects are concerned (*San Bernardino Valley Audubon Society v. County of San Bernardino* (4th Dist. 1984)). These alternatives must all feasibly attain the project's basic objectives. (*CEQA §15126(d)*) This is important to our organization because we place great emphasis on the value of the discussion of the alternatives in the upcoming public hearings. The alternatives, thus, should be realistic to ensure that discussion is not wasted on "throw away" alternatives and concentrates on truly feasible and environmentally superior alternatives. In this case, we feel that the projects' objectives should be fairly widely defined to

ensure that a full range of alternatives are available. For instance, the four central themes should not be considered the project objective. Alternatives to these themes should be explored, particularly an alternative to focusing the degree of growth planned for in community regions.

Each alternative should be carefully designed to avoid significant adverse environmental impacts (*CEQA Guidelines, §15126(d), (d)(3)*), even if it would to some degree impede the project objectives. This should not be difficult to achieve if the objectives are fairly widely defined. The essential objective is merely a legally adequate general plan which minimizes the environmental and social impacts of growth.

The No Project Alternative should include a discussion of both the existing General Plan as well as existing conditions "on the ground" (*Environmental Planning & Information Council* (3rd Dist. 1982).

Analysis Needed ~ As a result of the discussion above, at a minimum, the following alternatives should be discussed:

a. **Existing Conditions**
b. **Existing General Plan**
c. **Existing Zoning**
d. **Buildout to Projected Population of Plan Period Only.** Suburban holding zones could be used for growth after the 20 year Plan period. This alternative is warranted because buildout projections go beyond the Plan period and a lesser population can be expected to reduce impacts.
e. **Buildout to Population of Plan Period Only** based on recent County growth trends. This alternative is warranted because there is some concern that recent State-generated growth projections being used could be exceeded because of the attractiveness of Nevada County and because higher than State average rates were experienced in the 1970-1990 period.
f. **Alternative 2** as analyzed by the Steering Committee but adjusted to utilize more recent population/household and other assumptions being used. We calculate this buildout population at 136,000.
g. **Alternative 1** as analyzed by the Steering Committee.
h. Use of More Rural Land Use Designations in the Sphere of Influence to act as holding zones until these areas are annexed.
i. **Project as Proposed Without GPDs.** The relative impact on County Subareas without major GPDs should be individually discussed. An example would be the impacts on the Penn Valley area with and without a New Town. We do not feel that this type of analysis is precluded by legal precedent which requires discussion of alternatives to those that relate to the project as a whole. Regardless, this type of discussion is certainly not prohibited and would provide quantification of alternatives being discussed by the public at large.

j. **Environmentally sound design.** An Alternative(s) should be designed specifically intended to address impacts which are uncovered in the process of preparing the DEIR. An assumption should also be made that another alternative will be created after circulation of the DEIR based on Community input.

2. Concern: The Alternatives need to be quantified to the extent possible to ensure substantive discussion.

Background ~ In *Kings County Farm Bureau v. City of Hanford* (5th Dist. 1990), the Court of Appeal noted the need for a comparative, quantitative analysis of the relative environmental impact of project alternatives. The CEQA Guidelines note that the Alternatives section should be prepared in sufficient detail to "foster informed decision-making and informed public participation" (§15126(d)(5).

Analysis Needed ~

a. Quantification of each alternative for each issue where quantification is possible should be conducted. For example, for each alternative:
   - Traffic levels and related quality of life impacts should be evaluated.
   - Fiscal impacts should be determined and appropriate mitigation recommended.
   - Public facility needs and levels of service based on assured level of mitigation should be evaluated.

   Other alternatives which cannot be quantified should be discussed in a substantive manner.

b. Comparative Conclusions on each Alternative should be made extremely clear within the analysis as well as in a summary table for ease of use by community members.

3. Concern: Alternatives Considered Infeasible.

Alternatives which are rejected for discussion because of infeasibility should be described and the list should include any alternatives suggested during the NOP process and rejected for this reason.

Background ~ The Goleta II case discusses this issue. Our concern is that it is made clear to us all alternatives which were considered but rejected, particularly if an infeasible determination was made so that we can fully participate in the discussion.

Environmental Issues

Land Use

1. Concern: Jobs : Housing Balance

Analysis Needed ~ The following questions should be answered:

- Can the desired balance be achieved on an annual basis?
- Will potential jobs be adequate to result in household incomes which will assist in alleviating our affordable housing problem and substantially decrease our ratio of low and very low income households?
- Can business recruitment programs realistically make up the gap in jobs need? Case studies would be useful.

Mitigation Possibilities ~ Required annual jobs:housing balance measures.

2. Concern: Land Use Compatibility

Background ~ Conflicting land use designations in close proximity can result in land use compatibility concerns.

Analysis Needed ~ The Land Use Map should be explored carefully for potential conflicting land uses and Plan policies and implementation measures should be evaluated as well as existing County regulations for ability to reduce conflicts below the significant level.

Mitigation Possibilities ~

a. **Text regarding each area of concern with specific requirements to reduce compatibility concerns.**
b. **Elimination of conflict areas.**

3. Concern: Degree of Urbanization

Background ~ It is assumed that the degree of urbanization being planned for will result in unmitigable impacts including visual impacts. Nevertheless, all potential forms of mitigation should be explored.

Analysis Needed ~ Quantification by subareas of degree of urbanization proposed compared to existing levels.

Mitigation Possibilities ~

a. **Use of transfer of development rights - key areas for its use should be identified in the EIR.**
b. **Required clustering and at least partial deletion of constrained land to be credited for clustering.**
c. **Mapping of environmental constraints on Land Use Map to better ensure recognition in development review.**
d. **Greater detail on requirements of proposed design guidelines. Architecture, signage and night lighting guidelines should all be included.**
e. **Revise Land Use Map to provide for holding zone densities in Sphere of Influence until annexed by the cities to ensure an orderly pattern of growth occurs.**

4. Concern: Individual GPDs

Background ~ The special attention given these areas during the Plan process warrants similar attention in the EIR. Increases in total development allowed should be set forth by subarea compared to existing zoning and general plan designations.

Analysis Needed ~ EIR level conclusions relative to each GPD.

Mitigation Possibilities ~

a. **Discussed throughout this letter.**
b. **Deletion of those resulting in potentially unmitigable impacts.**

Visual Impacts

5. Concern: Visual impacts of growth under the proposed Plan including loss of open space, overall degree of visual change and in subareas, disturbance of scenic corridors, and loss of visually important cultural features.

Background ~ It is assumed that the visual impacts of urbanization proposed will be unmitigable. However, all potential mitigation measures should be explored.

Analysis Needed ~ A full inventory of overall visual quality and unique visual features is needed for the County as a whole and subareas against which to weigh potential impacts. An impact evaluation system which reduces the subjectivity of this type of analysis should be used and should be tailored to the high level of aesthetic concern in this rural community.

Potential for visual impacts related to landform disturbance in various land use designations and in specific areas of concern should be discussed in detail.

Mitigation Possibilities –

a. See Land Use/Degree of Urbanization discussion.
b. Mapping of critical areas/features which must receive special attention in development design/review and general description of techniques to be used.
c. Include protection for character and configuration of key historic roads, including local roads.
d. Increase scenic road designations to include appropriate local roads such as Pleasant Valley Road, Willow Valley Road and numerous similar roads. Define scenic road standards to a greater degree to ensure mitigation.
e. Prepare new PD guidelines.
f. Direct future commercial/industrial development to be screened from main arteries.
g. Use of Community Planning Boards to review proposed projects.
h. Downscaling of proposed retail areas to fit the scale of our rural area. Smaller centers are more appropriate to our area.
i. Policy calling for retention of open irrigation ditches, an important scenic and historic resource.

Hydrology / Water Quality / Groundwater Supply

6. Concern: Nitrogen Input to Water.

When, where, and how much will future discharges of nitrogen into the soil from leach fields and fertilized lawns, etc. pollute the groundwater, streams and reservoirs? What economic and environmental cost will result?

According to Appendix G of the CEQA Guidelines, a project will normally have a significant effect on the environment if it will, among other things:

(f) substantially degrade water quality;
(g) contaminate a public water supply;
(h) substantially degrade or deplete groundwater resources...

A large proportion of the future increase in human population will depend upon wells for their water supply and septic systems for waste disposal. The nitrogen placed in the ground by even well designed and operating septic tanks and leach fields, and from fertilized lawns is only partially converted to non-toxic forms. Much of it enters the ground water, polluting wells and eventually traveling underground to enter and pollute wells, streams and reservoirs.

No one has enough information to predict how much or when future well drilling and waste disposal will impact groundwater quantity or quality in various parts of the County. The most probable scenario is that wells here and there will need to be replaced with treated water systems and waste discharges piped to sewage treatment plants. There are obvious public health risks and unexpected costs to not being able to forecast when and where such problems will likely occur and how serious they might be.

Analysis Needed ~

a. A study of Nevada County groundwater, its geographical and depth distribution, movement and capacity to absorb nitrogen from waste disposal and fertilization of lawns etc. would seem the first logical step toward defining this problem which is ignored in the Draft General Plan.

b. A preliminary study could define a long term monitoring program of well and stream conditions that would reduce risks.

Mitigation Possibilities ~

a. **Recognize this problem as a major constraint to growth.**
b. **Limit development in susceptible areas.**
c. **Discourage lawns and other landscapes that use large amounts of fertilizer and water by policy and implementation measures.**

7. Concern: Fisheries / Surface Water Quality / Aquatic Habitat

What will be the impact of development permitted by the General Plan on fisheries and other resources that depend upon instream flows, stream substrate and other elements of the aquatic habitat?

Background ~ According to Appendix G of the CEQA Guidelines, a project will normally have a significant effect on the environment if it will, among other things:

> (c) substantially affect a rare or endangered species of animal or plant or the habitat of the species;
> (d) interfere substantially with the movement of any resident or migratory fish or wildlife species;
> (f) substantially degrade water quality;
> (q) cause substantial flooding, erosion or siltation;
> (t) substantially diminish habitat for fish, wildlife, or plants

The Federal water quality criterion that applies to sediment is expressed for solids and turbidity (USEPA, 1976). The criterion was established for fish and aquatic life, stating that the "... should not reduce the depth of compensation point for photosynthetic activity by more than 100 percent from the seasonally established norm for aquatic life." Basically, this means that sediments should

not cloud the water and reduce light penetration for photosynthesis more than 10%. This standard is difficult to reach in urbanizing areas.

According to the EPA (1976) standards, the maximum allowable concentration of oil and grease in domestic water supply is "Virtually free from oil and grease ...." This is also very difficult to reach without controls in an urbanizing area. The EPA standard for oil and grease with respect to aquatic life is not to exceed 0.01 times the lowest continuous flow which results in a 50% lethal concentration in 96 hours to important freshwater species. This criteria must be established in a laboratory for individual species. This criteria must be established in a laboratory for individual species and a particular chemical constituent. For example, the listed lethal toxicity for freshwater fish is 39mg/l for waste oil.

At the Federal level, both the Army Corps of Engineers and the Fish and Wildlife Service are responsible for implementing federal legislation, most notably the Endangered Species Act and the Federal Clean Water Act. A key issue with both agencies is wetland protection. The Fish and Wildlife Service has a wetland policy calling for the protection of native wetlands. The policy beings with the following sentence: "Wetlands provide important fish and wildlife benefit as well as other significant functions (flood control, water quality maintenance, water supply recreation, scientific research) to the nation."

The draft does not mention fish although they are one of the most important natural resources in Nevada County. In all waters, they are a public resource and are enjoyed by thousands of citizens and visitors. Yet, like wildlife, they depend upon the habitat in thousands of miles of streams and many lakes and reservoirs that is affected by actions of individuals or agencies often unaware of the damage they can do.

The two forces that have damaged California fisheries resources, including those in the Sierra Nevada, more than all others put together are dam construction and soil erosion. The combined effects of these forces have and continue to be very damaging.

The future will probably see applications to build new dams on Nevada Counties "underdeveloped" rivers to supply water for agriculture in the San Joaquin Valley or development in the Los Angeles Basin. The County should have a policy of opposing any increase export of water.

Whether new dams are built or not, NID will need to modify its use of existing dams and diversions to supply the increased human population within the NID boundaries. This will cause changes in instream flow and water temperature regimens that will affect fish habitat and populations.

Soil erosion, that always increases as natural vegetation is removed for construction of housing or roads, almost always results in increasing the deposition of soil and sand in stream beds. That soil and sand makes pools shallow and embeds gravel and rock necessary for all trout and salmon habitat.

Analysis Needed ~

a. The Nevada Irrigation District should be asked to provide a report predicting how they would probably use their existing water storage and delivery system to supply future needs. This report should include a study using their operations model to define mean monthly instream flows and water temperatures in streams below each of their dams and at each of the downstream USGS gaging stations affected by their projects, with and without the predicted changes. Changes in the seasonal regimens of reservoir storage are necessary part of such a study and should be reported. Loss of open ditches as habitat as urbanization increases should be evaluated. Impacts of water supply and conveyance improvements which will be needed in general should be evaluated.

b. The County or it's consultant should then predict both the increase in soil and erosion likely to occur as human development increases, how this will increase the sediment contribution to each permanent stream and then how the modification of stream flow will effect the capacity of the stream to cleanse itself. Effectiveness of the existing Grading Ordinance should be evaluated.

c. Finally it will be necessary to predict how fish habitats and populations will be affected.

Mitigation Possibilities ~

a. **Recognize these relationships in the General Plan and adopt Goals, Objectives and Policies and Implementation Measures to minimize the problems.**

b. **Develop and education program, for all road planners, grading inspectors and heavy equipment operators that makes them aware of these problems. Require use of Best Management Practices in the Grading Ordinance.**

c. **Recognize the importance of ordinances (building set backs, grading, etc) and operational policies of all who build or maintain roads, (no side casting) to prevent erosion or deposition of soil in places where it can be washed into stream channels. Make sure these rules and policies are enforced.**

d. **Adopt a policy that the County will oppose any export of additional water from Nevada County.**

e. **Require the provision of instream flows adequate to sustain healthy fish habitat and populations below all dams and diversions.**

f. **Include policy opposing piping of open ditches which serve as important habitat.**

8. Concern: Construction with Stream Environment Zones and Vicinity

What will be the impact of defining minimum building setback lines to the "average high water mark" of perennial streams and significant waterways (Policy 11.7)?

Background – According to Appendix G of the CEQA Guidelines, a project will normally have a significant effect on the environment if it will, among other things: "(q) cause substantial flooding, erosion or siltation".

The high water mark of streams and wetlands varies from year to year and would, in many years, be above the "average". This policy would allow many homes and other buildings to be constructed on the very edge of and often below the tops of stream banks and in flood plains where they would be subjected to flooding in those many years when runoff is above average.

Such construction involves safety risks, risks of legal action against the agency which is responsible for drafting appropriate ordinances, and of course obvious risks of environmental damage to the waterways during and after construction, from erosion and sewage discharge.

This new policy is an attempt to make setback lines "more flexible" but it goes too far, almost eliminating them. The policy conflicts with the goal of riparian, stream and flood protection.

Analysis Needed – Review of this policy with the County Building and Environmental Health Departments. If more information is needed, a review of US Geological Survey stream flow records will provide an understanding of the great seasonal and annual variation in flows and gage heights and whether or not previous restrictions provided greater mitigation.

Mitigation Possibilities –

a. **It would be much easier to change the proposed Policy 11.7 than to attempt mitigation for losses of property and even life that could occur if building is allowed to the "average" high water mark. The policy should ensure that construction does not occur with 100-feet (greater in steep areas), or the high water mark, or the 100 year floodplain – whichever is greater.**

   Environmental damage caused by erosion resulting from construction in the stream channel cannot be mitigated because causes the loss of habitat for fish and the aquatic insects that are their food supply.

b. **An implementation measure should call for biological field and other impact studies of bridge, culvert, and other in-stream improvements.**

9. Concern: Groundwater Supply for Large Lot Residential Not Served by NID Surface Water

Background ~ According to Appendix G of the CEQA Guidelines, a project will normally have a significant effect on the environment if it will, among other things: "(h) substantially .... deplete groundwater resources...". No study of groundwater supplies has ever been conducted in Nevada County. Without some indication of available groundwater supplies, appropriate lot sizes cannot be assigned. Passing this concern off on further study would violate legal precedent. In addition, in Kings County Farm Bureau v. City of Hanford, the issue of lack of evidence in showing water supply availability for the City as a whole during the 20 year life of a proposed power plant was considered an EIR deficiency.

Analysis Needed ~ See Recommendation 1a in this Section.

Mitigation Possibilities ~ See Mitigation Possibilities 1a,b in this Section.

Biological Resources

Wildlife and Vegetation

Introduction. The California Environmental Quality Act (CEQA) Guidelines states that a project may have a significant effect on the environment when any of a number of conditions occur including the following one related to biological resources:

> (a) The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal.

Additionally, Appendix G of the CEQA Guidelines state that "a project will normally have a significant effect on the environment if it will:"

> (c) Substantially affect a rare or endangered species of animal or plant or the habitat of the species;
>
> (d) Interfere substantially with the movement of any resident or migratory fish or wildlife species...

These concerns should be taken into consideration relative to all potential wildlife and vegetation impacts.

10. Concern: How will "significant and sensitive habitats" be protected as development proceeds consistent with the General Plan?

Background ~ Without a comprehensive inventory of sites supporting endangered, rare, and threatened species, as well as identification of important migration corridors and riparian habitats, it will be difficult to mitigate the effects of development. Sensitive, though not necessarily threatened, habitats such as oak woodlands are also of concern. In addition, upfront policies and programs are needed to assure impact avoidance. Reliance on incremental project level mitigation will not be effective.

Analysis Needed ~ Establish a county inventory, to be meshed with watershed-wide information, on listed species and existing habitats likely to support them. Identify key indicator species and their major habitat components throughout the county. Identify biological processes necessary to maintain indicator species in a healthy condition. Identify the effect of various residential densities on all listed and indicator species.

Mitigation Possibilities ~

a. **Clearly define "significant and sensitive habitats" using data from the analyses on the Land Use Map. Require detailed biological reports and mitigation plans, prepared by qualified professional wildlife scientists, for proposed developments in sensitive habitat areas.**

b. **Revise Land Use Map as necessary with Open Space or 20-40 acre plus parcel size designation depending on type of resource.**

c. **Reinsert the following policy, deleted from the administrative draft Plan (with changes):**

> **The County will form~~shall consider forming~~ an Open Space District to acquire and manage open space lands. Such a District would be able to acquire open space through dedication, or voluntary purchase from willing sellers of property or easements; the use of eminent domain would not be allowed.**
>
> **The County shall form~~may also consider formation~~ of an Open Space Authority under applicable State legislation to finance the acquisition of open space in the County through a transaction and use tax over a 20 year period. The Authority would enter into an agreement with the District for use of the funds generated by the tax in accordance with an expenditure plan adopted by the Authority.**
>
> **The District would be able to acquire land or other real property interests which could focus on lands which contain unique, valuable or sensitive open space resources reflecting environmental or biological sensitivity; scenic landscape units; community separators; historic, cultural, and archaeological content; and low intensity recreational potential.**

d. **Revise the clustering policy to ensure its use throughout the County:**

> **The County shall utilize clustering of development, as provided in the Land Use policies, to preserve open space within the *Rural Regions* village and community areas, and to encourage creation of open space which will enhance visual, habitat and other open space values. Such open space shall be permanently secured and preserved as open space through permanent easements, dedication to a public agency, permanent trust or other irrevocable means.**

11. Concern: How will the impacts to sensitive habitats and biological resources of single residences on individual lots be mitigated?

Background ~ With only a clustering ordinance as leverage to "discourage" encroachments on sensitive habitats, increased residential development on 5 and 10-acre parcels across the county will have significant effects on the health of the county biological resources. A 100-acre development of 20 homes will be regulated, but 20 homes built individually on separate lots will not, and will result in large-scale fragmentation of habitats.

Analysis Needed ~ Biotic resource overlay maps for all county land subject to development, indicating areas of special significance.

Mitigation Possibilities ~

a. **Include specific wording in Policy 13.1 to include single residences on individual lots,both small lots as well as 30-40 acre lots (per Fish and Game recommendation of 1/12/93). A specific implementation measure will need to be attached to this policy to ensure mitigation.**

b. **An implementation measure is needed to create an ordinance which requires building and road placement, during project review including at the individual building permit stage, to protect significant and sensitive habitats as defined.**

12. Concern: Tree loss in general as a result of urban development.

Background ~ Though the County is urbanizing, it has not adopted urban level tree protection measures. Protection of only heritage and landmark trees and groves is not sufficient to fully mitigate impacts.

Analysis Needed ~ Description of typical tree loss on various parcel sizes and development types.

Mitigation Possibilities ~ Implementation measure which requires tree cutting permits on all parcels 3-acres or less in size and for all non-residential projects

with a goal of loss of no more than 20% of trees on the site. Key stands should require additional protection.

13. Concern: What long-term effects will the suburbanization of the area have on native habitat?

Background ~ Without significant efforts to educate the public about low-water vegetation and water conservation, and without ordinances requiring long-term maintenance of landscaped areas, developers and individual home builders may opt for the most popular or inexpensive plantings. This will result in further loss of native vegetation.

Analysis Needed ~ Compilation of suitable and available species of landscape plants for various habitats in the county. Analysis of yearly water consumption requirements of these plants versus common landscaping plants.

Mitigation Possibilities ~ A Landscaping Ordinance should be aimed at addressing these concerns. It could:

- **Mandate building permit covenants which require landscape maintenance for multi-family and non-residential projects with covenants to be attached to any subsequent owners.**
- **Require retention of native landscaping for certain types of projects**
- **Provide credits for use of low-water and native plantings, to be applied against required amount of landscaping for all projects.**

14. Concern: How will monitoring of significant wildlife and habitat resources be used to ensure the validity and effectiveness of the Plan policies if no specific timing for review is required?

Background ~ We believe that without monitoring of biotic resources with consistent methods by qualified scientific personnel on a regular basis, adequate mitigation will be impossible.

Analysis Needed ~ Field monitoring of listed and indicator species using sampling designs specific to the resource, consistent through time, and conducted on an annual or biannual basis.

Mitigation Possibilities ~ Specify cooperation with local agencies of the Tahoe National Forest, Bureau of Land Management, and California Department of Fish and Game to develop monitoring standards useful to the county and the agencies. Structure impact fees assessed to multi-unit residential developers and mining operations, and timber harvest plans for over 10 acres filed with the California Department of Forestry by private landowners to pay part of the cost of such monitoring.

Forests

15. Concern: How will the characteristics of sustainable forest, including timber production, be maintained?

Background ~ We believe that the policies created under the Forest section of the draft Plan must address forests as systems, and their users as elements of those systems. Given population pressures for continual subdivision of available land, large parcels become small parcels, residential forest occupants object to resource extraction, wildlife values, and recreational uses. Under such circumstances, forests become woodland fragments.

Analysis Needed ~ Determine existing and potential economic and quality-of-life benefits provided by existing Forest designations, including wood products, recreation, tourism, and residential real estate values. Calculate impacts of increased residential housing in Forest designations on these aspects of the County. Inventory timber resources on Estate and Rural land and calculate potential economic value. Perhaps they would be more suitable for Forest designation.

Mitigation Possibilities ~

a. **Maintain existing 160-acre zoning for Forest designations.**
b. **Use Resource Overlay maps for Wildlife and Vegetation, and for Water during project review for residential development of all kinds in Forest designations, with deed restrictions to protect sensitive habitats.**
c. **Create recreation, timber extraction and conservation easements voluntarily with owners on Forest and Rural designations.**
d. **Require CUPs for commercial support uses in Forest designations.**
e. **Require clustering of development within Forest and Rural land use designations.**
f. **Increase TPZ tax benefits if longer term classification is agreed to with owner or long-term rotations are agreed to.**
g. **Request CDF Special Rules for Nevada County. Consideration should be given to the following in these special rules:**
   - **Mandates of uneven-age management for forests in Nevada County.**
   - **Longer term rotations.**
   - **Protection of natural biodiversity of Nevada County forests.**

Agriculture

16. Concern: Loss of agriculture in general.

Background ~ If a comprehensive inventory of existing and potential agricultural uses is not conducted, designation will occur on a case by case basis, leading to inappropriate development on prime agricultural lands.

Analysis Needed ~ Working with the Nevada County Department of Agriculture and the California Department of Food and Agriculture, survey all likely soil types and likely landforms for agricultural usage along with a listing of existing of commercial agricultural pursuits, regardless of soil type. Many current small RA parcels support agricultural operations. Identify parcels shown on the State Important Farmland Map as prime, of Statewide or local importance, or unique. Determination of percentage of agricultural land expected to be lost to urbanization (parcels of under 20 acres) should be made.

Mitigation Possibilities ~

a. **Maintain existing agricultural zoning and provide zoning classifications to protect prime agricultural lands as well as existing operations regardless of soil type throughout the County according to the appropriate pursuits for the parcel size. Particularly, maintain agricultural zoning adjacent to and within Community Regions to protect potential food production zones on the urban fringe. Existing agriculture should not be within Community Region boundaries to resist conversion.**
b. **Classify all parcels 40 acres and over on the State Important Farmland Map as AE.**
c. **Eliminate the New Town which will retire extensive agricultural land and exert growth pressure on surrounding agricultural lands.**

17. Concern: How will agricultural pursuits be protected from conflicts with new residential development adjacent to them?

Background ~ Without definition of "important agricultural lands" by zoning type or type of agricultural activity, and without ordinances to protect agricultural activity it is likely that new residential users will object to some agricultural activities and those activities will be discouraged as a result.

Analysis Needed ~ Define "important agricultural lands." This definition should include existing agricultural operations regardless of soil type or size.

Mitigation Possibilities ~

a. **Provide 100-foot setbacks from important agricultural lands for new residential and residential support uses.**
b. **Require disclosure in land sales of normal agricultural activity on adjacent lands and of the rights of practitioners to continue such agricultural activities ("Right to Farm" Ordinance).**
c. **Require clustering of residential developments in areas zoned predominantly for agriculture, including Estate and all Rural classifications.**

18. Concern: How will agricultural pursuits be protected from pressure to develop for more intensive uses?

Background ~ Without tax protection and zoning to support commercial agricultural pursuits, farmers and ranchers throughout the State face great enticement to sell or subdivide their lands for residential development.

Analysis Needed ~ Research on type of ordinances and zoning restrictions which will encourage owners of agricultural lands to maintain them in low density uses.

Mitigation Possibilities ~

a. **Create ordinances for AE lands offering Williamson Act-type county tax protection in exchange for prohibition on further subdivision and while commercial agricultural activity is pursued.**
b. **Create ordinances allowing for agricultural support and marketing services on land zoned predominantly for agriculture.**
c. **Allow direct marketing of agricultural products processed or produced on site without CUPs.**
d. **Provide facilitation to private conservation organizations and landowners to create conservation easements.**
e. **Facilitate landowner efforts to classify parcels under the Williamson Act.**

19. Concern: How will adequate water for agricultural irrigation be ensured in the case of a possible doubling of the County population?

Background ~ We feel that water delivery protections must be made, along with water conservation mandates and incentives, to non-hobby agricultural activities in order to ensure the protection of the county's agricultural base in the face economic pressure from residential development. Hobby agriculture also plays a role in Open Space protection and our rural lifestyle and also deserves some level of water supply assurance.

Analysis Needed ~ Determine the current consumption data for commercial and hobby agriculture by type and method of use and project future needs. Determine possible conservation yields by method. Determine possible options for increased efficiency in raw water distribution systems. Evaluate incentives for efficiency such as water banking. Determine how current water rights for agriculture can be protected without violating Clean Water Act, CEQA, and Endangered Species Act.

Mitigation Possibilities ~

a. **Guarantee water delivery rights to current agricultural users and adequate supply for future users along with ordinance-mandated conserving methods and low-cost loans or free consultation to achieve water savings.**
b. **Encourage NID to create an on-demand delivery system.**
c. **Scale back urban uses proposed if required to ensure adequate, cost-appropriate agricultural water supply. This is a particular concern in areas where land uses densities allowed may encourage replacement of raw water supply with piped, treated water, eliminating supply of agricultural water in the vicinity.**

Air Quality

20. Concern: What will be the air quality impacts related to construction activity from buildout of the Plan?

Background ~ Short-term construction emissions including dust form grading could result in substantial increases in pollutant concentrations within the County. This could make it more difficult for County to maintain State and federal air quality standards. We feel that the only way to mitigate this impact is to reduce land use densities/intensities proposed throughout the Plan area.

Air quality in Nevada County is heavily influenced from urban developments in Placer and Sacramento Counties. The Air Resources Board has identified Nevada County as a receptor of transported pollutants from these jurisdictions. In fact, the ARB has identified the pollutant-transport into Nevada County as "overwhelming" indicating that without such transport the County would not exceed State ozone standards.

However, the development potential under the new Plan could result in a population where state ozone standards could be exceeded in the absence of transport from upwind air districts. Therefore, it is imperative that the new Nevada County General Plan contain provisions to ensure the air quality in Nevada County does not substantially degrade as buildout of the Plan occurs. It would be less costly for the County to prevent the deterioration of its air quality than to have to restore it once it has been degraded, both in monetary and political costs.

In addition, the California Environmental Quality Act Guidelines (§15021) requires public agencies to "minimize environmental damage where feasible". A public agency must not approve a project if there are mitigation measures and/or project alternatives would substantially lessen a project's significant

impacts. Therefore, the County should include all mitigation measures that will serve to reduce potentially significant impacts expected from buildout of the proposed Draft Plan.

Analysis Needed ~ Using the economic analysis prepared for the Draft Plan, the amount of new construction that could be expected annually should be estimated for each land use designation. Then, using U.S. Environmental Protection Agency and local APCD generation rates, construction-generated dust and equipment emissions should be estimated on an annual basis. The local APCD should be contacted to determine the significance of these air quality impacts.

Mitigation Possibilities ~ The County is required as lead agency to minimize environmental damage that could result from buildout of the Plan area if feasible mitigation measures or alternatives are available "that would substantially lessen any significant effect" (CEQA §15021(a)(2)). Therefore, the County should consider including the following measures within the Plan to minimize significant environmental damage:

a. **Require all new projects that would be permitted under the Plan to submit development proposals to the local APCD for review, comment and approval.**
b. **Add policies that would require the County to deny any projects that have not conformed to APCD requirements and have not received APCD sign-off.**
c. **Adopt the Plan alternative which would substantially reduce the amount of emissions expected from the proposed Plan.**

21. Concern: What will the Air Quality Impacts be due to Carbon Monoxide Hotspots at Congested Intersections?

Background ~ We feel that State and federal carbon monoxide standards will be exceeded at various Plan area intersections due to the land use densities and intensities proposed in the current Draft Plan. Intersections in the Brunswick Basin, for example, are currently congested and carbon monoxide hotspots could result from buildout of the Plan area.

Analysis Needed ~ The APCD should be contacted to determine which Plan area intersections should have Caline4 computer modeling performed on future buildout conditions scenario. This Caline4 analysis should be done under the existing Plan, proposed Plan, and each Plan alternative scenarios. This will allow decision-makers the opportunity to choose a Plan that will not endanger the public's health from unacceptable carbon monoxide levels.

It should be noted that the Caline4 analysis should not take into consideration future roadway improvements that would benefit air quality unless it can be

shown that implementation of the improvements can be assured prior to significant impacts occurring.

Mitigation Possibilities ~ The Plan should include the following polices and implementation measures needed to substantially reduce potentially significant carbon monoxide air quality impacts. These should include:

a. **A policy requiring all future development projects requiring discretionary approval to prepare an air quality analysis if any affected intersections are currently at capacity or are expected to be adversely impacted from the project.**
b. **A policy indicating the public's health is more important than any economic, legal, or social concern and that all projects that would cause an exceedance of State or federal eight- and one-hour carbon monoxide standards to be denied.**
c. **Incorporation into the conditions of project approval all mitigation measures deemed feasible by the APCD and the County.**

22. Concern: What will the impacts be to Regional Air Quality and the Ability of the County to maintain State and federal standards from buildout of the Plan area?

Background ~ We believe that pollutant concentrations from stationary and mobile sources will result in an increased number of days/hours of ozone violations within the county. The land use densities/intensities proposed in the Draft Plan will make it impossible for the County to maintain health based State and federal ozone standards. The Plan increases County resident's reliance on the automobile, the primary contributor of ozone precursor gases, and therefore would not be consistent with provisions of the California Clean Air Act.

Analysis Needed ~ An estimate of vehicular related emissions using the Urbemis3 computer model should be made based on buildout of all land uses. This estimate should then be compared to emissions that could be expected from the existing Plan, and all the Plan's alternatives. The land use plan which results in the lowest amount of vehicular emissions should be considered by the decision-makers, keeping in mind that a public agency should not approve a project (in this case the Plan) if there are feasible alternatives.

Mitigation Possibilities ~ The County is required to adopt all feasible mitigation measures and/or alternatives that will substantially lessen significant impacts. At a minimum, these measures should include a policy or implementation measure requiring:

a. **A policy or implementation measure requiring all new development projects to submit their plans to the APCD for review and approval.**
b. **APCD review and approval of new development proposals.**

c. **Incorporation of all measures recommended as feasible by the APCD.**

d. **New indirect and area sources of air pollutants that are expected to exceed the APCD's significance thresholds to offset their emissions increased through the purchase of emission credits within the Mountain Counties and/or Sacramento Valley Air Basin.**

Traffic

23. Concern: What criteria will be used to determine when a segment of road is deficient, and what steps will be taken when it is?

Background ~ In determining the maximum acceptable volumes for most collector and local roads, the Level of Service for drivers is not the most important criteria. The safety of the roads, for both the drivers and the residents of these roads is more important. The safety of walking, or riding a bike, along these roads, must be considered.

Analysis Needed ~ Collector roads should be broken up into logical segments that stay within the same range of volume. The highest volume on this segment should be analyzed. The typical section assumed for analysis of the segment should be similar to the narrowest and/or steepest part of this segment. The safety of the existing road should be determined from accident rates, but the ability of the road to accommodate projected volumes should be based on road standards. This is true for local and most collector roads.

The County's road standards should be shown as a reference, but their adequacy should also be reviewed. To make our rural roads safe for pedestrians and bicyclists, the graded width must allow for a car going in each direction plus some width on each side. It can be paved or gravel, but a ditch does not qualify. This extra width may not be necessary on low volume roads, but it is important for collector roads passing through rural residential areas.

Reference should be made to major circulation studies which have been performed for the County. The Nevada County Transportation Commission's Subregional Traffic Study should be incorporated and the County's Bicycle Master Plan should be described.

Mitigation Possibilities ~

a. **Frontage improvements and rights-of-way requirements along with subdivision.**

b. **A mitigation fee program which pays for upgrading all of the roads to the standards discussed here.**

24. Concern: Quality of life impacts on residential streets as a result of existing and increased traffic.

Background ~ The major traffic-related concern of most residents is not Level-of-Service but safety and quality of life (QOL) related impacts (noise, vibration, annoyance) in their neighborhoods.

Analysis Needed ~ Quantification of quality of life impacts on all residential streets which may meet thresholds selected should be made. We recommend use of the Goodrich TIRE Index. Any residential streets which will exceed QOL thresholds should be the subject of mitigation attention or a conclusion of unmitigable impacts should be made.

Mitigation Possibilities ~

a. Adjustment of land uses to reduce impacts.
b. Noise impact retrofit programs.

25. Concern: Level-of-Service on area roads and intersections.

Analysis Needed ~ Existing and projected levels-of-service on area roads, <u>including local roads</u>, must be evaluated. If a complete evaluation is not made, the costs of mitigation will not be fully accounted for.

In the assuredness of funding per the mitigation policy in the Circulation Element must be explored. Interim impact levels should be determined which may result prior to collection of full funding for needed improvements to ensure full disclosure of impacts.

Mitigation Possibilities ~

a. Include local roads in Policy 4.10 (funding program).
b. Return <u>shall</u> to Policy 4.9 to ensure avoidance of impacts.

26. Concern: Impacts of proposed road improvements.

Background ~ Extensive roadway improvements will be needed to meet the needs of projected growth including road widenings, safety access, new roads, bridges, and highway improvements.

Analysis Needed ~ The physical impacts (noise, visual, biotic, etc.) of these improvements need to be evaluated.

Mitigation Possibilities ~

a. An implementation program is needed to create a framework for tree and vegetation avoidance protection and an impact mitigation fee or program when impacts do occur.

b. First priority should be given to realignment on the Circulation Map of proposed roadways where significant impacts to neighborhoods or environmental features might result.

Noise

27. Concern: Traffic and Point Source Noise Increases

Analysis Needed ~ Future noise contour mapping in all areas of concern including along local roadways and creation of local noise thresholds appropriate to our rural community.

Mitigation Possibilities ~

a. A standard for acceptable "perceptible change" should be included as a companion standard to the usual noise compatibility chart. It should be made clear that violation of both standards represent a "significant" noise level per Objective 9.1.1.

b. Add Policy: The ambient noise at remote receptors in the County shall be represented by the L90.

c. Revise Policy 9.6: Noise created by new transportation noise sources including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in the adopted Nevada County noise standards at outdoor activity areas of existing, expected, or future noise sensitive land uses based on land use designations, or interior noise spaces of existing noise-sensitive land uses. (The intent is to ensure that mitigation is ensured for future land uses allowed per the Land Use Map but not yet built.)

d. Revise Policy 9.11: Ensure the development of compatible land uses adjacent to the Nevada County Airpark-Airport through the approval of development consistent with the adopted Nevada County noise standards, General Plan Land Use Commission, and the continued enforcement of the Airport Land Use Noise Compatibility Criteria.~~as found~~ All uses in airport influence area shall be conditional to ensure implementation. Noise contours shall be on Land Use and Zoning Maps in the Nevada County Airpark-Airport Master Plan.

e. Add new Implementation Measure: Future noise contours should be on all Land Use and Zoning Maps to assist in determining setbacks and as an informational tool for property owners, realtors, and developers.

f. Add new Policy: Imposition of a noise level adjustment shall be mandatory if one or more of the following conditions are found to exist:

1) Unique characteristics of the noise source:

a) The noise contains a very high or low frequency, is of a pure tone (a steady, audible tone such as a whine, screech, or hum), or contains a wide divergence in frequency spectra between the noise

source and ambient level.)

b) The noise is impulsive in nature (such as hammering, riveting, or explosions), or contains music or speech.

c) The noise source is of a long duration.

In such instances the standards shall be lowered by 5 dBA.

2) Unique characteristics of the noise receptor when the ambient noise level is determined to be 5 dBA or more below the Policy I standard for those projects requiring a General Plan amendment, rezoning, and/or conditional use permit. In such instances, the new standard shall not exceed 5 dBA above the ambient or the standards, whichever is more restrictive.

The above standards shall not apply to those activities associated with the actual construction of a project or to those projects associated with the provision of emergency services or functions.

The standards of this policy shall be enforced through compliance inspections and/or complaints.

Recognizing that this Element must work toward the solution to existing noise problems, those land uses that are inconsistent with the above standards and are therefore non-conforming in nature, shall comply with said standards as these land uses are upgraded or intensified or after abandonment through the use permit or site plan process. Said standards shall apply only to that portion of the land use requiring approval. In any event, the use or portion subject to a land use permit must meet the standards in Table 1 and cumulatively the noise generated from the entire site must be equal to or less than the pre-land use permit ambient noise level. All such projects will require a comprehensive noise study per Policy 9.4.

Public Facilities and Services

28. Concern: Ability to provide public facilities/services at or above existing levels in the future.

Background ~ Nevada County has not shown a willingness to increase fees for public facility provision in the past. As a result, we see a lowering of service levels as growth proceeds in the future.

Additionally, we feel that mitigation of a public facility impact cannot be assured within the context of this EIR unless:

1) An adequate mitigation fee is already in place;
2) The fee can reasonably be assured to be adopted in the near future and in time for adequate fees to be

SOURCES

California Environmental Quality Act Guidelines §15021; §15021(a)(2)

CEQA Guidelines, §15126(c),(d); §15126(d)(3); (§15126(d)(5)

Citizens for Quality Growth v. City of Mt. Shasta (3rd Dist. 1988)

Environmental Planning & Information Council (3rd Dist. 1982)

Kings County Farm Bureau v. City of Hanford (5th Dist. 1990)

San Bernardino Valley Audubon Society v. County of San Bernardino (4th Dist. 1984)

USEPA, 1976

GREATER PENN VALLEY COMMUNITY ASSOCIATION

P.O. BOX 473 PENN VALLEY, CA 95946

May 25, 1994

Thomas Miller
Acting Planning Director
Nevada County Planning Department
950 Maidu Ave.
Nevada City, CA 95959

RECEIVED
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NEVADA COUNTY
PLANNING DEPARTMENT

Dear Mr. Miller,

I am writing as a representative of the Greater Penn Valley Community Association in response to the Notice of Preparation of the Environmental Impact report for the draft Nevada County General Plan. The following comments and questions should be addressed in the Environmental Impact Report now under development.

NEW TOWN POLICY IMPACTS

The Nevada County Draft General Plan Land Use Policy 1.15 creates a Special Development Area in the southwestern part of the County, in the vicinity of McCourtney & Spenceville Roads as shown on the General Plan Land Use maps, for the purpose of establishing a New Town Reserve. The Environmental Impact Report should closely examine the impacts of this policy. A New Town is going to have intensive and unmitigatable environmental impacts on air quality, noise, traffic, wildlife, vegetation, open space, etc. The environmental impacts of a New Town policy, regardless of location, must be specifically addressed in the report. Obviously, many of these impacts are going to be quite significant.

IMPACTS OF SPECIFIC GENERAL PLAN DESIGNATIONS

The General Plan revision goes beyond merely establishing a New Town policy - in fact, the draft plan includes two specific general plan designations (GPD's) which have been given the designation Special Development Area (SDA). These two GPD's, #7 (Gold County Ranch) and #37 (Robinson and Sons) are located very near to the Spenceville Wildlife Refuge in the Southwestern portion of Nevada County.

Together, these parcels have been zoned for 6,107 dwelling units, or (@ 2.3 people per home) 14,400 people. In addition, these parcels have been zoned for 35 acres of Neighborhood Commercial, 50 acres Community Commercial, 50 acres Highway Commercial, 300 acres Business Park, 300 acres Industry, 350 acres Public.

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To Ann Bertken	From Pat Nissen
Co.	Co. Nev. Co. Plann.
Dept.	Phone # 916-265-1377
Fax #	Fax #

The enormous impact of a New Town on existing transportation corridors, including Highway 20, Spenceville, Indian Springs, and Penn Valley Drive as well as the intersection of Pleasant Valley Drive with Highway 20, must be included in the Environmental Impact Report. Exactly how will the county absorb the estimated more than 100,000 daily trips generated by the development? The plan seems to hold a possibility of a new connection to Highway 20 near Pet Hill, but this does not in any way deal with the enormous impact on the roads in the Penn Valley region. Is the county planning to condemn the land and houses built close to the narrow corridors of Penn Valley and Spenceville Roads in order to widen these roads?

Though it is not now officially mentioned in the General Plan, county officials have called for a highway to be built through this New Town to connect Highway 20 to Highway 65 around Wheatland. If this highway is planned to mitigate traffic impacts of the New Town, its impact on air quality, noise, wildlife, public services and vegetation must be addressed in the impact analysis.

The area proposed for the New Town Reserve is one of the last remaining areas of large undeveloped hardwood habitat within the County and thus would be considered a significant wildlife habitat area. The impact of this huge population increase on wildlife must assessed. The impact of these two GPD's on air quality, noise, and vegetation must also be carefully analyzed.

In addition, much of this area was part of Camp Beale. There is a real potential hazard of unexploded bombs on the "bombing range" in this area. Many defense department installations have left behind tremendous toxic hazards. The EIR should address this issue in detail.

Finally, this Plan makes no mention of the world outside of Nevada County's borders, our planning staff is fully aware that immediately over the border from these two GPD's in Yuba County is a planed community for 15,000 people. Yuba County has already created an area plan for this community, and is moving forward in implementation. The EIR should address the multiple transportation and other impacts of these GPD's in the same immediate vicinity as this Yuba County development.

Please keep me informed about the general plan process in general, and the environmental impact report development specifically. I look forward to seeing the responses to my questions and comments in the draft EIR.

Sincerely,

Elizabeth J. Martin

Elizabeth J. Martin
President, GPVCA

APPENDIX C. Biotic Resources Data

APPENDIX B

DESCRIPTIONS OF WILDLIFE HABITATS IN NEVADA COUNTY

These descriptions are taken directly from *A Guide to Wildlife Habitats of California*, prepared by the California Department of Forestry and Fire Protection, October, 1988.

Subalpine Conifer

Biological Setting

HABITAT - SCN intergrades with Lodgepole Pine, Jeffrey Pine, and Red Fir habitats at lower elevations. The shrub understory and groundcover are better developed where SCN habitats adjoin moist sites, as along riparian corridors or montane meadows.

WILDLIFE CONSIDERATIONS - Coniferous forests at high elevations in California typically support fewer species of amphibians, reptiles, birds, and mammals than any other major forest type in the state. The reasons, though not clearly established, probably involve some combination of climate, short growing season, lower primary productivity, moisture stress, and lower production of insects and other invertebrates that provide food resources for many vertebrates. Excluding species dependent on ponds, lakes, streams, or cliffs, Laudenslayer (1980) shows no amphibians and only one reptile that find conditions suitable for breeding in these high-elevation forests. He lists only 17 species of birds and 15 of mammals that find conditions optimum, and 14 birds and 22 mammals that find conditions suitable for breeding in such forests. Several species that find optimum or suitable conditions at these high elevations have special significance for land managers. These include the great gray owl, pileated woodpecker, marten, and wolverine.

Burney (1980:99) writes that "birds and small mammals consume so much limber pine seed that little is left for natural regeneration. However, small mammals that transport and bury seed aid dissemination into new areas, and germination of forgotten seed caches undoubtedly accounts for dense groups of stems occasionally found." Such groups of stems are better known to grow from caches left by Clark's nutcrackers, which are probably the primary agents of seed dispersal for limber and perhaps whitebark pines (Tomback and Kramer, Tomback, 1982).

Physical Setting

These forests typically occupy extremely harsh environments. Soils are generally thin and of low quality--coarse sand, gravel, volcanic debris, and rocks derived from decomposing parent material. Although subalpine fir and Engelmann spruce occur together on rocky, moist moraines and are considered to be indicators of high soil moisture (Parker and Matyas, 1979), most stands of SCN are on dry, well-drained soils. The climate is especially challenging. For example, in the Subalpine Forest type described by Munz and Keck (1959), precipitation averages only 76 to 127 cm (30 to 50 in) and may be as low as 38 cm (15 in.) east of the crest of the Sierra Nevada. Heavy snow cover is usual. Mean summer high temperatures probably do not exceed

18°C (65°F), and killing frosts are possible during all months. The growing season lasts only 7 to 9 weeks. Similarly, in bristlecone pine forests, measured precipitation over a three-year period averaged 38 cm (15 in.), much of it as snowfall. Mean summer maximum temperatures ranged from 12 to 19°C (54 to 66°F), and winter minima ranged from —16 to —6°C (3 to 21°F) (Munz and Keck 1959). Intense winds are characteristic of these habitats.

Red Fir

Biological Setting

HABITAT - Red fir habitats occur on frigid soils of the higher mountains of northern California. At lower elevations, red fir habitats intergrade with white fir-dominated mixed conifer stands on drier sites and with lodgepole pine-mountain meadow stands on moist sites. Small pockets of lodgepole pine also occur in wet sites scattered throughout large tracts of red fir. Similar inclusions of aspen may be found along riparian zones. Mountain meadows of various sizes, sometimes associated with small lakes, are also typical of red fir habitats. At higher elevations, red fir habitats include increasing numbers of mountain hemlock western white pine, whitebark pine, and to a lesser extent, foxtail pine and limber pine. Noble fir is associated with red fir in the northwestern region of the state (Rundel *et al* 1977).

WILDLIFE CONSIDERATIONS - Red fir habitats throughout California provide food or cover for at least one season to a total of 169 wildlife species (8 amphibians, 4 reptiles, 104 birds including 15 waterbirds, and 53 mammals). Red fir habitats can be considered very important for 28 birds and 26 mammals. Of special note are goshawk (sensitive species); blue grouse (game species); great gray owl, red fox, pine marten, and wolverine (rare species). Several rare or endangered raptors use red fir habitats to a minor extent (Grinnel and Storer 1924, Sumner and Dixon 1953, Shelford 1963, Storer and Usinger 1963, Johnston 1970, Verner and Boss 1980).

Physical Setting

Red fir habitats are found on frigid soils over a wide range of topography exclusive of very wet sites. Annual precipitation ranges from 1000 to 2000 mm (40 to 50 in.) per year, primarily as snow that forms packs up to 5 m (15 feet) in winter. Summers are dry, limiting tree growth to seasonally available soil moisture (Rundel *et al* 1977).

Lodgepole Pine

Biological Setting

HABITAT- Typically the lodgepole pine zone is often above red fir and below the other subalpine conifer habitats (Rundel *et al* 1977). Although the boundaries between lodgepole pine and meadow are dynamic, they are easily differentiated in classification of the existing landscape. Lodgepole pine most closely associates with the red fir habitat of lower elevations. Although lodgepole pine is widespread, it is generally a minor forest element in other habitats. At the upper elevation limits of lodgepole pine in southern California, the trees may adjoin alpine habitats.

WILDLIFE CONSIDERATIONS - Lodgepole pine stands have low structural diversity and are relatively low in animal species. Many species found in lodgepole pine stands are associated with the meadow edge. The Lodgepole habitat provides suitable habitat for 6 reptiles and amphibians, 49 birds, 35 mammals (Verner and Boss 1980). These species include wolverine (rare), goshawk (sensitive), bald eagle (endangered), and prairie falcon (sensitive).

Physical Setting

Lodgepole pine occupies an array of landscape units within its zone of adaptation. Areas of lodgepole pine in the red fir habitats are characterized by poor drainage and often a cooler microsite. Lodgepole pine is commonly associated with meadows (Rundel *et al* 1977). Although lodgepole pine has well developed water regulation mechanisms, it typically occupies areas with at least seasonally wet soils. Annual precipitation in the lodgepole pine zone averages from 750 to 1000 mm (30 to 40 in.) annually, mostly as snow. The growing season is short, averaging 2 to 3 months (Rundel *et al* 1977).

Sierran Mixed Conifer

Biological Setting

HABITAT- The type adjoins the Pacific ponderosa pine-Douglas-fir type (SAF 244) in the Klamath Mountains and Cascade Range, the Pacific ponderosa pine (SAF 245) and interior ponderosa pine (SAF 237), (PPN) at lower elevations and drier slopes, and the white fir (SAF 211), (WFR) and red fir (SAF 207), (RFR) types at higher elevations. Montane meadows and riparian deciduous woodlands are found within the Sierran mixed conifer type. Digger-pine oak, blue oak savannah and chaparral types may adjoin this type at drier, and lower, elevations.

WILDLIFE CONSIDERATIONS - The mixed conifer forest supports some 355 species of animals (Verner and Boss 1980). Sensitive species inhabiting mixed conifer include spotted owl, fisher and pine marten. Endangered species include bald eagle and peregrine falcon (Verner and Boss 1980). Variety in plant species composition provides diversity in food and cover. Black oak acorns, berries from a variety of shrubs (e.g., deerbrush), and a great number of grasses and forbs provide the forage resource essential for wildlife (Kosco and Bartolome 1983).

Physical Setting

Soils supporting the Sierran mixed conifer habitat are varied, derived primarily form Mesozoic granitic, Paleozoic sedimentary and volcanic rocks, and Cenozoic volcanic rocks. Serpentine soils, found primarily in the northern mixed conifer zone, support a number of endemic plants. Soils are deep to shallow. Fissures and cracks in granitic parent material often support forest growth, even where soil development is shallow. Temperatures range from 24 to 58°C (40 to 96°F) in summer and 4 to 36°C (—10 to 60°F) in winter and decrease with elevation (Major 1977). The growing season ranges between 90 and 330 days in the north with 40 to 200 frost-free days, and 180 to 365 days in the south with 180 frost-free days. Precipitation ranges from 76 to 229 cm (30 to 90 in.) per year, from October to May, with increasing snowfall as elevation increases.

White Fir

Biological Setting

HABITAT - In the Klamath Mountains, the Cascades, and the Sierra Nevada, white fir habitat occurs between mixed conifer and red fir habitats (Eyre 1980, Parker and Matyas 1981). In the south coast Transverse and Peninsular ranges, and in the mountain ranges of interior southern California, white fir intergrades at lower elevations with mixed conifer and is replaced at higher elevations by lodgepole pine (Cheatham and Haller 1975, Parker and Matyas 1981).

WILDLIFE CONSIDERATIONS - White fir habitat is probably the coolest, moistest, nonriparian habitat within the lower to mid-elevation forests in northern California. In southern California this habitat is colder and drier, probably equivalent to the red fir habitat elsewhere, but with drier conditions (Cheatham and Haller 1975).

As stands mature, a high percentage of defective trees are found, the result of windthrow and heart rot fungus (Gordon 1973, Hopkins 1982). Excellent habitat is provided for snag and cavity dependent wildlife species, particularly when breaks occur between 15-30 m (50-100 feet). The additional benefit of heart rot is the cylindrically stable snag created as a result of the rot moving from the inside of the tree to the outer diameter.

White fir is the preferred tree species for insect-gleaning, yellow-rumped warblers and western tanagers, and is also commonly used by other insect-gleaning birds, such as mountain chickadee, chestnut-backed chickadee, golden-crowned kinglet, and black-headed grosbeak (Airola and Barrett 1985).

Physical Setting

White fir habitats are found on a variety of soils developed from different parent materials, including volcanic and igneous rocks, granitics, various metamorphics, and sedimentary material (Franklin and Dyrness 1973, Fowells 1965, Hopkins 1982). Soils are coarse textured, well-drained, have poorly developed profiles, are often rocky, and are cold, with mean annual temperatures from 0 to 10°C (32° to 50°F) (Cheatham and Haller 1975, Riegel 1982, Laacke and Fiske 1983). Cooler north- and east-facing slopes are the most common sites throughout the state, however, Riegel (1982) noted the presence of unusually xeric white fir stands in the Warner Mountains. Precipitation is between 76-178 cm (30 to 70 in.) mostly in the form of snow. Almost all precipitation falls between October and May (Laacke and Fiske 1983).

Jeffrey Pine

Biological Setting

HABITAT - The Jeffrey pine habitat is associated with Douglas-fir at its lower elevations and subalpine conifer at its higher elevations in the Klamath Mountains. East of the Sierra-Cascade crest, it occurs between subalpine conifer at higher elevations and pinyon-juniper or sagebrush at lower elevations. On the west side of the Sierra Nevada, Jeffrey pine is generally found above Sierra Nevada mixed conifer and below the subalpine conifer or alpine dwarf shrub. On ultramafic soils at mid-elevations, Jeffrey pine is surrounded by mixed conifer (Sierra Nevada and Klamath-enriched). In southern California, Jeffrey pine is situated above ponderosa pine or blue oak-digger pine on the southern side of the Transverse and the southwestern side of the Peninsular ranges. At higher elevations in these mountains, it give way to subalpine conifer. At lower elevations on the northern side of the Transverse Range, it adjoins pinyon-juniper. On the northeastern side of the Peninsular Range, it is adjacent to the desert scrub or pinyon-juniper. Areas of Jeffrey pine forest in the Peninsular Range east of San Diego are surrounded by chamise (redshank) or are adjacent to pinyon-juniper type.

WILDLIFE CONSIDERATIONS - Jeffrey pine is intermediate in species richness between warmer forests at lower elevations and colder forests at higher elevations in the Klamath Mountains and on the west side of the Sierra Nevadas. It species richness exceeds that of the adjacent upper elevation forests and lower elevation woodland and scrub types in both the Transverse and Peninsular Ranges.

The value of the Jeffrey pine forest type as a habitat for wildlife is due in large part to the food value of the Jeffrey pine seeds. Pine seeds are included in the diet of more wildlife species than any other genus except oak (Light 1973). The bark and foliage also serve as important food sources for squirrels and mule deer. Jeffrey pine provides vital nesting cover for several species such as nuthatch, brown creeper, woodpecker, and northern flying squirrel. The southern rubber boa, a species listed as rare by the State of California and sensitive by the U.S. Forest Service, is reported to occur in the Jeffrey pine forest type in southern California (Cunningham 1966).

Physical Setting

Jeffrey pine occurs in a variety of physical settings throughout its extensive range. The tolerance of its dominant species to low temperatures allows the type to occupy the borders of topographic frost pockets and high old ridges (Haller 1959). It is commonly found on soils developed from granite and lava flows, but can also develop as a type on ultramafic soils (Walker 1954). Its distribution in northern California west of the Sierra-Cascade crest is limited to such soils (Jenkinson 1980). Jeffrey pine is not restricted by aspect or slope.

Ponderosa Pine

Biological Setting

HABITAT - In Northern California, ponderosa pine stands occur above coastal oak woodland, valley oak woodland, blue oak woodland, blue oak-digger pine and below mixed conifer. Montane hardwood stands may be below or interspersed with ponderosa pine. Jeffrey pine stands often occur above ponderosa pine, but may be found on serpentine soils or on harsh sites at lower elevations in the ponderosa pine zone. Farther south, coastal scrub, chamise-redshank, mixed chaparral, or woodland oaks are typical at the lower boundary of the ponderosa pine habitat, with bigcone Douglas-fir or true firs at the upper edge. Dry, rocky sites within the habitat may support montane chaparral, mixed hardwood-conifer or closed-cone pine-cypress. Isolated, small patches of bigcone Douglas-fir may occur in mesic canyons or on north-facing slopes within ponderosa pine stands.

WILDLIFE CONSIDERATIONS - Ponderosa pine sometimes is a transitional or migratory habitat for deer and can be extremely important to deer nutrition in migration holding areas. A mixture of early and late successional stages closely interspersed probably will provide good general wildlife habitat, but riparian zones, deer migratory routes, and holding areas require special consideration during management planning. The California condor uses the ponderosa pine habitat from Madera and Santa Clara Counties southward. Moreover, the Sierra Nevada red fox, Siskiyou mountain salamander, and Shasta salamander also are found in the habitat.

Physical Setting

The lower elevational limit of the habit may correspond to a mean annual temperature less than 13°C (55°F) and precipitation greater than 350 mm (33 in.) except in southern California (Barbour 1986). Brown (1982) reported a minimum precipitation level of 635 mm (25 in.) annually in the Peninsular Ranges. Ponderosa pine is found on all aspects, depending on soils and location within the local elevational ranges. Less than one-third of the precipitation is snowfall (Barbour 1986).

Eastside Pine

Biological Setting

HABITAT - Eastside pine is bounded at the lower edge by low and big sagebrush, bitterbrush, perennial grassland or pinyon-juniper woodland habitat which often are found on finer textured soils and at the upper edge by mixed conifer, lodgepole pine, and red fir. Eastside pine occupies an intermediate, less harsh environment that Jeffrey pine, which occurs above and intermingled with eastside pine.

WILDLIFE CONSIDERATIONS - Pine types with shrubby understories have a high degree of vertical diversity, especially when other conifers are present. Large pine branches form good nesting substrates for large raptors. Sites supporting the larger shrub species--manzanita and some ceanothus species--may become so densely vegetated in the absence of fire that livestock and big game cannot use the areas. Eastside pine stands often form important migratory and winter range for deer. Higher elevation stands with grassy understories near water may be extremely important deer fawning areas and migratory holding areas. Important wildlife species in the eastside pine habitat include the bald eagle and American peregrine falcon (both on federal and state endangered species lists) and the Sierra Nevada red fox, and the California bighorn sheep.

Physical Setting

Eastside pine habitat is found on coarse, well-drained basaltic soils, in a drier, colder setting than the Ponderosa pine (PPN) habitat. All exposures are represented depending on elevation. Fine-textured soils favor pinyon-juniper habitats.

Juniper

Biological Setting

HABITAT - Juniper habitats generally occur at middle elevations forming a transition between habitats at higher elevations (e.g., Jeffrey Pine (JPN), Eastside Pine (EPN), and habitats at lower elevations (e.g., Sagebrush (SGB)). Pinyon-Juniper may be found at similar elevations in Inyo and Mono counties.

WILDLIFE CONSIDERATIONS - Juniper berries are an important food source for wintering birds. Maser and Gashwiler (1978) found that 17 birds use juniper berries in winter. Juniper foliage is also consumed by several mammals (Maser and Gashwiler 1978) and may be an important food source for some of these animals, especially during harsh winters.

Physical Setting

Juniper habitats occur on virtually all exposures and slopes but are common on level to gently rolling topography (Dealy *et al* 1978). Junipers may be found on soils ranging from rocky and well-drained (Cheatham and Haller 1975, Parker and Matyas 1981) to drier or poorly drained (Cheatham and Haller 1975). Supporting soils may be from many parent materials; effective moisture is more important to junipers than soil type (Dealy *et al* 1978). Climates within the range of Juniper habitats are semi-arid with hot, dry summers and cold winters (Fowells 1965). Temperatures range from summer highs of 40°C (105°) with a mean July temperature of 19°C (66°F) to lowest winter lows of —37°C (—36°F) (Fowells 1965). About 130 days per year are frost-free (Fowells 1965); generally, July and August are frost-free (U.S. Department of Agriculture 1941). Precipitation ranges from 25 to in excess of 51 cm (10 to 20 in.) (U.S. Department of Agriculture 1941). About two-thirds of the precipitation falls in winter as snow (Fowells 1965); the remainder falls as rain in spring and fall (U.S. Department of Agriculture 1941). Aldon and Springfield (1973) and West *et al* (1973) provide bibliographies that address biology and management of pinyon-juniper systems.

Aspen

Biological Setting

HABITAT - Aspen stands in California occur primarily at higher elevations near seeps, streams, an meadows on the eastern slopes of the Sierra Nevada and Cascade Ranges. Zonally they are found within the Red Fir, Mixed-conifer, and Lodgepole Pine habitats (Thorne 1977, Parker and Matyas 1981). Aspens commonly occur adjacent to Sagebrush habitats and other montane shrub types, where they are often the only tree species present. They are also found along steams adjoining Jeffrey Pine habitats. At higher elevations they occur with whitebark pine, where they grow in a shrubby, wind-pruned form (Parker and Matyas 1981).

WILDLIFE CONSIDERATIONS - Although no wildlife species is totally dependent on habitats dominated by aspen, this cover type adds significantly to the richness of the wildlife in areas where it occurs. The habitat typically has a shrubby ecotone with adjacent meadows. This and the shrub understory within stands provide nesting cover for several species that might otherwise be scarce or absent. The mesic sites that permit aspen to establish also result in higher insect production compared to adjacent forests or shrublands. Such insect production, together with a high rate of fungal infection of trees, is thought to account for the greater variety and abundance of birds in ASP habitats than in adjacent forests and shrublands (Winternitz 1980). Aspen stands are habitats favored by a variety of cavity-nesting birds, such as bluebirds, sapsuckers, downy woodpeckers, and chickadees. Snags are important to cavity nesters in these stands, but live aspens are easily and therefore commonly drilled by excavating species. On the eastern slopes of the Sierra Nevada, aspen stands adjoining sagebrush and other shrub habitats apart from forested sites often provide nesting cover for northern goshawks (E. L. McGraw pers. comm.).

Physical Setting

Aspen stands occur at high elevations on a variety of sites and soils. A high water table during the early part of the growing season is required. Therefore, these stands are good indicators of moist conditions (Parker and Matyas 1981). Sites with permanent high water tables are occupied by willows (Thorne 1977), with which aspens may form ecotones. Soils range "from shallow stony soils and loamy sands to heavy clays. Best development occurs on well-drained sandy to silt loam soils" (DeByle and Zasada 1980). The climate is rigorous--long winters with heavy snows and very cold temperatures, hence a short growing season.

Closed-Cone Pine-Cypress

Biological Setting

HABITAT- The cypress habitats usually occur as "arboreal islands" (Bowers 1961) within a matrix of chaparral or forest types. Similarly the pine habitats are patches in the surrounding chaparral, Montane Hardwood-Conifer, or Mixed Conifer habitats.

WILDLIFE CONSIDERATIONS - Numerous game species, including tree squirrels and band-tailed pigeons, and nongame species make use of this type for feeding and cover. Few species make substantial use of this type as a breeding habitat, although the great horned owl and red-tailed hawk will nest in closed-cone pine forests.

Physical Setting

Closed-cone Pine-Cypress habitats are typically found on sites that are more rocky and infertile than the surrounding soils. Many stands (especially of knobcone pine, and Sargent and MacNab cypress) are found on serpentine soils. Although typically found at low elevations, due to the coastal disruption of much of this habitat type, interior stands may be found at elevations up to 2,000 m (6,550 feet). Landforms are gentle to steep slopes where stands occur in interior California and coastal terraces or bluffs where distributed along coastal California.

Montane Hardwood-Conifer

Biological Setting

HABITAT - Geographically and biologically, Montane Hardwood-Conifer is transitional between dense coniferous forests and montane hardwood, mixed chaparral, or open woodlands and savannahs. MHC merges with many other habitats at its upper and lower ecotones. These habitats include Valley-Foothill Hardwood (VFH), Valley-Foothill Hardwood-Conifer (VHC), Valley-Foothill Riparian (VRI), Closed-Cone Pine-Cypress (CPC), Montane Hardwood (MHW), Mixed Conifer (MCN), Douglas-fir (DFR), Redwood (RDW), Montane Riparian (MRI),

Montane Chaparral (MCP), and Mixed Chaparral (MCH). The habitat is an area of vegetational and floristic diversity with large numbers of endemic species (Proctor *et al* 1980).

WILDLIFE CONSIDERATIONS - Montane Hardwood-Conifer provides habitat for a variety of wildlife species. Mature forests are valuable to cavity nesting birds. Moreover, most crops are an important food source for many birds, as well as mammals. Canopy cover and understory vegetation are variable which makes the habitat suitable for numerous species. In mesic areas, many amphibians are found in the detrital layer. Due to geographic variation in components of Montane Hardwood-Conifer, caution must be exercised when predicting wildlife species use.

Physical Setting

Montane Hardwood-Conifer generally occurs on coarse, well-drained mesic soils, in mountainous terrain with narrow valleys. Slopes average approximately 57 percent with all aspects encountered. Winters are cool and wet; summers are hot and dry. Northern California Montane Hardwood-Conifer sites have less rainfall and fog than Redwood (RDW) or Mixed Conifer (MCN) habitats. In southern California, this habitat is found at higher elevations and in moist canyons. Average rainfall is 60 to 170 mm (25 to 60 in.), with some fog. The growing season is 7 to 11 months, with 200 to 300 frost-free days. Mean summer maximum temperatures are 25 to 36°C (75 to 95°F). Mean winter minima are —2 to 4°C (29 to 30°F) (Munz and Keck 1970).

Montane Hardwood

Biological Setting

HABITAT - At lower elevations neighboring habitats are Valley-foothill Hardwood-conifer (VHC) and, to a lesser extent, Closed-cone Pine Cypress (CPC). At low and middle elevations, Mixed Chaparral (MCH) interfaces with Montane Hardwood. Wildlife habitats at middle elevations, often overlapping above and below, are Montane Hardwood-conifer (MHC), Mixed Conifer (MCN), Douglas-fir (DFR) and, to a lesser degree, Pine-juniper (PJN). At higher elevations, Montane Hardwood is neighbor to Eastside Pine (EPN), Jeffrey Pine (JPN), and Montane Chaparral (MCP).

WILDLIFE CONSIDERATIONS - Bird and animal species characteristic of the Montane Hardwood habitat include disseminators of acorns (scrub and Stellar's jays, acorn woodpecker, and western gray squirrel) plus those that utilize acorns as a major food source—wild turkey, mountain quail, band-tailed pigeon, California ground squirrel, dusky-footed woodrat, black bear, and mule deer. Deer also use the foliage of several hardwoods to a moderate extent. Many amphibians and reptiles are found on the forest floor in the Montane Hardwood habitat. Among them are Mount Lyell salamander, ensatina, relictual slender salamander, western fence lizard, and sagebrush lizard. Snakes include rubber boa, western rattlesnake, California mountain kingsnake, and sharp-tailed snake.

Physical Setting

Canyon live oak and associates are found on a wide range of slopes, especially those that are moderate to steep. Soils are for the most part rocky, alluvial, coarse textured, poorly developed, and well drained. Soil depth classes range from shallow to deep. Canyon live oak, incense-cedar, and a few other associates are also found on ultrabasic soils. Mean summer temperatures in the Montane Hardwood habitat vary between 20° and 25°C (68° and 77°F) and mean winter temperatures between 3° and 7°C (37° and 45°F). Frost-free days range from 160 to 230 (Thornburgh 1986).

Valley Oak Woodland

Biological Setting

HABITAT - VOWs in the Great Valley usually merge with Annual Grasslands or border agricultural land. Where these woodlands extend to the foothills surrounding the valley, they intergrade with Blue Oak Woodlands or Blue Oak-Digger Pine habitats. Near major stream courses, this community intergrades with Valley-Foothill Riparian vegetation. West of the Coast Range, VOWs sometimes associate with Coastal Oak Woodlands and, to a limited extent, Montane Hardwood and Coastal Scrub.

WILDLIFE CONSIDERATIONS - These woodlands provide food and cover for many species of wildlife. Oaks have long been considered important to some birds and mammals as a food resource (i.e., acorns and browse). Verner (1980) reported that 30 bird species known to use oak habitats in California include acorns in their diet. An average of 24 species of breeding birds were recorded on a study plot at Ancil Hoffman Park, near Carmichael, in Sacramento County from 1971 to 1973 (Gaines 1977). The study plot was dominated by valley oaks but included some cottonwood in the canopy. Probably the most significant breeding bird species recorded was red-shouldered hawk. In decreasing order, the most common species were European starling, California quail, plain titmouse, scrub jay, rufous-sided towhee, Bewick's wren, bushtit, and acorn woodpecker. Barrett (1980) indicates that the ranges of about 80 species of mammals in California show substantial overlap with the distribution of valley oaks, and several, such a fox and western gray squirrels and mule deer, have been documented using valley oaks for food and shelter.

Physical Setting

This habitat occurs in a wide range of physiographic settings, but is best developed on deep, well-drained alluvial soils, usually in valley bottoms. Most large, healthy valley oaks are probably rooted down to permanent water supplies (Griffin 1973). Stands of valley oaks are found in deep sills on broad ridgetops in the southern Coast Range. Where this type occurs near the coast, it is usually found away from the main fog zone (Griffin 1976). The climate is Mediterranean, with mild, wet winters and hot, dry summers.

Blue-Oak Digger-Pine

Biological Setting

HABITAT - As Griffin (1977:386) points out, "oak woodland seldom forms a continuous cover over large areas. It is a major item in a mosaic including valley grassland...and chaparral...with strips of riparian forest." This mosaic is reflected in the character of the understory in stands of BOP woodlands. At lower elevations, these woodlands merge with Annual Grassland, Blue Oak Woodlands, and Valley Oak Woodlands. The Annual Grasslands actually extend into the woodlands as a groundcover where not shaded by shrubs. The Blue Oak Woodlands differ from the BOP type in lacking a conifer component and usually in lacking a shrub component.

At upper elevations, BOP habitats merge with extensive stands of Mixed Chaparral in most localities, although in some places the Ponderosa Pine type grows at an elevation low enough to form a mixed ecotone with Mixed Chaparral and BOP.

WILDLIFE CONSIDERATIONS - BOP woodlands provide breeding habitats for a large variety of wildlife species, although no species is totally dependent on them for breeding, feeding, or cover. In the western Sierra Nevada, for example, 29 species of amphibians and reptiles, 79 species of birds, and 22 species of mammals find mature stages of this type suitable or optimum for breeding, assuming that other special habitat requirements are met (Verner and Boss 1980).

Most species breed during late winter and early spring--a factor to consider when planning management activities. Snags are less common, and hence less critical to wildlife, in this than in other forest types. Most species of cavity-nesting birds, for example, use living oaks. The cavities are often in scars where limbs have broken from the trunk or a main branch and have developed a level of decay that makes them more easily excavated by primary cavity nesters.

According to Olson (1974), blue oaks produce an abundant seed crop every 2 to 3 years and bumper crops every 5 to 8 years; however, McClaran (pers. comm.) questions that such a clear cycle of acorn production has been confirmed. In any case, acorns are an important food resource for many species of birds (Verner 1980) and mammals (Barrett 1980).

Physical Setting

The habitat occurs in a typically Mediterranean climate--hot, dry summers and cool, wet winters. Most precipitation falls as rain from November through April, averaging from 51 to 102 cm (20 to 40 in.) within the primary range of blue oak (McDonald 1985). The frost-free growing season ranges from 150 to 300 days, with January minima averaging —1°C (30°F) and July maxima averaging 32°C (90°F) (McDonald 1985).

Soils are from a variety of generally well-drained parent materials, ranging from gravelly loam through stony clay loams. Soils rich in rock fragments are typical (McDonald 1985).

Montane Riparian

Biological Setting

HABITAT - The transition between MRI and adjacent nonriparian vegetation is often abrupt, especially where the topography is steep. This habitat intergrades with montane chaparral, montane hardwood, montane hardwood/conifer, lodgepole pine, red fir, and wet meadow habitats.

WILDLIFE CONSIDERATIONS - All riparian habitats have an exceptionally high value for many wildlife species (Thomas 1979, Marcot 1979, Sands 1977). Such areas provide water, thermal cover, migration corridors, and diverse nesting and feeding opportunities.

The shape of many riparian zones, particularly the linear nature of streams, maximizes the development of edge which is so highly productive for wildlife (Thomas 1979).

The southern rubber boa and Sierra Nevada red fox are among the rare, threatened, or endangered wildlife that use MRI habitats during their life cycles.

Physical Setting

Riparian areas are found associated with montane lakes, ponds, seeps, bogs and meadows as well as rivers, streams and springs. Water may be permanent or ephemeral (Marcot 1979). The growing season extends from spring until late fall, becoming shorter at higher elevations. Most tree species flower in early spring before leafing out.

Valley Foothill Riparian

Biological Setting

HABITAT - Transition to adjacent nonriparian vegetation is usually abrupt, especially near agriculture (Cheatham and Haller 1975). The Valley-Foothill Riparian habitat is found in association with Riverine (RIV), Grassland (AGS, PGS), Oak Woodland (VFH), and Agriculture (PAS, CRP). It may intergrade upstream with Montane Riparian.

WILDLIFE CONSIDERATIONS - Valley-foothill riparian habitats provide food, water, migration, and dispersal corridors, and escape, nesting, and thermal cover for an abundance of wildlife. At least 50 amphibians and reptiles occur in lowland riparian systems. Many are permanent residents, others are transient or temporal visitors (Brode and Bury 1985). In one study conducted on the Sacramento River, 147 bird species were recorded as nesters or winter visitants (Laymon 1985). Additionally, 55 species of mammals are known to use California's Central Valley riparian communities (Trapp *et al* 1985).

Physical Setting

Valley-foothill riparian habitats are found in valleys bordered by sloping alluvial fans, slightly dissected terraces, lower foothills, and coastal plains. They are generally associated with low velocity flows, floodplains, and gentle topography. Valleys provide deep alluvial soils and a high water table. The substrate is oarse, gravelly or rocky soils more or less permanently moist, but probably well aerated (Cheatham and Haller 1975). Average precipitation ranges from 15 to 76 cm (6 to 30 in.), with little or no snow. The growing season is 7 to 11 months. Frost and short periods of freezing occur in winter (200 to 350 frost-free days). Mean summer maximum minima are —2 to 7°C (29 to 44°F) (Munz and Keck 1973). VRI habitats are characterized by hot, dry summers, mild and wet winters. Coastal areas have a more moderate climate than the interior and receive some summer moisture from fog (Bailey 1980). Potential evaporation during the warmest months is often greater than precipitation. Low rainfall and steamflow result in water scarcity in many parts of the area.

Low Sage

Biological Setting

HABITAT - This type commonly forms ecotones with the Sagebrush, Pinyon-Juniper, and Juniper habitats in northeastern California. Indeed, it may be difficult to determine the correct classification of some sites. "On the Modoc Plateau, *A. arbuscula* communities are common as openings within the coniferous forest" (Young *et al* 1977:780). They may thus be found adjacent to Mixed Conifer, Jeffrey Pine, or Ponderosa Pine forests. Climatic changes result in periodic shifting of these ecotones (e.g., Mehringer 1967), a relationship that is further complicated by invasion of coniferous woodlands into sagebrush habitats in response to fire suppression and grazing by domestic livestock (Burkhardt and Tisdale 1969, Blackburn and Tueller 1970).

WILDLIFE CONSIDERATIONS - Excluding species dependent on ponds, lakes, marshes, and cliffs commonly found in northeastern California, Laudenslayer (1982) lists 28 species of terrestrial vertebrates that find conditions optimum for breeding in typical stands of LSG (<20 percent shrub cover), including chukar, burrowing owl, rock wren, and pronghorn. He lists 37 additional species that find conditions suitable for breeding in typical stands, including sage grouse, mourning dove, and kit fox. In addition, several species of raptorial birds find ideal hunting grounds in stands of low sagebrush. These stands tend to lose their snow cover earlier in spring than surrounding habitats; thus they provide an especially important source of new, green forage for pronghorn and mule deer (D. L. Neal, pers. comm.).

Physical Setting

LSG occurs in areas with cold, harsh winters and hot, dry summers. Precipitation generally ranges from 20 to 46 cm (8 to 18 in.), falling mostly as snow from December through March. Mean summer maximum temperatures range from 28 to 35° (83 to 95°F); mean winter minima

range from —13 to —3°C (8 to 27°F) (Munz and Keck 1959). Stands of low sagebrush are "usually found on shallow soils with impaired drainage in the transition zone between the wetter bottom and open timber on the mountainsides" (Hormay and Talbot 1961:6). The type also occurs on terraces with hardpan or heavy clay soils. In mosaics formed with bitterbrush, low sagebrush occurs on harsher sites with shallow, well-drained soils, and bitterbrush occupies areas with deeper soils (Parker and Matyas 1979). The clay-rich soils yield much of their snowmelt as runoff, making them very important watershed areas (Young *et al* 1977). Zamora and Tueller (1973) speculate that perched water tables in spring, which result in poor aeration in the rooting zone of low sagebrush, may be significant in the ecology of the LSG habitat. Soils typically associated with stands of black sagebrush are shallow, contain a high percentage of gravel, and are rich in mineral carbonates. (Young *et al* 1977). Black sagebrush is prevalent on limestone soils (Hironaka 1963, St. Andre *et al* 1965).

Bitterbrush

Biological Setting

HABITAT - Bitterbrush habitats occur together with a variety of wildlife habitats. At higher elevations both species mix with Ponderosa Pine (PPN) and Jeffrey Pine (JPN). At lower elevations, antelope bitterbrush mixes with Sagebrush (SGB) and Pinyon-Juniper (PJN). Desert bitterbrush occurs with Pinyon-Juniper (PJN), Juniper (JUN), Joshua Tree (JST), and adjoins Desert Scrub (DSC).

WILDLIFE CONSIDERATIONS - Bitterbrush is highly digestible and contains desirable levels of moisture, calcium, phosphorus, and fat (Hickman 1975). It tolerates considerable browsing. Its leaves and twigs are favored by mule deer, pronghorn, cattle, sheep, and horses. Diet (1965) listed the minimum level of crude protein required in mule deer diets as 6 to 7 percent crude protein during the period of rapid growth in early June.

Many species of birds, rodents, and insects use seeds. Birds also eat the loopers and tent catepillers that feed on the vegetative parts of bitterbrush. Some of the more characteristic wildlife species found in Bitterbrush habitat include the western fence lizard, gray flycatcher, Brewer's blackbird, green-tailed towhee, jackrabbits, least chipmunk, Belding's ground squirrel, kangaroo rats, and badger.

Physical Setting

Bitterbrush is found on flats and slopes with deep, well-drained, rapidly permeable soils having a slightly acid reaction (ph 6.0 to 7.0). Precipitation in bitterbrush types varies from about 30 to 90 cm (12 to 35 in.) and is mostly snow in the winter. Desert bitterbrush sites receive about 25 cm (10 in.) or less and snow is important only at the northern end of the range and at higher elevations. For antelope bitterbrush, the summers are hot and the winters somewhat milder. Basins and lowland that have restricted drainage or alkali give way to low sagebrush, silver sagebrush, or one of the more moisture tolerant species.

Sagebrush

Biological Setting

HABITAT - Sagebrush occurs at a wide range of middle and high elevations. At lower elevations and on drier sites, it gives way to such species as saltbush, greasewood, creosotebush, and winterfat. At mid-elevations and on more mesic sites the habitat meets bitterbrush, curlleaf mountain mahogany, and western serviceberry. At high elevations, it intergrades with Ponderosa Pine (PPN) and even with Aspen (ASP) habitat types.

WILDLIFE CONSIDERATIONS - The Sagebrush type is very important to wildlife because it serves as habitat for some of the more important game animals and occupies such a vast area. It is a major winter-range type for migratory mule deer, and many herds summer in Sagebrush-Ponderosa Pine complexes at middle and high elevations. The sagebrush and its included Low Sagebrush and Bunchgrass types are the principal habitats for pronghorns. The sage grouse is dependent on various successional stages of the type all year. It is also occupied by jackrabbits, cottontail rabbits, ground squirrels, least chipmunk, kangaroo rats, wood rats, pocket mice, deer mice, grasshopper mice, sagebrush vole, and the California bighorn sheep. Birds of the sagebrush type include the chukar, black-billed magpie, gray flycatcher, pinyon jay, sage thrasher, and several sparrows, and hawks. Maintenance of the type is essential for many of these species. Some can benefit from the increased diversity and forage created by the careful use of fire, mechanical brush removal, seeding, or grazing (Urness 1976, Neal 1981). Endangered species found in the Sagebrush type include the peregrine falcon, bald eagle, Lost River sucker, shortnosed sucker, Owens River pupfish, and Owens tui chub. Threatened species are the Lahontan and Paiute cutthroat trouts.

Montane Chaparral

Biological Setting

HABITAT - Montane chaparral adjoins a variety of other wildlife habitats, including montane riparian (MRI), mixed chaparral (MCH), and perennial grassland (PGS). It becomes established in disturbed coniferous habits such as ponderosa pine (PPN), mixed conifer (SMC), Jeffrey pine (JPN), red fir (RFR), and lodgepole pine (LPN). At high elevations in the southern Sierra, it may occur with a sparse juniper overstory. At the lower extent of its elevational range, montane chaparral may intergrade with mixed chaparral, a very similar habitat type.

WILDLIFE CONSIDERATIONS - Montane chaparral provides habitat for a wide variety of wildlife. Numerous rodents inhabit chaparral (Wirtz 1974). Deer and other herbivores often make extensive use of chaparral. Throughout the west slope of the Sierra and south through the Transverse Range, deer are strongly associated with chaparral communities. Montane chaparral provides critical summer range foraging areas, escape cover and fawning habitat. In the Sierra, fawning areas are frequently found where the chaparral lies adjacent to or contains an interspersion of perennial grass or meadow-riparian habitat (Ashcraft 1975, Dasmann 1971, Ashcraft 1976, Pacific Gas and Electric 1981). Some small herbivores use chaparral species in

fall and winter when grasses are not in abundance. Rabbits and hares eat twigs, evergreen leaves and bark from chaparral. Shrubs are important to many mammals as shade during hot weather, and moderate temperature and wind velocity in the winter (Loveless 1967).

Many birds find a variety of habitat needs in the montane chaparral. It provides seeds, fruits, insects, protection from predators and climate, as well as singing, roosting and nesting sites (Verner and Boss 1980, Storer and Usinger 1970).

Physical Setting

Montane chaparral can be found on shallow to deep soils, on all exposures, and from gentle to relatively steep slopes. It may dominate on more xeric sites, but occurs locally throughout the coniferous forest zone. Generally, climate is like that associated with the coniferous forest zone--cold winter temperatures with substantial precipitation. Summers are typically hot and dry (Barbour and Major 1977). In the northern portion of the state, montane chaparral is found between 914 to 2,743 m (3,000 to 9,000 feet). In southern California this type occurs above 2,134 m (7,000 feet).

Mixed Chaparral

Biological Setting

HABITAT - Mixed and Chamise-Redshank Chaparral (CRC) occur as a mosaic on low to middle elevation slopes below several woodland and forest types. Compared to Chamise-Redshank Chaparral, Mixed Chaparral generally occupies more mesic sites at higher elevations or on north-facing slopes. In southern California, Coastal Scrub (CSC) may form the lower chaparral boundary (Hanes 1977). In northern California, Mixed Chaparral merges with Annual Grassland (AGS) and Blue Oak-Digger Pine (BOP) at lower elevations. Chaparral shrubs form the understory of many Blue Oak-Digger Pine stands. At upper elevations, Mixed Chaparral grades into Coastal Oak Woodland (COW), Ponderosa Pine (PPN), or mixed conifer types and frequently forms the understory of these habitats. On desert exposures, Desert Scrub (DSC), Desert Succulent Scrub (DSS) or Joshua Tree (JST) may be found below Mixed Chaparral, Jeffrey pine (JPN), Pinyon-Juniper (PJN) or Juniper (JUN) habitats occur above Mixed Chaparral.

WILDLIFE CONSIDERATIONS - No wildlife species are restricted to Mixed Chaparral. Most species are found in other shrub-dominated types including Chamise-Redshank Chaparral (CRC), Montane Chaparral (MCP), Coastal Scrub (CSC), and Sagebrush (SGB), or the shrubs beneath several woodland and forest types. Wildlife management considerations usually focus on selecting alternative fire management treatments. Potential impacts of management actions in Mixed Chaparral generally are similar to Chamise-Redshank Chaparral.

Physical Setting

Mixed Chaparral occurs on all aspects, but at lower elevations it generally is found on north-facing slopes. This pattern is especially true in southern California. Generally, it occurs on steep slopes and ridges with relatively thin, well-drained soils (Ornduff 1974, Cheatham and Haller 1975). Soils can be rocky, sandy, gravelly, or heavy (Cheatham and Haller 1975, Thorne 1976). Mixed Chaparral occurs on sites with deeper and more mesic soils than Chamise-Redshank Chaparral (Cheatham and Haller 1975). Serpentine soils are high in several potentially toxic substances, including calcium (Whittaker 1975). The mediterranean climate is characterized by cool, wet winters and hot, dry summers. Total rainfall is 38 to 63 cm (15 to 25 in.) with less than 20 percent falling during the summer (Ornduff 1974).

Chamise-Redshank Chaparral

Biological Setting

HABITAT - Chamise-Redshank Chaparral generally occurs below and grades into Mixed Chaparral (MCH). On some sites, Chamise-Redshank Chaparral may form an ecotone with Ponderosa Pine (PPN), Coastal Oak Woodland (COW), or mixed conifer types. In northern California, the lower boundary is with Annual Grassland (AGS) and Blue Oak-Digger Pine (BOP). In southern California, Coastal Scrub (CSC) may form a broad mosaic with Chamise-Redshank Chaparral. Location of the boundary can depend on fire frequency (Hanes 1971). On desert exposures, redshank stands may occur above either Mixed Chaparral (MPC) or Desert Succulent Scrub (DSC) and either above or below Pinyon-Juniper (PJN).

WILDLIFE CONSIDERATIONS - Wildlife species found in this habitat type also are found in either Mixed Chaparral (MCH), Montane Chaparral (MCP), Coastal Scrub (CSC), or Sagebrush (SGB) and in shrub beneath several woodland and forest types. The primary land management consideration is selection of alternative fire management treatments. Long-term fire suppression can lead to stand senescent (Vogl 1977) and declines in deer (Biswell *et al* 1952), small mammals (Quinn 199), birds (Wirtz 1979), and reptiles (Simovich 1979). Most animal populations reach peak densities in the first two or three decades, frequently 1 to 15 years, after a fire. Repeated fires at short intervals could favor crown-sprouting shrubs over obligate seed sprouters (Vogl 1977). Either management extreme could have long-term impacts on wildlife through changes in nutrient availability, soil quality, or vegetation composition, structure, and recovery time. Prescribed burning can be an effective management tool, but the effects vary with season of burn (Rundel 1982). Post-fire herbs may be important in immobilizing nitrogen within the chaparral system (Rundel and Parson 1980). Protecting these herbs from grazing may be important for effective long-term habitat maintenance (Rundel 1982). Populations of most small vertebrates decline sharply or are eliminated when chaparral is converted to grassland (Lillywhite 1977). Active and passive chaparral management programs must tailor management prescriptions to specific site characteristics and project goals.

Physical Setting

Chamise-dominated stands are most common on south- and west-facing slopes; redshank is found on all aspects (Hanes 1965, 1977, Cheatham and Haller 1975). Soils usually are thin with little accumulation of organic material (Cheatham and Haller 1975). Chamise may be a dominant shrub on some serpentine sites (Parker and Matyas 1981). Chamise-Redshank Chaparral is found in a mediterranean climate; rainfall is 38 to 63 cm (15 to 25 in.), less than 20 percent of total precipitation falls in summer, and winters are mild (Ornduff 1974). The predominant landforms are steep slopes and ridges (Thorne 1976).

Annual Grassland

Biological Setting

HABITAT - Annual Grassland habitat is found just above or surrounding Valley Foothill Riparian (VRI), Alkali Scrub (ASC), Fresh Emergent Wetland (FEW), Cropland (CRP), Orchard-Vineyard (OVN), and Pasture (PAS) habitat types, and below Valley Oak Woodland (VOW), Blue Oak Woodland (BOW), Blue Oak-Digger Pine (BOP), Chamise-Redshank (CRC), and Mixed Chaparral (MCH) habitats. Annual Grassland habitat also borders Coast Oak Woodland (COW), Closed Cone-Pine Cypress (CPC), Coastal Scrub (CSC), and Eucalyptus (EUC) habitats.

WILDLIFE CONSIDERATIONS - Many wildlife species use Annual Grasslands for foraging, but some require special habitat features such as cliffs, caves, ponds, or habitats with woody plants for breeding, resting, and escape cover. Characteristic reptiles that breed in Annual Grassland habitats include the western fence lizard, common garter snake, and western rattlesnake (Basey and Sinclear 1980). Mammals typically found in this habitat include the black-tailed jackrabbit, California ground squirrel, Botta's pocket gopher, western harvest mouse, California vole, badger, and coyote (White *et al* 1980). The endangered San Joaquin kit fox is also found in and adjacent to this habitat (U.S. Fish and Wildlife Service 1983). Common birds known to breed in Annual Grasslands include the burrowing owl, short-eared owl, horned lark, and western meadowlark (Verner *et al* 1980). This habitat also provides important foraging habitat for the turkey vulture, northern harrier, American kestrel, black-shouldered kite, and prairie falcon.

Physical Setting

Annual Grassland habitat occurs mostly on flat plains to gently rolling foothills. Common soil orders include Entisols and Alfisols (Garrison *et al* 1977). Entisols are often found at lower elevations on floodplains and swales that receive periodic deposits of alluvium (U.S. Soil Conservation Service 1975), and are characterized by little or no pedogenic horizon development. Alfisols occur at higher elevations above the valley floor (Garrison *et al* 1977). Some Annual Grassland habitats can be found in the drier portion of the southern San Joaquin Valley on Aridisols (Garrison *et al* 1977). Climatic conditions are typically Mediterranean, with cool, wet winters and dry, hot summers. The length of the frost-free season averages 250 to

300 days (18 to 21 fortnights) (Garrison *et al* 1977). Annual precipitation is highest in the north (Redding, 960 mm [38 in.]) and north coast (Ukiah, 909 mm [36 in.]), decreasing to the south (Sacramento, 430 mm [17 in.]); (Stoc .on, 339 mm [13 in.]; Fresno, 259 mm [10 in.]), and reaching a minimum in the southern San Joaquin Valley (Bakersfield, 150 mm [6 in.]) (Major 1977).

Wet Meadow

Biological Setting

HABITAT - Wet Meadows usually occur as ecotones between Fresh Emergent Wetlands (FEW) and Perennial Grassland (PGS) or mesic meadow types. Mesic meadows contain some species in common with Wet Meadows, and the distinction between wet and mesic meadows is not always clear. Where Wet Meadows merge with Fresh Emergent Wetlands, slight differences in water depth control the species present.

WILDLIFE CONSIDERATIONS - In late summer, small mammals may visit Wet Meadows that have dried. However, the meadows are generally too wet to provide suitable habitat for small mammals. Mule deer and elk may feed in Wet Meadows, seeking especially forbs and palatable grasses. Waterfowl, especially mallard ducks, frequent streams flowing through Wet Meadows. Yellow-headed and red-winged blackbirds occasionally nest in Wet Meadows with tall vegetation and with adequate water to discourage predators (Storer and Usinger 1963). The striped racer is the common snake of Wet Meadows in the Sierra Nevada and Cascade Range. Various frog species are abundant in Wet Meadows throughout California. Six species of trout (Brown, cutthroat, golden, rainbow, eastern brook, and mackinaw) inhabit streams of the Sierra Nevada (Storer and usinger 1963), and presumably may occur in perennial streams of wet meadows. In the southern Sierra Nevada, the golden trout is the important fish of meadow habitats at high elevations.

Physical Setting

Wet Meadows occur where water is at or near the surface most of the growing season, following spring runoff. Hydrologically, they occupy lotic, sunken concave, and hanging sites (Ratliff 1985). Lotic sites (Gosselink and Turner 1978) are those with main input flow (other than precipitation) from upstream sources; at least early in the growing season, water flows across them at depths of 10 to 20 cm (4 to 8 in.). Downstream runoff is the principal output flow. Lotic sites are topographic basins but have a slight slope, which permits drainage of surface water. Percolation is nil due to the saturated or slowly permeable nature of underlying materials. Sunken concave sites also receive water input from upstream sources, but evapotranspiration is the main output flow. Percolation is slowed by heavy-textured soils and/or shallow bedrock; however, in contrast to lotic and hanging sites, soils of sunken concave sites may dry to considerable depth by fall. Hanging sites are watered by hydrostatic flows as springs or seeps. They frequently occur on rather steep slopes, and downstream runoff is the main output flow. Surface flows, although constant, are usually no more than 1 cm (0.4 in.) deep.

Fresh Emergent Wetland

Biological Setting

HABITAT - Fresh emergent wetland habitats may occur in association with terrestrial habitats or aquatic habitats including Riverine (RIV), Lacustrine (LAC), and Wet Meadows (WTM). The upland limit of Fresh Emergent Wetlands is the boundary between land with predominantly hydrophytic cover and land with primarily mesophytic or xerophytic cover to the boundary between hydric and nonhydric soils (Cowardine *et al* 1979). The boundary between fresh emergent wetlands and deep water habitats (e.g., Lacustrine or Riverine) is the deep water edge of the emergent vegetation. It is generally accepted that this demarcation is at or above the 2 m (6.6 feet) depth (Cowardine *et al* 1979, Zoltai *et al* 1975). The 2 m (6.6 feet) lower limit for emergent wetlands was selected because it represents the maximum depth to which emergent plants normally grow (Welch 1952, Sculthorpe 1967).

WILDLIFE CONSIDERATIONS - Fresh emergent wetlands are among the most productive wildlife habitats in California. They provide food, cover, and water for more than 160 species of birds (U.S. Comptroller General 1979), and numerous mammals, reptiles, and amphibians. Many species rely on Fresh Emergent Wetlands for their entire life cycle. The endangered Santa Cruz long-toed salamander and rare black toad require ponded water for breeding, while the rare giant garter snake use these wetlands as its primary habitat. The endangered Aleutian Canada goose, bald eagle, and peregrine falcon use Fresh Emergent Wetlands as feeding area sand roost sites (California Department of Fish and Game 1980).

Physical Setting

Fresh emergent wetland habitats occur on virtually all exposures and slopes, provided a basin or depression is saturated or at least periodically flooded. However, they are most common on level to gently rolling topography. They are found in various landscape depressions are at the edge of rivers or lakes (Wentz 1981). Fresh emergent wetland vegetation zones characteristically occur as a series of concentric rings which follow basin contours and reflect the relative depth and duration of flooding. If the bottom of the wetland is very uneven, vegetation zones may be present in a patchy configuration rather than the classic concentric ring pattern (Millar 1976). Soils are predominantly silt and clay, although coarser sediments and organic material may be intermixed (Cowardin *et al* 1979). In some areas organic soils (peat) may constitute the primary growth medium (U.S. Army Corps of Engineers 1978). Climatic conditions are highly variable and range from the extreme summer heat of Imperial County to the Great Basin climate of Modoc County where winter temperatures often are well below freezing (Cheatham and Haller 1975).

Riverine

Biological Setting

HABITAT - Riverine habitats can occur in association with many terrestrial habitats. Riparian habitats are found adjacent to many rivers and streams. Riverine habitats are also found contiguous to lacustrine and fresh emergent wetland habitats.

WILDLIFE CONSIDERATIONS - The open water zones of large rivers provide resting and escape cover for many species or waterfowl. Fulls, terns, osprey and bald eagle hunt in open water. Near-shore waters provide food for waterfowl, herons, shorebirds, belted-kingfisher, and American dipper. Many species of insectivorous birds (swallows, swifts, flycatchers) hawk their prey over water. Some of the more common mammals found in riverine habitats include river otter, mink, muskrat, and beaver.

Physical Setting

Streams begin as outlets of ponds or lakes (lacustrine), or rise from spring or seepage areas. All streams at some time experience very low flow and nearly dry up. Some streams, except for occasional pools, dry up seasonally every year.

The temperature of the riverine habitat is not constant. In general, small, shallow streams tend to follow, but lag behind air temperatures, warming and cooling with the seasons. Rivers and streams with large areas exposed to direct sunlight are warmer than those shaded by trees, shrubs and high, steep banks.

The constant swirling and churning of high-velocity water over riffles and falls result in greater contact with the atmosphere and thus have a high oxygen content. In polluted waters, deep holes or low velocity flows, dissolved oxygen is lower (Smith 1974).

Lacustrine

Biological Setting

HABITAT - Lacustrine habitats may occur in association with any terrestrial habitats, Riverine (RIV), and Fresh Emergent Wetlands (FEW).

WILDLIFE CONSIDERATIONS - Lacustrine habitats are used by 18 mammals, 101 birds, 9 reptiles, and 22 amphibians for reproduction, food, water and cover. This represents about 23 percent of the species in the Wildlife Habitat Relationship data base. The endangered Santa Cruz long-toed salamander and rare black toad require ponds for breeding. The endangered bald eagle feeds on fish and some birds taken from lakes.

Physical Setting

The relatively calm waters of lakes and ponds offer environmental conditions that contrast sharply with those of running water. Light penetration is dependent on turbidity. Temperatures vary seasonally and with depth. Because only a small portion of the water is in direct contact with the air and because decomposition is taking place on the bottom, the oxygen content of lake water is relatively low compared to that of running water. In some lakes, oxygen may decease with depth, but there are many exceptions. These gradations of oxygen, light and temperature along with the currents and seiches, profoundly influence the vertical distribution of lake organisms (Smith 1974).

Orchard-Vineyard

Biological Setting

HABITAT - Orchards and vineyards are typically associated with other agricultural types such as cropland (CRP) and pasture (PAS), and some are near urban types. They are frequently associated with Valley-Foothill Riparian (VRI) areas, shrub habitats (Mixed chaparral (MCH)), herbaceous types such as Annual Grasslands (AGS), a few tree types such as Valley-Foothill Hardwood (VFH), Valley-Foothill Hardwood-Conifer (VHC), and Ponderosa Pine (PPN).

WILDLIFE CONSIDERATIONS - Orchards and vineyards have been planted on deep fertile soils which once supported productive and diverse natural habitats. Larger and more diverse populations of wildlife were also supported by these native habitats. However, some species of birds and mammals have adapted to the orchard and vineyard habitats. Many have become "agricultural pests" which has resulted in intensive efforts to reduce crop losses through fencing, sound guns, or other management techniques.

Wildlife such as deer and rabbit browse on the trees or vines; other wildlife such as squirrel and numerous birds feed on fruit or nuts. Some wildlife (e.g., morning dove, California quail) are more passive in their use of the habitat for cover and nesting sites. Evergreen orchards can be especially beneficial to wildlife during inclement weather in winter or in hot summer periods. Water and shade can also be beneficial in irrigated orchards. Many wildlife species act as biological control agents by feeding on weed seeds or insect pests. The literature is generally lacking on wildlife associated with these habitats except as it relates to pests and pest control. Martin *et al* (1951) give an overview of wildlife use of plants for food. Examples of wildlife reported to commonly feed on nuts (almonds and walnuts) include northern flicker, scrub jay, American crow, plain titmouse, Brewer's blackbird, house finch, and California ground squirrel. Some other orchard crops such as apples, cherries, figs, pears, and prunes are also eaten by these same species plus others such as band-tailed pigeon, yellow-billed magpie, western bluebird, American robin, varied thrush, northern mockingbird, cedar waxwing, yellow-rumped warbler, black-headed grosbeak, Bullock's oriole, desert cottontail, western gray squirrel, coyote, black bear, raccoon, and mule deer.

Physical Setting

Orchards and vineyards can be found on flat alluvial soils in the valley floors, in rolling foothill areas, or on relatively steep slopes. Though some orchards are nonirrigated, most are irrigated. Some flat soils are flood irrigated, but most orchards and vineyards are sprinkler irrigated. Large numbers of orchards and vineyards are irrigated by drip or trickle irrigation systems. Most orchards and vineyards are in valley or foothill areas, with a few up to 3,000 feet elevation. Many are not very tolerant of frost.

Urban

Biological Setting

HABITAT - Urban development has occurred within or adjacent to most other habitats in California, with the highest density at lower elevations. The majority of urban developments exceeding 10,000 in population were developed in grassland or scrub (coastal sagebrush or chaparral) vegetation. Very probably the original vegetation at such locations was modified by agriculture and today most of our cities are surrounded by agricultural and grazing lands rather than natural vegetation.

WILDLIFE CONSIDERATIONS - Three urban categories relevant to wildlife are distinguished: downtown, urban residential, and suburbia. The heavily-developed downtown is usually at the center, followed by concentric zones of urban residential and suburbs. There is a progression outward of deceasing development and increasing vegetative cover. Species richness and diversity is extremely low in the inner cover. Rock dove, house sparrow, and startling comprise over 90 percent of all avian density and biomass (Emlen 1974).

The urban residential zone is characterized by a denser and more varied mosaic of vegetation--shade trees, lawns, hedges, and planted gardens; approximately 40 percent of the land's surface is covered by impervious material. This region is characterized by a variety of bird species including scrub jay, mockingbird, house finch (Jaeger and Smith 1966, Smith 1968, Guthrie 1974, Sproul 1975, Williams and Monroe 1976). Associates in the urban residential areas include the racoon, opossum, striped skunk (Berry and Berry 1959), and California slender salamander (Stebbins 1972).

Suburban areas with mature vegetation closely approximate the natural environment. In addition to landscaped gardens and lawns, relatively large tracts of adjacent natural vegetation such as chaparral, grasslands, and oak woodland abound. Wildlife diversity increases while species density decreases (Thomas and DeGraaf 1975) and proportionately greater numbers of native species occur. Bird species include wrentits, bushtits, plain titmouse, chestnut-backed chickadee, California quail, (Jaeger and Smith 1966, Smith 1968, Guthrie 1974, Sproul 1975, Williams and Monroe 1976). Common mammals are black-tailed deer, ringtail cat, black-tailed jackrabbit (Berry and Berry 1959, Jaeger and Smith 1966, Williams and Monroe 1976). Gopher snake and western fence lizard also occur in this zone.

Physical Setting

Urban habitats are not limited to any particular physical setting. The first California cities were situated along coastline or major rivers providing marine or riparian habitats which continue to influence wildlife diversity in these cities.

Urban climate varies in temperature and wind velocity from the surrounding countryside (Lowry 1967). Heat islands, warmer zones in the most densely developed portions or cities, often show temperatures that are 3° to 5°C warmer than the undeveloped landscape. Wind velocities are reduced in urban areas except where highrise construction has occurred. Tall structures can funnel wind through man-made canyons to velocities well above those found over undeveloped landscape.

State of California
The Resources Agency
Department of Fish and Game

STATE AND FEDERAL ENDANGERED AND THREATENED ANIMALS OF CALIFORNIA

(Revised April 1993)

This is a list of the species or subspecies of animals found within California or off the coast of the State that have been classified as Endangered or Threatened by the California Fish and Game Commission (state list) or by the U.S. Secretary of the Interior or the U.S. Secretary of Commerce (federal list).

The official California listing of Endangered and Threatened animals is contained in the California Code of Regulations, Title 14, Section 670.5. The official federal listing of Endangered and Threatened animals is published in the Federal Register, 50 CFR 17.11.

Candidate animals for state listing and proposed animals for federal listing are also included in this list. A state candidate species is one that the Fish and Game Commission has formally noticed as being under review by the Department for addition to the state list. A federal proposed species is one for which a proposed regulation has been published in the Federal Register.

Code designation:	Totals as of April 1993
SE = State-listed Endangered	44
ST = State-listed Threatened	29
FE = Federally listed Endangered	52
FT = Federally listed Threatened	26
SCE = State candidate (Endangered)	1
SCT = State candidate (Threatened)	0
FPE = Federally proposed (Endangered)	10
FPT = Federally proposed (Threatened)	0
Total number of animals listed	110
Total number of candidate/proposed animals	11

Common and scientific names are shown as they appear on the state or federal lists. If the nomenclature differs for a species that is included on both lists, the state nomenclature is given and the federal nomenclature is shown in a footnote. Also, other synonyms and name changes are footnoted.

Common Name	Scientific Name	Classification
	GASTROPODS	
Trinity Bristle Snail	*Monadenia setosa*	ST
	CRUSTACEANS	
Riverside Fairy Shrimp	*Streptocephalus woottoni*	FPE
California Linderiella	*Linderiella occidentalis*	FPE
Conservancy Fairy Shrimp	*Branchinecta conservatio*	FPE
Longhorn Fairy Shrimp	*Branchinecta longiantenna*	FPE
Vernal Pool Fairy Shrimp	*Branchinecta lynchi*	FPE
Vernal Pool Tadpole Shrimp	*Lepidurus packardi*	FPE
Shasta Crayfish	*Pacifastacus fortis*	SE, FE
California Freshwater Shrimp	*Syncaris pacifica*	SE, FE
	INSECTS	
Delta Green Ground Beetle	*Elaphrus viridis*	FT
Valley Elderberry Longhorn Beetle	*Desmocerus californicus dimorphus*	FT
Kern Primrose Sphinx Moth	*Euproserpinus euterpe*	FT
Mission Blue Butterfly	*Icaricia icarioides missionensis*	FE
Lotis Blue Butterfly	*Lycaeides argyrognomon lotis*	FE
Palos Verdes Blue Butterfly	*Glaucopsyche lygdamus palosverdesensis*	FE
El Segundo Blue Butterfly	*Euphilotes [=Shijimiaeoides] battoides allyni*	FE
Smith's Blue Butterfly	*Euphilotes [=Shijimiaeoides] enoptes smithi*	FE
San Bruno Elfin Butterfly	*Incisalia mossi bayensis*	FE
Lange's Metalmark Butterfly	*Apodemia mormo langei*	FE
Bay Checkerspot Butterfly	*Euphydryas editha bayensis*	FT
Oregon Silverspot Butterfly	*Speyeria zerene hippolyta*	FT
Myrtle's Silverspot Butterfly	*Speyeria zerene myrtleae*	FE
Delhi Sands Flower-loving Fly	*Rhaphiomidas terminatus abdominalis*	FPE

FISHES

Winter-run Chinook Salmon	*Oncorhynchus tshawytscha*	SE, FT
Little Kern Golden Trout	*Oncorhynchus*[1] *aguabonita whitei*	FT
Lahontan Cutthroat Trout	*Oncorhynchus*[2] *clarki henshawi*	FT
Paiute Cutthroat Throat	*Oncorhynchus*[3] *clarki seleniris*	FT
Bull Trout	*Salvelinus confluentus*	SE
Delta Smelt	*Hypomesus transpacificus*	FT
Mohave Tui Chub	*Gila bicolor mohavensis*	SE, FE
Owens Tui Chub	*Gila bicolor snyderi*	SE, FE
Bonytail[4]	*Gila elegans*	SE, FE
Colorado Squawfish	*Ptychocheilus lucius*	SE, FE
Lost River Sucker	*Deltistes luxatus*	SE, FE
Modoc Sucker	*Catostomus microps*	SE, FE
Shortnose Sucker	*Chasmistes brevirostris*	SE, FE
Razorback Sucker	*Xyrauchen texanus*	SE, FE
Desert Pupfish	*Cyprinodon macularius*	SE, FE
Cottonball Marsh Pupfish	*Cyprinodon salinus milleri*	ST
Owens Pupfish	*Cyprinodon radiosus*	SE, FE
Unarmored Threespine Stickleback	*Gasterosteus aculeatus williamsoni*	SE, FE
Tidewater Goby	*Eucyclogobius newberryi*	FPE
Rough Sculpin	*Cottus asperrimus*	ST

AMPHIBIANS

Santa Cruz Long-toed Salamander	*Ambystoma macrodactylum croceum*	SE, FE
Siskiyou Mountains Salamander	*Plethodon stormi*	ST
Tehachapi Slender Salamander	*Batrachoseps stebbinsi*	ST
Kern Canyon Slender Salamander	*Batrachoseps simatus*	ST
Desert Slender Salamander	*Batrachoseps aridus*	SE, FE
Shasta Salamander	*Hydromantes shastae*	ST
Limestone Salamander	*Hydromantes brunus*	ST
Black Toad	*Bufo exsul*	ST

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[1] Federal: *Salmo aguabonita whitei*

[2] Federal: *Salmo clarki henshawi*

[3] Federal: *Salmo clarki seleniris*

[4] Federal: Bonytail Chub

REPTILES

Desert Tortoise	*Gopherus [=Xerobates] agassizii*	ST, FT
Green Sea Turtle	*Chelonia mydas*	FT
Loggerhead Sea Turtle	*Caretta caretta*	FT
Olive (=Pacific) Ridley Sea Turtle	*Lepidochelys olivacea*	FT
Leatherback Sea Turtle	*Dermochelys coriacea*	FE
Barefoot Banded Gecko	*Coleonyx switaki*	ST
Coachella Valley Fringe-toed Lizard	*Uma inornata*	SE, FT
Blunt-nosed Leopard Lizard	*Gambelia silus*[5]	SE, FE
Island Night Lizard	*Xantusia [=Klauberina] riversiana*	FT
Southern Rubber Boa	*Charina bottae umbratica*	ST
Alameda Whipsnake	*Masticophis lateralis euryxanthus*	ST
San Francisco Garter Snake	*Thamnophis sirtalis tetrataenia*	SE, FE
Giant Garter Snake	*Thamnophis couchii gigas*[6]	ST,FPE

BIRDS

California Brown Pelican	*Pelecanus occidentalis californicus*	SE, FE
Aleutian Canada Goose	*Branta canadensis leucopareia*	FT
California Condor	*Gymnogyps californianus*	SE, FE
Bald Eagle	*Haliaeetus leucocephalus*	SE, FE
Swainson's Hawk	*Buteo swainsoni*	ST
Peregrine Falcon	*Falco peregrinus*	FE
American Peregrine Falcon	*Falco peregrinus anatum*	SE, FE
California Black Rail	*Laterallus jamaicensis coturniculus*	ST
California Clapper Rail	*Rallus longirostris obsoletus*	SE, FE
Light-footed Clapper Rail	*Rallus longirostris levipes*	SE, FE
Yuma Clapper Rail	*Rallus longirostris yumanensis*	ST, FE
Greater Sandhill Crane	*Grus canadensis tabida*	ST
Western Snowy Plover	*Charadrius alexandrinus nivosus*	FT

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[5] Federal: *Gambelia (=Crotaphytus) silus*

[6] Same as *Thamnophis gigas*

BIRDS (continued)

California Least Tern	*Sterna antillarum browni*[7]	SE, FE
Marbled Murrelet	*Brachyramphus marmoratus*	SE, FT
Western Yellow-billed Cuckoo	*Coccyzus americanus occidentalis*	SE
Elf Owl	*Micrathene whitneyi*	SE
Northern Spotted Owl	*Strix occidentalis caurina*	FT
Great Gray Owl	*Strix nebulosa*	SE
Gila Woodpecker	*Melanerpes uropygialis*	SE
Gilded Northern Flicker	*Colaptes auratus chrysoides*	SE
Willow Flycatcher	*Empidonax traillii*	SE
Bank Swallow	*Riparia riparia*	ST
California Gnatcatcher	*Polioptila californica*	FT
San Clemente Loggerhead Shrike	*Lanius ludovicianus mearnsi*	FE
Arizona Bell's Vireo	*Vireo bellii arizonae*	SE
Least Bell's Vireo	*Vireo bellii pusillus*	SE, FE
Inyo Brown Towhee[8]	*Pipilo fuscus eremophilus*	SE, FT
San Clemente Sage Sparrow	*Amphispiza belli clementeae*	FT
Belding's Savannah Sparrow	*Passerculus sandwichensis beldingi*	SE

MAMMALS

Riparian Brush Rabbit	*Sylvilagus bachmani riparius*	SCE
Point Arena Mountain Beaver	*Aplodontia rufa nigra*	FE
San Joaquin Antelope Squirrel	*Ammospermophilus nelsoni*	ST
Mohave Ground Squirrel	*Spermophilus mohavensis*	ST
Morro Bay Kangaroo Rat	*Dipodomys heermanni morroensis*	SE, FE
Giant Kangaroo Rat	*Dipodomys ingens*	SE, FE
Stephens' Kangaroo Rat	*Dipodomys stephensi*	ST, FE
Tipton Kangaroo Rat	*Dipodomys nitratoides nitratoides*	SE, FE
Fresno Kangaroo Rat	*Dipodomys nitratoides exilis*	SE, FE
Salt-marsh Harvest Mouse	*Reithrodontomys raviventris*	SE, FE
Amargosa Vole	*Microtus californicus scirpensis*	SE, FE
Sierra Nevada Red Fox	*Vulpes vulpes necator*	ST

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[7] Federal: *Sterna antillarum (=albifrons) browni*

[8] Same as Inyo California Towhee *(Pipilo crissalis eremophilus)*

MAMMALS (continued)

San Joaquin Kit Fox	*Vulpes macrotis mutica*	ST, FE
Island Fox	*Urocyon littoralis*	ST
Guadalupe Fur Seal	*Arctocephalus townsendi*	ST, FT
Northern (Steller) Sea Lion	*Eumetopias jubatus*	FT
Wolverine	*Gulo gulo*	ST
Southern Sea Otter	*Enhydra lutris nereis*	FT
Sei Whale	*Balaenoptera borealis*	FE
Blue Whale	*Balaenoptera musculus*	FE
Finback Whale[9]	*Balaenoptera physalus*	FE
Humpback Whale[10]	*Megaptera novaeangliae*	FE
Right Whale[11]	*Balaena glacialis*	FE
Sperm Whale	*Physeter catodon*[12]	FE
California Bighorn Sheep	*Ovis canadensis californiana*	ST
Penninsular Bighorn Sheep	*Ovis canadensis cremnobates*	ST,FPE

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[9] Also called Fin Whale

[10] Also called Hump-backed Whale

[11] Also called Black Right Whale

[12] Same as *Physeter macrocephalus*

APPENDIX D. Cultural Resources Report

NEVADA COUNTY GENERAL PLAN UPDATE
MASTER ENVIRONMENTAL ASSESSMENT
CULTURAL RESOURCES ELEMENT
TECHNICAL DATA AND FINDINGS

BY

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TECHNICAL DATA/FINDINGS

CONTEXTUAL BACKGROUND

Prehistory and the Native American Period

Nevada County lies within the traditional territories of the Hill Nisenan (or Southern Maidu), a Penutian speaking group who inhabited the west-central Sierra Nevada, and the Northern Washoe (or Wel mel ti), a Hokan language group who occupied the west-central Great Basin along the eastern Sierran flank. The Nisenan territory held the foothill and mountainous portions of the drainages of the Yuba, Bear and American Rivers and the lower drainages of the Feather River. Nuclear Washoe tribal lands were about 2000 square miles surrounding Lake Tahoe, with much larger peripheral lands having flexible, undefended boundaries. The area between snowline on the west Sierra slope and the Sierran crest was shared between the Nisenan and Washoe.

Environmental phenomena such as springs and drainages, unique geological outcrops, and different land surface exposures with variable slopes created extreme variety in the accompanying plant and animal communities upon which the Washoe and Hill Nisenan depended. Like most hunters and gatherers, vegetable foods formed the subsistence baseline, although they used a wide range of plant and animal species. Generally, the least productive time of the year for both groups was late winter-early spring. However, during this lean time the Washoe were able to catch cutthroat trout, which spawned all winter in the lower Truckee River drainage basin. For the Nisenan, the salmon runs in west slope rivers did not begin until late spring. Throughout the summer, both groups gathered nuts and seeds, roots, berries, fungi, and greens. Expeditions to hunt large game took place within the higher elevations during the fall. Acorns became available in massive quantities in the autumn. Acorn eating is the hallmark of California Indians and they were the primary staple for those groups who inhabited the western foothills of the Sierra. The Washoe went to great lengths to obtain acorns in trade from their western neighbors.

Lower elevations were occupied on a permanent or semi-permanent basis, with higher elevations being inhabited at various times of the year by smaller groups who made seasonal movements in order to procure economic resources as they became available. The archaeological imprint of these ancient subsistence activities are distinctive, with diverse environmental zones closely corresponding to a variety of specific site types, such as villages, multi-task camps, task-specific locales, and special use areas.

Nisenan villages and year-round encampments were clustered in the western part of Nevada County. Permanent villages are represented archaeologically by culturally enriched and darkened soils (or "midden") which contain artifacts, charcoal, organic debris, and/or house pit and dance house depressions. Villages hosted important social gatherings and religious ceremonies. For example, Nevada City, Anthony House, Pleasant Valley, etc., were important centers where significant numbers of Nisenan still resided during the 1920s. Nisenan villages consisted of from four to 12 separate dwellings, housing a nuclear or polygamous family. Larger social organizations, called "tribelets", were formed by several villages uniting under a single chief. Boundaries of such tribelets were formed by using natural ridges between streams. No permanent Nisenan winter village occupation is reported above approximately 3000-4000 feet elevation on the western slope.

As for the east slope, the Northern Washoe generally wintered in the Truckee Meadows area and spent summers in the higher elevations in and around the Truckee Basin. Compared to the Nisenan, the Washoe were a relatively informal and flexible political collectivity. While semi-permanent villages were maintained along the eastern Sierran front, the Washoe as a whole were more mobile than the Nisenan.

Higher elevations within the eastern and central portions of Nevada County were inhabited seasonally by small groups of Hill Nisenan and Northern Washoe. The Washoe, in particular, have a tradition of making long treks across the Sierran passes to hunt and gather acorns and to trade with Maidu and Miwok neighbors. Exploitation of this mountain region was directed from seasonal base camps. The occupation by fewer people for briefer periods of time precluded the build up of deep midden deposits. Such seasonal camps are manifest archaeologically by a wide range of cultural items (including stone tools, waste flakes from the manufacture of stone tools, and milling equipment such as bedrock mortars and portable mortars and pestles and manos and metates), all of which indicate that multiple tasks were pursued.

Single-task specific sites were located throughout Washoe and Nisenan territory and were used at variable times of the year as satellite locales aimed at a specific function. Task sites were often located away from camps or villages and near concentrations of plant, animal or fish resources. For example, bedrock mortar stations were positioned in oak groves, fishing stations were established near productive spawning streams, and hunting stations (consisting of waste flakes and broken tools) were placed in proximity to deer migration routes. Aboriginal trek routes, patterned after game trails, were later used by the

emigrants and are often the precursors of our modern transportation systems.

In Nevada County, special use sites, which were often isolated from living areas, involve petroglyphs (or rock writings), cemeteries, and quarries, where rock sources such as chert or basalt was mined from an outcrop of parent material and roughly fashioned into tool preforms or "bifaces."

These land use patterns, known from Washoe and Nisenan protohistoric times, are generally consistent with interpretations derived from numerous archaeological investigations within the county, which have focused upon sites from more ancient prehistoric times. However, the archaeological record indicates a shift from hunting-based societies in earlier times to populations with increasing reliance on plant foods by the time of historic contact. Also, paleoclimates may have been warmer and drier in the past, allowing for year-round occupation of the higher elevations in in Nevada County. This is suggested by possible permanent camp sites containing midden, which have been recorded in Martis Valley. Occupation of western and central Nevada County may extend back from nearly 4000 years ago up to the time of historic contact. Prehistoric groups may have inhabited the eastern end of the county as early as 6000 years ago.

The largest available body of data on the Nisenan and Washoe was collected between the 1890s to the 1930s. Most of this information was gathered after aboriginal populations had been substantially reduced and the process of acculturation was well underway. Both the Washoe and the Nisenan had the misfortune of inhabiting the heart of two of the most important mineral resource zones in the western United States, the Sierra Nevada motherlode and Washoe's Comstock lode. By the 1850s Euroamericans had permanently occupied their territories and changed traditional lifeways. Mining, lumbering, grazing, commercial fishing, tourism, and the growth of settlements disrupted traditional Indian relationships to the land. As hunting, fishing, and gathering wild foods were no longer possible, they were forced into dependency upon the Euroamerican settlers.

The Federal Government's Indian "relocation" policies in California were set in motion during the 1850s with the creation of rancherias and reservations. Hill Nisenan from the Yuba and Bear River Basins either stayed on reservations or rancherias and married into their own or into other Indian tribes, or became assimilated into the dominant Euroamerican society. One of a series of 18 government treaties was negotiated in 1852 with the Nisenan of Nevada County, the ultimate purpose being to secure

Indian land title to California. The treaty, made at Camp Union near the Yuba River, set aside a large portion of present-day western Nevada County for the sole use and occupancy of the Nisenan "forever." Boundaries commenced at Camp Far West on the Bear River, continued upstream for 12 miles, then due north to the Yuba River, then downstream 12 miles, then due south to the place of beginning. A special stipulation was made in this treaty to deviate the boundary line located due north between the Bear and Yuba Rivers to specifically include Penn Valley as part of the reservation. In 1852 the Senate rejected the treaty. A rancheria was established around Nevada City; it was terminated in 1964. Today, significant numbers of Nisenan are dispersed throughout many Sierran foothill communities. The Washoe remain as a recognized tribe by the U.S. government and have maintained an established land base. Its 1200 tribal members are governed by a tribal council which consists of members of the Carson, Dresslerville, Woodfords, and Reno-Sparks Indian colonies, as well as members from non-reservation areas.

Historic Period

Pre-Gold Rush Period (1848-1859):

Earliest exploration during the Spanish and Mexican periods was limited in Nevada County. It wasn't until later, with the growing American interest in the Trans-Mississippi West and California, that the U.S. government dispatched expeditions, such as those led by John C. Fremont, to explore the region, produce accurate maps, and report back on the region's inhabitants and resources. Fremont's expedition of 1845-1846 traversed portions of Nevada County over Donner Pass.

A similar route to that taken by Fremont, ascending the Truckee River out of Nevada, over Donner Pass, and down the west slope into the Central Valley, was opened in 1844 by members of the Stephens-Townsend-Murphy Party, the first emigrant group to cross the Sierra Nevada by wagon. Hundreds of emigrant trains soon followed, the most notable being the Donner Party. The ordeal of starvation and cannibalism, endured by their members in the winter of 1846-1847, is a well-known and tragic episode in the American settlement of the West and is now memorialized at Donner State Historic Park. With the discovery of gold in 1848, the major route across the Sierra Nevada shifted from the Truckee Route of the California Trail further south to the Carson Pass and Johnson's Cutoff.

After Marshall's gold discovery at Sutter's Mill in 1848, placer gold was found in Wolf Creek later that same year. Thousands of gold seekers soon arrived and within a few years settlements were permanently established in Nevada County. Prior

to this time, the very earliest settlement in the territory, now known as Nevada County, was made in the summer of 1848 at a place known as Rose's Corral located in present-day Pleasant Valley between Anthony House and Bridgeport. Nevada County was organized by an act of the legislature, approved May 18, 1851 and Nevada City was made the county seat. Before that time it had been a part of Yuba County. The County of Nevada was named for the Spanish word meaning "snow-covered", and not after the State of Nevada, as has been sometimes assumed.

Nevada County encompasses 17 mining districts, with gold mining dominating mineral exploitation here. Mining from 1850 to 1957 established Nevada County as the heart of the region known as the "Northern Mines." This was the most productive gold producing region in the nation, owing largely to the fact that gold was available in large quantities in both stream-laid placer and hard-rock quartz deposits of great size. The county contains some of the most productive placer gravels in the world, namely its Tertiary deposits at North Bloomfield and North Columbia. The county also contains some of the most heavily mineralized and richest lode-gold districts in the state, among which are those at Grass Valley and Nevada City. Nevada County also claims fame in its association with many prominent mining engineers and geologists who pioneered a number of important inventions and improvements in mining and milling technology.

The first prospecting in Nevada County was confined to the gravel bars and the beds of running streams. These younger Quaternary stream deposits eroded the gold-bearing gravels laid down in earlier times. Streams are the dominant agent in the formation of most placer deposits and water, which had originally deposited the gold in the gravels, was the basis for its extraction. These shallow deposits were initially mined by a variety of simple surface hand mining techniques which involved the basic principle of agitating gold-bearing gravel in water-filled containers. Early gold extraction devices include gold pan, rocker, long tom, and sluice box. These early techniques were phased out in favor of ones which processed higher volumes of gravel. However, the sluice box continued as the standard means for extracting gold from gravels. The shallower pits and excavations and mounds of hand-piled rocks associated with these old surface washings are now largely infilled by erosion and are difficult to distinguish from natural features.

Older Tertiary Gravels, such as those formed by the ancestral Yuba River which drained much of what is now the western and central portion of Nevada County, were laid down by slower Sierra Nevada rivers with gradual slopes. These huge deposits of ancient, loosely cemented gold-bearing gravels are more deeply buried and required more sophisticated techniques in

their extraction. One method, ground sluicing, employed gravity flows of water aided by pick and shovel to break up deposits. Hydraulicking was a more powerful form of ground sluicing, using water under pressure to dislodge and direct gold-bearing deposits into sluices where gold was trapped. These huge hydraulic pits remain as commanding cultural landscapes in Nevada County. Coyoting and later, more elaborate drift mining techniques employed horizontal or vertical excavations sunk into the ground to reach the gold bearing gravels.

In the western placer regions the "cream" was quickly skimmed from shallow bars and benches along the streams by the initial rush of miners using pans, rockers, long toms, and sluice boxes. By the mid 1850s this source of free gold was exhausted. Miners, who moved to the higher terrace deposits to work the dry diggings, required large amounts of water. To accommodate these more modest needs and to keep pace with the innovations of increasingly more sophisticated and powerful hydraulic methods, which demanded enormous volumes of water, an elaborate system of ditches, flumes and storage reservoirs was put in place. Financial backing requiring large capital reserves prompted the development of ditch companies which directed their water delivery and storage facilities to major hydraulic diggings on the San Juan Ridge and in the South Yuba and Bear River Basins. In 1867 the total length of ditches in Nevada County was 850 miles. By 1879 there were 900 miles of ditches, with an additional 1,000 miles of smaller ditches. Ditches and flumes headed in high elevation reservoirs and wound their way down mountain sides. Steep cliffs and ravines were traversed by flumes. Routes with southern exposure were preferred to encourage snow melt and prevent snow and ice damage. Ditch tenders maintained cabins or stations along the ditch route to monitor and service the canals.

In California quartz lode mining was a less important mining technique than placer mining until after the discovery and development of the Comstock silver mines in Nevada in 1859. The "Mother Lode" is the popular name for the main quartz vein that is associated with the intrusion of the Sierra Nevada batholith. This single lode is split into a number of seams that underlie the quartz lode region within western and central Nevada County. These gold-quartz veins occur along contacts between granite and metamorphosed sedimentary rocks, volcanics and deeply-weathered serpentinite. One of the earliest worked deposits of gold-bearing quartz in California was opened in Grass Valley in 1850. These and other hardrock sources were tapped by excavating tunnels with drills and dynamite in order to follow gold bearing quartz veins. Rock was transported out of the tunnels on ore carts and then transferred to stamp mills where the rock was

crushed to release the gold ores from the surrounding material. The pulverized ore was then treated to remove impurities.

Throughout this arly gold rush period, logging, agriculture, and transportation were adjuncts in support of the mining industry. Many migrants who flocked to the county had no intention of working the mines, but rather of working the miners, an equally lucrative prospect as the burgeoning population needed shops and services, food and clothing, transportation and building materials. California was almost completely dependent on imported food, most coming from Oregon, Hawaii, Chile and other Pacific rim countries. To fill this subsistence need, disenchanted or opportunistic ex-miners secured the best farming lands in the lower foothills of Nevada County to produce food for miners. Ranching of both sheep and cattle was encouraged by the increased demand for meat during the gold rush. Sawmills immediately sprang up around mining camps to supply lumber for mine timbering and building materials for the growing settlements. The growth of gold rush era camps and towns stimulated the development of transportation systems based on supplying mines and camps with needed mail, express and provisions. The earliest transportation into the mines was done by the miners themselves, with crude wagons, pack animals, or backpacks. Freighting with wagons or by major express companies out of valley supply centers was not undertaken until larger-scale hydraulic and quartz mining developed in the late 1850s. With the permanence of the mining settlements insured, heavy expenditures commonly required for road building could then be justified. As government was unable or unwilling to finance road building, individuals or companies undertook the task and operated the thoroughfares as toll roads for profit and as a means to attract freight business into a community. As teaming became more important, the number and permanency of roadside inns increased.

A heterogenous population composed of people from every corner of the world crowded into the Sierra mining districts, as reflected in the ethnic names assigned to some of the earliest camps in Nevada County. Native Americans played an important and little acknowledged part in the earliest period of the gold rush. Immigrants from Hawaii, Latin America, Europe, Asia, and elsewhere were initially welcomed because of their knowledge of mining techniques, but anti-foreign feelings hampered their economic opportunities in Nevada County and many groups were gradually forced out of the mines altogether into other economic pursuits. The mingling of these different ethnic groups and nationalities has produced a unique cultural collage from which Nevada County's heritage is drawn.

Post-Gold Rush Period (1859-present):

The years following 1859 are marked by technological changes which prompted a shift in the organization and financial arrangements of the mines. Lode mining and large scale placer mining within the county required considerable technical skill, which was dependent upon scientific knowledge and a trained work force. The era of the self-sufficient, itinerant prospector with pick and shovel gave way to a system based increasingly on cooperation between groups of miners and ultimately to the miner as wage earner employed by large multidivisional corporations tied to the national and world economy. National and foreign capitalists, initially investing only in mining, now poured their money into logging, transportation and water development, enterprises which paralleled mining interests. The period after 1859 can also be characterized by a change in settlement patterns, away from the "boom-bust" camp structure common to the early mining frontier and the growth, in its place, of a more mature, stable, and diversified economy and social structure that was not based on mining alone.

The beginning of this period was heralded by a down-turn in the county's mining economy, as mining in the Yuba-Bear River Basins was curtailed by the exodus of miners and capitalists to the Comstock rush of 1859-1865. By the late 1860s, the Nevada County mines were again productive. Until 1884, when the hydraulic mines were restrained from dumping their tailings into the streams, the largest hydraulic mines in the world were operated here, providing the county's largest source of gold. From the turn of the century to 1917, gold production statewide rose. With the restrictions imposed on hydraulic mining, lode mining, drift mining and gold dredging supplied the principal sources of gold. Inflation following World War I caused the continual decline of gold production until the early 1930s when the prices increased. During the depression years of the 1930s, gold output in the state was nearly as high as it had been during the gold rush. Thousands of urban unemployed rushed to the Sierran gold fields to prospect with pan and rocker. The revival of mining infused Nevada County communities with new life and stimulated non-mining industries such as logging and agriculture. Many mines were shut down during World War II and reopened soon afterward, but with decreasing productivity. Gradually outside investment capital was funneled away from mining into California agriculture and real estate. The Nevada County gold mining industry has not since recovered.

Hydraulic mines and mining water companies were among the first to use electric lights and telephones as part of their operations. The need for ditch tenders to communicate with each other, with company offices, and with reservoir maintenance men led to the construction in 1878 of the first long distance

telephone line in the nation. It was located along the San Juan Ridge and linked the mines, ditches, and reservoirs of these major companies. When hydraulic mining was stopped in 1884 by court order most of the ditches and water rights were abandoned but some ditches and reservoirs were maintained for pasture and orchard irrigation, hydroelectric power generation and domestic use. By 1905 hydroelectric power, primarily emanating from generating plants and storage reservoirs located in the higher elevations Nevada County, was delivered over a network of high tension transmission lines owned and operated by Pacific Gas and Electric Company. In 1921 Nevada Irrigation District launched its far reaching plans for headwaters storage development and downstream ditch construction. Over half of its system incorporates historic ditch segments from the gold rush period.

After the discovery of gold and silver in the Comstock in 1859, traffic was sufficiently heavy to warrant major improvements on the trans-Sierra routes. Towns in the western part of the county, in an effort to position themselves at trans-mountain road termini and obtain a share of the rapidly growing Comstock trade, established connecting roads to the major trans-Sierran routes through Nevada County , namely the Henness Pass Turnpike, which crossed the summit above the Middle Fork of the Yuba River, and the Dutch Flat and Donner Lake Wagon Road over Donner Pass. The latter road was constructed in 1864 to supply construction materials for the transcontinental railroad. After the Central Pacific (now Southern Pacific) Railroad was finished in 1869, transportation by freight wagon and stagecoach, the former mainstays of the regional transportation network, became secondary modes of transport and were reduced to a shuttle service which connected mining camps, logging centers and agricultural valleys with the Central Pacific line. The Nevada County Narrow Gauge Railroad, which until the 1930s served the mines and communities around the county seat, also provided connecting service to the Central Pacific. The building of the transcontinental railroad had a tremendous impact on the economic activities of Nevada County. It ended California's effective isolation and brought Nevada County into the national economy. Logging, agriculture, commercial fishing, the ice industry, and recreation were all stimulated or expanded by the new markets provided by the railroad. The ice industry developed along the Central Pacific line, on tributaries of the Truckee River and around Donner Pass. Until the demise of the native trout fishery during the 1920s, commercial fishing in the eastern end of the county was a viable enterprise. Fresh fish caught in Sierran lakes and rivers could be quickly transported to the Comstock mines, Sacramento, and San Francisco.

Lumbermen got their start cutting pine to meet the needs of the western mines for timbering and flume construction. When

mining declined, timber losses were offset between 1864 and 1869 by supplying ties and cordwood to meet the demands generated by the construction of the transcontinental railroad. Charcoal production in the eastern part of the county (to supply smelters in the western Great Basin) and box making (to supply California fruit growers) further supplemented revenues. The lumber industry enjoyed continued support in the general building needs of expanding cities in California and Nevada. Logging in the western half of the county differed significantly from that the eastern end. On the west-side sawmills dated back to the early gold rush period. They tended to be smaller, generally produced for local consumption, and usually operated on a seasonal basis. The men who worked in the mill and forest were generally settled members of the community in nearby towns. For east-side operations, the majority of the logging took place from 1906 to 1940. While men who worked in the mills were more likely to be year-round residents of those mill towns, companies built logging camps in the woods to house the majority of cutters. Those who labored in the forests constituted a substantially larger floating population which focused activities near the scene of each season's cutting operations. As logging operations expanded after 1859, so did the technology used to harvest timber. Transportation of logs to mills and finished lumber to market was an enduring problem, especially in the rugged forest lands of Nevada County. This problem was initially solved through the use of V-flumes, log chutes and wagons. However, yarding and transporting logs with bull teams was a slow, cumbersome and expensive process and was gradually substituted by the use of railroads and steam tractors. Between 1875 and 1906 a network of logging railroads was built in the Truckee Basin. The Sierra Nevada Wood and Lumber Company, a major lumber operator which cut north of Truckee town between 1896 and 1936, established an extensive railroad logging system which radiated out from their mill at Hobart. The Towle Brothers, as a part of their west-side lumber operations, ran a narrow gauge line from Alta towards Washington. A few other smaller operators also transported logs by narrow gauge railroad. The steam tractor was patented in 1882 and served as an efficient complement to railroad logging. By the 1920s almost all of the large-scale companies in the county logged with steam logging engines or "steam donkeys" and railroads.

As with lumber and other county industries, farm production for outside markets came after 1859 and was dependent on the development of better transportation systems. During the 1860s settled agriculture continued in the western part of the county on farms of varying sizes. In the higher elevations, agriculture centered on orchard crops and the production of hay. With the passage of the 1905 Reclamation Act, Truckee River water draining

eastern Nevada County was used for reclamation of agricultural lands in Carson Valley.

A pattern of rang use developed with seasonal stocking of mountainous lands by valley or foothill cattle ranchers, with full stocking by the early 1880s. Programs of predator eradication were worked out with stockgrowers and hunters established cabins in remote areas which served as headquarters for their operations. In the most general terms, the western division of the county, along with scattered allotments at the lower elevations on the eastern side, were historically allotted to cattle ranchers. The higher elevations and the eastern slope were assessed primarily to sheep ranchers and Basque itinerant shepherds, the latter leaving their distinctive mark in the form of aspen tree carvings. Mountain valleys in the eastern county were desired for dairy ranching.

The late 19th century brought a surge of interest and appreciation of wilderness recreation. With a favored location adjacent to the railroad, Nevada County (and especially the Truckee-Donner Summit area) became a focal point of early mountain resort summer and winter development. Truckee was promoted as a "winter wonderland" as early as the 1890s. During the 1930s ski areas were developed at Donner Summit and elsewhere along the main highway and railroad tracks. Increased automobile traffic stimulated by winter and summer recreational developments prompted business entrepreneurs to accommodate highway travelers by developing motels, campsites, service stations, and stores. By the late 1910s, the Lincoln Highway, an improved thoroughfare which closely followed the route of the old Dutch Flat and Donner Lake Wagon Road, brought hundreds of automobile tourists into Nevada County. Middle class folk in the early decades of the 20th century remodeled abandoned homesteads, farmhouses and mountain cabins for conversion into summer homes. Nevada County increasingly became the relocation focus for retirees. Tahoe National Forest promoted the recreational potential of its lands, which were enhanced by Civilian Conservation Corps crews between 1933 and 1943. CCC camps were established near North Bloomfield and at Boca. Within the last few decades the enhancement and interpretation of selected historic sites and buildings have boosted community economies throughout Nevada County in the form of recreational tourism.

Wider markets for mining, timber and agriculture, better transportation, larger corporations with more sophisticated financing, and advanced technologies based upon scientific knowledge have brought varying degrees of material prosperity to Nevada County. These positive economic and social attributes for Nevada County residents have also brought severe costs to the natural environment in the form of eroded hillsides, hydraulic

pits and silted rivers, toxic tailings, depleted vegetation on overgrazed range lands, and denuded timberlands. Over a century later we can now study and monitor the effects of Nevada County landscapes altered by such historic activities. Similar environmental degradation on a national level gave rise in 1906 to the designation of a national forest system and the establishment of the Tahoe National Forest as a substantial public land base which constitutes about 21% of Nevada County. A series of federal environmental protection mandates for public lands soon followed to promote the conservation and protection of natural resources for the use and enjoyment of future generations. The spirit and letter of this federal legislation is embodied in the California Environmental Quality Act and its local manifestation as the Nevada County General Plan. In it, coordinated public planning is viewed as necessary to curtail haphazard and exploitative practices engendered by the laissez-faire approach.

The unique and varied cultural resources of Nevada County are incorporated into community planning studies, just like any other natural resource. In particular, the archaeological remains left by Nevada County's ancestral Native Americans require respectful treatment, along with the continued incorporation of contemporary Native American opinions, knowledge and sentiments into the planning process. Thoughtful interpretive development of a representative sample of Nevada County's heritage remains enhances not only public education and enjoyment, but greatly augments the local economy, as has been proven time and again elsewhere in the state and nation. A sense of local pride and solidarity is manifest in the interpretation of heritage attractions which celebrate cultural diversity and human ingenuity. In short, "history sells", and few counties are so well endowed with potentially marketable antiquities as is the County of Nevada.

These cultural resources are fragile and must be considered with sensitivity. Their integrity is diminished daily by natural deterioration processes and the pressures of growth. Furthermore, natural depositional processes, which typically serve to bury archaeological sites with a protective layer of soil, are relatively inactive at higher elevations. As such, archaeological sites within the central and eastern portions of the county are especially fragile and susceptible to destruction; in these cases, thousands of years of prehistory lay exposed upon the surface.

Summary of California and Local Ordinances Protecting Archaeological Resources

A variety of California laws have been passed in the last few decades which are designed to protect archaeological resources. In the early 1970s, archaeologists estimated that more than 80 percent of California's prehistoric record had already been destroyed before it could be studied. This makes cultural resource inventory and protection of significant remaining sites all the more urgent. Several California public resource codes make it illegal to damage objects of historical or archaeological interest on public or private lands or to disturb human remains, including those in archaeological sites. It is illegal to possess remains or artifacts taken from Native American graves and the Native American Heritage Commission must be consulted whenever Native American graves are found.

California Environmental Quality Act ("CEQA") (13 Public Resources Code, Section 21000)

The act requires that all private and public activities not specifically exempted be evaluated against the potential for environmental damage, including effects to historical resources. It defines historical resources as "any object, building, structure, site, area, or place which is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (Division I, Public Resources Code, Section 5021.1b).

Guidelines for the Implementation of the California Environmental Quality Act, (CEQA Guidelines) (14 California Administrative Code Section 15000 et seq.)

These guidelines were developed by the Governor's Office of Planning and Research for the Secretary for Resources and detail the practical application of CEQA. The Guidelines also define activities, persons, and agencies required to comply with CEQA and provide recommended ways to avoid or lessen damage to environmental resources. Appendix K deals specifically with archaeological resources.

Health and Safety Code, Section 7052 (Stats. 1939, C.60:672)

This code establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Penal Code, Section 622.5 (Stats. 1939, D.90:1605, 5.1)

This code provides misdemeanor penalties for injuring or destroying objects of historical or archaeological interest

located on public or private lands. It specifically excludes the landowner.

Public Resources Code, Section 5097.5 (Stats. 1965, C.11362792)

An additional code defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public lands.

Public Resources Code S5097.9

It is contrary to the free expression and exercise of Native American religion to interfere with or cause severe or irreparable damage to any Native American cemetery, place of worship, religious or ceremonial site or sacred shrine.

Health and Safety Code, Ch. 1492 (SB 297)

The health and safety code requires that the Governor's Native American Heritage Commission be consulted whenever Native American graves are found. It makes it illegal to possess remains or artifacts taken from Native American graves.

Public Resources Code Sec. 5024 and 5024.5

This code requires State Government agencies to inventory and protect historical structures and objects under their jurisdiction. The State Historic Preservation Officer must be consulted before any such structure or object is altered or sold.

Public Resources Code, Section 6313, Chapter 1083 (SB 2199)

This code requires the State Lands Commission (which has jurisdiction over state waters) to forward to the State Historic Preservation Officer all applications for permits to salvage or excavate submerged archaeological resources. Such permits may be revoked by the State Lands Commission or by recommendation of the State Historic Preservation Officer.

Nevada County's Land Use and Development Code (zoning ordinance) contains the "Design" combining district, the intent of which is to preserve and enhance areas of historic, civic or cultural value to the county. Under this ordinance, Truckee has established an historic preservation district.

In order to prevent vandalism and unauthorized artifact collecting and to protect landowners from trespass, the locations of cultural resources are kept confidential. California Code Section 6254.10 exempts archaeological site information from the California Public Records Act, which requires that public records

be open to public inspection. Location information is restricted and is not circulated as part of public documents but is used for planning purposes only.

INVENTORY OF CULTURAL RESOURCES

A variety of prehistoric and historic site types occur within Nevada County. Prehistoric site types which have been inventoried include villages, multi-task camps, single task-specific locales, and special use sites. No sites considered sacred or of special religious significance to the Maidu or Washoe have been specifically identified. However, as the existence and location of such sites is not readily acknowledged or divulged by Native Americans, it is likely that such sites do in fact exist within the county.

1. Village sites typically contain: (a) flaked stone tools; (b) portable milling implements such as mortars and pestles and manos and metates; (c) stationary features like bedrock mortars, which are sometimes accompanied by small-diameter pitted boulders (or "cupules") that appear as miniature mortar cups; (d) discolored soil or "midden" which is usually deep and may contain animal bone, charcoal and organic residues; (e) house pit or dance house depressions; and (d) cemeteries.

2. Multi-task camps are not permanently occupied. They are characterized by: (a) both flaked stone and (b) ground stone tools and (c) sometimes bedrock mortars which may be associated with shallow middens or cupules.

3. Single task-specific locales are places where a single task is performed once or intermittently (seasonally) over successive years. They exhibit either flaked stone or ground stone tools. Isolated bedrock mortars with shallow middens and quarries, where rock sources were quarried and roughly fashioned into tool preforms, also fall into this category.

4. Special use sites involve: (a) petroglyphs (or rock writings); (b) hunting blinds; and (c) cemeteries.

Historic themes within Nevada County are manifest archaeologically by site types related to mining, water management, logging, transportation, emigrant travel, ranching and agriculture, grazing, and the ice industry. Those sites containing evidence of habitation structures, but which cannot be directly related to any identifiable historic activity, are classed as settlement site types. These often occur in association with trash dumps and sometimes cemeteries. The presence of recognizable ethnic groups at some of these sites include Chinese and Basques. Historic site types which share

multiple activities have been categorized according to their dominant historic theme. For example, a mining site which contains water ditches, dirt roads, remains of a habitation structure, livestock corral, garden, trash dump, and small cemetery is classified solely as a mining site.

The varied environmental zones, the geological characteristics, and the geographical position of the county account for a cultural resource base which is exceedingly rich and exceptionally complex. This explains the wide array of prehistoric and historic site types. To best interpret the tally of the numbers and types and statuses of sites recorded within Nevada County to date, certain limitations and problems inherent in the data base need clarification. While National Register status and State Landmark and Points of Historical Interest designations are complete and up to date, data on the total number of sites recorded in the county and their breakdown according to site type represents only a rough estimate of the actual extent of cultural resources inventoried. The site tabulations presented here may be somewhat underestimated. Several reasons account for this.

1. No concise data base exists for Nevada County. The master archaeological site inventory for the county is housed with the office of the California Archaeological Inventory, North Central Information Center at California State University, Sacramento (NCIC-CSUS). The NCIC-CSUS, by agreement with the State of California Office of Historic Preservation, is the official repository of archaeological site information for Nevada County. However, only about half of the total number of archaeological site records have been processed and received official Smithsonian numbers. The many site records which are still assigned temporary site numbers have been recorded by a number of private and public archaeologists with varying philosophies regarding what constitutes a "site." Consequently, some submitted site records may not ultimately qualify for site status. On the other hand, some resources, which should be considered sites, are treated as isolated artifacts or features and are therefore never assigned a site number. There are a large number of informally reported isolated finds which fall into this latter category. Also, some sites, containing both a prehistoric and historic component, have not been uniformly assigned a single number, as is current practice. Consequently, some have been treated as two separate sites and have been counted twice in the tabulations presented here. Furthermore, for archaeological surveys completed decades ago, sites were not always formally reported.

2. The existing site inventory is not drawn from a random archaeological survey of the entire county and so it suffers from

sampling bias. Areas slated for archaeological survey are dictated according to proposed ground disturbance activities rather than by prescribed sampling methodology. For example, mountainous, timbered lands in Nevada County receive relatively more archaeological coverage, in the course of U.S. Forest Service surveys for timber sales. These lands are generally less sensitive to contain cultural resources, prehistoric sites in particular. Such sampling bias may reduce the overall ratio of the number of sites recorded per acre surveyed in the county and may underinflate the overall density of prehistoric sites.

3. Archaeological site records for Nevada County date back to the 1940s and many are inadequate by today's standards. Requirements for site recordation have only recently been developed. Sites inventoried prior to the last decade or so often provide very little detail about the resource. Frequently data are incomplete or misleading and sites are mislocated or misrepresented in size. These older records are in the process of being updated to the current higher standards, as they are revisited by archaeologists during the course of various future projects.

4. No exact information on archaeological coverage is currently available. Coverage strategies, which range from complete to cursory examinations have not been consistently presented in archaeological reports. Beyond this, public agencies doing work in the county do not regularly submit their archaeological coverage figures to the North Central Information Center, unless a report has been prepared by a private contractor.

For these and other reasons, the figures presented in Tables 1 through 3 should be considered only as estimates for planning purposes.

Nevada County contains 978 square miles or approximately 625,920 acres. About 169,045 acres, or 21% of the county is contained on Tahoe National Forest Lands and an additional 19,011 acres, or 3%, are managed by the Bureau of Land Management. Approximately 52,069 acres, or about 8% of Nevada County has been subjected to archaeological survey with relatively "complete" systematic coverage. (Complete coverage implies the implementation of a systematic survey at 30-meter transect intervals or less.) About 29,300 acres have been surveyed on private lands, 22,769 acres on U.S. Forest Service lands and 482 acres on U.S. Bureau of Land Management lands. Within this total county area approximately 1490 prehistoric and historic archaeological sites have been recorded to date. Considering the total number of sites recorded in the county and given the amount of acreage that has been surveyed, it can be estimated that the

potential number of total sites expected to exist within Nevada County is about 17,883. This leaves about 16,393 potential archaeological sites yet undiscovered. On the average, one site is expected per every 35 acres surveyed within Nevada County. This figure accounts for a relatively high site density, especially when considering that nearly half of the prior archaeological coverage falls on forested and mountainous public lands which are, overall, less likely to contain cultural resources.

Cultural resources are variably represented according to elevation (Table 2) and site type (Table 3). Prehistoric sites tend to cluster between the 1000 and 2000 foot elevation on the west side, where 33% of all sites have been recorded, and between the 5000 and 6000 foot elevation on the east side, where 22% of the sites have been inventoried. The fewest prehistoric sites (only 1%) have been recorded in the crest zone. Historic sites, follow a somewhat different elevation pattern than prehistoric sites, with most sites occurring between the 1000 and 2000 foot interval (28%) and the 2000 and 3000 foot elevation (18%). About 10% of all historic sites recorded occur on the east side at the 5000 to 6000 foot level. The fewest number of sites fall within the crest zone.

Out of the prehistoric sites recorded in Nevada County, 56% are single task-specific locales, out of which one-third are isolated lithic scatters and one-third are isolated bedrock mortar features. About 34% of the prehistoric sites are multi-task camps. Special use sites represent 3% of the total site types, village sites are 2% and about 5% are other or undesignated site types. About 32% of the historic sites involve mining, 18% relate to early settlement, 14% are associated with water management, another 14% comprise historic dumps, 9% relate to logging, 5% involve transportation, 2% are associated with cemeteries, 1% involve emigrant travel, about 1% involve ranching and agricultural activities, another 1% relate to grazing, less than 1% are related to the ice industry, and about 1% of the historic sites fall into the other or undesignated class. Out of the total of historic sites, 3% are associated with a particular ethnic group -- mostly Chinese and some Basque

The National Register of Historic Places is the official list of the nation's cultural resources, recorded to date, which are worthy of preservation. It was established to help preserve the diversity of our cultural heritage by highlighting the best remaining examples of all site types. Thirty-nine sites within Nevada County are either listed on, or have been determined eligible to the National Register of Historic Places (Table 4). An additional 22 historic properties have been nominated to the National Register but their eligibility remains to be determined

(Table 5). Nineteen sites are listed as California Historic Landmarks (Table 6), 27 properties have been established as Points of Historical Interest (Table 7), and another three sites are on the State Inventory of Historic Places (Table 8). Under Nevada County's Land Use and Development Code (zoning ordinance which contains the "Design" combining district), Truckee has established an historic preservation district.

CULTURAL RESOURCE SENSITIVITY MODEL

The intended purpose of a predictive cultural resource sensitivity data base for Nevada County is to serve as a general guide to advanced planning by providing a means of estimating the probable likelihood of sites occurring within a given area proposed for development. Sensitivity ratings indicate the degree of probability of finding sites in a specific project area and the relative number and types of sites expected. In this way, project sponsors can anticipate, at the outset, the extent to which cultural resources may become a constraining issue later on. The sensitivity model is not meant to replace a project specific records search by the NCIC-CSUS or a field survey by a professional archaeologist. A records search is always initiated but field surveys are not always necessary. Not every project area needs to be physically inspected, for example selected areas in low sensitivity zones, but the option for field study rests with the archaeologist. In the event that field work is required, the sensitivity model provides a beginning point from which archaeological survey strategies are then tailored, so as to minimize the number of acres requiring examination, while still maintaining a survey intensity sufficient to identify all the cultural resources in a particular project area. For project areas located in high sensitivity zones, cultural resource issues are addressed at the earliest stages of planning. As the likelihood of encountering cultural resources is high, project modifications and/or further mitigative research is usually anticipated; accordingly, sufficient time and money is appropriated. It is beneficial for all concerned to know what constraints may be necessary before project planning progresses too far.

Components of the Sensitivity Model

Cultural resource sensitivity predictions for Nevada County are derived from the collective results of many archaeological surveys in similar environments throughout the region. There are inherent limitations of cultural resource sensitivity models as all the data can't be factored-in. However, used correctly, they offer valuable guidelines in advanced community planning. The development of a cultural resource sensitivity model for Nevada County finds precedent in the intuitions of many experienced

field observers (archaeologists and non-archaeologists) who consistently note the obvious correlations between archaeological site locations and basic environmental variables (water, level ground, etc.). In order to refine and substantiate these intuitions, predictive statements on site locations have been more systematically analyzed by employing statistical techniques to determine the combination of environmental variables which most closely correlate with particular types of sites. In one such study, undertaken by the Tahoe National Forest, significant correlations were found for the major types of sites which occur on federal lands within the county ("Tahoe National Forest Cultural Resources Overview Part III: Cultural Resources Management, Report Number 18 by Richard Markley and Gregory Henton, Tahoe National Forest, Nevada City, 1985). Selected elements of this federal study were incorporated into the Nevada County sensitivity model.

Cultural resource sites do not appear to be randomly located. Rather, it is apparent that the prehistoric and historic inhabitants selected specific areas in which to occupy or work because of the presence of particular environmental conditions. The goal of the sensitivity model, then, is to be able to predict the kinds of environmental situations in which sites may be expected to occur, so that inventory efforts may be focused on (but not limited to) those "sensitive" areas. In order to be selective about the areas of the county to be inventoried, and yet still locate all of the sites that potentially exist, requires an understanding of the relationship between independent environmental variables (such as elevation, slope, aspect, proximity to water, etc.) and their dependent cultural variables (which are expressed as the various sites types, to include prehistoric villages, task-specific locales, historic mining and logging sites, etc.). The relationships between these independent and dependent variables are analyzed in order to predict cultural resource sensitivity according to environmental features. The environmental variables which dictate sensitivity are interrelated and no single variable allows for effective prediction of site locations. The environmental variables, which have been incorporated into the Nevada County sensitivity model. are outlined in Table 9. Corresponding dependent cultural variables, or site types, are described in the previous section.

Discussion of Sensitivity Levels

The checklists of environmental variables influencing cultural resource sensitivity assessment and their order of relative importance are presented in Tables 10 through 13. The results confirm previous intuitive notions about cultural resource sites and environmental relationships. Correlations

with specific environmental variables are better for prehistoric site types than for historic sites. For example, this is consistent with the idea that historic activities, particularly mining, involved intensive use of specific locations with little reliance or dependence on local resources for subsistence or other nonindustrial needs.

Prehistoric Cultural Resources:

For both the Nisenan and Washoe, territories encompassed wide-ranging elevations and varied environmental zones. Intense gathering was most effectively carried out in the grassland and oak woodland zone below 3000 feet, where winter villages were located. Single task-specific locales, from which [illegible]titude of plant and animal resources were procured, are found [illegible]ber numbers in proximity to winter villages. Cemeteries are restricted to the winter village area. Elevations above 3000 feet on the west slope and above 6000 feet on the east slope are beyond the range of permanent occupation but are moderately to highly sensitive to contain seasonal multi-task camps, single task-specific locales, petroglyphs and hunting blinds. The 5000 to 6000-foot elevation on the east side is less likely to contain petroglyphs or hunting blinds but is highly sensitive to contain evidence of single and multi-task sites. The possibility of permanent villages at this elevation would be co[illegible]d to warmer and/or drier prehistoric times. (For example, th[illegible]s some evidence to suggest more permanent occupation of Martis Valley several thousand years ago.)

Level ground is a basic determinant for any prehistoric habitation. Areas with greater than 30% slope may accommodate some specific short-term tasks and hunting blinds. Petroglyphs generally occur on large horizontal bedrock outcrops.

Southern and eastern exposure was generally advantageous for warmth and protection from storms.

Villages are dependent upon a permanent water source. Seasonal multi-task camps occur around springs and along intermittent streams during their periods of flow. On the west slope at higher elevations, camps along streams are most likely to occur at the confluence of a major creek flowing down from the ridge, thereby providing an access corridor up to the ridge. The critical variable in the location of seasonal camps on ridges above the river is a reliable water source. In the lower sections of the ridge system, water was provided by a major creek, however, above the 3000-foot zone, springs located along drainage heads served as prime water sources. For west slope occupation in general, spring sources are of critical importance. Single task-specific locales are not necessarily dependent upon

water, however, in the eastern part of the county and along the crest zone, studies by the Tahoe National Forest found water to be the strongest variable that accounts for most of the correlation between sites and environment.

Geological variables are centered upon rock sources used in fashioning stone tools; namely, metasediments which contain chert outcrops and volcanic flows which are comprised of basalt. Soapstone was carved into bowls and other items. Granite was favored for milling equipment. Horizontal smooth surfaces of granite or metasediments were preferred for petroglyphs.

The floral component is important in the prediction of prehistoric site locations in that plant resources made up a significant percentage of the subsistence base of the aboriginal inhabitants of the county. Elevation and microenvironmental diversity enhanced the rich and varied seasonal resources that were regularly available for human use. However, pristine plant and animal communities in Nevada County were different both in make-up and distribution than those found today. Changes are due to historic impacts associated with mining, logging and grazing, to the introduction of non-native plant species, and to the cessation of regular aboriginal burning, which was practiced to improve the vigor of plant resources. The pine forests, particularly in the purely coniferous areas, were not as productive for aboriginal exploitation as were areas containing hardwoods (especially oaks) and a wide variety of brush and grass species. Campsites in the eastern and crest zones also tend to correlate with nonforested areas. Ecotones, where plants were procured from the junctions of two or more vegetation communities, were the most productive and efficient zones. Areas corresponding to more diversified plant species are designated as highly sensitive.

Animal resources, including both large and small mammals, a variety of avifauna, large anadromous fish (salmon and steelhead trout on the west slope and cutthroat trout on the east slope), and smaller suckers and minnows, were significant food items. In Nevada County, deer herds are migratory, wintering in the major river canyons and moving upslope in elevation in the spring (a pattern not unlike that practiced by the Nisenan and Washoe). Zones which accommodate deer migration routes and winter ranges or support productive fisheries are highly sensitive.

Disturbed areas are less likely to contain sites that are intact. Areas containing known cultural resources for which there is some type of formal record are, of course, extremely sensitive. This includes the locations of major village sites and traditional areas frequently visited during the seasonal round, which are sometimes mentioned in early ethnographies or

historic documents. For example, the area delineated by the unratified Camp Union Treaty of 1852 probably correlates with a portion of Nisenan territory that was most intensively used on a permanent basis. This area, occupying a substantial portion of lower western Nevada County and bordered by the Yuba and Bear Rivers on the north and south and Penn Valley on the east, has the greatest likelihood of containing villages sites, associated cemeteries, and multi-task camps and single-task locales. Accordingly, this entire area is considered highly sensitive. With such intensive occupation, the land demarcated in this treaty was likely the scene of traditional social and ceremonial gatherings. It is also likely that these lands encompassed primary economic resource zones. These areas of potential religious, social and economic importance to contemporary Native Americans should also be considered highly sensitive. They may have significance beyond that which can be detected in the archaeological record. For instance, on the eastern Sierran slope, the Washoe have expressed a concerted interest in maintaining access to traditional lands upon which important medicinal plants continue to thrive.

Historic Sites:

Historic site locations are much less dependent upon environmental variables and correlations between the two are not as satisfactory. Prehistoric and historic sites tend to be distributed differently, at least with regards to elevation. Lower elevations have a consistently higher than average density of historic sites. Historic site densities radically pick up between the 5000 and 6000 foot range on the east slope, primarily due to the focus of historic logging activities in this zone.

Geological data is key to predicting historic mining sites. All areas which fall within zones designated on the "Mineral Land Classification Map for Western, Central and Eastern Nevada County" (compiled by Ralph Loyd and John Clinkenbeard, 1990, and on file with Nevada County Planning Department) are highly sensitive and are likely to contain sites related to mining activities. This series of three maps lists active and inactive mines and classifies areas according to: (1) deposits formed by hydrothermal processes, e.g. gold, silver, copper, zinc; (2) placer gold deposits; (3) industrial mineral deposits, e.g. barite, clay, and silica; (4) sand and gravel resources of alluvial and glacial origin; and (5) crushed stone resources consisting of metamorphic and volcanic rocks. With the exception of sand and gravel resources, mining is absent on the east slope. Mining in the crest zone is geographically limited to the area around Meadow Lake. The Tahoe National Forest study for cultural resource sensitivity showed that for west slope mining sites, other important independent variables include steep slopes and

the presence of water. The positive correlation with water is to be expected, since many of the placer deposits are located near streams and rivers. The correlation with steeper slopes is also not surprising, as many of the mining sites are either located in the bottom of steep drainages or on canyon sides where rivers have cut through the gold-bearing deposits.

Water management activities are initially tied to water, with sources generally at higher elevations. The correlations between ditches and flumes and environmental variables ends there, however, except for a preference for slopes with southern exposure.

Transportation routes are relatively free of environmental constraints. While more moderate terrain was favored, steep slopes were still traversed. In the case of emigrant travel, an intermittent proximity to water and vegetation to feed stock were essential. Transportation modes associated with railroad logging were confined to more moderate slopes. Major sensitive transportation corridors within Nevada County include:

1. railroads - the Transcontinental Railroad (also known as the Central Pacific Railroad and the Southern Pacific Railroad), the Nevada County Narrow Gauge Railroad (now State Highway 174), the Towle Brothers Logging Railroad, the Sierra Nevada Wood and Lumber Company Logging Railroad; and 2

2. roads - Interstate 80 and State Highway 40 (which incorporated portions of the Lincoln Highway, Victory Highway, Dutch Flat and Donner Lake Wagon Road, and Emigrant Trail), State Highway 49 and State Highway 20 (both of which included parts of the the Emigrant Trail and assorted historic routees through the motherlode), State Highway 174 (once the route of the Nevada County Narrow Gauge Railroad), State Highway 89 (formerly the old Sierra Valley Road), and State Highway 267 (once the old Brockway Road to Lake Tahoe).

While logging site patterns are historically different on the east and west side, overall, logging is tied to a forest vegetation type and the covariables involving productive soils and elevations below the Sierran crest. More moderate slopes, sunny exposures and the presence of water are important considerations in historic logging camp locations.

Grazing activities are tied to the presence of grazing land. In the most general terms, the western division of the county, along with scattered allotments at the lower elevations on the eastern side, were historically allotted to cattle ranchers. The higher elevations and the eastern slope were assessed primarily to sheep ranchers and Basque itinerant shepherds. Mountain

valleys in the eastern county were desired for dairy ranching. Grazing related sites most closely conform to the combination of environmental variables requisite for prehistoric sites (level spots near water, etc. , camps are commonly found in aspen groves.

Historic settlement is less dependent upon environmental variables than is prehistoric settlement. The need for level ground for habitation was overcome by artificial terracing. Water was brought in by ditch or flume and foodstuffs and supplies were transported to the living site. The main constraints on historic agricultural activities were elevations below the frost zone and relatively level terrain. Although Nevada County is not considered a major agricultural area, a major area of historic importance is the Cedar Ridge-Chicago Park vicinity, which supported specialty crops, fruits, vegetables, and nuts. Ranching activities required water and sufficient feed for livestock and somewhat level terrain.

Commercial fishing and the ice industry were tied to water sources and, in the latter case, level terrain was necessary.

Areas containing known cultural resources for which there is some type of formal record or historic documentation are extremely sensitive. As was the case for prehistoric sites, disturbed areas are also less likely to contain intact sites. However, some forms of historic disturbance take on significance in themselves. For example, each of the successive stages of mining development frequently upset or obliterated earlier patterns, leaving only traces of previous activities. The archaeological imprints from all eras of development constitute a potentially significant cultural resource.

Tables 10 and 11 serve as a kind of checklist of the positive correlations between environmental and cultural variables which influence cultural resource sensitivity assessment. One or more environmental variables can serve as criteria for a determination of a level of sensitivity. An area increases in sensitivity as it increases in the numbers of key environmental variables which have cultural correlates. In Tables 12 and 13 environmental variables are roughly arranged by order of magnitude of importance. For Tables 10 through 13, a site type which is not listed according to a certain environmental category, indicates either that the site is not likely to occur in this category or that the influence of the environmental variable is not strong. The environmental category would receive a rating of low sensitivity.

REFERENCES

As the purpose of this study is to assist Nevada County in planning and refining alternative development scenarios on non-public lands within the county, no on-the-ground field reconnaissance was done. Rather, a literature review and records search was performed, one which addressed all lands within the county but focused on private lands for potential development. Research included a review of prior archaeological work and of the pertinent published and unpublished literature. It also included an examination of historic maps dating from the 1850s. In order to obtain a sense of the total number and type of cultural sites inventoried within the county, over 1400 Nevada County site records, held at the North Central Information Center, California State University, Sacramento, were analyzed. To complete this survey of archaeological site records, contacts with a variety of public and private agencies were also initiated. These included the Tahoe National Forest, U.S. Bureau of Land Management, California Division of Forestry, State Historic Preservation Office, Pacific Gas and Electric Company, Nevada County Historical Society, Truckee-Donner Historical Society, Nevada Irrigation District, Nevada County Planning Department, and various other municipal, county and state entities. The counsel of several representatives of the local Maidu and Washoe communities was sought, in order to determine known areas of Native American cultural ecology and history and management concerns over traditional tribal lands in Nevada County. Other archaeologists who regularly do work in Nevada County were also consulted.

The existing data base pertaining to cultural resources within Nevada County is vast and a variety of materials were reviewed in the preparation of the cultural resources component of the Nevada County General Plan Update.

Published and unpublished documents are housed in a number of private and public institutions. Official archaeological site survey records, cultural resource management reports and National Register, National Landmarks and Points of Historical Interest updates are filed at the North Central Information Center at California State University, Sacramento. Artifacts collected as part of scientific excavations are curated at several universities in California and Nevada. Ph.D. dissertations and master's theses pertaining to prehistoric and historic themes applicable to Nevada County have been filed a several regional universities. Other key resource materials are held by research libraries at the University of California at Berkeley, the California State Library, the Nevada Historical Society, the University of Nevada, Reno, Getchell Library Special Collections Department, the Tahoe National Forest Headquarters, the Nevada County Recorder's and Assessor's offices, and files and publications of the Nevada County Historical Society and the

Truckee-Donner Historical Society. The Searls Historic Law Library holds an excellent collection of documents which especially pertain to Nevada County history. Some of the more notable resources include an 1856-1922 alphabetical index to Nevada County deeds historic business and mining directories, miscellaneous diaries, letters, photographs, and maps dating from the 1850s to the 1920s, Sanbourne fire insurance maps, Nevada County Assessors records from 1864 to 1879, Nevada County printouts on births, deaths and marriages since 1873, Nevada County Historical Society Bulletins (1948 to present), a set of 1939 aerial photographs of Nevada County, the Great (voting) Register from 1864 to 1905, tapes or transcriptions of oral history interviews, and indexes and accompanying documents regarding Nevada County mines, personalities, historic themes, and historical newspaper clippings.

Key general county and city histories consulted include:

Gudde, E. G.
1974 California Place Names. Berkeley: University of California Press.

1975 California Gold Camps. Berkeley: University of California Press.

Hoover, M. B., H. E. Rensch and E. G. Rensch
1966 Historic Spots in California. Stanford: Stanford University Press.

Lardner, W. B. and M. J. Brock
1924 History of Placer and Nevada Counties California with Biographical Sketches. Los Angeles: Historic Records Company.

Wells, H.
1880 Thompson and West's History of Nevada County. Howell North Books. Berkeley (reprint 1970).

Other important government resources are the Geographical Land Office survey plats and notes, government reports by mining engineers, surveyors, geologists, mineralogists, and forest service officials, W. Lindgren's 1896 U.S. Geological Survey special Nevada City Folio, along with these important sources:

Clark, W. B.
1970 Gold Districts of California. California Division of MInes and Geology, Bulletin 193. San Francisco.

MacBoyle, Errol
1919 Mines and Mineral Resources of Nevada County.

State of California, Division of Mines.
Sacramento: State Printing Office.

Significant resources reviewed which relate to prehistory and the Native American period in Nevada County include:

d'Azevedo, W. A.
1986 The Washoe In Handbook of North American Indians, Volume 11, Great Basin. Smithsonian: Washington, D.C.

Kroeber, A. L.
1925 Handbook of the Indians of California. Bureau of American Ethnology, Bulletin 78. Washington D. C.

Wilson, N. and A. Towne
1978 The Nisenan In Handbook of North American Indians, Volume 8. (R.F. Heizer, ed.) Smithsonian. Washington, D. C.

A series of three cultural resource overviews, published by the Tahoe National Forest, have provided a baseline for the contextual background section of this report. Although directed towards U.S. Forest Service lands within Nevada County, each volume would be a valuable addition to the reference library being developed by the Nevada County Planning Department:

Carlson, Ann
1986 Tahoe National Forest Cultural Resources Overview Part II: Ethnography, Report Number 19. Tahoe National Forest, Nevada City.

Jackson, Turrentine, Herbert Rand and Steven Wee
1982 History of the Tahoe National Forest: 1840-1940. Report Number 15. Tahoe National Forest, Nevada City

Markley, Richard and Gregory Henton
1985 Tahoe National Forest Cultural Resources Overview Part I: Prehistory, Report Number 20. Tahoe National Forest, Nevada City.

Contacts with a number of agency officials and private individuals were initiated in order to supplement the cultural resources inventory data:

1. Sharon Bovin, Planner, Nevada County Planning Department, Nevada City;

2. Sean Carlson, Archaeologist/Associate Planner, City of San Diego, San Diego;

3. Glen Caruso, Archaeologist, PG&E, San Francisco;

4. Dave Comstock, Historian, You Bet;

5. Donna Day, Assistant Forest Archaeologist, Tahoe National Forest, Nevada City;

6. Dean Decker, District Archaeologist, Bureau of Land Management, Folsom;

7. Carol Erwin, Director, Chapa De Indian Health Center, Auburn;

8. Dan Foster, State Archaeologist, California Division of Forestry, Sacramento;

9. Jill Harvey, Spokesperson, Maidu Native American Community, Nevada City;

10. Tod Herman, Planner II, Nevada County Planning Department, Nevada City;

11. Lee Jordan, Assistant Engineer, Nevada County Department of Sanitation, Nevada City;

12. Leigh Jordan, Assistant Coordinator, California Archaeological Inventory, Northwest Information Center, Sonoma State University, Rohnert Park;

13. Genny Lynch, President, Truckee-Donner Historical Society, Truckee;

14. Dick Markley, Forest Archaeologist, Tahoe National Forest, Nevada City;

15. Ron May, County Archaeologist, San Diego County, San Diego;

16. Terry Mayfield, Operations Nevada Irrigation District (district historian), Grass Valley;

17. Hank Meals, District Archaeologist, Downieville Ranger District, Tahoe National Forest, Camptonville;

18. Carmel Meisendorf, Forest Historian, Tahoe National Forest, Nevada City;

19. Larry Myers, Executive Secretary, Native American Heritage Commission, Sacramento;

20. Pat Norman, Senior Planner, Nevada County Planning Department, Nevada City;

21. Janis Offerman, Archaeologist, Caltrans, Marysville;

22. Lester Ross, Coordinator, California Archaeological Inventory, San Bernardino County Museum, San Bernardino;

23. Marianne Russo, Coordinator, California Archaeological Inventory, North Central Information Center, California State University, Sacramento;

24. Gerald Sam, Land Use Planner, Washoe Tribe of Nevada and California, Gardnerville;

25. Lynda Shoshone, Cultural Committee, Washoe Tribe of Nevada and California, Gardnerville;

26. Dave Shpak, Planner III, Nevada County Planning Department, Nevada City;

27. Carrie Smith, District Archaeologist, Truckee Ranger District, Truckee;

28. Nolan Smith, District Archaeologist, Nevada City Ranger District, Nevada City;

29. Bruce Steidl, Archaeologist and Native American Consultant, Oroville;

30. Leslie Steidl, Archaeologist, Oroville;

31. David Stone, County Archaeologist, Santa Barbara County, Santa Barbara;

32. Donald Storm, Archaeologist, Oregon House;

33. Dana Supernowicz, Forest Historian, Eldorado National Forest, Placerville;

34. Ed Tyson, President, Nevada County Historical Society, Nevada City;

35. Peter Van der Pas, past President, Nevada County Historical Society, Nevada City;

36. Ruth Van Dusen, Drafting and Maps, Nevada County Planning Department, Nevada City;

37. Susan Varner, Planner and Archaeologist, El Dorado County Planning Department, Placerville;

38. Stephanie Wagner, Planner I, Nevada County Planning Department, Nevada City;

39. A. Brian Wallace, Chairman, Washoe Tribe of Nevada and California, Gardnerville;

40. Laurie Warner, County Archaeologist, Sacramento County, Sacramento;

TABLES

Table 1. Nevada County Cultural Resource Inventory Summary

Number of sites recorded to date:	1490
Number of acres subjected to "complete" archaeological coverage to date:	52,069 or 8%
Projected number of sites per acre:	35
Projected number of total sites:	17,883
Projected number of undiscovered sites:	16,393

Table 2. Percentage of Archaeological Sites in Nevada County According to Elevation Range

ZONE	ELEVATION (FT)	PREHISTORIC SITES	HISTORIC SITES
West Slope	400 - 2000	33%	28%
	2000 - 3000	7%	18%
	3000 - 4000	9%	9%
	4000 - 5000	4%	9%
	5000 - 6000	4%	5%
	6000 - 7000	1%	1%
	7000 - 8000	1%	1%
(Crest)	8000+	1%	-
East Slope	8000 - 7000	2%	2%
	7000 - 6000	7%	5%
	6000 - 5000	22%	10%

Table 3. Percentage of Archaeological Sites in Nevada County According to Site Types

PREHISTORIC SITES		HISTORIC SITES	
Single task-specific	= 56%	Mining	= 32%
Multi-task camps	= 34%	Settlement	= 18%
Other	= 5%	Water Management	= 14%
Special Use	= 3%	Dumps	= 14%
Village	= 2%	Logging	= 9%
		Transportation	= 5%
		Cemeteries	= 2%
		Emigrant	= 1%
		Ranching/Agriculture	= 1%
		Grazing	= 1%
		Ice	= 1%
		Other	= 1%
		(Ethnic association	= 3%)

Table 4. List of Nevada County Properties on the National Register of Historic Places (each property is identified by its property name, location and certification date)

1. Boca Dam - Newlands Reclamation, Truckee River, South end of Boca Reservoir, Truckee vicinity, 3/25/1981

2. Bridgeport Covered Bridge - southwest of French Corral over South Yuba River, French Corral vicinity, 7/14/1971

3. Donner Camp - 2.6 miles west of Truckee on U.S. 40, Truckee vicinity, 10/15/1966

4. Empire Mine - southeast of Grass Valley at 338 E. Empire Street, Grass Valley vicinity, 12/9/1977

5. Foote's Crossing Road - Tahoe National Forest, North Columbia vicinity, 1/29/1981

6. Kruger House, 10292 Donner Pass Road, Truckee, 6/17/1982

7. Malakoff Diggins/North Bloomfield Historic District - Graniteville Star Route, North Bloomfield, 4/11/1973

8. Marsh, Martin Luther, House - 254 Boulder Street, Nevada City, 4/11/1973

9. Meadow Lake Petroglyphs - address restricted, French Lake vicinity, 5/6/1971

10. Mount St. Mary's Academy and Convent - Church and Chapel Streets, Grass Valley, 5/3/1974

11. National Exchange Hotel - 211 Broad Street, Nevada City, 10/25/1973

12. Nevada Brewery - 107 Sacramento Street, Nevada City, 9/12/1985

13. Nevada City Firehouse No. 2 - 420 Broad Street, Nevada City, 5/3/1974

14. Nevada City Downtown Historic District - roughly bounded by Spring, Bridge, Commercial, York, Washington, Coyote, and Main Streets, Nevada City, 9/23/1985

15. Nevada Theatre - Broad and Bridge Streets, Nevada City, 3/14/1973

16. Ott's Assay Office/South Yuba Canal Office - 130 Main Street, Nevada City, 7/14/1975

17. Sargent, Aaron A., House - 449 Broad Street, Nevada City, 6/20/1980

18. Nevada City Free Public Library - Nevada City, 12/10/1990

19. Bridge No. 17C-20, Historic Truss Bridge, Auburn Road, Wolf Creek, Grass Valley, 10/28/1977

20. Old Main Post Office - South Auburn Street/Falk Street, Grass Valley, 10/28/1977

21. Deer Creek Bridge/Bitney Springs - Bitney Springs Road, Grass Valley, 10/28/1977

22. South Fork, Yuba River Bridge No. 17C-6, Historic Truss Bridge - Bloomfield Road, Nevada City, 10/28/1977

23. South Fork, Yuba River Bridge No. 17C-24, Historic Truss Bridge - Purdon Road, Nevada City, 10/28/1977

24. Deer Creek Bridge No. 17C-1, Historic Truss Bridge - South Pine Street, Nevada City, 10/28/1977

25. Milton Ditch (FS-05-17-55-52), Tahoe National Forest, 4/24/1990

26. Donner Summit Bridge, Highway 40, Truckee, 4/28/1986

27. Prehistoric Archaeological Site FS-05- 17-55-72, Tahoe National Forest, 7/9/1981

28. Prehistoric Archaeological Site FS-05-17-57-232, Tahoe National Forest, 7/31/1981

29. Prehistoric Archaeological Site FS-05-17-57-280, Tahoe National Forest, 7/31/1981

30. Prehistoric Archaeological Site FS-05-17-57-281, Tahoe National Forest, 7/31/1981

31. Prehistoric Archaeological Site FS-05-17-57-282, Tahoe National Forest, 7/31/1981

32. Prehistoric Archaeological Site FS-05-17-57-73, Tahoe National Forest, 7/31/1981

33. Prehistoric Archaeological Site FS-05-17-57-74, Tahoe National Forest, 11/16/1981

34. Prehistoric Archaeological Site CA-NEV-203, Bureau of Land Management, 7/21/1988

35. Prehistoric Archaeological Site CA-NEV-251, Tahoe National Forest, 8/8/1980

36. Prehistoric Archaeological Site CA-NEV-407, Tahoe National Forest, 4/23/1981

37. Bridge No. 17C-30 Historic Truss Bridge - Maybert Road over Canyon Creek, Washington, 12/24/1985

38. Bridge No. 17C-6 Historic Truss Bridge - Bloomfield Road over South Fork Yuba River, Nevada City, 12/24/1985

39. Excelsior Ditch CA-NEV-107 - 1/23/1981

Table 5. List of Nevada County Historic Properties Nominated to the National Register with Eligibility Pending

1. Doctor's Office - 120 Bank Street, Grass Valley
2. Grass Valley Dentistry - 122 Bank Street, Grass Valley
3. Auto City - 110 East Main Street, Grass Valley
4. Firehouse - 143 East Main Street, Grass Valley
5. George Brothers - 149 East Main Street, Grass Valley
6. Apple Crate Gifts - 106 Mill Street, Grass Valley
7. Collier's Shoes - 113 Mill Street, Grass Valley
8. Grass Valley Hardware - 114 Mill Street, Grass Valley
9. J. C. Penney Building - 115 Mill Street, Grass Valley
10. Foothill Mercantile - 121 Mill Street, Grass Valley
11. Beitz' Jewelers - 124 Mill Street, Grass Valley
12. Grannie's Gourmet Grocery - 128 Mill Street, Grass Valley
13. The Wooden Spoon - 130 Mill Street, Grass Valley
14. Ninman Bicycle Company - 138 Mill Street, Grass Valley
15. Pacific $ Store - 153 Mill Street, Grass Valley
16. Gold Exchange/ET Photos - 158 Mill Street, Grass Valley
17. Century 21 - 121 Neal Street, Grass Valley
18. Masonic Lodge - 128 South Auburn Street, Grass Valley
19. Theo. H. Wilhelm - 109 West Main Street, Grass Valley
20. Placer Savings & Loan - 130 West Main Street, Grass Valley
21. Quick Building - 205 West Main Street, Grass Valley
22. Kidd and Knox Building - 228-236 Broad Street, Nevada City

Table 6. List of California Historical Landmarks in Nevada County

No. 134 - Donner Monument (Pioneer Monument)

No. 247 - the world's first long-distance telephone line

No. 292 - home of Lola Montez

No. 293 - home of Lotta Crabtree

No. 294 - the little town of Rough and Ready

No. 297 - site of one of the first discoveries of quartz gold in California

No. 298 - Empire Mine

No. 390 - Bridgeport (Nyes Crossing) Covered Bridge

No. 628 & 629 - Alpha Hydraulic Diggings, Omega Hydraulic Diggings and Townsite

No. 780-6 - first Transcontinental Railroad - Truckee

No. 799 - Overland Emigrant Trail

No. 832 - South Yuba Canal Office

No. 843 - North Star Mine Powerhouse

No. 852 - North Bloomfield Mining and Gravel Company

No. 855 - Mount Saint Mary's Convent and Academy

No. 863 - Nevada Theatre

No. 899 - National Hotel

No. 914 - Holbrooke Hotel

Table 7. List of Points of Historical Interest in Nevada County

Nev-001 - The Lone Gra e, six to eight miles above Nevada City on Highway 20, 12/16/1966

Nev-002 - The Red Castle, 119 Prospect Street, Nevada City, 5/19/1971

Nev-003 - Western Skisport Museum, Boreal Ridge, Truckee area, 5/19/1971

Nev-004 - Truckee Jail, Truckee, 5/19/1971

Nev-006 - Columbia Hill School, Foote Road, Nevada City, 5/19/1971

Nev-011 - Gilmore Air Field (site of Lyman Gilmore Intermediate School), 29 Gilmore Way, Grass Valley, 1/19/1972

Nne-012 - Emanuel Episcopal Church, Church Street, Grass Valley, 4/25/1972

Nev-013 - The Union, Grass Valley Newspaper, 151 Mill Street, Grass Valley, 4/25/1972

Nev-014 - Methodist Episcopal Church, North San Juan, 4/25/1972

Nev-015 - Searls Law Office, Church Street, Nevada City, 6/22/1972

Nev-016 - William Morris Stewart House, 416 Zion Street, Nevada City, 11/1/1972

Nev-017 - American Hill Diggins, Highway 49 north of Nevada City, 11/1/1972

Nev-018 - Site of Caldwell's Upper Store, Corner of Nevada & Grove Street, Nevada City, 7/13/1973

Nev-020 - Pioneer Cemetery, West Broad Street, Nevada City, 3/15/1974

Nev-021 - Miner's Foundry, 400 Spring Street, Nevada City, 3/15/1974

Nev-022 - Plaza Grocery, 101 Broad Street, Nevada City, 3/15/1974

Nev-023 - Englebright House, 524 East Broad Street, Nevada City, 3/15/1974

Nev-024 - Aaron Baruh House, 516 Main Street, Nevada City, 3/20/75

Nev-025 - Red Dog (Town Site), eight miles from Nevada City, 5/9/1975

Nev-026 - Site of You Bet, 12 miles from Nevada City, 5/9/1975

Nev-027 - Foote's Crossing, between Columbia Hill and Alleghany, 5/9/1975

Nev-028 - Caroline Hansen House, 319 Neal Street, Grass Valley, 5/9/1975

Nev-029 - Dr. W. C. Jones Home, 125 South Auburn Street, Grass Valley, 3/31/1980

Nev-030 - Root Cellar on Mexican War Land Grant, 16330 Gibboney Lane, Grass Valley, 12/31/1982

Nev-031 - Town of Washington, South Fork of Yuba River, 12/31/1982

Nev-032 - Site of Boca Ice Harvest, Truckee Basin, 3/2/1983

Nev-033 - Site of Idaho-Maryland Mine, Grass Valley, 11/16/1984

Table 8. List of Other Nevada County Properties Included in the State of California Inventory of Historic Resources

Caldwell's Upper Store Site - corner of Nevada and Grove Streets, Nevada City

Grass Valley Historic District - Grass Valley

North San Juan - on State Highway 49

Table 9. Environmental Variables Incorporated into the Nevada County Cultural Resource Sensitivity Model

I. Environmental Variables

A. Topography

1. Elevation (west slope = 100 feet to crest; east slope = 5000 feet to crest)

2. Percent slope (0-30%; 30-50%; 50+%)

3. Aspect (north; south; east; west)

4. Proximity to water (less than 1/4 mile; greater than 1/4 mile)

5. Water Type

a. Stream (intermittent; permanent)

b. Spring

6. Soils (agriculture/timber productive)/Geology (mineral deposits; quarry sources)

B. Flora (oak-grassland; hardwood/conifer; conifer; alpine; meadow; community ecotone)

C. Fauna

1. Deer Range

2. Fishery

II. Other Considerations

A. Ethnographic/historic data which documents past land use

B. Previously recorded sites

C. Recent/historic land modifications and disturbance

Table 10. Check List of Variables Influencing Cultural Resource Sensitivity Assessment: Prehistoric Sites in Nevada County

VARIABLE*	SITE TYPE**	PREDICTED SENSITIVITY LEVEL
Topography		
Elevation:		
400-3000 (W)	V/MT/ST/SU-C	high
3000-crest (W)	MT/ST/SU-P,HB	moderate
6000-crest (E)	MT/ST/SU-P-HB	moderate
5000-6000 (E)	(V)/MT/ST	high
Percent slope:		
0-30%	V/MT/ST/SU-C,P	high
30-50%	ST/SU-HB	moderate
50%+	ST/SU-HB	high-low
Aspect:		
Southern	V/MT/ST	high
Eastern	V/MT/ST	high
Western	V/MT/ST	moderate
Northern	MT/ST	high-low
Proximity to water:		
less than 1/4 mile	V/MT/ST	high
greater than 1/4 mile	ST	high-low
Water type:		
Stream - permanent	V/MT/ST	high
Stream - intermittent	MT/ST	moderate
Spring	V/MT/ST	high

Geology:		
Chert/basalt outcrops	ST	high
Large, flat granite/ metasedimentary surface	SU-P	high
Flora:		
Oak grassland	V/MT/ST/SU-C	high
Hardwood/conifer	MT/ST	high
Conifer	ST	mod-low
Alpine	ST	mod-low
Meadow	V/MT/ST	high
Ecotone	V/MT/ST	high
Fauna:		
Deer range	V/MT/ST/SU-HB, P	high-mod
Fishery	V/MT/ST	high-mod
Other		
Ethnographic/historic documented land use:	V/MT/ST/SU-C, HB, P	high
Previously recorded sites:	V/MT/ST/SU-C, HB, P	high
Recent land modifications:		
Undisturbed	V/MT/ST/SU-C, HB, P	high
Disturbed	V/MT/ST/SU-C, HB, P	mod-low

* (W) = west slope; (E) = east slope

** Prehistoric site types: V=village; MT=multi-task site; ST=single task-specific site; SU=special use; C=cemetery; HB=hunting blind; P=petroglyph

Table 11. Check List of Variables Influencing Cultural Resource Sensitivity Assessment: Historic Sites in Nevada County

VARIABLE*	SITE TYPE**	PREDICTED SENSITIVITY LEVEL
Topography		
Elevation:		
1000-2000 (W)	M/S-D/W/T/C/E/R-A	high
2000-3000 (W)	M/S-D/W/T/C/E	high
3000-crest (W)	M/S-D/W/L/T/C/E/G	high
Crest	T/E/I	high
5000-crest	S-D/L/T/E/G/I	high
Percent slope:		
0-30%	M/S-D/W/L/T/C/E/R-A/G/I	high
30-50%	M/W/L/T/E	high
50%+	M	high
50%+	W/L/T/E	moderate
Aspect:		
Southern	S-D/W	high
Northern	I	high
Proximity to water:		
less than 1/4 mile	M/S-D/W/L/R-A/G/I	high
greater than 1/4 mile	M/S-D/R-A/G	mod-low
Water type:		
Stream - permanent	M/S-D/W/R-A/G/I	high
Stream - intermittent	M/S-D-/W/R-A/G	mod
Spring	S-D/R-A/G	high

Geology/soils:		
Mineral bearing	M/S-D/W	high
Productive soils	L/S-D/R-A/G	high
Flora		
Oak-grassland	S-D/W/R-A/G	high
Hardwood/conifer	L	moderate
Conifer	L	high
Alpine	G/I	high
Meadow	R-A/G	high
Fauna		
Fishery	(commercial fishing)	high
Other		
Historic documentation of land use	M/S-D/W/L/T/C/E/R-A/G/I	high
Previously recorded sites	M/S-D/W/L/T/C/E/R-A/G/I	high
Recent land modifications		
Undisturbed	M/S-D/W/L/T/C/E/R-A/G/I	high
Disturbed	M/S-D/W/L/T/C/E/R-A/G/I	mod-low

* (W) = west slope; (E) = east slope

** Historic site types: M=mining; S/D=settlement site with dump; W=water management; L=logging; T=transportation; C=cemetery, E=emigrant travel; R&A=ranching and agriculture; G=grazing; I=ice.

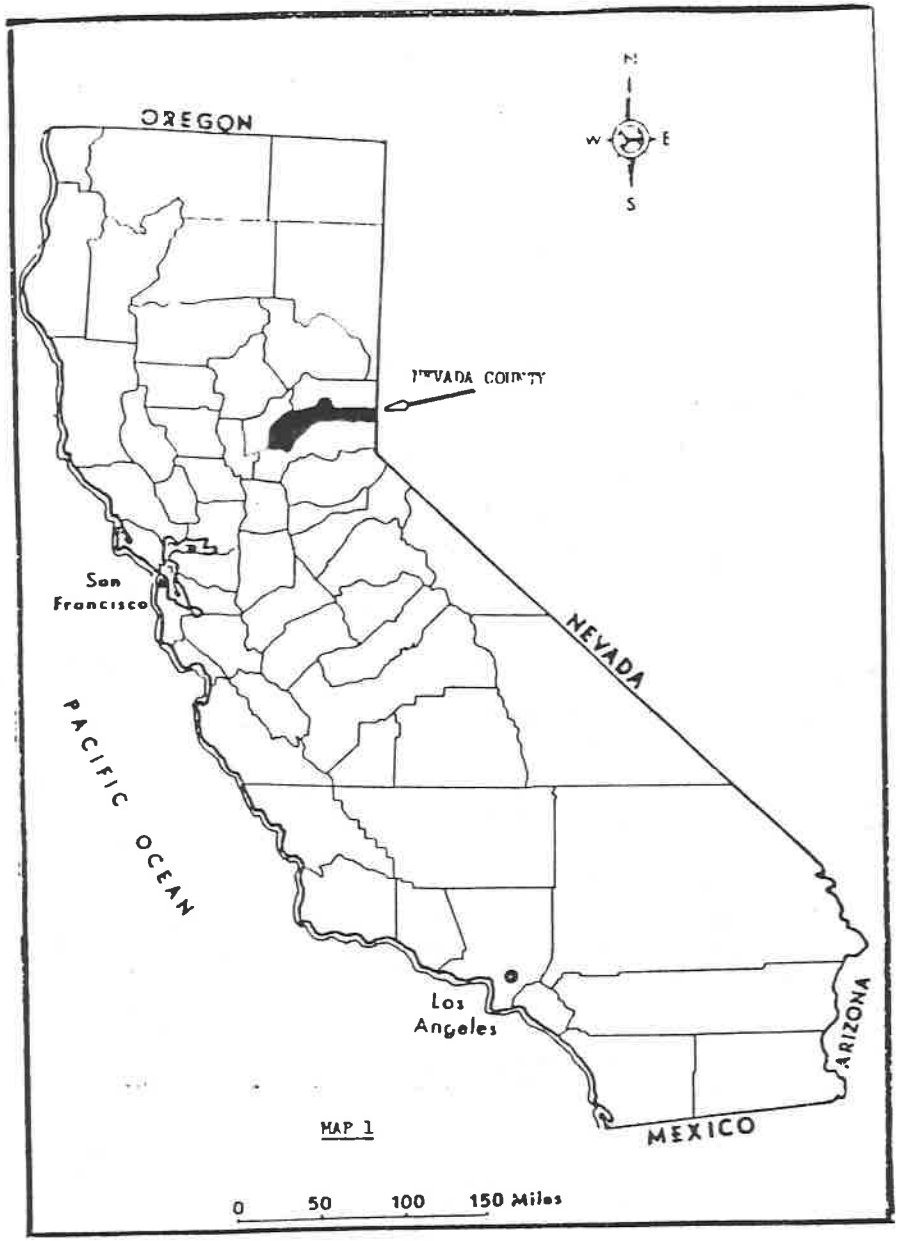
Table 12. List of Variables Correlating with Relative Cultural Resource Sensitivity by Order of Importance: Prehistoric Sites in Nevada County

ZONE	SITE TYPE					
				Special Use		
	Village	Multi-Task	Single-Task	Cemetery/Petro/HntBlnd		
400-3000 (W)	ele slope water flora fauna	slope water flora fauna	flora fauna geol	ele slope	-	-
3000-crest (W)	-	slope water flora fauna	flora fauna geol	-	geol	fauna
6000-crest (E)	-	slope water flora fauna	flora fauna geol	-	geol	fauna
5000-6000 (E)	(ele slope water flora fauna)	slope water flora fauna	flora fauna geol	-	geol	fauna

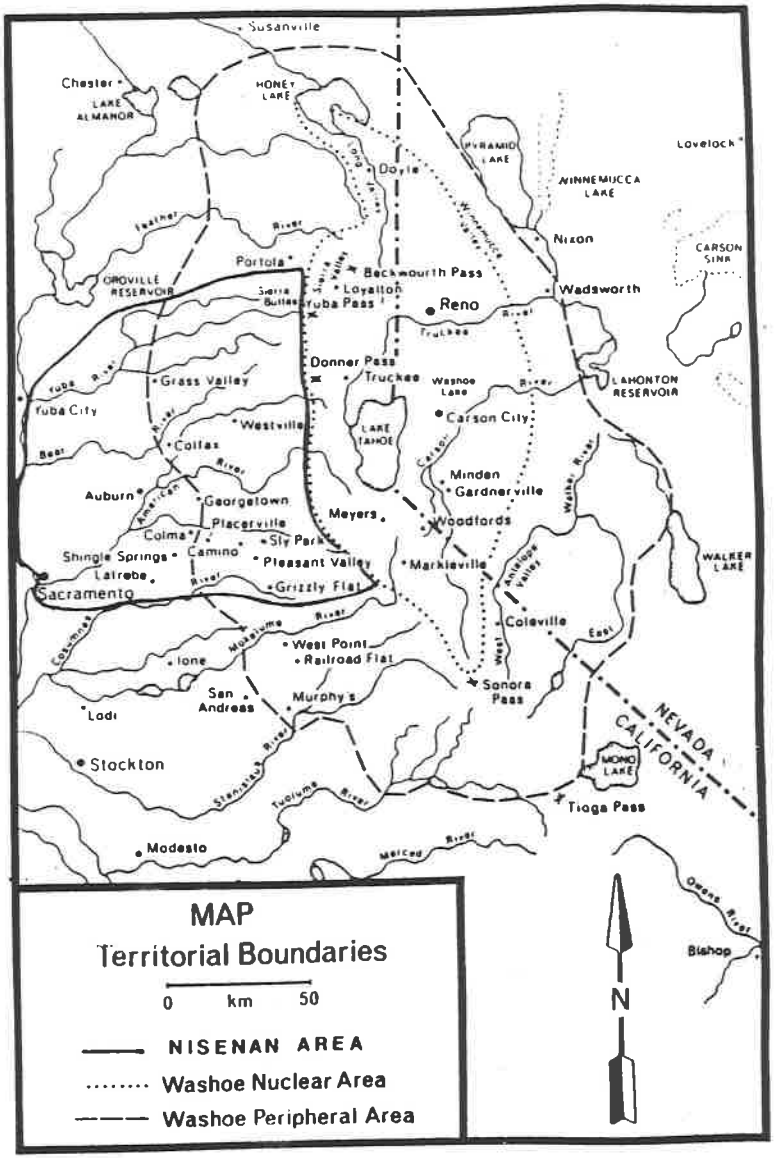
MAP

Table 13. List of Variables Correlating with Relative Cultural Resource Sensitivity by Order of Importance: Historic Sites in Nevada County

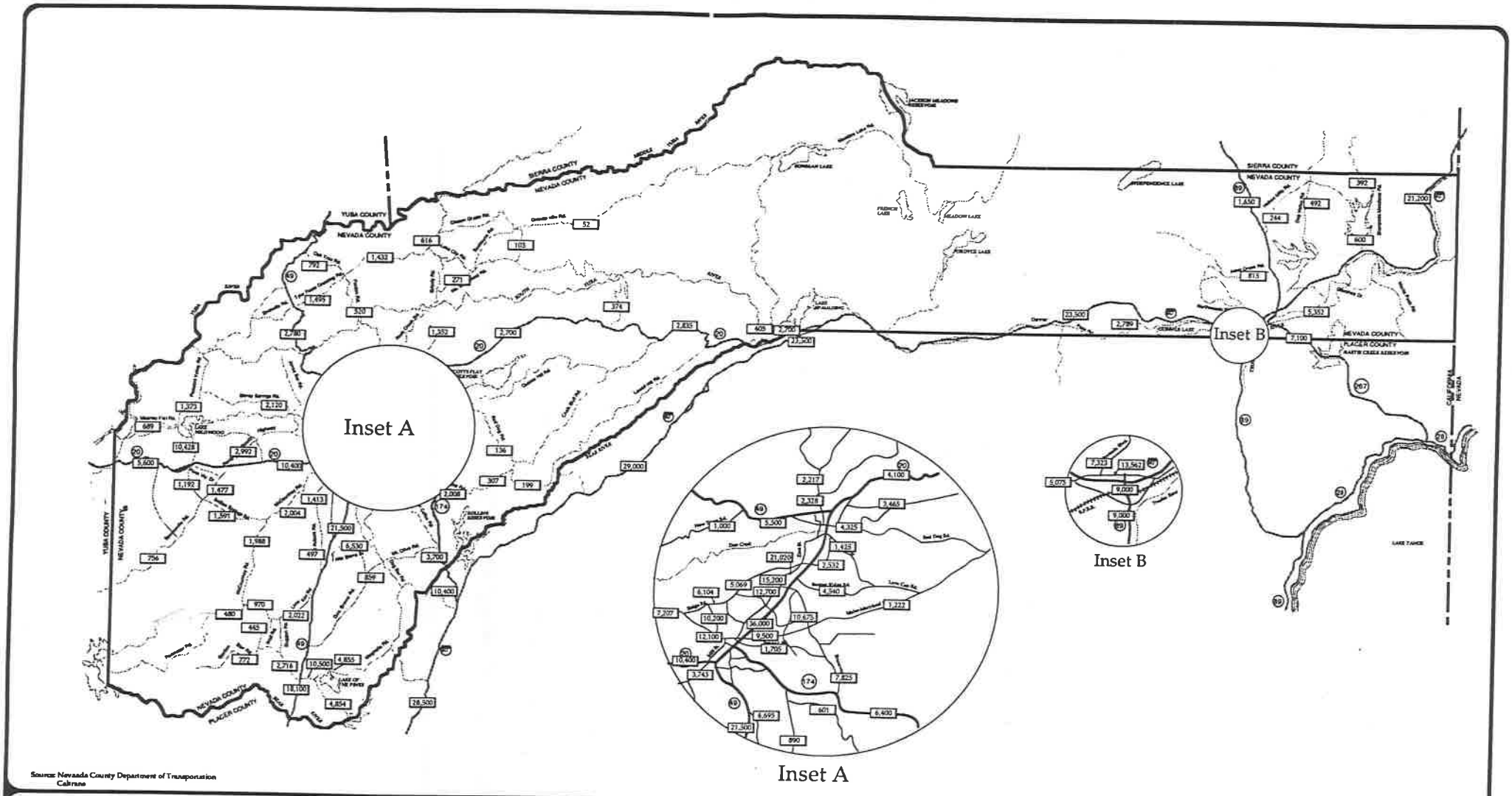
ZONE	SITE TYPE									
	M	S-D	W	L	T	C	E	R-A	G	I
West Slope	geol water slope	slope water	water aspect ele	ele flora soils	slope	slope	slope water flora	ele slope water soils flora	slope water flora soils	-
Crest	-	slope water	water aspect	-	slope	-	slope water flora	-	flora soils water	water slope
East Slope	-	slope water	-	flora soils	slope	slope	slope water flora	water soils flora slope	flora soils water	water slope


N
W
E
S
OREGON
NEVADA COUNTY
San Francisco
NEVADA
PACIFIC OCEAN
Los Angeles
ARIZONA
MEXICO
0 50 100 150 Miles

MAP 1


Susanville
Chester
LAKE ALMANOR
HONEY LAKE
Doyle
PYRAMID LAKE
Lovelock
WINNEMUCCA LAKE
Nixon
CARSON SINK
Portola
OROVILLE RESERVOIR
Beckwourth Pass
Loyalton
Yuba Pass
Reno
Wadsworth
Donner Pass
Truckee
Grass Valley
Yuba City
Westville
Colfax
Carson City
LAHONTON RESERVOIR
LAKE TAHOE
Auburn
Georgetown
Placerville
Colma
Camino
Sly Park
Meyers
Minden
Gardnerville
Woodfords
Shingle Springs
Latrobe
Pleasant Valley
Markleeville
Grizzly Flat
Sacramento
Coleville
WALKER LAKE
West Point
Railroad Flat
Ione
Sonora Pass
San Andreas
Murphy's
Lodi
NEVADA
CALIFORNIA
Stockton
MONO LAKE
Tioga Pass
Modesto
Bishop
MAP
Territorial Boundaries
0 km 50
NISENAN AREA
Washoe Nuclear Area
Washoe Peripheral Area
N

APPENDIX E. Graphic Displays of Traffic Data

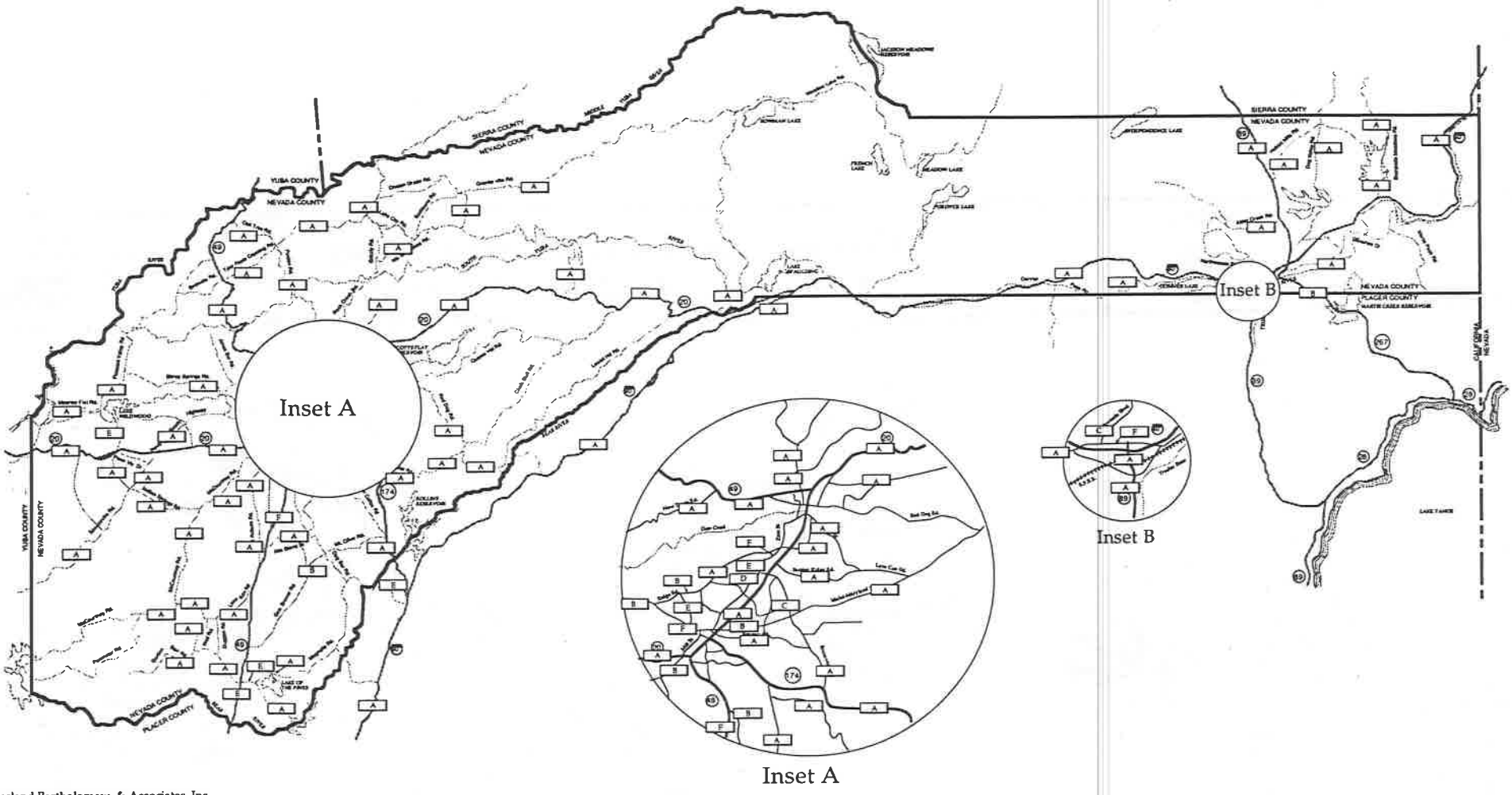


Planning • Engineering • Landscape Architecture
Harland Bartholomew & Associates, Inc
Sacramento, California

NEVADA COUNTY GENERAL PLAN
Existing Average Daily Traffic Volumes

1" = 25,000'

FIGURE 1



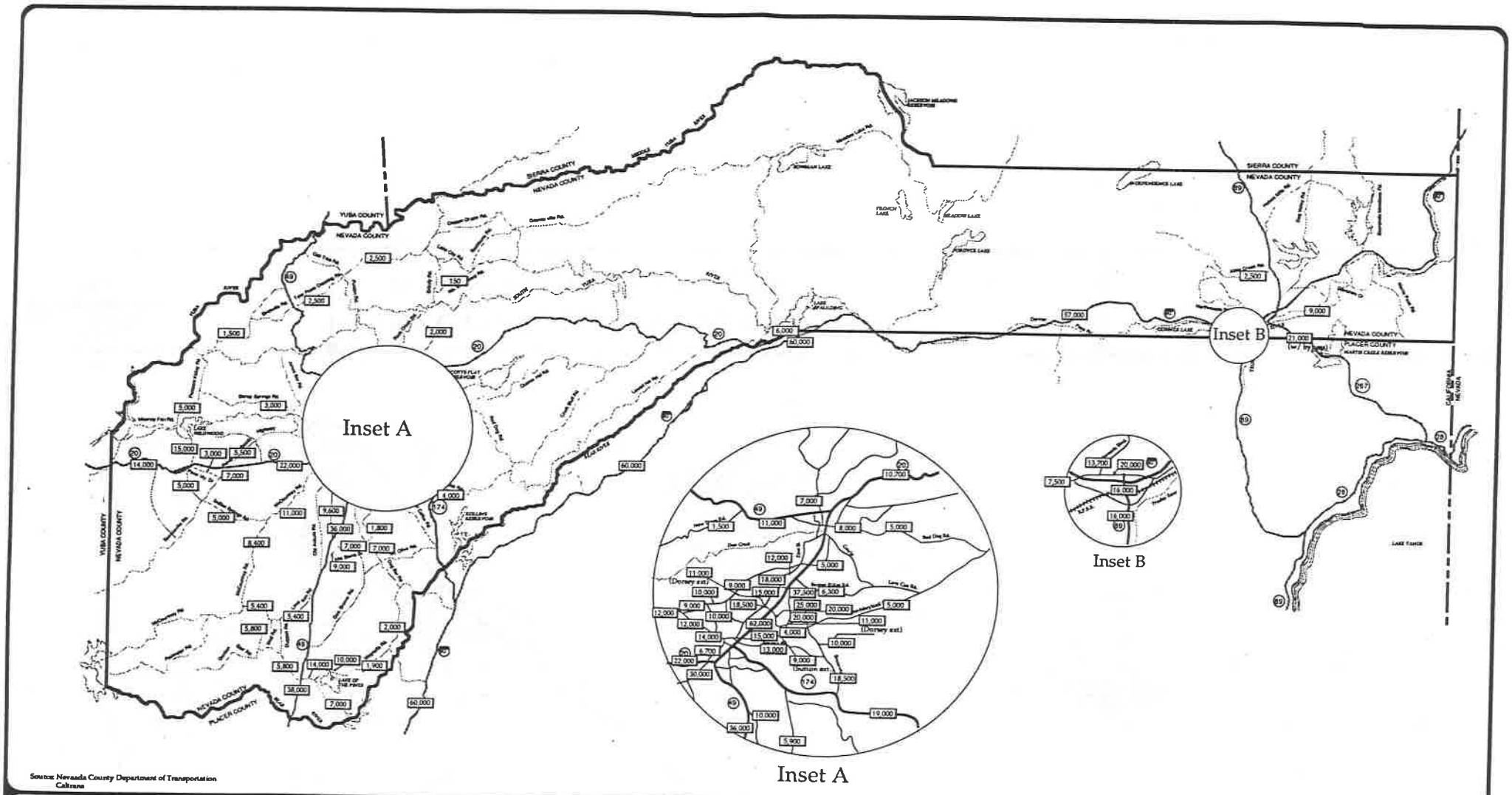
Source: Harland Bartholomew & Associates, Inc.

Planning • Engineering • Landscape Architecture
Harland Bartholomew & Associates, Inc
Sacramento, California

NEVADA COUNTY GENERAL PLAN
Existing Daily Level of Service

1" = 25,000'

FIGURE 2



Source: Nevada County Department of Transportation
Caltrans

Planning • Engineering • Landscape Architecture
Harland Bartholomew & Associates, Inc
Sacramento, California

NEVADA COUNTY GENERAL PLAN

General Plan Buildout Average Daily Traffic Volumes

1" = 25,000'

FIGURE 3

APPENDIX F. Air Quality Modeling Results

APPENDIX

AIR QUALITY METHODOLOGY AND ASSUMPTIONS

URBEMIS-3 PROGRAM

Estimates of regional emissions generated by project traffic were made using a program called URBEMIS-3. URBEMIS-3 is a program that estimates emissions that would result from land use development projects. Land uses can include residential used such as single family housing, apartments and condominiums, and non-residential uses such as shopping centers, office buildings, and industrial parks. URBEMIS-3 contains default values for much of the information needed to calculate emissions. However, project-specific, user-supplied information can also be used when it is available.

The following is a description of the parameters that were used in the regional air quality analysis of the project and associated development:

-Year of Analysis: 2010

-Ambient Temperature: 75 degrees F.

-Trip Lengths:

Home-Work	10.9 miles
Home-Shop	8.0 miles
Home-Other	9.3 miles
Work	10.6 miles
Non-Work	9.0 miles

The above trip lengths are default values for rural areas in California.

An adjustment was made to the URBEMIS-3 output. The URBEMIS-3 program generates estimates of Total Organic Gases rather than Reactive Organic Gases. Reactive Organic Gases were assumed to

equal 91% of the Total Organic Gases. The URBEMIS-3 estimates of new vehicle emissions for the project are shown in Table 1. The URBEMIS-3 printouts are included in Attachment 1.

RESIDENTIAL AREA SOURCE EMISSIONS

Residential uses contain a number of dispersed and intermittent sources of pollutants such as space and water heaters, household paints and solvents, consumer products, lawn mowers and other equipment. These emissions were estimated using per-unit emission factors developed by the Bay Area Air Quality Management District.[1] The resulting emission estimates, in pounds per day, are shown in Table 1.

BURDEN7F ANALYSIS

BURDEN7F is a computer program developed by the California Air Resources Board to allow prediction of emissions from on-road vehicles in all counties and air basins in the state.[2] The program estimates emissions by multiplying emission factor and activity factors.

The activity factors used in BURDEN7F are estimates of vehicle activity such as vehicle populations, vehicle miles travelled (VMT), and vehicle trips. These are developed specifically for BURDEN7F, based largely on a variety of statistical information from the California Department of Motor Vehicles and the California Department of Transportation and the California Department of Finance.

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[1] Bay Area Air Quality Management District, Air Quality and Urban Development- Guidelines, 1985.

[2] California Air Resources Board, Methodology for Estimating Emissions from On-Road Motor Vehicles Volume III: BURDEN7F, June 1993.

Table 1
EMISSIONS FROM POPULATION GROWTH, 1994-2010, IN POUNDS PER DAY

	ROG	CO	NOx	SOx
Vehicle Travel	1838	19,584	4194	503
Residential Area Sources	842	485	168	10
Total	2680	20,069	4362	513

ROG = Reactive Organic Gases
CO = Carbon Monoxide
NOx = Nitrogen Oxides
SOx = Sulfur Oxides

BURDEN7F creates separate emission calculations for several classes of vehicles:
- Light Duty Automobiles
- Light Duty Trucks
- Medium Duty Trucks
- Heavy Duty Trucks (Gasoline and Diesel)
- Urban Buses
- Motorcycles

The BURDEN7F output for Nevada County in 1994 and 2010 are included in Attachment 2. Table 2 shows a summary of the BURDEN7F output along with data on projected daily VMT and daily vehicle trips.

Table 2 shows that even though substantial increases in VMT and vehicle trips are predicted by 2010, emissions of reactive organic gases, carbon monoxide, oxides of nitrogen and sulfur oxides are expected to decrease between 1994 and 2010. While the number of vehicles and vehicle miles travelled would be increasing, the emission rate for vehicles would be dropping at a faster rate because of state emission control programs.

Table 2
ESTIMATED COUNTY-WIDE EMISSIONS FROM ON-ROAD VEHICLES IN NEVADA COUNTY, 1994 AND 2010

Pollutant/Parameter	1994	2010
Daily Emissions in Pounds/Day for:		
Reactive Organic Gases	8,640	3,720
Carbon Monoxide	71,320	34,520
Nitrogen Oxides	12,840	12,220
Sulfur Oxides	1,420	740
Daily Vehicle Miles Travelled	2,677,000	4,194,000
Daily Vehicle Trips	362,393	556,524

Attachment 1: URBEMIS-3 Printout

Attachment 2: BURDEN7F Output for 1994 and 2010

Project Name : NEVADA GP

Date : 05-31-1994

Analysis Year = 2010 Temperature = 75
EMFAC7 VERSION : EMFAC7D ...11/88

Unit Type	Trip Rate	Size	Tot. Trips	Days Op.
RESIDENCES	10.0/Unit	14745	147450	

	Residential			Commercial	
	Home-Work	Home-Shop	Home-Other	Work	Non-Work
Trip Length	10.9	8.0	9.3	10.6	9.0
% Started Cold	88.6	40.4	58.8	77.8	27.6
Trip Speed	35	35	35	35	35
Percent Trip	27.3	21.2	51.4		

Vehicle Fleetmix

Vehicle Type	Percent Type	Leaded	Unleaded	Diesel
Light Duty Autos	72.8	0.0	97.5	2.5
Light Duty Trucks	14.3	0.0	97.4	2.6
Medium Duty Trucks	4.3	0.0	100.0	0.0
Heavy Duty Trucks	3.9	11.4	88.6	N/A
Heavy Duty Trucks	3.9	N/A	N/A	100.0
Motorcycles	0.9	100.0	N/A	N/A

Project Emissions Report in Lb/Day

Unit Type	TOG	CO	NOx
RESIDENCES	2019.9	19584.4	4194.3

Project Emissions Report in Lb/Day

Unit Type	FUEL USE	PM10	SOx
RESIDENCES	53249.6	429.1	503.4

OXIDES OF NITROGEN EMISSIONS								
RUNNING EXHAUST	0.22	1.38	0.03	1.63	0.05	0.67	0.01	0.73
COLD START EXHAUST	0.01	0.39	0.00	0.40	0.00	0.16	0.00	0.16
HOT START EXHAUST	0.03	0.14	0.00	0.17	0.01	0.06	0.00	0.07
TOTAL NOX EMISSION	0.26	1.91	0.03	2.20	0.06	0.89	0.01	0.96
PARTICULATE MATTER EMISSIONS								
EXHAUST	0.00	0.02	0.01	0.03	0.00	0.01	0.00	0.01
TIRE-WEAR	0.01	0.35	0.00	0.36	0.00	0.13	0.00	0.13
TOTAL PM EMISSION	0.01	0.37	0.01	0.39	0.00	0.13	0.01	0.14
LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OXIDES - SULFUR	0.01	0.09	0.01	0.11	0.00	0.04	0.01	0.05
FUEL CONSUMED IN 1000 GALLONS								
GASOLINE	4.51	64.88		69.39	1.15	30.86		32.01
DIESEL			0.55	0.55			0.32	0.32

1 PREDICTED CALIFORNIA VEHICLE EMISSIONS RUNDATE: 05/27/94
OZONE PLANNING INVENTORY

YEAR: 1994 NEVADA COUNTY EMISSION UNIT: TONS PER DAY

E7F/B7F/V1.1 /DAILY EMISSIONS/STATE MOUNTAIN COUNTY AIR BASIN I AND M PROGRAM IN EFFECT

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	LIGHT DUTY PASSENGERS				LIGHT DUTY TRUCKS			
	NON-CAT	CAT	DIESEL	TOTAL	NON-CAT	CAT	DIESEL	TOTAL
NO. OF IN USE VEHS	3952	56096	754	60802	1075	20466	440	21981
DAILY VMT (X 1000)	56	1584	17	1657	13	578	9	600
NO. OF HOT TRIPS	4651	86709	917	92277	1060	31620	465	33145
NO. OF COLD TRIPS	3081	131289	1388	135758	703	47878	705	49286
NO. OF DAILY TRIPS	7732	217998	2305	228035	1763	79498	1170	82431
TOTAL ORGANIC GAS EMISSIONS								
RUNNING EXHAUST	0.34	0.72	0.00	1.07	0.07	0.39	0.00	0.46
COLD START EXHAUST	0.07	0.65	0.00	0.72	0.02	0.26	0.00	0.27
HOT START EXHAUST	0.09	0.05	0.00	0.14	0.02	0.02	0.00	0.04
TOTAL EXHAUST	0.50	1.43	0.01	1.93	0.10	0.67	0.00	0.77
DIURNAL EVAPORATION	0.05	0.16	0.00	0.21	0.01	0.06	0.00	0.07
HOT SOAK EVAPORATION	0.06	0.15	0.00	0.21	0.01	0.06	0.00	0.07
RUNNING LOSSES	0.02	0.21	0.00	0.23	0.00	0.06	0.00	0.06
RESTING LOSSES	0.01	0.17	0.00	0.17	0.01	0.07	0.00	0.07
TOTAL TOG EMISSION	0.63	2.11	0.01	2.75	0.13	0.91	0.00	1.05
REACTIVE ORGANIC GAS EMISSIONS								
RUNNING EXHAUST	0.31	0.62	0.00	0.93	0.06	0.33	0.00	0.40
COLD START EXHAUST	0.06	0.56	0.00	0.63	0.01	0.22	0.00	0.24
HOT START EXHAUST	0.08	0.05	0.00	0.13	0.01	0.02	0.00	0.04
TOTAL EXHAUST	0.46	1.22	0.01	1.69	0.09	0.57	0.00	0.67
DIURNAL EVAPORATION	0.05	0.16	0.00	0.21	0.01	0.06	0.00	0.07
HOT SOAK EVAPORATION	0.06	0.15	0.00	0.21	0.01	0.06	0.00	0.07
RUNNING LOSSES	0.02	0.21	0.00	0.23	0.00	0.06	0.00	0.06
RESTING LOSSES	0.01	0.17	0.00	0.17	0.01	0.07	0.00	0.07
TOTAL ROG EMISSION	0.59	1.91	0.01	2.50	0.13	0.82	0.00	0.94
CARBON MONOXIDE EMISSIONS								
RUNNING EXHAUST	2.90	9.61	0.02	12.53	0.48	4.72	0.01	5.21
COLD START EXHAUST	0.47	6.09	0.01	6.57	0.10	2.61	0.00	2.71
HOT START EXHAUST	0.15	0.94	0.00	1.10	0.03	0.41	0.00	0.45
TOTAL CO EMISSION	3.52	16.65	0.03	20.20	0.61	7.75	0.01	8.37

OXIDES OF NITROGEN EMISSIONS											
RUNNING EXHAUST	0.03	0.36	0.39	0.25	0.35	0.60	2.13	2.74	0.00	0.02	5.50
COLD START EXHAUST	0.00	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
HOT START EXHAUST	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
TOTAL NOX EMISSION	0.03	0.47	0.50	0.25	0.35	0.60	2.13	2.74	0.00	0.02	6.42
PARTICULATE MATTER EMISSIONS											
EXHAUST	0.00	0.00	0.00	0.00	0.00	0.01	0.24	0.24	0.00	0.00	0.29
TIRE-WEAR	0.00	0.04	0.04	0.01	0.02	0.03	0.10	0.13	0.00	0.00	0.67
TOTAL PM EMISSION	0.00	0.04	0.04	0.01	0.02	0.04	0.34	0.37	0.00	0.00	0.95
LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OXIDES - SULFUR	0.00	0.02	0.02	0.01	0.01	0.03	0.50	0.52	0.00	0.00	0.71
FUEL CONSUMED IN 1000 GALLONS											
GASOLINE	0.77	15.92	16.69	5.34	9.20	14.55		14.55		0.34	132.98
DIESEL							23.51	23.51	0.00		24.38

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PREDICTED CALIFORNIA VEHICLE EMISSIONS
OZONE PLANNING INVENTORY

RUNDATE: 05/27/94

YEAR: 1994 NEVADA COUNTY

EMISSION UNIT: TONS PER DAY

E7F/87F/V1.1 /DAILY EMISSIONS/STATE MOUNTAIN COUNTY AIR BASIN

I AND M PROGRAM IN EFFECT

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	MEDIUM DUTY TRUCKS			HEAVY DUTY TRUCKS - GASOLINE TRUCKS			DIESEL	TOTAL HD	URBAN	MOTOR-	ALL
	NON-CAT	CAT	TOTAL	NON-CAT	CAT	TOTAL	TRUCKS	TRUCKS	BUSES	CYCLES	VEHICLES
NO. OF IN USE VEHS	731	6067	6798	1463	1295	2758	932	3690	0	3237	96508
DAILY VMT (X 1000)	8	178	186	30	52	82	135	217	0	17	2677
NO. OF HOT TRIPS	631	9723	10354	5462	6203	11665	0	11665	0	1052	148493
NO. OF COLD TRIPS	418	14722	15140	3568	9452	13020	0	13020	0	696	213900
NO. OF DAILY TRIPS	1049	24445	25494	9030	15655	24685	0	24685	0	1748	362393
TOTAL ORGANIC GAS EMISSIONS											
RUNNING EXHAUST	0.04	0.17	0.21	0.07	0.04	0.11	0.29	0.41	0.00	0.03	2.17
COLD START EXHAUST	0.01	0.09	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.01	1.11
HOT START EXHAUST	0.01	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.21
TOTAL EXHAUST	0.06	0.27	0.33	0.07	0.04	0.11	0.29	0.41	0.00	0.05	3.49
DIURNAL EVAPORATION	0.01	0.02	0.02	0.02	0.00	0.02	0.00	0.02	0.00	0.00	0.33
HOT SOAK EVAPORATION	0.01	0.01	0.02	0.02	0.01	0.03	0.00	0.03	0.00	0.00	0.33
RUNNING LOSSES	0.00	0.02	0.02	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.31
RESTING LOSSES	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
TOTAL TOG EMISSION	0.08	0.34	0.42	0.12	0.06	0.17	0.29	0.47	0.00	0.05	4.73
REACTIVE ORGANIC GAS EMISSIONS											
RUNNING EXHAUST	0.04	0.15	0.18	0.07	0.03	0.10	0.29	0.39	0.00	0.03	1.93
COLD START EXHAUST	0.01	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.96
HOT START EXHAUST	0.01	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19
TOTAL EXHAUST	0.05	0.23	0.29	0.07	0.03	0.10	0.29	0.39	0.00	0.04	3.07
DIURNAL EVAPORATION	0.01	0.02	0.02	0.02	0.00	0.02	0.00	0.02	0.00	0.00	0.33
HOT SOAK EVAPORATION	0.01	0.01	0.02	0.02	0.01	0.03	0.00	0.03	0.00	0.00	0.33
RUNNING LOSSES	0.00	0.02	0.02	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.31
RESTING LOSSES	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
TOTAL ROG EMISSION	0.07	0.30	0.37	0.11	0.05	0.16	0.29	0.45	0.00	0.05	4.32
CARBON MONOXIDE EMISSIONS											
RUNNING EXHAUST	0.36	1.22	1.58	2.22	0.67	2.89	1.22	4.10	0.00	0.17	23.59
COLD START EXHAUST	0.06	1.01	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.04	10.39
HOT START EXHAUST	0.02	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.01	1.69
TOTAL CO EMISSION	0.44	2.33	2.76	2.22	0.67	2.89	1.22	4.10	0.00	0.22	35.66

OXIDES OF NITROGEN EMISSIONS											
RUNNING EXHAUST	0.00	0.47	0.47	0.09	0.37	0.46	3.13	3.60	0.00	0.03	5.43
COLD START EXHAUST	0.00	0.12	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
HOT START EXHAUST	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17
TOTAL NOX EMISSION	0.00	0.62	0.62	0.09	0.37	0.46	3.13	3.60	0.00	0.03	6.11
PARTICULATE MATTER EMISSIONS											
EXHAUST	0.00	0.00	0.00	0.00	0.01	0.01	0.25	0.26	0.00	0.00	0.31
TIRE-WEAR	0.00	0.06	0.06	0.00	0.03	0.04	0.17	0.21	0.00	0.00	1.05
TOTAL PM EMISSION	0.00	0.07	0.07	0.01	0.04	0.05	0.42	0.47	0.00	0.00	1.36
LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OXIDES - SULFUR	0.00	0.03	0.03	0.01	0.02	0.03	0.12	0.15	0.00	0.00	0.37
FUEL CONSUMED IN 1000 GALLONS											
GASOLINE	0.00	24.40	24.40	2.18	16.72	18.90		18.90		0.52	175.46
DIESEL							34.63	34.63	0.00		34.67

1 PREDICTED CALIFORNIA VEHICLE EMISSIONS — RUNDATE: 05/28/94
OZONE PLANNING INVENTORY

YEAR: 2010 — NEVADA COUNTY — EMISSION UNIT: TONS PER DAY

E7F/B7F/V1.1 /DAILY EMISSIONS/STATE — MOUNTAIN COUNTY AIR BASIN — I AND M PROGRAM IN EFFECT

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	MEDIUM DUTY TRUCKS			HEAVY DUTY TRUCKS - GASOLINE TRUCKS			DIESEL	TOTAL HD	URBAN	MOTOR-	ALL
	NON-CAT	CAT	TOTAL	NON-CAT	CAT	TOTAL	TRUCKS	TRUCKS	BUSES	CYCLES	VEHICLES
NO. OF IN USE VEHS	0	10440	10440	531	3704	4235	1431	5666	0	4971	148206
DAILY VMT (X 1000)	0	291	291	12	95	107	229	336	0	26	4194
NO. OF HOT TRIPS	0	15574	15574	2646	13286	15932	0	15932	0	1615	222780
NO. OF COLD TRIPS	0	23579	23579	1728	20243	21971	0	21971	0	1069	333744
NO. OF DAILY TRIPS	0	39153	39153	4374	33529	37903	0	37903	0	2684	556524
TOTAL ORGANIC GAS EMISSIONS											
RUNNING EXHAUST	0.00	0.08	0.08	0.01	0.03	0.04	0.42	0.47	0.00	0.05	0.91
COLD START EXHAUST	0.00	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.47
HOT START EXHAUST	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05
TOTAL EXHAUST	0.00	0.16	0.16	0.01	0.03	0.04	0.42	0.47	0.00	0.07	1.43
DIURNAL EVAPORATION	0.00	0.01	0.01	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.15
HOT SOAK EVAPORATION	0.00	0.01	0.01	0.00	0.02	0.02	0.00	0.02	0.00	0.00	0.12
RUNNING LOSSES	0.00	0.02	0.02	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.25
RESTING LOSSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
TOTAL TOG EMISSION	0.00	0.20	0.20	0.01	0.07	0.08	0.42	0.50	0.00	0.07	2.01
REACTIVE ORGANIC GAS EMISSIONS											
RUNNING EXHAUST	0.00	0.07	0.07	0.01	0.03	0.04	0.41	0.45	0.00	0.04	0.83
COLD START EXHAUST	0.00	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.40
HOT START EXHAUST	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04
TOTAL EXHAUST	0.00	0.14	0.14	0.01	0.03	0.04	0.41	0.45	0.00	0.06	1.28
DIURNAL EVAPORATION	0.00	0.01	0.01	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.15
HOT SOAK EVAPORATION	0.00	0.01	0.01	0.00	0.02	0.02	0.00	0.02	0.00	0.00	0.12
RUNNING LOSSES	0.00	0.02	0.02	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.25
RESTING LOSSES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
TOTAL ROG EMISSION	0.00	0.18	0.18	0.01	0.06	0.07	0.41	0.49	0.00	0.07	1.86
CARBON MONOXIDE EMISSIONS											
RUNNING EXHAUST	0.00	0.90	0.90	0.16	0.67	0.83	1.92	2.75	0.00	0.22	11.08
COLD START EXHAUST	0.00	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.06	5.38
HOT START EXHAUST	0.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.81
TOTAL CO EMISSION	0.00	1.91	1.91	0.16	0.67	0.83	1.92	2.75	0.00	0.30	17.26

OXIDES OF NITROGEN EMISSIONS								
RUNNING EXHAUST	0.00	0.82	0.00	0.82	0.00	0.51	0.00	0.51
COLD START EXHAUST	0.00	0.25	0.00	0.25	0.00	0.14	0.00	0.14
HOT START EXHAUST	0.00	0.09	0.00	0.09	0.00	0.05	0.00	0.05
TOTAL NOX EMISSION	0.00	1.15	0.00	1.16	0.00	0.69	0.00	0.69
PARTICULATE MATTER EMISSIONS								
EXHAUST	0.00	0.03	0.00	0.03	0.00	0.01	0.00	0.01
TIRE-WEAR	0.00	0.57	0.00	0.57	0.00	0.21	0.00	0.21
TOTAL PM EMISSION	0.00	0.60	0.00	0.60	0.00	0.22	0.00	0.22
LEAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OXIDES - SULFUR	0.00	0.12	0.00	0.12	0.00	0.06	0.00	0.06
FUEL CONSUMED IN 1000 GALLONS								
GASOLINE	0.03	89.00		89.03	0.00	42.60		42.60
DIESEL			0.03	0.03			0.01	0.01

1 PREDICTED CALIFORNIA VEHICLE EMISSIONS RUNDATE: 05/28/94
OZONE PLANNING INVENTORY

YEAR: 2010 NEVADA COUNTY EMISSION UNIT: TONS PER DAY

E7F/B7F/V1.1 /DAILY EMISSIONS/STATE MOUNTAIN COUNTY AIR BASIN I AND M PROGRAM IN EFFECT

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	LIGHT DUTY PASSENGERS				LIGHT DUTY TRUCKS			
	NON-CAT	CAT	DIESEL	TOTAL	NON-CAT	CAT	DIESEL	TOTAL
NO. OF IN USE VEHS	47	93234	93	93374	0	33735	20	33755
DAILY VMT (X 1000)	1	2599	1	2601	0	940	0	940
NO. OF HOT TRIPS	42	139206	57	139305	0	50339	15	50354
NO. OF COLD TRIPS	28	210772	84	210884	0	76218	23	76241
NO. OF DAILY TRIPS	70	349978	141	350189	0	126557	38	126595
TOTAL ORGANIC GAS EMISSIONS								
RUNNING EXHAUST	0.00	0.22	0.00	0.22	0.00	0.09	0.00	0.09
COLD START EXHAUST	0.00	0.27	0.00	0.27	0.00	0.11	0.00	0.11
HOT START EXHAUST	0.00	0.03	0.00	0.03	0.00	0.01	0.00	0.01
TOTAL EXHAUST	0.00	0.52	0.00	0.52	0.00	0.21	0.00	0.21
DIURNAL EVAPORATION	0.00	0.10	0.00	0.10	0.00	0.03	0.00	0.03
HOT SOAK EVAPORATION	0.00	0.07	0.00	0.07	0.00	0.02	0.00	0.02
RUNNING LOSSES	0.00	0.17	0.00	0.17	0.00	0.06	0.00	0.06
RESTING LOSSES	0.00	0.04	0.00	0.04	0.00	0.01	0.00	0.01
TOTAL TOG EMISSION	0.00	0.89	0.00	0.90	0.00	0.34	0.00	0.34
REACTIVE ORGANIC GAS EMISSIONS								
RUNNING EXHAUST	0.00	0.19	0.00	0.19	0.00	0.08	0.00	0.08
COLD START EXHAUST	0.00	0.23	0.00	0.24	0.00	0.09	0.00	0.10
HOT START EXHAUST	0.00	0.02	0.00	0.02	0.00	0.01	0.00	0.01
TOTAL EXHAUST	0.00	0.44	0.00	0.44	0.00	0.18	0.00	0.18
DIURNAL EVAPORATION	0.00	0.10	0.00	0.10	0.00	0.03	0.00	0.03
HOT SOAK EVAPORATION	0.00	0.07	0.00	0.07	0.00	0.02	0.00	0.02
RUNNING LOSSES	0.00	0.17	0.00	0.17	0.00	0.06	0.00	0.06
RESTING LOSSES	0.00	0.04	0.00	0.04	0.00	0.01	0.00	0.01
TOTAL ROG EMISSION	0.00	0.82	0.00	0.82	0.00	0.30	0.00	0.30
CARBON MONOXIDE EMISSIONS								
RUNNING EXHAUST	0.01	4.81	0.00	4.82	0.00	2.39	0.00	2.39
COLD START EXHAUST	0.00	2.54	0.00	2.55	0.00	1.87	0.00	1.87
HOT START EXHAUST	0.00	0.43	0.00	0.43	0.00	0.26	0.00	0.26
TOTAL CO EMISSION	0.02	7.77	0.00	7.79	0.00	4.51	0.00	4.52

APPENDIX G. Traffic Modeling of Plan Alternatives

Daily Level Of Service Analysis
1980 General Plan Buildout

Roadway	Segment	Class	Volume	Exist Lanes	LOS	Lanes Reqd.	LOS
I-80	Placer County Line to SR 174	1	63,600	4	B	4	B
I-80	SR 174 to SR 20	1	47,600	4	A	4	A
I-80	SR 20 to SR 89	1	59,700	4	B	4	B
SR 20/49	Grass Valley to Nevada City	1	58,500	4	B	4	B
SR 20	Yuba County Line to Pleasant Valley Road	2-R	15,000	2	D	4*	A
SR 20	Pleasant Valley Road to SR 49	2-S	31,500	2	F	4*	D
SR 20	SR 49 to Willow Valley Road	2-R	13,100	2	C	2	C
SR 20	Bowman Lake Road to I-80	3-R	8,000	2	A	2	A
SR 49	Placer County Line to Alta Sierra Drive	2-R	37,600	2	F	6*	D
SR 49	Alta Sierra Drive to McKnight Way	2-S	40,500	2	F	6*	E
SR 49	W Broad Street to Newtown Road	3-S	15,300	2	E	4*	A
SR 267 (with Bypass)	Placer County to I-80	3-S	17,500	2	F	4*	A
SR 89	Placer County to I-80	3-S	22,300	2	F	4*	C
SR 174	You Bet Road to Brunswick Road	3-S	7,400	2	A	2	A
Idaho-Maryland Road	Brunswick Road to SR 20/49	4-MU	18,800	4	B	4	B
Idaho-Maryland Road	Brunswick Road to Banner Ridge	5-S	NA	2			
Brunswick Road	Idaho-Maryland Road to SR 20/49	3-MU	15,000	4	A	4	A
Main Street	Mill Street to Ridge Road	3-MU	15,800	2	F	4*	A
Donner Pass Road	Northwoods Blvd to Commercial Row	4-MU	43,200	2	F	6*	E
Pleasant Valley Road	Lake Wildwood to SR 20	4-S	18,400	2	F	4*	D
Combie Road	SR 49 to Magnolia Road	4-MU	16,800	2	F	4*	C
Ridge Road	Hughes Road to Nevada City Hwy	4-MU	7,600	2	B	2	B
Alta Sierra Drive	Dog Bar Road to SR 49	4-S	16,100	2	F	4*	C
Bennett Road	Brunswick Road to SR 20/49	4-MU	9,000	2	D	2	D
Gold Flat Road	Gracie Road to SR 20/49	4-MU	8,800	2	C	2	C
Donner Pass Road	Donner Lake Drive to I-80	4-S	13,800	2	F	4*	B
Northwoods Boulevard	Trout Creek to Donner Pass Road	5-S	22,700	2	F	6*	C
Glenshire Drive	Truckee River to SR 267	4-S	16,800	2	F	4*	C
Bitney Springs Road	Pleasant Valley Road to Rough & Ready Hwy	5-R	4,400	2	A	2	A
Indian Springs Road	SR 20 to McCourtney Road	4-R	NA	2			
McCourtney Road	Indian Springs Road to Old Auburn Road	4-R	NA	2			
Lime Kiln Road	McCourtney Road to SR 49	5-S	NA	2			
Wolf Road	Lime Kiln Road to SR 49	4-R	NA	2			
Rough & Ready Hwy	Bitney Springs to Ridge Road	4-S	NA	2			
Newtown Road	Bitney Springs to SR 49	5-R	NA	2			
Tyler Foote Crossing Rd	SR 49 to Lake City Road	4-R	NA	2			
North Bloomfield Road	SR 49 to Lake Vera-Purdon Road	5-S	NA	2			
Red Dog Road	Boulder Street to You Bet Road	5-S	NA	2			
You Bet Road	SR 174 to Red Dog Road	5-R	NA	2			
Magnolia Road	E. Hacienda to Dog Bar Road	4-S	NA	2			
LaBarr Meadows Road	McKnight to Dog Bar Road	4-S	NA	2			
Banner Ridge-Lava Cap	SR 49 to Red Dog Road	5-S	NA	2			
Boulder Street	SR 49 to Willow Valley Road	4-MU	NA	2			
Nevada City Hwy	Ridge Road to Gates Place	3-MU	NA	2			
Hughes Road	Ridge Road to Main Street	4-MU	NA	2			
Mill Street	West Main Street to McCourtney Road	5-MU	NA	2			
Sutton Way (extended)	Brunswick Road to E. Bennett Street	4-MU	NA	2/0			
Alder Creek Road	Fjord Road to SR 89	5-R	NA	2			

*Indicates segment requiring road improvement to maintain policy level of service.

NA - Segment not included in analysis

5/5/94

Daily Level Of Service Analysis
Preliminary Draft General Plan (August 1993) Buildout

Roadway	Segment	Class	Volume	Exist Lanes	LOS	Lanes Reqd.	LOS
I-80	Placer County Line to SR 174	1	63,300	4	B	4	B
I-80	SR 174 to SR 20	1	58,400	4	A	4	B
I-80	SR 20 to SR 89	1	57,000	4	A	4	B
SR 20/49	Grass Valley to Nevada City	1	62,000	4	B	4	B
SR 20	Yuba County Line to Pleasant Valley Road	2-R	13,200	2	C	2	C
SR 20	Pleasant Valley Road to SR 49	2-S	22,600	2	F	4*	B
SR 20	SR 49 to Willow Valley Road	2-R	11,000	2	A	2	A
SR 20	Bowman Lake Road to I-80	3-R	6,700	2	B	2	B
SR 49	Placer County Line to Alta Sierra Drive	2-R	38,200	2	F	6*	B
SR 49	Alta Sierra Drive to McKnight Way	2-S	31,300	2	F	4*	D
SR 49	W Broad Street to Newtown Road	3-S	12,200	2	C	2	C
SR 267 (with Bypass)	Placer County to I-80	3-S	23,500	2	F	4*	C
SR 89	Placer County to I-80	3-S	16,200	2	F	4*	A
SR 174	You Bet Road to Brunswick Road	3-S	13,950	2	D	4*	A
Idaho-Maryland Road	Brunswick Road to SR 20/49	4-MU	34,200	4	F	6*	C
Idaho-Maryland Road	Brunswick Road to Banner Ridge	5-S	2,600	2	A	2	A
Brunswick Road	Idaho-Maryland Road to SR 20/49	3-MU	37,500	4	F	4	D
W. Main Street	E. Main to Alta Street	3-MU	10,700	2	B	2	B
Donner Pass Road	Northwoods Blvd to Commercial Row	4-MU	18,000	2	F	4*	D
Pleasant Valley Road	Lake Wildwood to SR 20	4-S	19,200	2	F	4*	D
Combie Road	SR 49 to Magnolia Road	4-MU	13,500	2	F	4*	B
Ridge Road	Hughes Road to Nevada City Hwy	4-MU	7,400	2	B	2	B
Alta Sierra Drive	Dog Bar Road to SR 49	4-S	8,900	2	D	2	D
Bennett Road	Brunswick Road to SR 20/49	4-MU	5,000	2	A	2	A
Gold Flat Road	Gracie Road to SR 20/49	4-MU	6,500	2	A	2	A
Donner Pass Road	Donner Lake Drive to I-80	4-S	7,500	2	B	2	B
Northwoods Boulevard	Trout Creek to Donner Pass Road	5-S	13,700	2	F	4*	C
Glenshire Drive	Truckee River to SR 267	4-S	14,300	2	F	4*	B
Bitney Springs Road	Pleasant Valley Road to Rough & Ready Hwy	5-R	3,000	2	A	2	A
Indian Springs Road	SR 20 to McCourtney Road	4-R	8,400	2	C	2	C
McCourtney Road	Indian Springs Road to Old Auburn Road	4-R	8,400	2	C	2	C
Lime Kiln Road	McCourtney Road to SR 49	5-S	2,600	2	A	2	A
Wolf Road	Lime Kiln Road to SR 49	4-R	5,800	2	A	2	A
Rough & Ready Hwy	Bitney Springs to Ridge Road	4-S	9,800	2	D	2	D
Newtown Road	Bitney Springs to SR 49	5-R	1,400	2	A	2	A
Tyler Foote Crossing Rd	SR 49 to Lake City Road	4-R	1,600	2	A	2	A
North Bloomfield Road	SR 49 to Lake Vera-Purdon Road	5-S	3,200	2	A	2	A
Red Dog Road	Boulder Street to You Bet Road	5-S	3,000	2	A	2	A
You Bet Road	SR 174 to Red Dog Road	5-R	1,400	2	A	2	A
Magnolia Road	E. Hacienda to Dog Bar Road	4-S	1,000	2	A	2	A
LaBarr Meadows Road	McKnight to Dog Bar Road	4-S	13,400	2	F	4*	B
Banner Ridge-Lava Cap	SR 49 to Red Dog Road	5-S	3,200	2	A	2	A
Boulder Street	SR 49 to Willow Valley Road	4-MU	6,900	2	B	2	B
Nevada City Hwy	Ridge Road to Gates Place	3-MU	11,749	2	C	2	C
Hughes Road	Ridge Road to Main Street	4-MU	24,800	2	F	6*	A
Mill Street	West Main Street to McCourtney Road	5-MU	6,900	2	C	2	C
Sutton Way (extended)	Brunswick Road to E. Bennett Street	4-MU	9,000	2/0	D	2	D
Alder Creek Road	Fjord Road to SR 89	5-R	4,200	2	A	2	A

*Indicates segment requiring road improvement to maintain policy level of service.

5/5/94

Daily Level Of Service Analysis
General Plan Buildout

Roadway	Segment	Roadway Functional Classification	Existing Lanes	Existing LOS	General Plan Min. LOS	Existing (1990) Volume	Final Draft Adjusted Buildout Volume	Final Draft Future Required Lanes	Final Draft Future LOS W/Imp.	Planning Commission Adjusted Buildout Volume	Planning Commission Required Lanes	Planning Commission Future LOS W/imp.
I-80	Placer County Line to SR 174	Interstate	4	A	D	28,500	60,000	6*	C	60,000	6*	C
I-80	SR 174 to SR 20	Interstate	4	A	D	29,000	60,000	6*	C	60,000	6*	C
I-80	SR 20 to SR 89	Interstate	4	A	D	23,500	57,000	6*	C	57,000	6*	C
SR 20	Yuba Co.Line to Pleasant Valley Rd	Prin. Arterial	2	A	C	5,600	14,000	2	C	14,000	2	C
SR 20	Pleasant Valley Rd to SR 49	Prin. Arterial	2	A	C	10,400	22,000	4*	B	**84,000**	**4 (FWY)**	**D**
SR 20	SR 49 to Willow Valley Road	Prin. Arterial	2	A	C	4,100	10,700	2	B	10,700	2	B
SR 49	Placer Co.Line to Alta Sierra Drive	Prin. Arterial	2	E	C	18,100	36,000	4*	B	**43,100**	**6**	**C**
SR 49	Alta Sierra Drive to McKnight Way	Prin. Arterial	2	F	C	21,500	38,000	4*	C	**45,000**	**6**	**C/D**
SR 49	W.Broad Street to Newtown Road	Minor Arterial	2	A	C	5,500	11,000	2	C	11,000	2	C
SR 49 NB Ramp	SR 20 to SR 49/20	Fwy Ramp	1	A	D	6,000	17,600	**	F	**31,000**	**	**F**
SR 49 SB Ramp	SR 49/20 to SR 20	Fwy Ramp	1	A	D	6,000	22,250	**	F	**36,000**	**	**F**
SR 89	Placer County to I-80	Minor Arterial	2	D	D	9,000	16,000	2	C	16,000	2	C
SR 174	You Bet Road to Brunswick Road	Minor Arterial	2	B	C	6,400	19,000	2	C	19,000	2	C
SR 267 (W/Bypass)	Placer County to I-80	Minor Arterial	0	n/a	D	n/a	21,000	4*	B	21,000	4*	B
SR 20	Bowman Lake Road to I-80	Minor Arterial	2	A	C	2,700	6,000	2	D	6,000	2	D
SR 20/49	Grass Valley to Nevada City	Other Freeeway	4	B	D	36,000	62,000	4	B	**72,000**	**4**	**C**
Alder Creek Road	Fjord Road to SR 89	Minor Collector	2	A	C	815	2,500	2	C	2,500	2	C
Allison Ranch Road	McCourtney Road to SR 49	Minor Collector	2	A	D	616	9,600	2*	D	**9,600**	**2***	**D**
Alta Sierra Drive	SR 49 to Bell Road	Major Collector	2	B	C	6,530	9,000	2	D	9,000	2	D
Alta Sierra Drive	Bell Road to Dog Bar Road	Major Collector	2	A	C	2,581	7,000	2	B	7,000	2	B
Banner Ridge-Lava Cap	SR 49 to Red Dog Road	Minor Collector	2	A	D	4,540	6,300	2	C	6,300	2	C
Bennett Road	Centennial Ext. to SR 49/20	Collector	2	A	D	1,705	13,000	2	C	13,000	2	C
Bennett Road	Centennial Ext. to Brunwick Rd.	Collector	2	A	D	1,705	8,000	2	C	8,000	2	C
Bitney Springs Road	Pleasant Vlly Rd to Rough&Ready Hwy	Minor Collector	2	A	C	2,120	3,000	2	C	3,000	2	C
Boulder Street	SR 49 to Red Dog Road	Minor Collector	2	A	D	4,324	8,000	2	C	**9,900**	**4**	**A**
Brunswick Road	SR 49/20 to Sutton Way	Collector	4	D	D	21,020	37,500	4*	D	37,500	4*	D
Brunswick Road	Sutton Way to Old Tunnel	Minor Arterial	2	C	D	10,430	25,000	4*	D	25,000	4*	D
Brunswick Road	Old Tunnel to Idaho-Maryland Road	Minor Arterial	2	C	D	10,675	20,000	4	B	20,000	4	B
Brunswick Road	Idaho Maryland Road to SR 174	Minor Arterial	2	A	C	7,500	18,500	4	A	**28,000**	**6**	**B**
Combie Road	SR 49 to Magnolia Road	Minor Arterial	2	D/E	D	10,500	14,000	4	B	**21,000**	**4**	**F**
Combie Road	Magnolia Road to end	Major Collector	2	A	D	4,854	7,000	2	B	7,000	2	B
Dog Bar Road	LaBarr Meadows Road to Carrie Drive	Major Collector	2	B	D	7,195	7,000	2	B	7,000	2	B
Dog Bar Road	Carrie Drive to Magnolia Road	Major Collector	2	A	C	800	2,000	2	A	2,000	2	A
Donner Pass Road	Northwoods Blvd to Commercial Row	Major Collector	2	E	D	12,840	20,000	4	D/E	20,000	4	D/E
Donner Pass Road	Donner Lake Drive to I-80	Collector	2	A	C	4,600	7,500	2	B	7,500	2	B
Dorsey Drive	Nevada City Hwy to SR49/20	Major Collector	2	unk	D	unk	18,500	4	D	18,500	4	D
Dorsey Drive	SR 49/20 to Sutton Way	Collector	2	unk	D	unk	20,000	4*	C	20,000	4*	C
Dorsey Drive (extended)	Sutton Way to Brunswick Road	Collector	0	n/a	D	n/a	18,000	4	D	18,000	4	D
Dorsey Drive (extended)	Nevada City Highway to Ridge Road	Collector	0	n/a	D	n/a	11,000	2*	D	11,000	2*	D
Glenshire Drive	Truckee River to SR 267	Collector	2	A	C	5,350	9,000	2	D	9,000	2	D
Gold Flat Road	Gracie Road to SR 20/49	Major Collector	2	A	D	2,850	5,000	2	A	5,000	2	A

Hughes Road	Ridge Road to Main Street	Major Collector	2	D/E	D	10,200	10,000	2*	C	10,000	2*	C
Idaho-Maryland Rd	SR 49/20 to Sutton Way	Collector	2	A	D	3,500	15,000	4	B	15,000	4	B
Idaho-Maryland Rd	Sutton Way to Brunswick Road	Collector	2	A	D	1,222	4,000	2	A	4,000	2	A
Idaho-Maryland Rd	Brunswick Road to Banner Ridge	Major Collector	2	A	D	1,737	5,000	2	A	5,000	2	A
Indian Springs Road	SR 20 to Spenceville Road	Minor Collector	2	A	C	989	5,000	2	A	5,000	2	A
Indian Springs Road	Spenceville Road to McCourtney	Major Collector	2	A	C	1,466	5,000	2	A	5,000	2	A
LaBarr Meadows Road	McKnight to Dog Bar Road	Major Collector	2	B	D	6,700	10,000	2*	C	10,000	2*	C
Lime Kiln Road	McCourtney Road to SR 49	Minor Collector	2	A	C	2,022	5,400	2	A	5,400	2	A
Loma Rica Drive	Brunswick Road to Charles Drive	Minor Collector	2	B	D	5,724	10,000	2*	D	10,000	2*	D
Magnolia Road	Combie Road to East Hacienda Drive	Major Collector	2	D/E	D	10,144	10,000	2*	C	10,000	2*	C
Magnolia Road	East Hacienda Drive to Dog Bar Road	Major Collector	2	A	C	950	1,900	2	A	1,900	2	A
McCourtney Road	Lime Kiln Road to Indian Springs Road	Major Collector	2	A	C	3,743	8,400	2	C	8,400	2	C
McCourtney Road	Indian Springs Road to Old Auburn Rd	Major Collector	2	A	C	3,750	11,000	2*	D	11,000	2*	D
McCourtney Road	Old Auburn Rd to SR 20	Major Collector	2	A	D	7,561	30,000	6*	C	30,000	6*	C
Mill Street	W. Main Street to McCourtney Road	Collector	2	A	D	1,000	6,700	2*	A	6,700	2*	A
Nevada City Hwy	DorseyDrive to Brunswick Road	Minor Arterial	2	D	D	12,569	15,000	2*	A	15,000	2*	A
Nevada City Hwy	Brunswick Road to Gates Place	Minor Arterial	3	E	D	15,249	18,000	4	A	18,000	4	A
Nevada City Hwy	Gates Place to Ridge Road	Minor Arterial	2	A	D	6,899	12,000	2	C	12,000	2	C
Newtown Road	Bitney Springs to SR 49	Minor Collector	2	A	C	1,000	1,500	2	A	1,500	2	A
New Town SDA Road	Direct Access to SR20	Minor Arterial	0	n/a	C	n/a	15,000	4	B	15,000	4	B
North Bloomfield Road	SR 49 to Lake Vera-Purdon Road	Minor Collector	2	A	C	4,373	7,000	2	C	7,000	2	C
North Bloomfield Road	Lake Vera-Purdon Road to Yuba River	Minor Collector	2	A	C	1,352	2,000	2	A	2,000	2	A
North Bloomfield Road	Yuba River to Graniteville	Minor Collector	2	A	C	60	150	2	A	150	2	A
Northwoods Blvd	Trout Creek to Donner Pass Road	Minor Collector	2	B	D	7,325	13,700	4	C	13,700	4	C
Penn Valley Drive	Pleasant Valley Road to Spenceville Road	Major Collector	2	A	D	1,032	3,000	2	A	3,000	2	A
Penn Valley Drive	Spenceville Road to SR 20	Major Collector	2	A	D	4,913	7,000	2	B	7,000	2	B
Pleasant Valley Rd	SR 20 to Lake Wildwood Drive	Major Collector	2	D/E	C	10,428	15,000	3	B	15,000	3	B
Pleasant Valley Rd	Lake Wildwood Drive to Bitney Springs	Major Collector	2	A	C	2,137	5,000	2	A	5,000	2	A
Pleasant Valley Rd	Bitney Springs Road to SR 49	Major Collector	2	A	D	400	1,500	2	A	1,500	2	A
Rattlesnake Road	SR 174 to Tiger Lily Lane	Minor Collector	2	A	C	2,126	5,900	2	B	5,900	2	B
Rattlesnake Road	Tiger Lily Lane to Dog Bar Road	Minor Collector	2	A	C	800	1,800	2	A	1,800	2	A
Red Dog Road	Boulder Street to You Bet Road	Minor Collector	2	A	C	3,680	5,000	2	A	6,900	2	C
Ridge Road	Rough and Ready Highway to Alta Street	Major Collector	2	A	D	4,649	9,000	2	D	9,000	2	D
Ridge Road	Alta Street to Hughes Road	Major Collector	2	B	D	6,721	10,000	2*	C	10,000	2*	C
Ridge Road	Hughes Road to Nevada City Highway	Major Collector	2	A	D	5,079	9,000	2	D	9,000	2	D
Rough & Ready Hwy	SR 20 to Bitney Springs Road	Major Collector	2	A	C	2,992	5,500	2	A	5,500	2	A
Rough & Ready Hwy	Bitney Springs Road to Ridge Road	Major Collector	2	B	D	7,207	12,000	4	A	12,000	4	A
Rough & Ready Hwy	Ridge Road to G.V. City Limits	Major Collector	2	A	D	4,545	12,000	4	A	12,000	4	A
Sutton Way	Brunswick Road to Idaho Md. Rd.	Collector	2	E	D	10,900	9,000	2	D	9,000	2	D
Tyler Foote Crossing Rd	SR 49 to Lake City Road	Major Collector	2	A	C	1,495	2,500	2	A	2,500	2	A
W. Main Street	E. Main to Alta Street	Minor Arterial	2	A	D	6,104	14,000	2	D	14,000	2	D
Wolf Road	Lime Kiln Road to SR 49	Major Collector	2	A	C	2,716	5,800	2	A	5,800	2	A
You Bet Road	SR 174 to Red Dog Road	Minor Collector	2	A	C	2,008	4,000	2	A	4,000	2	A

* Additonal spot improvements slightly increase capacity above Table 10 criteria.
** Additional study required to design interchange to accomodate projected traffic.

The following major GPD, SDA Changes were considered in the project vs. the Planning Commission recommended land use scenario:
Baldwin Ranch GPD, Northstar SDA, Deadman's Flat GPD, and Terra Alta Dev. GPD.

Daily Level Of Service Analysis
Mitigated Preliminary Draft General Plan (August 1993) Buildout

Roadway	Segment	Class	Volume	Exist Lanes	LOS	Lanes Reqd.	LOS
I-80	Placer County Line to SR 174	1	62,600	4	B	4	B
I-80	SR 174 to SR 20	1	57,400	4	A	4	A
I-80	SR 20 to SR 89	1	55,600	4	A	4	A
SR 20/49	Grass Valley to Nevada City	1	54,900	4	A	4	A
SR 20	Yuba County Line to Pleasant Valley Road	2-R	11,600	2	B	2	B
SR 20	Pleasant Valley Road to SR 49	2-S	15,000	2	D	4*	B
SR 20	SR 49 to Willow Valley Road	2-R	9,700	2	A	2	A
SR 20	Bowman Lake Road to I-80	3-R	6,600	2	B	2	B
SR 49	Placer County Line to Alta Sierra Drive	2-R	34,400	2	F	4*	E
SR 49	Alta Sierra Drive to McKnight Way	2-S	33,600	2	F	4*	D
SR 49	W Broad Street to Newtown Road	3-S	11,400	2	C	2	C
SR 267 (with Bypass)	Placer County to I-80	3-S	18,700	2	F	4*	B
SR 89	Placer County to I-80	3-S	21,100	2	F	4*	B
SR 174	You Bet Road to Brunswick Road	3-S	13,100	2	D	4*	D
Idaho-Maryland Road	Brunswick Road to SR 20/49	4-MU	17,400	4	C	4	C
Idaho-Maryland Road	Brunswick Road to Banner Ridge	5-S	2,200	2	A	2	A
Brunswick Road	Idaho-Maryland Road to SR 20/49	3-MU	26,900	4	D	4	D
Donner Pass Road	Northwoods Blvd to Commercial Row	4-MU	19,200	2	F	4*	D
Pleasant Valley Road	Lake Wildwood to SR 20	4-S	9,100	2	D	2	D
Combie Road	SR 49 to Magnolia Road	4-MU	10,700	2	F	4*	A
Ridge Road	Hughes Road to Nevada City Hwy	4-MU	14,500	2	F	4*	B
Alta Sierra Drive	Dog Bar Road to SR 49	4-S	9,400	2	D	2	D
Bennett Road	Brunswick Road to SR 20/49	4-MU	7,500	2	A	2	A
Donner Pass Road	Donner Lake Drive to I-80	4-S	7,800	2	A	2	A
Northwoods Boulevard	Trout Creek to Donner Pass Road	5-S	11,300	2	F	4*	A
Glenshire Drive	Truckee River to SR 267	4-S	13,600	2	F	4*	B
Bitney Springs Road	Pleasant Valley Road to Rough & Ready Hwy	5-R	3,000	2	A	2	A
Indian Springs Road	SR 20 to McCourtney Road	4-R	2,700	2	A	2	A
McCourtney Road	Indian Springs Road to Old Auburn Road	4-R	6,500	2	A	2	A
Lime Kiln Road	McCourtney Road to SR 49	5-S	2,900	2	A	2	A
Wolf Road	Lime Kiln Road to SR 49	4-R	5,300	2	A	2	A
Rough & Ready Hwy	Bitney Springs to Ridge Road	4-S	7,900	2	C	2	C
Newtown Road	Bitney Springs to SR 49	5-R	1,900	2	A	2	A
Tyler Foote Crossing Rd	SR 49 to Lake City Road	4-R	1,800	2	A	2	A
North Bloomfield Road	SR 49 to Lake Vera-Purdon Road	5-S	3,900	2	A	2	A
Red Dog Road	Boulder Street to You Bet Road	5-S	1,700	2	A	2	A
You Bet Road	SR 174 to Red Dog Road	5-R	1,700	2	A	2	A
Magnolia Road	E. Hacienda to Dog Bar Road	4-S	1,400	2	A	2	A
LaBarr Meadows Road	McKnight to Dog Bar Road	4-S	8,500	2	C	2	C
Banner Ridge-Lava Cap	SR 49 to Red Dog Road	5-S	4,000	2	A	2	A
Boulder Street	SR 49 to Willow Valley Road	4-MU	5,400	2	A	2	A
Nevada City Hwy	Ridge Road to Gates Place	3-MU	8,100	2	A	2	A
Hughes Road	Ridge Road to Main Street	4-MU	19,900	2	F	4*	D
Mill Street	West Main Street to McCourtney Road	5-MU	2,800	2	A	2	A
Sutton Way (extended)	Brunswick Road to E. Bennett Street	4-MU	9,000	2/0	D	2	D
Alder Creek Road	Fjord Road to SR 89	5-R	1,100	2	A	2	A

*Indicates segment requiring road improvement to maintain policy level of service.

APPENDIX H. Comparison of Steering Committee Alternatives

Comparison of Alternatives

	COMMUNITY REGIONS					RURAL REGION	Existing Population is 83,000 +
Alt.	Grass Valley/ Nevada City	Penn Valley Lake Wildwood Higgins Corner Lake of Pines	Alta Sierra	Villages	Towns	Rural	Population Range
1*	Only in existing City limits	No building allowed	No building allowed	None	None	No building allowed	95,000
2*	Buildout per City GP in existing spheres of influence	Becomes a Community Region-building on existing parcels only	Becomes a Community Region-building on existing parcels only	Higgins Corner, Lake of the Pines, Alta Sierra, Penn Valley, Lake Wildwood	None	Six Rural Places; building on existing parcels only	151,000
3	Buildout in existing spheres to higher density	Expand Community Boundary for Penn Valley, Lake Wildwood, Higgins Corner, and Lake of the Pines	Expand Community Boundary	New Village in West County	Alta Sierra, Penn Valley, Lake Wildwood	One more Rural Place; up to a total of 5,000 people	171,000
4	Buildout in expanded spheres and higher density	Becomes a Community Region- building on existing parcels only	Becomes a Community Region-building on existing parcels only	Higgins Corner, Lake of the Pines, Alta Sierra, Penn Valley, Lake Wildwood	New village becomes a Town	Seven rural places; allow rural land division	171,000+
5	Grass Valley and Nevada City to sphere	infill	infill	No	No	Significant growth	218,000+

*Alternative 1 and 2 assumes no new land divisions or subdivisions

+ Indicates unknown additional population from division of large parcels and from second units.

I. RESOLUTION COMMITTEE RECOMMENDED CHANGES TO FINAL DRAFT GENERAL PLAN

COUNTY OF NEVADA

PLANNING DEPARTMENT

Eric Rood Adm. Bldg.
950 Maidu Avenue
Nevada City, CA 95959-8617
(916) 265-1440

November 15, 1994

Honorable Board of Supervisors
950 Maidu Avenue
Nevada City, CA 95959

RE: Recommended Changes by the Resolution Committee to the Final Draft Nevada County General Plan

ATTACHMENTS:
1. Recommended Changes by Resolution Committee to the Final Draft General Plan - Text
2. Nevada County General Plan Buildout Population - Final Draft and Resolution Committee Changes (recommended changes to the land use maps)
3. Log of decisions made which include those motions not passed by the Committee.

RECOMMENDATION:

Staff recommends the Board accept the report of the Resolution Committee and direct the Planning Commission to consider said changes during the Commission's public hearings on the Draft Plan.

BACKGROUND:

The Board-appointed Resolution Committee met 11 times from August 29 to October 26, 1994. With the assistance of facilitators Joyce McKay and Victoria Kalman, the Committee voted to recommend numerous changes to the Final Draft Plan text and land use maps. In addition, the Committee deadlocked on a number of issues.

Very truly yours,

Thomas Miller

Thomas Miller, Acting Planning Director

TM:dk

cc: Committee Facilitators
Resolution Committee Members

RECOMMENDED CHANGES BY RESOLUTION COMMITTEE TO THE FINAL DRAFT GENERAL PLAN - TEXT

INTRODUCTION

The following reflects recommended changes by the Nevada County Resolution Committee to the text of the Final Draft Nevada County General Plan. Additions are in **bold**, deletions are in ~~strikethrough.~~

VOLUME 1: GOALS, OBJECTIVES, POLICIES AND IMPLEMENTATION MEASURES:

LAND USE CHAPTER

Policy 1.3: To provide for an appropriate range of land use types and densities within the County, the following General Plan land use designations are established:

a. Urban High Density Residential (**15** ~~20~~ dwelling units per acre maximum)
b. Urban Medium Density Residential (6 dwelling units per acre maximum)
c. Urban Single Family Residential (10,000 square foot minimum parcel size)
d. Residential (1.5 acre minimum parcel size)
e. Estate (3 acre minimum parcel size)
f. Rural-5 (5 acre minimum parcel size)
g. Rural-10 (10 acre minimum parcel size)
h. Rural-20 (20 acre minimum parcel size)
i. Rural-30(30 acre minimum parcel size)
j. Rural-40 (40 acre minimum parcel size)
k. Rural-160 (160 acre minimum parcel size)
l. Neighborhood Commercial
m. Community Commercial
n. Highway Commercial
o. Service Commercial
p. Rural Commercial
q. Office-Professional
r. Business Park
s. Industrial
t. Recreation
u. Forest - **40 (40 acre minimum parcel size)**
v. **Forest - 80 (80 acre minimum parcel size)**
w. **Forest - 160 (160 acre minimum parcel size)**
x. **Forest - 640 (640 acre minimum parcel size)**

ATTACHMENT "1"

y. Public
z. Open Space
aa. Water Area
bb. Special Development Area
cc. Planned Development
dd. Planned Residential Community

The location and extent of each of the land use designations is shown on the General Plan Land Use Maps. Boundary lines for the various land use designations, as shown on the General Plan Land Use Maps, are intended to portray the relative location and extent of land use areas, generally following known physical features such as watercourses, roads and parcel lines.

The County will review innovative land use measures that promote the preservation of open space and environmentally-sensitive areas. Such concepts as transferable development credits, clustering incentives, and site analysis requirements will be considered.

Policy 1.5.a.: Urban High Density Residential (UHD) is intended to provide for residential uses, including single- and multi-family housing types at higher densities, of up to **15** ~~20~~ dwelling units per acre, in locations with a high degree of access to transportation facilities (including arterial and major collector roads and public transit), shopping and services, employment, recreation and other public facilities. Areas of Urban High Density Residential use are intended to provide locations appropriate for the development of affordable housing due to the higher density allowed and resulting cost efficiency in costs of land development and provision of services. Locations which are adjacent to or in close proximity to Community Commercial, Business Park or Industrial areas are considered appropriate for this designation.

Policy 1.5.i.: Highway Commercial (HC) is intended to provide for the retail and service needs of both highway-related and tourist populations, including automotive and travel-related services, recreation, dining, and lodging. Development within this designation **shall** ~~should~~ be grouped as a contiguous center to preclude strip development, and with convenient, controlled access to Interstate, freeway or primary arterial routes.

Policy 1.5.k:. Rural Commercial (RC) is intended to provide for limited day-to-day retail and service needs for local residents, or for uses of limited scale and intensity providing goods and services to support local agricultural, natural resource or recreational operations. Such designations should have not more than **5** ~~10~~ acres in a single location, and convenient, controlled access to an arterial or major collector roadway.

Size may be increased to not more than 10 acres where it is determined that a local market need clearly exists for this size development based upon a professionally-prepared market study, and a Design Master Plan is adopted providing for development in keeping with the rural character of the area.

Policy 1.5.r.: Open Space (OS) is intended to provide for land, primarily in public ownership, which is dedicated to recreation, resource **and habitat** preservation, ~~and~~ protection of environmental resources, and which typically allows only recreation or very low-intensity limited uses, **such as, but not limited to, visual corridor preservation, interconnecting wildlife corridors, slope protection, preservation of ditches, railroad rights-of-way, and historic trials.** This designation shall also provide for the designation of land in private ownership which is permanently devoted to open space through clustering or other open space requirements.

Policy 1.16: A Special Development Area in the southwestern part of the County, in the vicinity of McCourtney and Spenceville Roads is shown on the General Plan land use maps for the purpose of establishing a ~~New Town~~ Reserve. Development within this Reserve shall require implementation of a Specific Plan. ~~Also, a specific *Community Region* boundary shall be established as part of this process.~~ Prior to such time, this designation shall be implemented by the "IDR" Interim Development Reserve district of the County zoning regulations.

(Note: the remainder of this policy is deleted.)

Policy 1.22: The General Plan shall provide for the following population densities in the respective land use designation based upon the maximum number of dwelling units or persons per acre for the minimum parcel area per dwelling.

The densities shown are the maximum provided for in the respective General Plan designations. The maximum density may not be achieved for all development, either in the short term or in the long term, due to site specific conditions.

General Plan Designation	Maximum Units Per Acre	**Minimum Acres Per Unit**	Maximum Persons Per Acre
Urban High Density Residential	**15** ~~20~~		**36** ~~48~~
Urban Medium Density Residential	6		14.4
Urban Single Family Residential	4		9.6
Residential	**2/3** ~~0.66~~	**1.5**	1.584
Estate	**1/3** ~~0.33~~	**3**	0.792
Rural-5 (5 acre minimum parcel size)	**1/5** ~~.02~~	**5**	0.48
Rural-10 (10 acre minimum parcel size)	**1/10** ~~0.1~~	**10**	0.24
Rural-20 (20 acre minimum parcel size)	**1/20** ~~0.05~~	**20**	0.12
Rural-30 (30 acre minimum parcel size)	**1/30**~~0.033~~	**30**	0.0792
Rural-40 (40 acre minimum parcel size)	**1/40**~~0.025~~	**40**	0.06
Rural-160 (160 acre minimum parcel size)	**1/160** ~~0.00625~~	**160**	0.015
Neighborhood Commercial	4		9.6
Community Commercial	4		9.6
Highway Commercial	4		9.6
Service Commercial	4		9.6
Rural Commercial	4		9.6
Office-Professional	4		9.6
Business Park	4		9.6
Industrial	4		9.6
Recreation	4		9.6
Forest-**40**	**1/40**~~0.025~~	**40**	0.06
Forest-80	**1/80**	**80**	**0.03**
Forest-160	**1/160**	**160**	**0.015**
Forest-640	**1/640**	**640**	**0.0038**
Public	NA		NA
Open Space	NA		NA
Water Area	NA		NA
Special Development Area	(1)		(1)
Planned Development	(1)		(1)
Planned Residential Community	4		9.6

NOTES:

NA - Not applicable

(1) Population and dwelling units density within Special Development Areas and Planned Developments shall conform to the densities for the land use designations shown on the General Plan Land Use Maps for each specific Special Development Area or Planned Development.

In addition to the densities allowed in the above table, an increased number of dwelling units for housing for lower income and senior citizen households through the density bonus provision of Policy 8.2 may be allowed.

Cluster developments in rural areas may employ flexible lot sizes subject to health minimums.

Policy 1.23: The General Plan shall provide for the following building intensities in the respective land use designations. Impervious surface shall include all land covered by structures or paved surfaces (including gravel surfaces).

General Plan Designation	Maximum Impervious Surface in %	Maximum Building Height
Urban High Density Residential	60	3 stories or 45'
Urban Medium Density Residential	50(1)	3 stories or 45'
Urban Single Family Residential	40(1)	3 stories or 45'
Residential	30(1)	3 stories or 45'
Estate	20	3 stories or 45'
Rural-5 (5 acre minimum parcel size)	10	3 stories or 45'
Rural-10 (10 acre minimum parcel size)	10	3 stories or 45'
Rural-20 (20 acre minimum parcel size)	10	3 stories or 45'
Rural-30 (30 acre minimum parcel size)	10	3 stories or 45'
Rural-40 (40 acre minimum parcel size)	10	3 stories or 45'
Rural-160 (160 acre minimum parcel size)	10	3 stories or 45'
Neighborhood Commercial	85	**2 stories or 35'** ~~3 stories or 45'~~
Community Commercial	85	**3 stories or 50'** ~~4 stories or 60'~~
Highway Commercial	85	**3 stories or 50'** ~~4 stories or 60'~~
Service Commercial	85	**3 stories or 50'** ~~3 stories or 45'~~
Rural Commercial	**75** ~~85~~	**2 stories or 35'** ~~3 stories or 45'~~
Office-Professional	60	**2 stories or 35'** ~~3 stories or 45'~~
Business Park	50	**3 stories or 50'** ~~4 stories or 60'~~
Industrial	85	**3 stories or 50'** ~~4 stories or 60'~~
Recreation	**20** ~~10~~	**3 stories or 50'** ~~4 stories or 60'~~
Forest	5	3 stories or 45'
Public	85	3 stories or 45'
Open Space	5	3 stories or 45'
Water Area	5	NA
Special Development Area	(2)	(2)
Planned Development	(2)	(2)
Planned Residential Community	40(1)	3 stories or 45'

NOTES
NA - Not Applicable

(1) Maximum impervious surface may be increased to 60% for conditionally permitted support uses.
(2) Intensity of use within Special Development Areas and Planned Developments shall conform to that for the land use designations shown on the General Plan Land Use Maps for each specific Special Development Area or Planned Development.

Policy 1.25: The County strongly supports home occupations and cottage industries in both *Community* and *Rural Regions* as a means of providing convenient employment opportunities and decreasing dependence on the auto. To ensure home occupations are in keeping with the residential or rural character of the neighborhood or area, home occupations shall be subject to administrative permits; whereas, cottage industries shall be subject to **special** ~~conditional~~ use permits.

Policies T1.1 through T1.16 - Town of Truckee policies to be removed from Plan.

PUBLIC FACILITIES AND SERVICES CHAPTER

Objective 3.2: Ensure that the capacity, **availability,** financing, and capability of public services and facilities are **deemed sufficient to meet levels of service requirements for** ~~coordinated with the timing of~~ development.

State Highway 267 Bypass Phasing: The Committee recommended that a policy be included that addresses the phasing of development with the Highway 267 bypass in Truckee. Staff offers the following suggested wording as a new action policy to implement Objective 3.2:

> **To ensure adequate timing of major development projects in the Martis Valley with the availability of adequate transportation facilities, the County shall conditionally restrict or otherwise prohibit development on all discretionary projects within the Martis Valley and with access to State Highway 267 until the bypass with Interstate Freeway 80 is completed.**

Policy 3.5: Within Community Regions with existing public sewer and water systems, all new ~~non-residential development and all new~~ residential land divisions shall be required to connect to public sanitary sewer and water systems. Temporary use of private on-site systems may be allowed where public systems are not yet available but where a specific improvement plan and funding mechanisms are in place. A legally binding mechanism shall be required to insure that the development will connect to the public systems when available, and that the private systems will be discontinued ~~and removed.~~

Policy 3.6: The County shall prepare a long-range Capital Facilities Plan for all facilities to be included in the development impact fee program, as well as facilities to solve existing deficiencies, including a funding and phasing program for provision of facilities in not less than five-year increments ~~through the year 2000~~.

Policy 3.19: Maintain the existing requirement for minimum lot sizes for single-family residential uses based upon type of water and sewer facilities as follows:

a. Public domestic treated water and public sewage system - 10,000 square feet, except for low/moderate income or cluster housing where the lot size may be reduced.
b. Public domestic treated water and individual sewage disposal system - 1.5 acres.
c. Groundwater well and public sewerage system - 1.5 acres.
d. Groundwater well and individual sewage disposal system - 3 acres.

These minimum requirements may be increased where other considerations, including adverse soil, geologic or topographic conditions may warrant larger parcel sizes.

Cluster development in rural areas may employ flexible lot sizes subject to health minimums.

Availability of public treated water and/or sewerage facilities shall not solely be used as justification to increase residential density. Many other factors, as provided for throughout the Plan, shall be used to determine the appropriate density for any given area.

RECREATION CHAPTER

Policy 5.20: Recognize **and protect** the South Yuba River canyon as an important resource in terms of recreation, tourism, aesthetics, water resource, mineral resource, water quality, and wildlife habitat through the following actions:

a. Designate publicly-owned lands physically adjoining the river as open space in the General Plan land use maps
b. Encourage the recreation master planning and development activities by the State Department of Parks and Recreation.
c. **Encourage the protection of the South Yuba River from dams.**

OPEN SPACE CHAPTER

Policy 6.10: **The County shall consider forming an Open Space District to acquire and manage opens space lands. Such a District would be able to acquire open space through dedications or voluntary purchase from willing sellers to property or easement; the use of eminent domain would not be allowed.**

The County may also consider formation of an Open Space Authority under applicable State legislation to finance the acquisition of open space in the County through a transaction and use tax over a 20-year period. The Authority would enter into an agreement with the District for use of the funds generated by the tax in accordance with an expenditure plan adopted by the authority.

The District would be able to acquire land or other real property interests which could focus on lands which contain unique, valuable or sensitive open space resources reflecting environmental or biological sensitivity, scenic landscape units, community separators, historic, cultural, and archaeological content, and low intensity recreational potential.

HOUSING CHAPTER

Objective 8.1: **The County shall work to provide** ~~Ensure~~ an adequate supply of affordable housing for all economic segments of the community, especially lower income households. Such housing should include not only multiple family but also single family opportunities.

Policy 8.1.c.: Conservation: Total number of Section 8 certificates and vouchers will increase by at least 25 new units per year of which one-half would be for certificates for lower-income and one-half for vouchers for very low income. **Provide aftercare certificates for people with disabilities as available.**

Policy 8.2.b.: Continue the current granny, handicap, and other second dwelling unit distinctions of the County permit process and specifically allow granny and handicap units as a permitted use, regardless of General Plan or zoning density.

Support ~~Encourage~~ the construction of this housing type by promoting development by the Nevada County Housing Authority and local housing assistance organizations and providing building plans approved by the Nevada County Building Department. All second units shall comply with site development and building standards applicable to the primary dwelling on the site, including but not limited to water supply, sanitary waste disposal, vehicular access and fire safety.

Policy 8.2.c.: Encourage the construction of multi-family and single-family housing units for very low and lower-income households and senior citizens by providing for projects qualifying under California Government Code Section 65915 by providing (1) a bonus of **a maximum of** ~~at least~~ 25% ~~,but not more than 50%~~ over density allowed by the General Plan land use map and implementing zoning and/or (2) **at least one** ~~additional~~ concessions or incentives provided by items d. and e. of Policy 8.4, consistent with the provisions of California Government Code Section 65915, or provide other incentives of equal financial value. These bonuses and other incentives equal or exceed those required by Government Code Sections 65915. Assurance shall be made that said projects will continue to be made available to said income groups.

Policy 8.4.d.: The following **may** ~~shall~~ be provided for all portions of construction projects that provide housing for very low- and lower-income households and for senior citizens. These exemptions, reductions in standards, and waivers may also be provided by the County to other qualifying projects providing affordable housing for moderate-income households pursuant to Policy 8.2.f.:

~~1. Architectural design standards of the "d" Design, "SC" Scenic Corridor, and "HP" District Preservation Combining District;~~

~~2. Reduction of 50% in the proportional open space retention standards of the County be a ratio equal to the number of affordable housing units to total housing units within a given project, provided some form of outdoor recreation is included in the project.~~

1.~~3.~~ Waiver of parking lot standards for guest parking by a ratio equal to the number of affordable units to total units within a given project;

2.~~4.~~ Reduction by **25** ~~50~~ percent in the proportional site and parking lot landscaping standards by a ratio equal to the number of affordable housing units to total housing units within a given project;

3.~~5.~~ Establishment of site and building setbacks that do not exceed the Fire Safe Standards required by the State Department of Forestry;

~~6. Exemption from building height limits unless required to comply with airport height restriction areas or fire district limitations; and~~

4.~~7.~~ Reduction by **25** ~~50~~ percent in all limitations on lot coverage for multi-family housing projects.

These exemptions, reductions in standards, and waivers are provided as an incentive for all qualifying construction projects, as well as those requesting a density bonus pursuant to Policy 8.2c and California Government Code Section 65915, as well as individual home builders. Assurance shall be made that said projects will continue to be made available to said income groups.

Policy 8.4.g.: All subdivisions **creating 20 or more parcels or dwelling units** within the UHD, UMD, **and** USF ~~, and RES General Plan~~ land use map designations shall have an **inclusionary affordable housing component** ~~mandatory density bonus~~ of 10% applied to the number of **parcels/units** ~~building sites~~ in the proposed project and rounding up any fraction of a dwelling unit to one additional unit. **These parcels/units may be located either on-site or off-site.**

The County shall offer a voluntary density bonus equal to the number of inclusionary parcels-units created, as well as other incentives as provided in this chapter to ensure that these projects are economically feasible. The inclusionary parcels/units shall be made available only to moderate income, lower income, senior citizen, or disabled households.

~~Bonus lots or dwelling units constructed on bonus lost shall be made available only to moderate-income, lower-income, senior citizens, or disabled households. The County shall offer incentives where necessary, as provided in the policies of this chapter, to ensure that these projects are economically feasible.~~

~~This policy shall be implemented through the parcel and tentative map review process, and monitored by the Nevada County Housing Authority. Assurance shall be made that any units made available to lower-income households will continue to be made available to said income groups.~~

Policy 8.17: Ensure an adequate supply of land to meet the County's share of regional lower-income housing needs during the period from July 1, 1992 to July 1, 1997 by providing sites at a capacity-to-need ratio of **at least 1.2:1** ~~2.3:1~~**.** UHD and UMD lands are also located in other areas of the County, such as *Rural Centers*, to allow for the provision of affordable housing, including housing for moderate-, low-, and very low-income households in these areas.

The Urban High Density (HUD) land use designation shall be used on the General Plan Land Use Maps to identify appropriate sites for lower-income housing, at the rate of fifteen residential units per acre (strongly encouraged by Policy 8.19). The General Plan Land Use Maps shall designate additional lands for Urban Medium Density (UMD), which will provide for development of affordable housing at the rate of six residential units per acre (minimum density required by Policy 8.19).

Location of UHD and UMD lands are based upon maximizing the possible locations within *Community Regions* outside Grass Valley and Nevada City, and within other Community Regions with the greatest available urban infrastructure capacity (e.g. Higgins Corner/Lake of the Pines, and Penn Valley). UHD and UMD lands are also located in other areas of the County, such as *Rural Centers,* to allow for the provision of affordable housing, including housing for low- and very-low income households in these areas.

Policy 8.21 Review all existing and future building codes to ensure the maintenance of those standards that reasonable provide for the public health, welfare, safety, and energy efficiency, and to eliminate those standards that do not accomplish said goals.

The County should develop prescriptive building standards that supplement existing building codes for such items as alternative energy systems, building materials, and alternative sewage systems.

Objective 8.8: Ensure that appropriate types, densities, and amounts of housing development are directed to *Community Regions* and *Rural Regions* and that development of housing in the *Community Regions* is encouraged ~~to the maximum extent possible~~.

AESTHETICS CHAPTER

Policy 18.2 The County may adopt Specific Design Guidelines for areas within *Community Regions*, ***Rural Places,*** **and** ***Rural Centers*** to provide for the maintenance of community identity, scenic resources and historic sites and areas. The Specific Design Guidelines may include, but not be limited to, standards which:

a. Reflect the distinctions among and transitions between different areas within *Community Regions*;

b. Reflect and retain the historic character of the area by requiring designs consistent with historic buildings, areas and sites related to a project;

c. Reflect and retain the rural and small-town character of the County;

d. Address building height and bulk at locations of visual sensitivity;

e. Encourage consistent thematic use of building materials and design elements appropriate to the visual and scenic qualities of specific areas;

f. Encourage cluster-type development of office, commercial uses, and residential uses to enhance open space;

g. Encourage office and commercial development provide safe, functional and attractive pedestrian connections and, where appropriate, social places (e.g. seating, landscaped patio areas, etc.);

h. Locate parking areas out of view from road traffic where conditions permit and provide measures to reduce the impacts of large paved areas;

i. Encourage building designs which provide customer entrance from pedestrian and parking areas, with customer-friendly store fronts facing pedestrian areas; and

j. Provide uniform criteria for project design review.

k. Encourage landscape treatment to enhance the built environment, including the preservation, long-term maintenance, and use of drought-tolerant native species.

Specific Design Guidelines shall be implemented through the regulations of the "D" Design Combining District of the County zoning ordinance.

Scenic Stream Corridor: The Committee recommended a new policy to provide for a "scenic stream corridor" along designated streams. Staff offers the following suggested wording as a new action policy implementing Objective 18.2:

> **To provide for scenic stream corridor protection along designated streams, the County shall prepare standards and procedures whereby local groups, associations, or similar organizations can apply for designation of a segment of any stream as a local scenic stream corridor. If approved, a Scenic Stream Corridor Plan shall be prepared.**

Objective 18.3: Promote the conservation of scenic roads and highways **consistent with the State Scenic Highways designation process.**

Policy 18.8: **To promote the conservation of scenic highways, the County shall prepare a State Highway Scenic Corridor Plan for those eligible segments of State Highways designated on the State Scenic Highways Master Plan. Standards and procedures shall be included as a part of this Plan.** ~~The County shall amend the "SC" Scenic Corridor Combining District Regulations to require design review of all proposed development within the District.~~

Policy 18.9: To encourage a system of scenic County roads, the County shall **prepare** ~~adopt~~ standards and procedures **whereby local groups, associations, or similar organizations can apply for designation of County roadways. If approved, a County Scenic Corridor Plan shall be prepared.** ~~for protection of scenic corridors and shall prepare a Scenic Corridor Plan which may include, but not be limited to, State Scenic Highways.~~

IMPLEMENTATION MEASURES (page IV-213)

Implementation Measure 51: Community Design Guidelines

Action: Prepare and adopt Community Design Guidelines as part of Comprehensive Site Development Standards

Purpose: Provide guidelines for review of basic design features of new development to ensure that aesthetic considerations such as community identity, preservation of landforms, ~~and~~ viewsheds, **architecture, signage, and site planning** are considered in the design of new development.

Funding: Nevada County General Plan

Responsible Agency: Nevada County Planning Department

Time Frame: Within one year from adoption of the General Plan

Implements: Policy 18.1

VOLUME 2: BACKGROUND DATA AND ANALYSIS

Page VI-3, Population and Dwelling Units, Dwelling Units:

The following densities in dwelling units per gross acre were used to generate dwelling unit data:

- Urban High Density Residential - **15** ~~20~~ dwelling units per acres.

Page VI-4, first paragraph:

These figures represent gross acres. To provide figures for net acres, representing the actual developable area, a factor of **0.85** ~~0.90~~ was applied to the number of dwelling units for the ~~Rural-5 through Rural-160,~~ Urban High and Urban Medium Density **designations**, ~~and Forest categories,~~ and a factor of **0.75** ~~0.85~~ was applied to the dwelling units generated in the other designations. The resulting numbers provide the anticipated dwelling units for each residential land use type at buildout.

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NEVADA COUNTY GENERAL PLAN BUILDOUT POPULATION - FINAL DRAFT & RESOLUTION COMMITTEE CHANGES

*Table 1**

AREA	FDGP	RES COMM	DIFFERENCE(-)
Grass Valley	30,700	24,500	6,200
Nevada City	6,800	6,800	0
Truckee	35,600	19,000	16,600
LWW	8,000	8,000	0
Penn Valley	6,000	3,400	2,600
LOP	7,600	7,400	200
New Town	12,700	400	12,300
Alta Sierra	12,100	11,700	400
South	15,000	15,000	0
West	11,700	11,600	100
Central	12,800	12,800	0
Scotts Flat	2,000	2,000	0
N.San Juan	6,300	6,300	0
Lowell Hill	2,400	2,400	0
Washington	1,900	1,900	0
East	3,600	3,400	200
Total	**175,200**	**136,600**	**- 38,600**

*Table 2***

AREA	FDGP	RES COMM	DIFFERENCE(-)
Grass Valley	30,700	19,200	11,500
Nevada City	6,800	6,100	700
Truckee	35,600	19,000	16,600
LWW	8,000	7,800	200
Penn Valley	6,000	2,900	3,100
LOP	7,600	7,300	300
New Town	12,700	400	12,300
Alta Sierra	12,100	11,700	400
South	15,000	12,800	2,200
West	11,700	9,900	1,800
Central	12,800	11,100	1,700
Scotts Flat	2,000	1,600	400
N.San Juan	6,300	5,200	1,100
Lowell Hill	2,400	2,000	400
Washington	1,900	1,600	300
East	3,600	3,100	500
Total	**175,200**	**121,700**	**- 53,500**

*assumes UHD density change from 20 to 15 units

**assumes UHD density change from 20 to 15 units and net development standard as follows:
UHD and UMD = .85, all other designations = .75.

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ATTACHMENT "2"

NEVADA COUNTY GENERAL PLAN RESOLUTION COMMITTEE
RECOMMENDED LAND USE MAP CHANGES

AREA	#	LOCATION	FDGP (acres)	RES COMM (acres)	POP. CHANGE
Truckee***	1	Incorporated Town limits	Show map designations	Remove map designations	-16,600
East	2	Raley Ranch	FOR-160 (1,795) RUR-30 (1,124) EST (683)	PD- FOR-160 (1,800) Remainder = 265 DUs	0
	3	Tahoe-Donner - west	FOR-160 (200)	REC (200)	0
	4	Donner Summit	HC (25) RC (2) REC (170) UMD (55) USF (140) PUB (4) W (175) FOR-40 (1060) FOR-160 (280) OS (285)	SDA with FDGP designations	0
Grass Valley	5	Sunset**	USF (80)	RES (80)	-80
	6	Squirrel Creek Road**	USF (200)	RES (200)	-350
	7	Alta Hill**	USF (320)	RES (320)	-750
	8	Ridge Road**	USF (375)	RES (375)	-1,200
	9	Northstar*	SDA - CC (20) NC (7) BP (50) IND (90) PUB (90) Remainder = 1,670 DU	PD- IND (200) CC (15) Remainder = 363 DU	-3,100
Penn Valley	10	Penn Valley Drive*	USF (570)	RES (570)	-2,100
	11	Penn Valley Drive - (west end)*	UMD (25)	RES (25)	-300
	12	Penn Valley Drive - Squirrel Creek area*	UMD (16)	PD - UMD (11) OS (5)	-60

Penn Valley	13	Penn Valley Drive - Squirrel Creek area*	UMD (34)	PD - UMD (26) OS (8)	-100
New Town Reserve	14	Penn Valley - south*	SDA - USF (920) UMD (50) UHD (170) NC (35) CC (50) HC (50) BP (300) IND (300) PUB (350) OS (4,375) REC (500)	SDA - 180 DU	-12,300
West	15	Mystic Mine-Pierite Road**	RES (50)	RUR-5 (50)	-5
	16	Rough and Ready**	RES (70)	EST (30) RUR-5 (40)	-20 -30
Alta Sierra	17	Alta Sierra - west**	RES (1,000)	EST (1,000)	-200
	18	Alta Sierra Drive & Dog Bar Road*	PD- BP (10) CC (15) NC (5) UMD (20) OS (6)	PD- BP (10) CN (5) UMD (5) OS (5) RES (16) RES (11)	-170 15
North San Juan, Central, and Nevada City	19	Lake Vera Road - Round Mountain**	RUR-10 (64) RUR-10 (34) RUR-10(137) RUR-30(101) RUR-40 (23)	RUR-30 (64) RUR-40 (34) RUR-20 (137) RUR-20 (101) RUR-10 (23)	-25
Washington	20	River Rest Trailer Park*	UMD (3)	UMD (2.5) CN (.5)	-5
	21	Crowely Estates Mobilehome Park*	FOR-160 (15)	UMD (11 DUs)	25

MAP CHANGES RECOMMENDED BY STAFF

Grass Valley* **	22	Scotia Pines (annexed to GV)	UHD (19)	UMD (19)	-700
TOTAL					**-38,000**

*assumes FDGP net development standard

**assumes buildout based on existing and potential parcelization

***based on input from the Town or City

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J. IMPLEMENTATION PLAN

Section 4: Implementation Measures

Implementation Measures

Implementation measures are embedded in many of the policies contained in the topical chapters of Sections 2 and 3 of this document. In these policies, specific implementation measures are identified. The identified programs and other implementation measures are thus clearly linked to a specific policy or series of policies. The implementation of these programs and other measures is the basis by which progress in implementing the General Plan as a whole can be measured.

The following Summary Implementation Matrix identifies the key measures which are necessary to implement the Action Policies of the Plan. For each implementing measure, the summary also highlights the method of implementation, the primary and secondary body responsible for taking the lead in implementing the measure, and the recommended timing for completion of the action. The completion dates shown are from the date of General Plan adoption.

Each implementation measure is more fully described in later sections of this chapter.

General Plan Summary Implementation Matrix

Policy #	Implementation Measure	Method of Implementation	Implementing Body		Completion Date
			Primary	Secondary	
1.17	1	Ordinance	Planning Dept.	-	Within 12 months
1.18	2	Ordinance	Planning Dept.	-	Within 6 months
1.19	3	Ordinance	Planning Dept.	-	Within 6 months
1.24	3	Ordinance	Planning Dept.	-	Within 6 months
1.25	3	Ordinance	Planning Dept.	-	Within 6 months
1.26	3	Ordinance	Planning Dept.	-	Within 6 months
1.27	3	Ordinance	Planning Dept.	-	Within 6 months
1.35	4	Resolution	Planning Dept.	-	Every 5 years

General Plan Summary Implementation Matrix					
Policy #	Implementation Measure	Method of Implementation	Implementing Body		Completion Date
			Primary	Secondary	
2.1	5	Resolution	County Admin.	-	Within 3 months
2.2	6	Resolution	County Admin.	Economic Advisory Body	Within 9 months
2.3	7	Minute Order	County Admin.	-	Within 9 months
2.6	8	Ordinance	Planning Dept.	-	Within 12 months
3.6	9	Resolution	County Admin.	DOT, STAR, Other Dept.	Within 12 months
3.7	10	Resolution	County Admin.	DOT, STAR, Other Dept.	Within 12 months
3.8	11	Resolution	County Admin.	County Counsel	Within 12 months
3.9	12	Minute Order	Sanitation Dept.	-	Within 12 months
3.25	13	Minute Order	Sanitation Dept.	-	Within 12 months
3.27	1	Ordinance	Planning Dept.	-	Within 12 months
4.4	14	Minute Order	Dept. Trans.	-	Biennially
4.5	15	Resolution	Dept. Trans.	-	1994 and annually
4.11	10	Resolution	County Admin.	County Counsel	Within 12 months
4.17	16	Resolution	Dept. Trans	-	Within 24 months
4.26	17	Ordinance	Planning Dept.	County DOT	Within 6 months
4.27	18	Resolution	Planning Dept.	County DOT	Within 12 months
4.28	19	Resolution	Planning Dept.	County DOT	Within 12 months
5.7	20	Ordinance	Planning Dept.	-	Within 18 months

General Plan Summary Implementation Matrix					
Policy #	Implementation Measure	Method of Implementation	Implementing Body		Completion Date
			Primary	Secondary	
6.9	1	Ordinance	Planning Dept.	-	Within 12 months
8.2a	21	Ordinance	Planning Dept.	-	Within 6 months
8.2b 8.4c 8.4f	22	Ordinance	Planning Dept.	Dept. Housing and Bldg. Dept.	Within 6 months
8.2c 8.4d 8.4e	23	Ordinance	Planning Dept.	Dept. Housing	Within 6 months
8.2d	24	Minute Order	Planning Dept.	-	Ongoing
8.2e	25	Ordinance	Planning Dept.	-	Within 6 months
8.4	26	Ordinance	Planning Dept.	Bldg. Dept. and Trans. Dept.	Within 6 months and ongoing
8.6	27	Resolution	Dept. Housing	-	Ongoing
8.7	28	Minute Order	Dept. Housing	-	Ongoing
8.7	29	Minute Order	Dept. Housing	-	Ongoing
8.22	30	Minute Order	Bldg. Dept.	-	Ongoing
8.24	31	Minute Order	Planning Dept.	-	Ongoing
8.8	32	Minute Order	Planning Dept.	-	Every 5 years
8.8	33	Minute Order	Dept. Housing	-	Annually
8.10	34	Resolution	Dept. Housing	-	Ongoing
8.11	35	Minute Order	Dept. Housing	-	Within 12 months.
8.12	36	Resolution	Dept. Housing	-	Ongoing
8.18	37	Resolution	Planning Dept.	-	Within 3 months

General Plan Summary Implementation Matrix					
Policy #	Implementation Measure	Method of Implementation	Implementing Body		Completion Date
			Primary	Secondary	
8.13	38	Ordinance	Planning Dept.	-	Within 6 months
8.14	39	Ordinance	Planning Dept.	-	Within 6 months
8.15	40	Ordinance	Planning Dept.	-	Within 6 months
8.16	41	Resolution	County Admin.	-	Ongoing
8.17	42	Resolution	Planning Dept.	-	Within 6 months
8.19	43	Ordinance	Planning Dept.	-	Within 6 months
8.23	1	Ordinance	Planning Dept.	-	Within 12 months
9.4	44	Ordinance	Planning Dept.	-	Within 12 months
10.4	45	Resolution	County Admin.	-	Within 6 months
10.5	1	Ordinance	Planning Dept.	-	Within 12 months
10.11	1	Ordinance	Planning Dept.	-	Within 12 months
10.12	1	Ordinance	Planning Dept.	-	Within 12 months
10.13	1	Ordinance	Planning Dept.	-	Within 12 months
11.1	46	Resolution	Planning Dept.	-	Within 18 months
11.7	1	Ordinance	Planning Dept.	-	Within 12 months
13.2	1	Ordinance	Planning Dept.	-	Within 12 months
13.3	1	Ordinance	Planning Dept.	-	Within 12 months
13.7	1	Ordinance	Planning Dept.	-	Within 12 months
14.2	1	Ordinance	Planning Dept.	-	Within 12 months

General Plan Summary Implementation Matrix					
Policy #	Implementation Measure	Method of Implementation	Implementing Body		Completion Date
			Primary	Secondary	
15.6	1	Ordinance	Planning Dept.	-	Within 12 months
16.5	3	Ordinance	Planning Dept.	-	Within 6 months
16.6	47	Ordinance	Planning Dept.	-	Within 6 months
16.10	3	Ordinance	Planning Dept.	-	Within 6 months
16.12	3	Ordinance	Planning Dept.	-	Within 6 months
17.15	48	Ordinance	Planning Dept.	-	Within 6 months
17.16	49	Minute Order	Planning Dept.	-	Within 12 months and ongoing
17.23	50	Minute Order	Planning Dept.	-	Within 12 months
18.1	51	Resolution	Planning Dept.	-	Within 12 months
18.4	1	Ordinance	Planning Dept.	-	Within 12 months
18.4	3	Ordinance	Planning Dept.	-	Within 6 months
18.5	3	Ordinance	Planning Dept.	-	Within 6 months
18.8	52	Ordinance	Planning Dept.	-	Within 6 months
18.9	53	Resolution	Dept. Trans.	-	Within 18 months
19.1	54	Ordinance	Planning Dept.	-	Within 12 months

IMPLEMENTATION MEASURE 1: PREPARE AND ADOPT COMPREHENSIVE SITE DEVELOPMENT STANDARDS

Action: Prepare and adopt a comprehensive set of site development standards to be used in project review; amend zoning ordinance to

require application of standards for review of all discretionary development projects, and of ministerial project where applicable.

Purpose: Provide for review of development projects to ensure basic requirements for site development are met.

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Adoption and ordinance amendment within 12 months from adoption of General Plan

Implements: Policy 1.17; Policy 3.27; Policy 8.23; Policy 10.5; Policy 10.11; Policy 10.12; Policy 10.13; Policy 11.7; Policy 13.2: Policy 13.3; Policy 13.7; Policy 14.2; Policy 15.6; Policy 18.4

IMPLEMENTATION MEASURE 2: ADOPT CLUSTERING PROVISIONS

Action: Amend Zoning Ordinance to require clustering where natural constraints are present.

Purpose: To provide a mechanism for preservation of natural resources, environmentally sensitive areas and the rural character of the County while maintaining reasonable expectations for development of private property.

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Within 6 moths from adoption of the General Plan

Implements: Policy 1.18

IMPLEMENTATION MEASURE 3: AMEND ZONING REGULATIONS AND ZONING DISTRICT MAPS

Action: Adopt amended zoning regulations and zoning district maps, which are consistent with the General Plan.

Purpose: To implement the General Plan land use designations.

Funding: Nevada County General Fund

Responsible

Agency: Nevada County Planning Department

Time Frame: Within 6 months from adoption of the General Plan

Implements: Policy 1.18; Policy 1.24; Policy 1.25; Policy 1.26; Policy 1.27; Policy 8.25; Policy 16.5; Policy 16.10; Policy 16.12; Policy 17.16; Policy 18.4; Policy 18.5

IMPLEMENTATION MEASURE 4: UPDATE GENERAL PLAN

Action: Update the General Plan based upon the revised regional housing allocation and incorporating an updated housing needs assessment.

Purpose: Assure the updating of the General Plan in accordance with State mandated requirements.

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Every five years starting in 1997

Implements: Policy 1.35

IMPLEMENTATION MEASURE 5: ECONOMIC ADVISORY BODY

Action: Designate a permanent economic advisory body

Purpose: Establish an economic advisory body to assist the County in the development of an economic development stragegy.

Funding: Nevada County General Fund

Responsible Agency: Office of County Administrator

Time Frame: Within three months from adoption of General Plan

Implements: Policy 2.1

IMPLEMENTATION MEASURE 6: PREPARE AND ADOPT A COUNTY ECONOMIC POLICY

Action: Prepare, adopt, and implement a County Economic Policy Including a 5-year Strategic Plan

Purpose: To guide county economic development activities and programs, including business retention and attraction.

Funding: Nevada County General Fund

Responsible Agency: Office of County Administrator and Economic Advisory Body

Time Frame: Adoption within 9 months from adoption of General Plan; implementation ongoing

Implements: Policy 2.2

IMPLEMENTATION MEASURE 7: ECONOMIC DATA BASE

Action: Compile an economic data base to support the County Economic Policy

Purpose: To provide a source of information to support county economic development activities and programs.

Funding: Nevada County General Fund

Responsible Agency: Office of County Administrator

Time Frame: Adoption within 9 months from adoption of General Plan; implementation ongoing

Implements: Policy 2.3

IMPLEMENTATION MEASURE 8: ECONOMIC ANALYSIS OF GENERAL PLAN AMENDMENTS

Action: Amend Zoning Ordiannce to require economic analysis of General Plan Amendment requests

Purpose: To require economic evaluation of future projects

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Within 12 months from adoption of the General Plan

Implements: Policy 2.6

IMPLEMENTATION MEASURE 9: LONG-RANGE CAPITAL FACILITIES PLAN

Action: Preparation of a Long-Range Capital Facilities Plan

Purpose: Assure the completion of a long-range Public Facilities Plan through the year 2010 for all facilities identified in the level of service standards

Funding: Nevada County General Fund

Responsible Agency: Office of County Administrator, with required input from Transportation, STAR, and other County departments

Time Frame: Within 6 months from adoption of the General Plan

Implements: Policy 3.6

IMPLEMENTATION MEASURE 10: CAPITAL IMPROVEMENT PROGRAM

Action: Adoption of a Five Year Capital Improvement Program

Purpose: Assure the completion of a Five Year Capital Improvement Program, based upon the Long-Range Capital Facilities Plan

Funding: Nevada County General Fund

Responsible Agency: Office of County Administrator, with required input from Transportation, STAR, and other County departments

Time Frame: Within 12 months from adoption of the General Plan and updated annually thereafter

Implements: Policy 3.7

IMPLEMENTATION MEASURE 11: IMPACT FEE PROGRAM

Action: Adoption of an Impact Fee Program for County Facilities including Roads, Parks, and Public Buildings

Purpose: Assure the completion of a comprehensive development fee program meeting the requirements of AB 1600 and SB 327

Funding: Nevada County General Fund

Responsible Agency: Office of County Administrator and County Consel, with required input from Transportation, STAR, and other County departments

Time Frame: Within 12 months from adoption of the General Plan

Implements: Policy 3.8; Policy 4.11

IMPLEMENTATION MEASURE 12: REGIONAL WASTEWATER TREATMENT SYSTEM STUDY

Action: Formally approach the Cities of Grass Valley and Nevada City to consider a joint study of a western Regional Wastewater Treatment System for Western Nevada County

Purpose: To evaluate the long-term feasibility of a regional wastewater system to serve the more intensely developed portions of the Western County

Funding: Nevada County General Fund

Responsible Agency: Nevada County Department of Sanitation

Time Frame: Within 12 months from adoption of General Plan

Implements: Policy 3.9

IMPLEMENTATION MEASURE 13: DEVELOP LONG RANGE SOLID WASTE DISPOSAL PLAN

Action: Institute the development of a long-range plan for disposal of solid waste

Purpose: To provide for long term solid waste disposal needs of Nevada County

Funding: Solid Waste Revenues

Responsible Agency: Nevada County Department of Sanitation

Time Frame: Within 12 months from adoption of the General Plan

Implements: Policy 3.25

IMPLEMENTATION MEASURE 14: ROAD SYSTEM MONITORING

Action: Monitor the road system for non-attainment of level of service standards and preparation of biennial report to Board of Supervisors and Planning Commission

Purpose: To insure adequate roadway level of service

Funding: Nevada County Road Fund

Responsible Agency: Nevada County Department of Transportation

Time Frame: Ongoing; Report prepared biennially, in conjunction with preparation of the Regional Transportation Plan (RTP)

Implements: Policy 4.5

IMPLEMENTATION MEASURE 15: COUNTY ROAD IMPROVEMENT PROGRAM

Action: Maintain and update the County Road Improvement Program

Purpose: Identify and establish a schedule for needed road improvements and source of funding

Funding: Nevada County Road Fund

Responsible Agency: Nevada County Department of Transportation

Time Frame: Annually beginning in 1994

Implements: Policy 4.6

IMPLEMENTATION MEASURE 16: TRANSPORTATION SYSTEM MANAGEMENT (TSM) PROGRAM

Action: Preparation and adoption of TSM program

Purpose: To assure implementation of a TSM program

Funding: Nevada County General Fund

Responsible Agency: Nevada County Department of Transportation

Time Frame: Within 24 months from adoption of the General Plan

Implements: Policy 4.17

IMPLEMENTATION MEASURE 17: ALTERNATIVE TRANSPORTATION MEASURES

Action: Amend Zoning Ordinance to require consideration of transit in all discretionary project review; amend Zoning Ordinance to require consideration of other alternative transportation measures in review of all non-residential projects

Purpose: To reduce reliance on the automobile and increase the availability of alterantive means of transportation

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department; Department of Transportation

Time Frame: Within 6 months from adoption of the General Plan

Implements: Policy 4.26

IMPLEMENTATION MEASURE 18: PEDESTRIAN MASTER PLAN

Action: Preparation and adoption of a Pedestrian Master Plan

Purpose: Assure preparation of a Pedestrian Master Plan

Funding: Nevada County General Fund

Responsible Agency: County Department of Transportation and County Planning Department in cooperation with the Nevada County Transportation Commission

Time Frame: Within 18 months from adoption of the General Plan

Implements: Policy 4.27

IMPLEMENTATION MEASURE 19: BICYCLE MASTER PLAN

Action: Preparation and adoption of an updated Bicycle Master Plan

Purpose: Assure update of the Bicycle Master Plan

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department; Department of Transportation

Time Frame: Within 18 months from adoption of the General Plan

Implements: Policy 4.28

IMPLEMENTATION MEASURE 20: PARKS AND RECREATION MASTER PLAN

Action: Preparation and adoption of a Parks and Recreation Master Plan

Purpose: Assure preparation of a Parks and Recreation Master Plan

Funding: Nevada County General Fund

Responsible

Agency: County Department of Services for Transit, Airports, and Recreation (STAR)

Time Frame: Within 18 months from adoption of the General Plan

Implements: Policy 5.7

IMPLEMENTATION MEASURE 21: ALLOW FOR MOBILE HOMES AND FACTORY BUILT HOUSING

Action: Amend and enforce Zoning Ordinance to allow all mobile homes and factory-built housing, if permanently installed, to be allow on the same basis as conventional housing.

Purpose: To provide for a variety of housing; to provide for additional low and moderate cost housing.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Planning Department.

Time Frame: Amendment of Zoning Ordinance within 6 months of General Plan adoption; enforcement on ongoing basis

Quantified Objective: 250 new units.

Implements: Policy 8.1; Policy 8.2a

IMPLEMENTATION MEASURE 22: SECOND RESIDENTIAL UNITS

Actions: a) Amend and enforce existing "Second Residential Unit" ordinance; b) provide technical assistance to the Nevada County Housing Authority, Nevada County Housing Development Corporation, Rural California Housing Corporation, Community Spirit Corporation, and other organizations providing senior housing assistance; c) provide approved building plans for senior citizen second residential units to the general public; and d) amend the zoning ordinance qualifications for ministerial projects and adopt a Resolution directing all County Departments to maintain compliance with State-mandated time limits for permit reviews.

Purposes: To provide for and encourage a variety of housing; to provide for additional low and moderate cost housing.

Funding: Nevada County General Fund.

Responsible

Agency: Nevada County Planning Department, Nevada County Department of Housing and Community Services, Nevada County Building Department.

Time Frames: Amend Zoning Ordinance and provide building plans within eighteen months; enforce existing ordinance and provide technical assistance on an ongoing basis.

Quantified Objective: 130 new units.

Implements: Policy 8.1; Policy 8.2b; Policy 8.4c; Policy 8.4f

IMPLEMENTATION MEASURE 23: CONSTRUCTION OF HOUSING FOR LOWER INCOME HOUSEHOLDS

Action: Adopt density bonus provisions and additional concessions and incentives to encourage construction of housing for lower income households.

Purpose: To assist in the construction of low-cost housing.

Funding: Nevada County General Fund.

Responsible Agencies: Nevada County Planning Department

Time Frame: Zoning Ordinance amendments within 6 months of General Plan adoption

Quantified Objective: 250 new units.

Implements: Policy 8.1; Policy 8.2c; Policy 8.4d; Policy 8.4e; Policy 8.5

IMPLEMENTATION MEASURE 24: EMPLOYEE HOUSING

Action: Continue to enforce existing ordinance.

Purpose: To provide for a variety of housing.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Planning Department.

Time Frame: Ongoing basis.

Quantifiable Objective: 20 new units.

Implements: Policy 8.1; Policy 8.2d

IMPLEMENTATION MEASURE 25: DENSITY BONUS FOR HOUSING FOR DISABLED PERSONS

Action: Amend zoning ordinance to include disabled persons in the provisions permitting senior citizens apartments/senior independent living center, including the provisions for minimum accessibility standards.

Purpose: To provide affordable housing for disabled persons.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Planning Department.

Time Frame: Within 6 months.

Quantified Objective: Unknown number of new units.

Implements: Policy 8.2e

IMPLEMENTATION MEASURE 26: REDUCE GOVERNMENTAL CONSTRAINTS FOR HOUSING

Action: (1) Enforce existing ordinance. (2) provide approved building plans for affordable single-family housing to the general public. (3) amend the zoning ordinance standards for architectural design, proportional open space retention, parking lot spaces, site and parking lot landscaping, site and building setbacks, maximum building height, infrastructure improvements, permit and impact fees, and lot coverage. (4) amend the zoning ordinance qualifications for ministerial projects and adopt a Resolution directing all County Departments to maintain compliance with State-mandated time limits for permit reviews. (5) amend zoning ordinance standards for density bonus and subdivision ordinance standards for map design and approval.

Purpose: To decrease the cost of housing, reduce governmental constraints upon production of affordable housing, and increase the availability of low-cost land for the production of affordable housing.

Funding: Nevada County General Fund.

Responsible Agency: Items (1), (3), and (5) Nevada County Planning Department. Item (2) Nevada County Building Department. Item (4) Nevada County Planning Department and Nevada County Department of Transportation.

Time Frames: Item (1) Ongoing basis. Items (2) through (5) Within 6 months.

Quantifiable Objectives: Policy 8.4a: 44 new units, Policy 8.4b: 720 new units, Policy 8.4g: other items under Policy 8.4: unknown number of units.

Implements: Policy 8.4

IMPLEMENTATION MEASURE 27: HOUSING GRANT AND LOAN PROGRAMS

Action: Apply for and administer grants and loans.

Purpose: To provide low- or no-cost funding for housing rehabilitation and extension of utilities/services to low-income households.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Department of Housing and Community Services.

Time Frame: Ongoing basis.

Quantified Objective: Unknown.

Implements: Policy 8.6

IMPLEMENTATION MEASURE 28: WEATHERIZATION PROGRAMS

Action: Continue County administration of the LIHEAP and DOE Weatherization Programs.

Purpose: To improve the quality of housing for low-income households.

Funding: State Department of Economic Opportunity.

Responsible Agency: Nevada County Department of Housing and Community Service.

Time Frame: Ongoing Basis.

Quantified Objective: 940 households.

Implements: Policy 8.7

IMPLEMENTATION MEASURE 29: ENERGY CRISIS INTERVENTION PROGRAM

Action: Continue County administration of the Energy Crisis Intervention Program.

Purpose: To provide financial assistance to low-income households for housing energy costs.

Funding: State Department of Economic Opportunity.

Responsible Agency: Nevada County Department of Housing and Community Services.

Time Frame: Ongoing basis.

Quantified Objective: 2260 households.

Implements: Policy 8.7

IMPLEMENTATION MEASURE 30: BUILDING CODE ENFORCEMENT

Action: Continue to enforce existing ordinance.

Purpose: To maintain and improve the quality of existing housing.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Building Department and Nevada County Planning Department

Time Frame: Ongoing basis.

Quantifiable Objective: Unknown number of units.

Implements: Policy 8.21; Policy 8.22

IMPLEMENTATION MEASURE 31: INNOVATIVE SUBDIVISION DESIGN

Action: Work with developers during the subdivision approval process, encourage those techniques that provide for maintenance, preservation, and use of open space as a part of a planned development.

Purpose: To decrease the cost of housing.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Planning Department

Time Frame: Ongoing basis.

Implements: Policy 8.24

IMPLEMENTATION MEASURE 32: LAND USE MONITORING

Action: Monitor existing land uses.

Purpose: To maintain an adequate housing supply.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Planning Department.

Time Frame: Once every five years as part of General Plan Review.

Implements: Policy 8.8

IMPLEMENTATION MEASURE 33: HOUSING IMPLEMENTATION MONITORING

Action: Monitor assistance, approval, and construction of housing units.

Purpose: To ensure achievement of adopted quantified objectives.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Department of Housing and Community Services.

Time Frame: Annually

Implements: Policy 8.3; Policy 8.8; Policy 8.20

IMPLEMENTATION MEASURE 34: ASSISTANCE TO HOUSING PROVIDERS

Actions: (a) Pursuit of Federal and/or State grants for housing development, rehabilitation, and conservation; (b) Where feasible, direct monetary assistance for agency support and housing assistance; (c) Provide technical assistance from County departments utilized by said organizations.

Purpose: To assist the Nevada County Housing Development Corporation, Rural California Housing Corporation, Community Spirit Corporation, Emergency Assistance Coalition, and other private

non-profit and for-profit organizations involved in addressing affordable housing issues.

Funding: Nevada County General Fund and Federal and State grants.

Responsible Agency: Nevada County Department of Housing and Community Services.

Time Frame: Ongoing basis.

Implements: Policy 8.10

IMPLEMENTATION MEASURE 35: HOUSING INFORMATION CENTER

Action: Provide housing information.

Purpose: To provide a central location for housing information.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Department of Housing and Community Services.

Time Frame: Within 12 months from adoption of the General Plan

Implements: Policy 8.11

IMPLEMENTATION MEASURE 36: SECTION 8 HOUSING PROGRAM

Action: Formal notification of need to the State Department of Housing and Community Development.

Purpose: To provide cost assistance to low-income renters.

Funding: Nevada County General Fund for administrative purposes.

Responsible Agency: Nevada County Department of Housing and Community Services.

Time Frame: Ongoing basis.

Quantifiable Objective: 320 units receiving cost assistance.

Implements: Policy 8.12

IMPLEMENTATION MEASURE 37: DISCOURAGE HOUSING DISCRIMINATION

Actions: Resolution passed by the Board of Supervisors directing all County department heads to direct all local housing discrimination complaints to the U.S. Department of Fair Employment and Housing and the Sate Department of Fair Employment and Housing. An information dissemination program shall be implemented providing educational material on government services provided to the public. Said program shall include the posting of such information in public places and advertising in the local media.

Purpose: Discourage housing discrimination.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Department of Housing and Community Services.

Time Frame: Within 3 months from adoption of the General Plan

Implements: Policy 8.18

IMPLEMENTATION MEASURE 38: EMERGENCY SHELTER HOUSING

Actions: Amend the zoning ordinance to allow such housing as a permitted use for up to six persons per unit and as a conditionally-allowed use for more than six persons per unit for those districts consistent with the stated map designations.

Purpose: To assist in the provision of an adequate supply of emergency shelter housing.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Planning Department.

Time Frame: Within 6 months from adoption of the General Plan

Quantified Objective: Unknown number of new units.

Implements: Policy 8.13

IMPLEMENTATION MEASURE 39: TRANSITIONAL HOUSING

Actions: Amend the zoning ordinance to allow such housing as a permitted use for up to six persons per unit and as a conditionally-allowed use for more than six persons per unit for those districts consistent with the stated map designations.

Purpose: To assist in the provision of an adequate supply of transitional housing.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Planning Department.

Time Frame: Within 6 months from adoption of the General Plan

Quantified Objective: Unknown number of new units.

Implements: Policy 8.14

IMPLEMENTATION MEASURE 40: TEMPORARY USE OF RECREATIONAL VEHICLES

Action: Amend Zoning Ordinance

Purpose: To assist property owners in establishing temporary residences prior to, and during, construction of a permanent single-family home.

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department.

Time Frame: Within 6 months from adoption of the General Plan

Quantified Objective: Unknown number of new units.

Implements: Policy 8.15

IMPLEMENTATION MEASURE 41: COUNTY HOUSING AUTHORITY

Action: Continued funding of the Nevada County Housing Authority.

Purpose: To provide the organization necessary to implement existing programs and create and implement new programs to effectively address the affordable housing issue.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Department of Administration.

Time Frame: Ongoing basis

Implements: Policy 8.16

IMPLEMENTATION MEASURE 42: LAND SUPPLY FOR REGIONAL HOUSING NEEDS

Actions: Amend the zoning district maps.

Purposes: To accommodate production of affordable housing by designating urban-level residential density within urban fringe and other areas served by existing infrastructure; to reduce constraints upon production of affordable housing due to limited public water and/or sewage treatment services.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Planning Department.

Time Frame: Within 6 months.

Quantified Objective: 1,261 new units.

Implements: Policy 8.17

IMPLEMENTATION MEASURE 43: REVISE MULTI-FAMILY ZONING DISTRICTS

Action: Revise Zoning Ordinance provisions for minimum density development in multi-family zoning districts.

Purpose: To ensure development of multi-family residential projects at the highest practical densities, maximize residential utilization of public services, and ensure construction of affordable housing units.

Funding: Nevada County General Fund.

Responsible Agency: Nevada County Planning Department.

Time Frame: Within 6 months from adoption of the General Plan

Quantified Objective: Unknown number of units.

Implements: Policy 8.19

IMPLEMENTATION MEASURE 44: NOISE STANDARDS AND NOISE ELEMENT MANUAL

Action: Adopt noise standards and Noise Element Manual to minimize noise impacts from noise generating land uses

Purpose: Establish measures to minimize impacts from noise generating land uses

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Within 12 months from adoption of the General Plan

Implements: Policy 9.4

IMPLEMENTATION MEASURE 45: FIRE MARSHAL

Action: Establish the Office of County Fire Marshal

Purpose: To provide for the coordination of development with respect to fire prevention and safety

Funding: Nevada County General Fund

Responsible Agency: Office of County Administrator

Time Frame: Within 6 months from adoption of the General Plan

Implements: Policy 10.4

IMPLEMENTATION MEASURE 46: WATER CONSERVATION STANDARDS

Action: Adoption of County Water Conservation Standards

Purpose: Assure the adoption of water conservation standards consistent with State guidelines

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Within 18 months from adoption of the General Plan

Implements: Policy 11.1

IMPLEMENTATION MEASURE 47: AMEND RIGHT TO FARM ORDINANCE

Action: Amend the Right to Farm Ordinance to require all sellers to notify prospective buyers of rights to engage in agricultural operations

Purpose: Minimize potential conflicts by educating potential buyers of property in rural areas

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Within six months from adoption of the General Plan

Implements: Policy 16.6

IMPLEMENTATION MEASURE 48: SURFACE MINING IN THE "ME" DISTRICT

Action: Amend the Zoning Ordinance to provide for surface mining only in the "ME" District.

Purpose: To allow for surface mining only in the "ME" District and to remove surface mining as an allowable use in other district..

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Within six months from adoption of the General Plan; and ongoing

Implements: Policy 17.15

IMPLEMENTATION MEASURE 49: NOTIFICATION OF MRZ-2 PROPERTY OWNERS

Action: Notify all existing and subsequent propety owners of MRZ-2 lands of the existence of significant mineral deposits and the potential for mining

Purpose: Provide for awareness by property owners of the potential for mining to occur where important minerals are present.

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Initially, within one year from adoption of the General Plan; and ongoing

Implements: Policy 17.16

IMPLEMENTATION MEASURE 50: RIVER AND FLOODPLAIN DEVELOPMENT PLAN

Action: Prepare a comprehensive plan for river and floodplain development

Purpose: Ensure that aggregate operations are appropriately located and developed.

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Within one year from adoption of the General Plan

Implements: Policy 17.23

IMPLEMENTATION MEASURE 51: COMMUNITY REGION DESIGN GUIDELINES

Action: Prepare and adopt Community Region Design Guidelines as part of Comprehensive Site Development Standards

Purpose: Provide guidelines for review of basic design features of new development to ensure that aesthetic considerations such as community identity, preservation of landforms, and viewsheds are considered in the design of new development

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Within one year from adoption of the General Plan

Implements: Policy 18.1

IMPLEMENTATION MEASURE 52: AMEND SCENIC CORRIDOR COMBINING DISTRICT

Action: Adopt amended Zoning District Regulations

Purpose: Establish discretionary authority to increase landscaping within the SC District

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Within 6 months from adoption of the General Plan

Implements: Policy 18.8

IMPLEMENTATION MEASURE 53: SCENIC CORRIDOR PLAN

Action: Adopt a County Scenic Corridor Plan and standards for preparation of County Scenic Highway Reports

Purpose: Establish a program to designate scenic corridors along County routes

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Within 18 months from adoption of the General Plan

Implements: Policy 18.9

IMPLEMENTATION MEASURE 54: CULTURAL RESOURCES ORDINANCE

Action: Adopt a Cultural Resource Ordinance

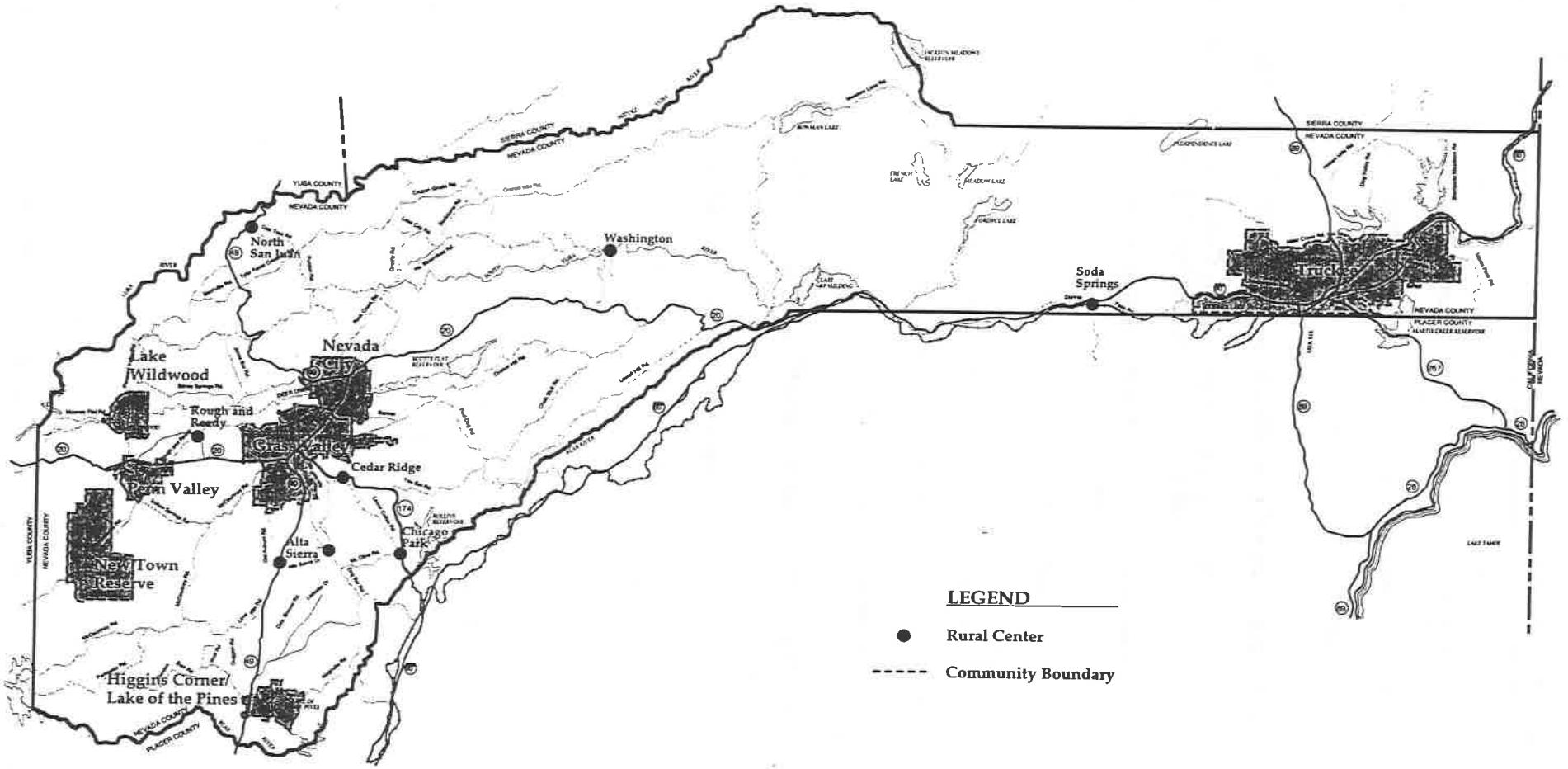
Purpose: Provide for the preservation of cultural and historic resources

Funding: Nevada County General Fund

Responsible Agency: Nevada County Planning Department

Time Frame: Within 12 months from adoption of the General Plan

Implements: Policy 19.1

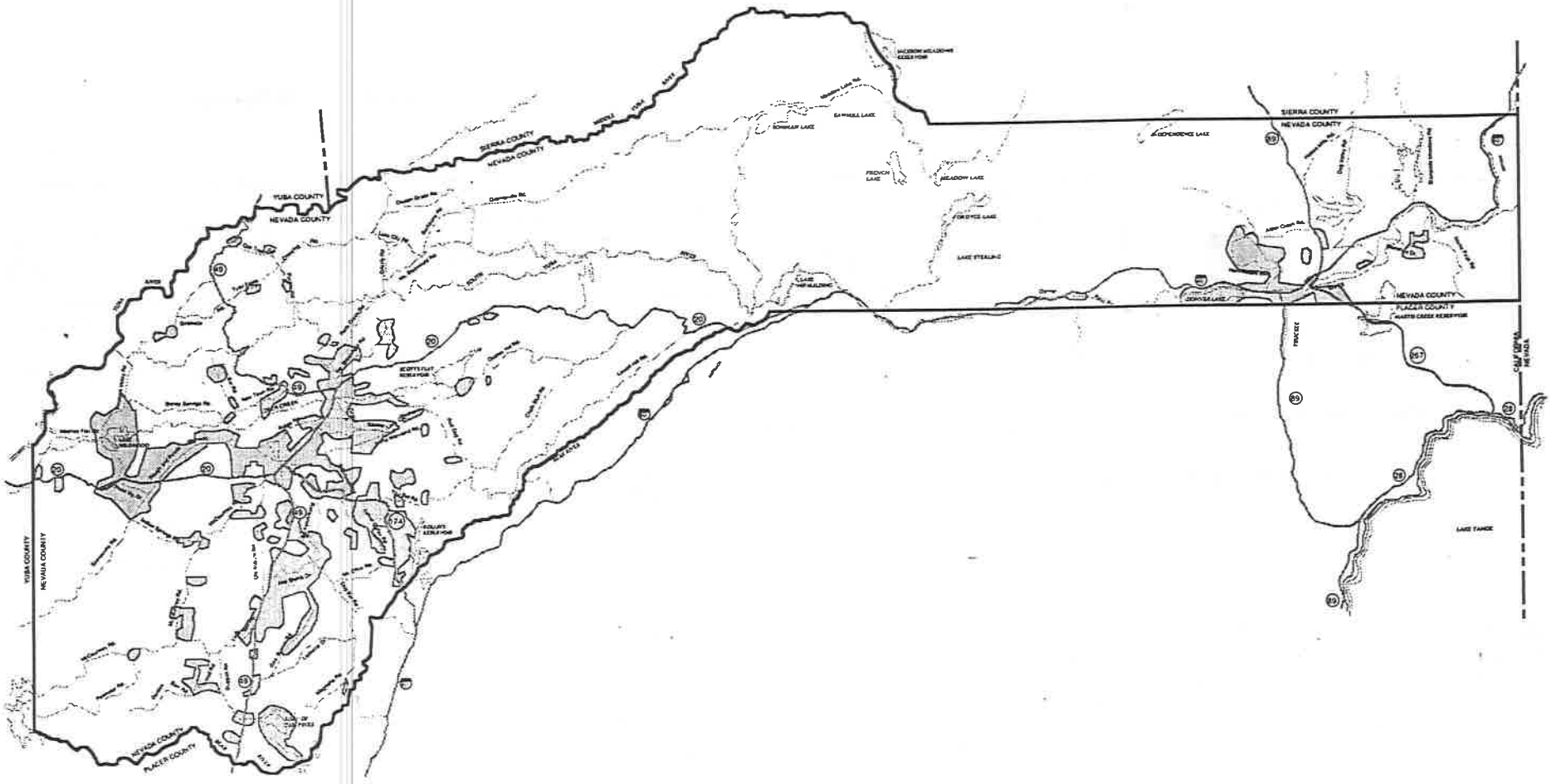


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NEVADA COUNTY GENERAL PLAN
Community Regions

1" = 25,000'

FIGURE 3-2



Source: Harland Bartholomew & Associates, Inc., 1991.

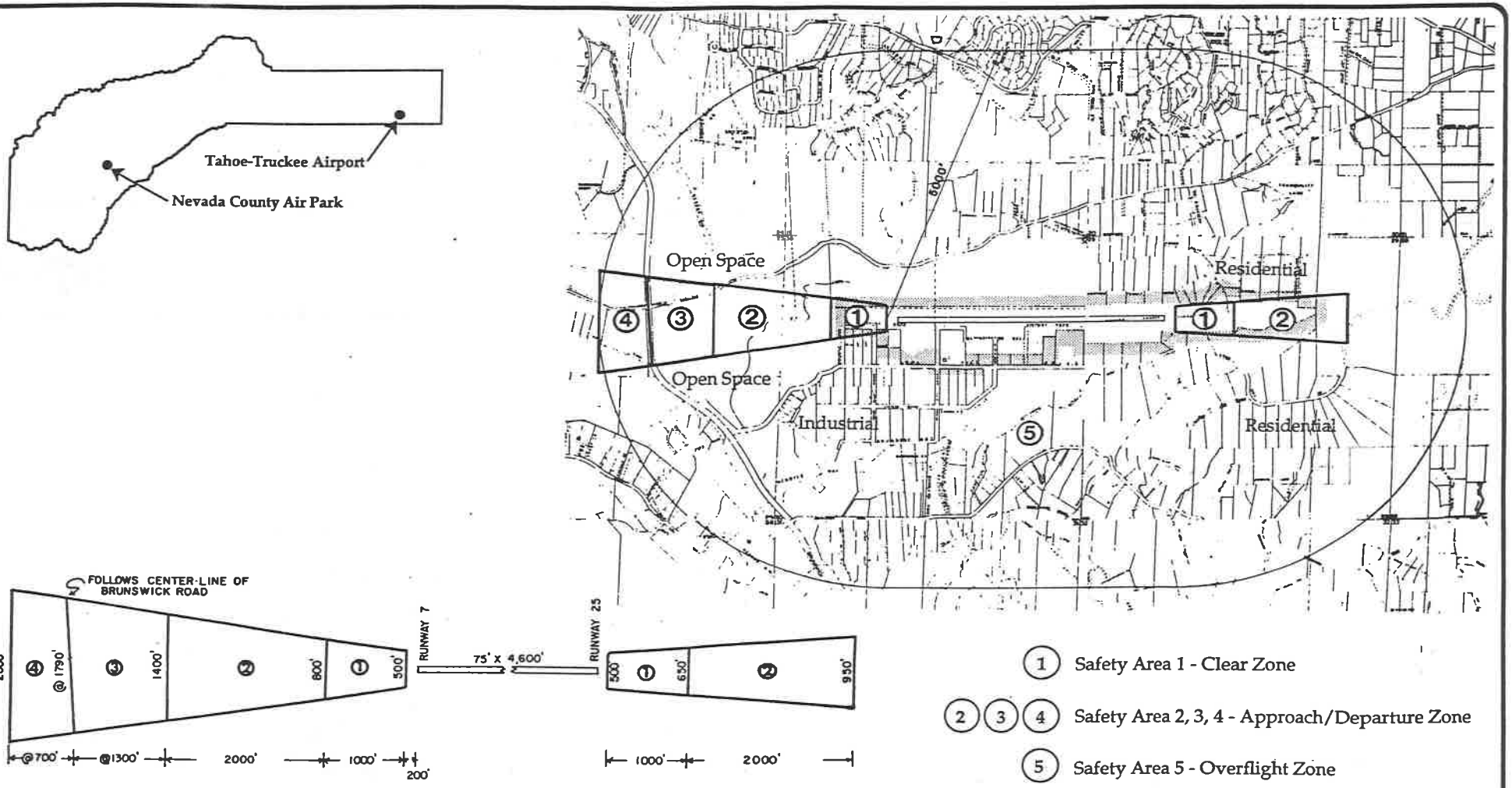
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Sacramento, California

NEVADA COUNTY GENERAL PLAN

Areas of Concentrated Development

1" = 25,000'

FIGURE 4.1-1



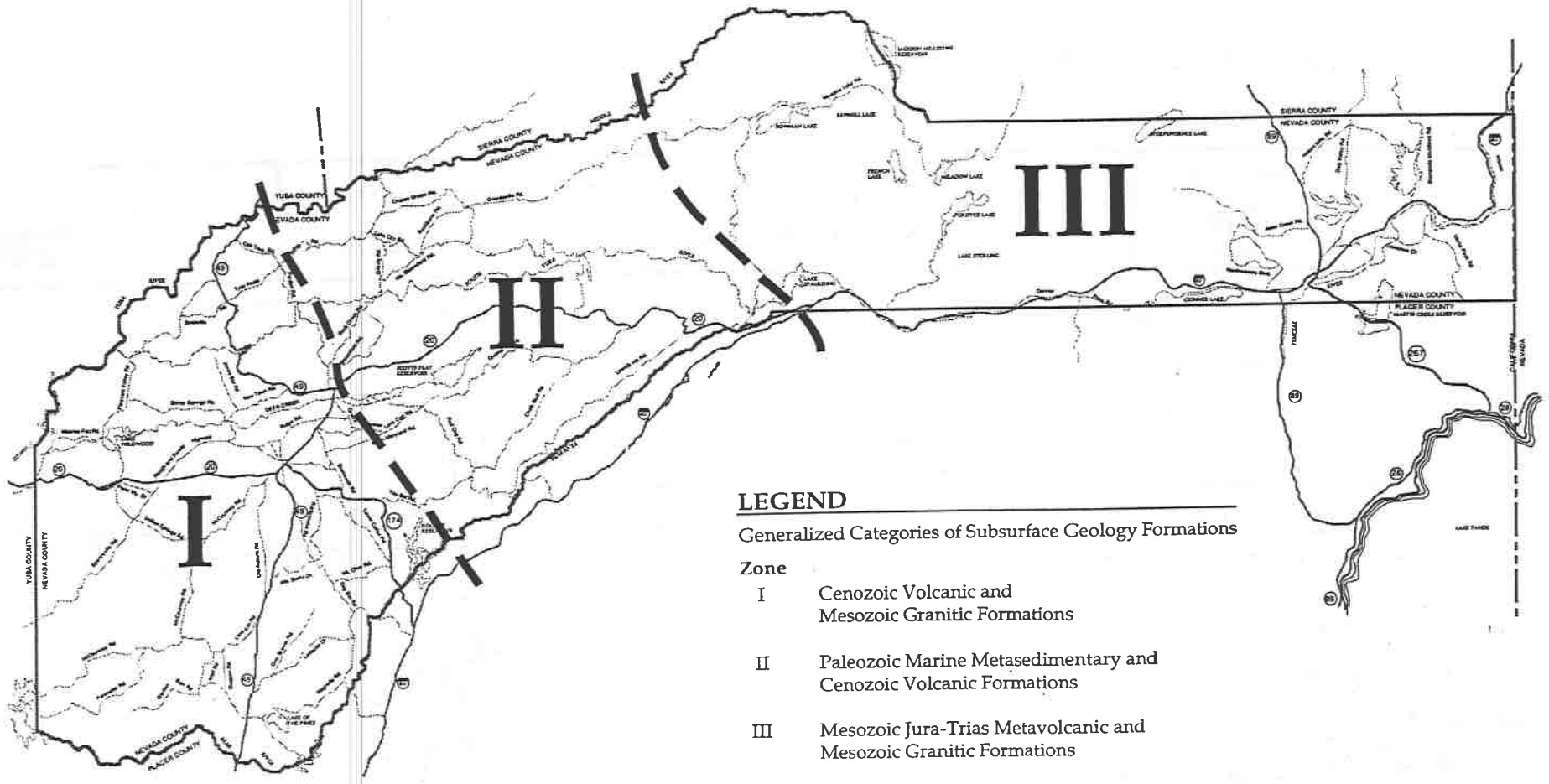
Source: Nevada County Air Park, Comprehensive Land Use Plan, 1987.

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NEVADA COUNTY GENERAL PLAN
Airport Safety Areas - Nevada County Air Park

Not to Scale

FIGURE 4.1-2



Source: Nevada County General Plan 1980.

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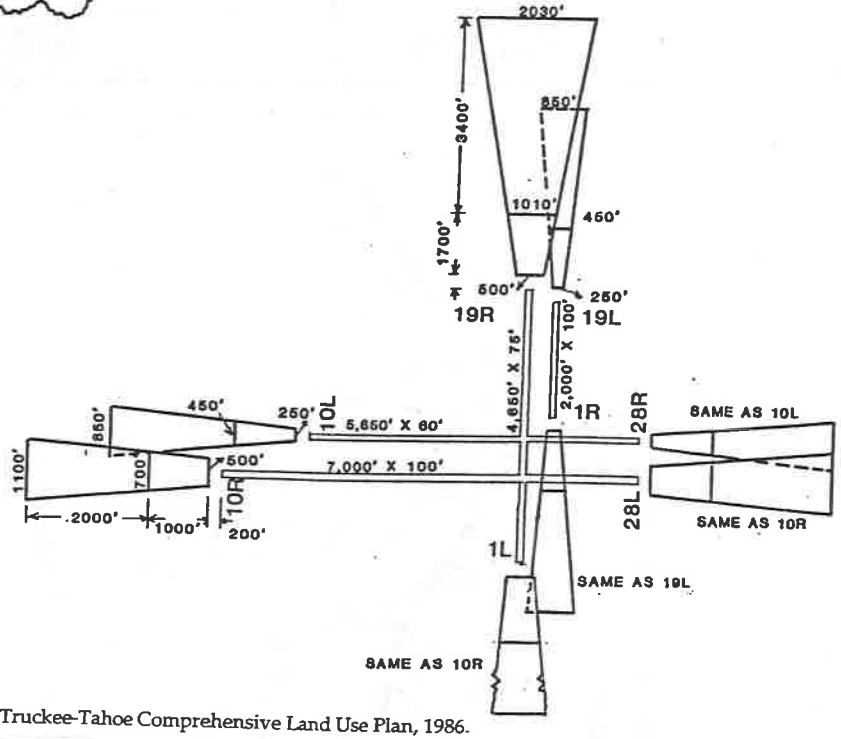
NEVADA COUNTY GENERAL PLAN

Geologic Substructure

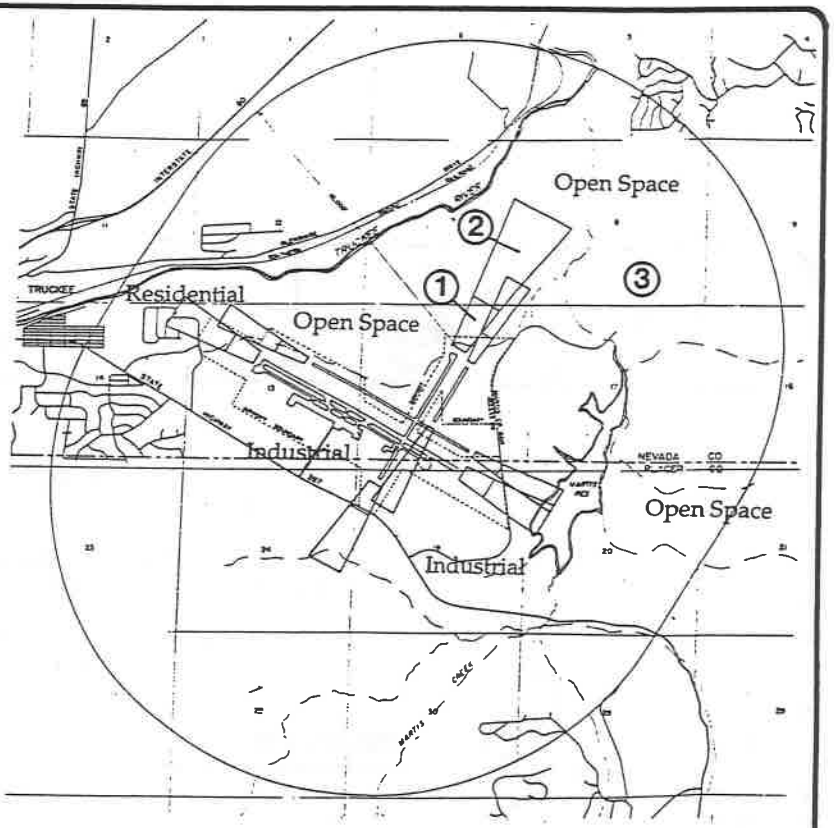
1" = 25,000'

FIGURE 4.2-1





Source: Truckee-Tahoe Comprehensive Land Use Plan, 1986.



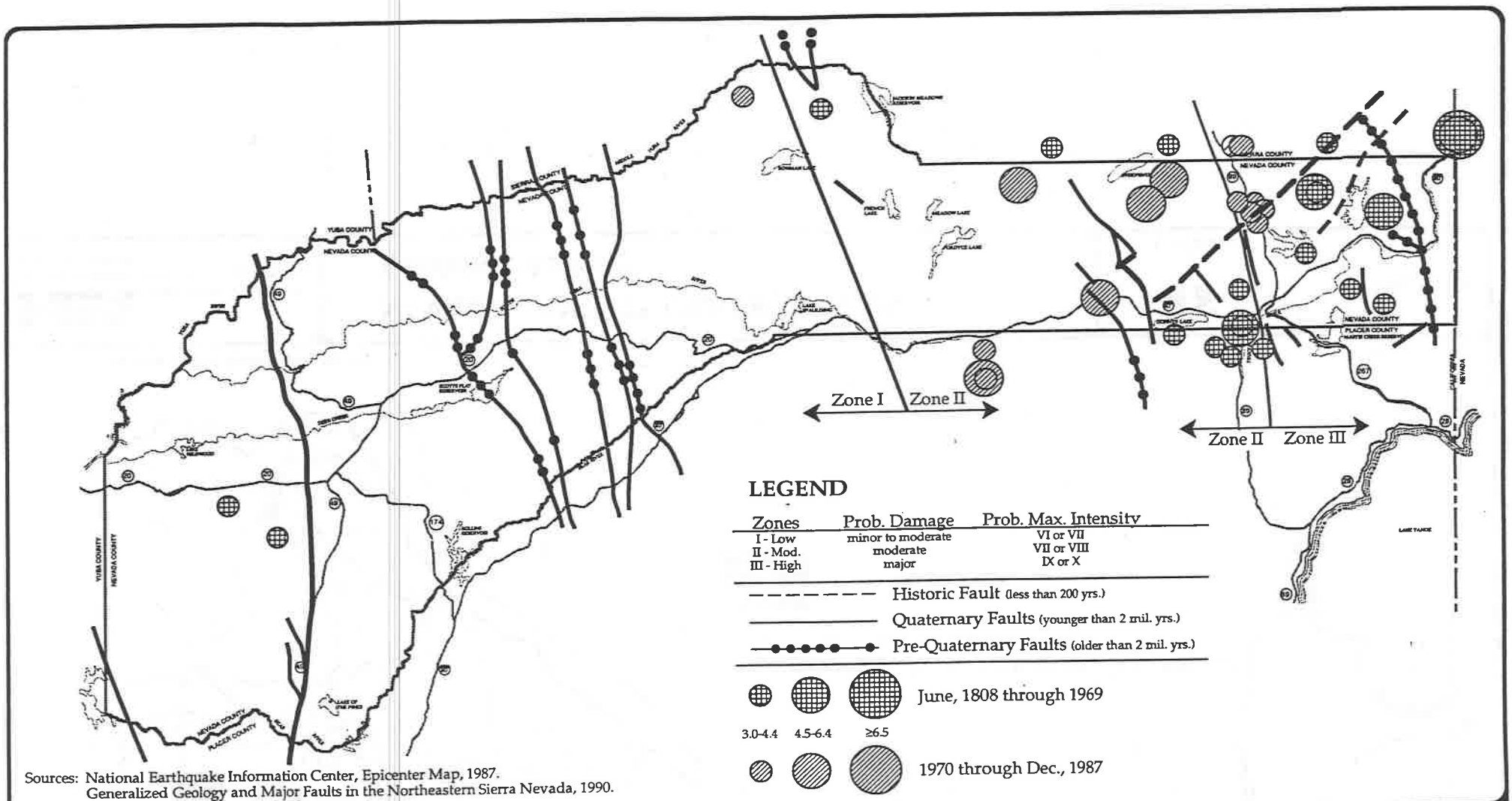
1. Safety Area 1 - Clear Zone
2. Safety Area 2 - Approach/Departure Zone
3. Safety Area 3 - Overflight Zone

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NEVADA COUNTY GENERAL PLAN
Airport Safety Areas - Truckee-Tahoe Airport

Not to Scale

FIGURE 4.1-3



Sources: National Earthquake Information Center, Epicenter Map, 1987.
Generalized Geology and Major Faults in the Northeastern Sierra Nevada, 1990.
O.E.S. Emergency Operations Plan, 1990.

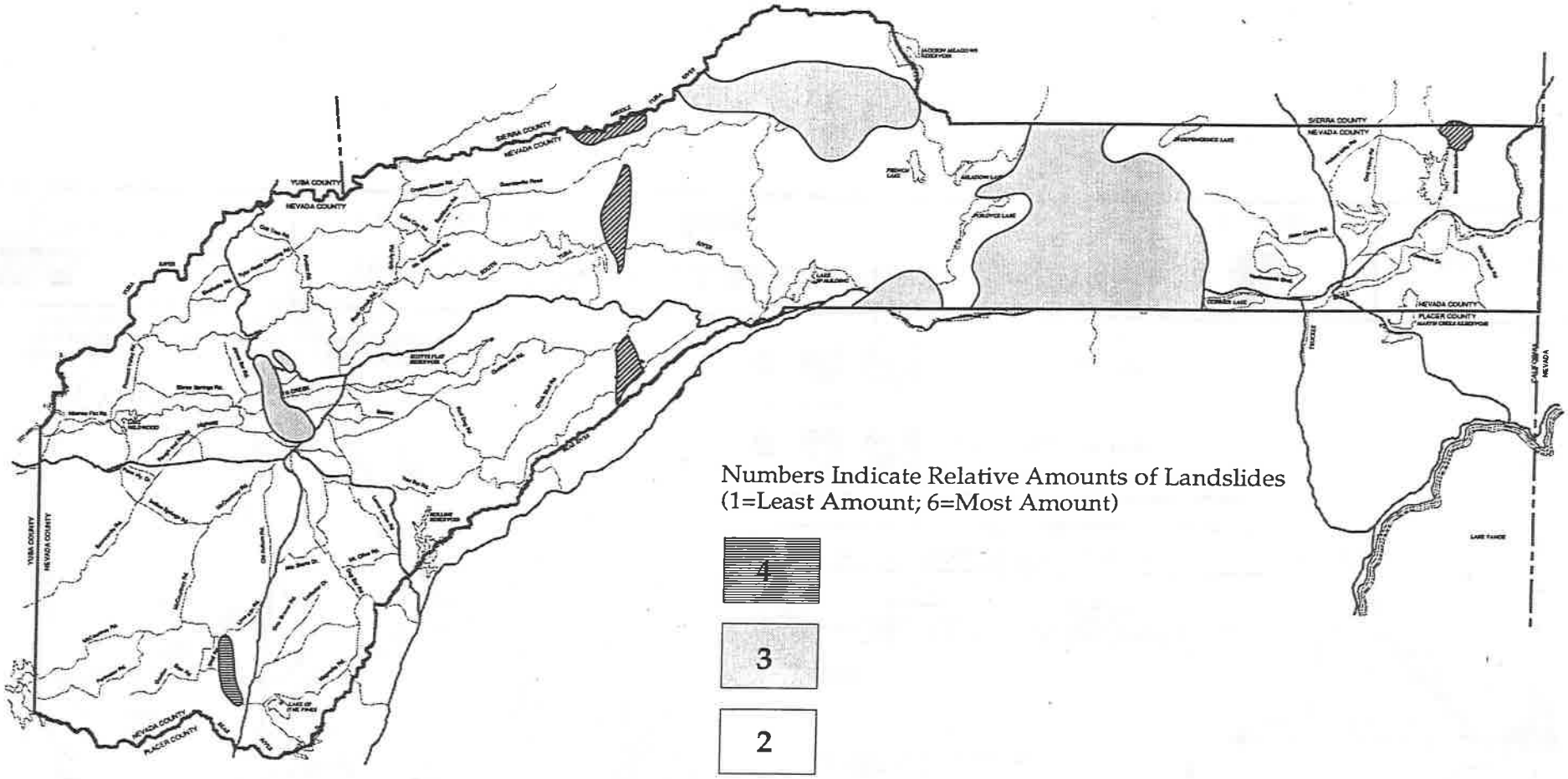
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NEVADA COUNTY GENERAL PLAN

Epicenters and Faults Map

1" = 25,000'

FIGURE 4.2-2



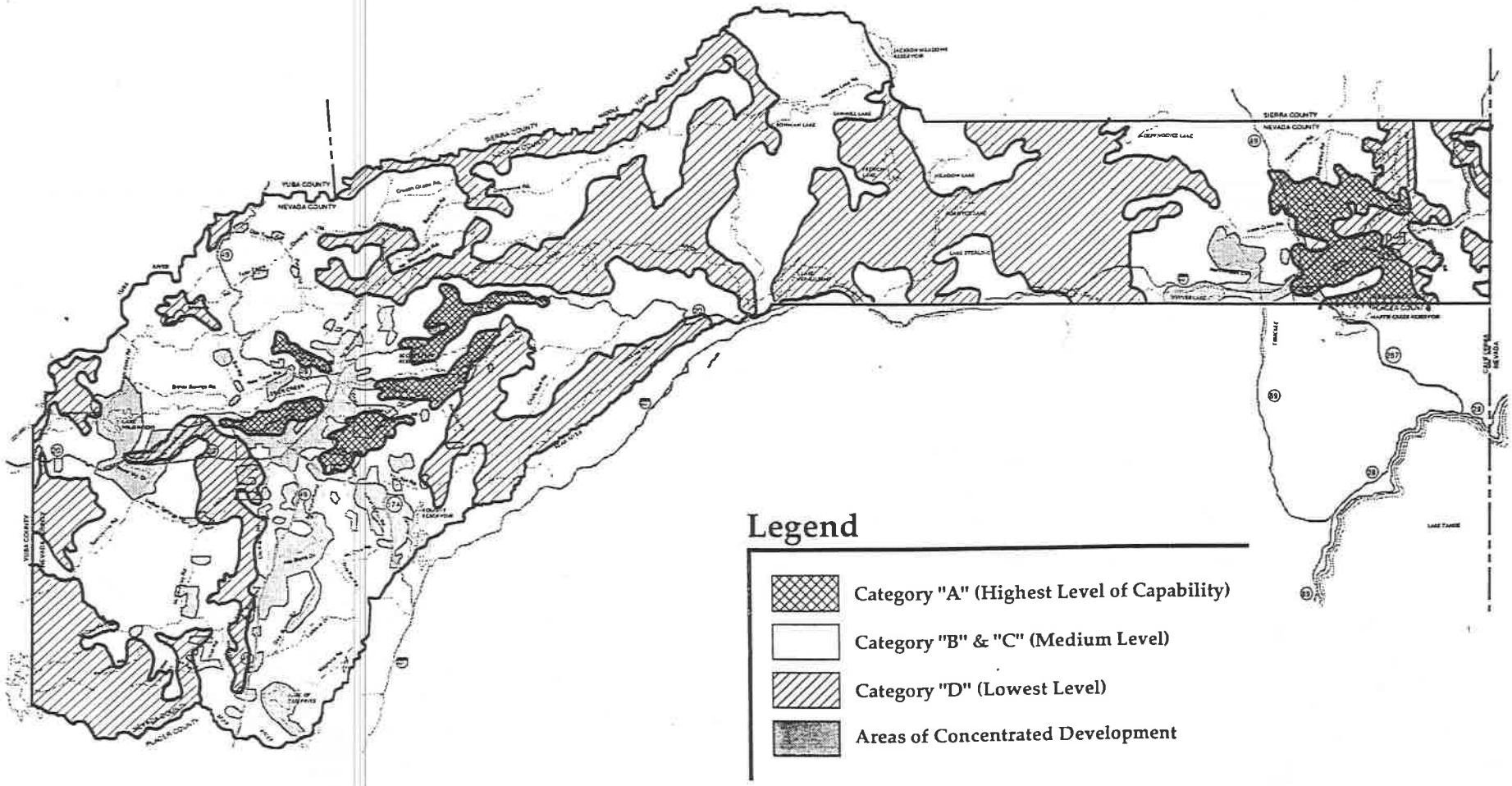
Source: U.S. Geological Service, Open File Report, 1970.

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NEVADA COUNTY GENERAL PLAN
Landslide Activity

1" = 25,000'

FIGURE 4.2-3



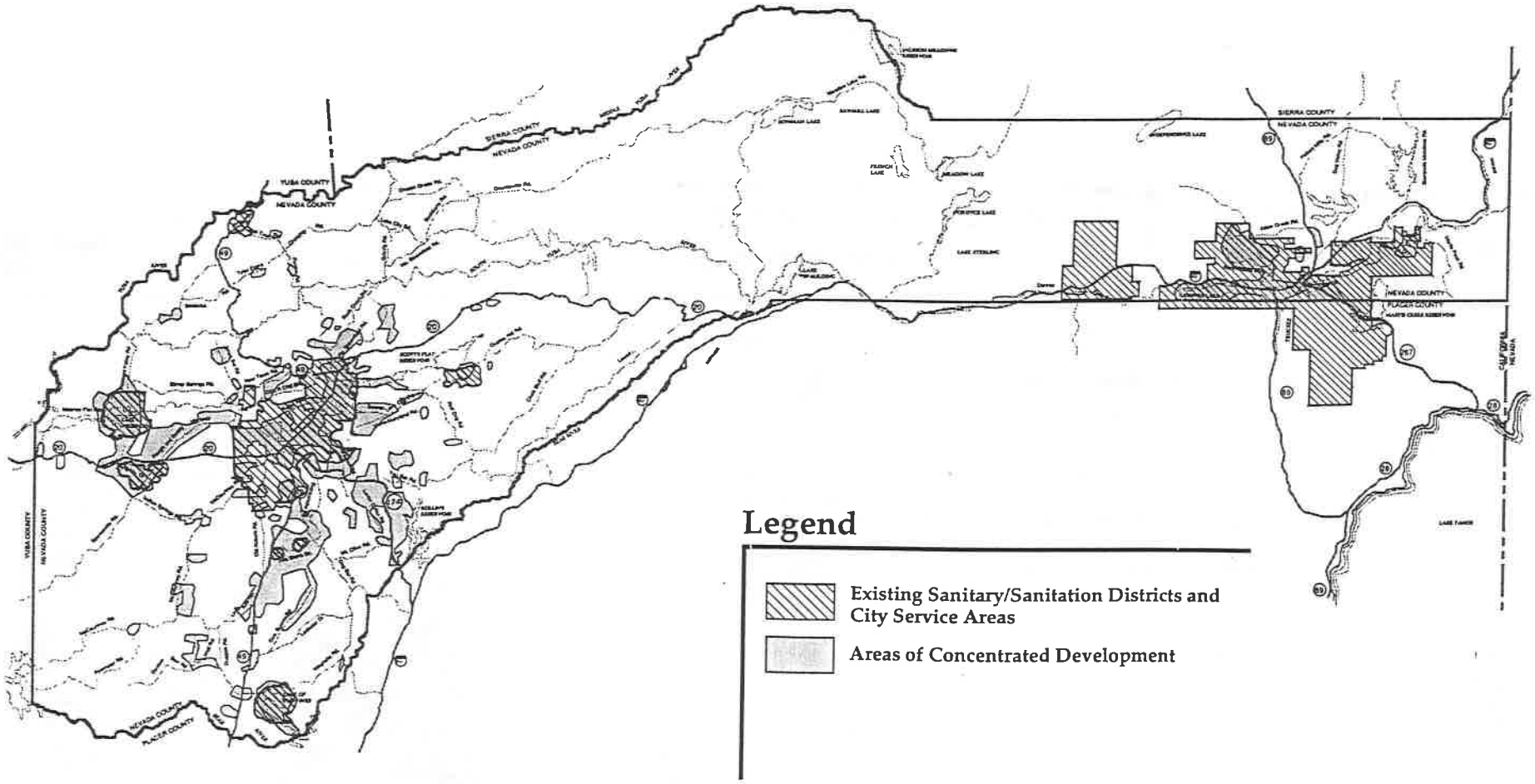
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NEVADA COUNTY GENERAL PLAN

Septic System Capabilities & Areas of Concentrated Development

1" = 25,000'

FIGURE 4.2-4



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NEVADA COUNTY GENERAL PLAN

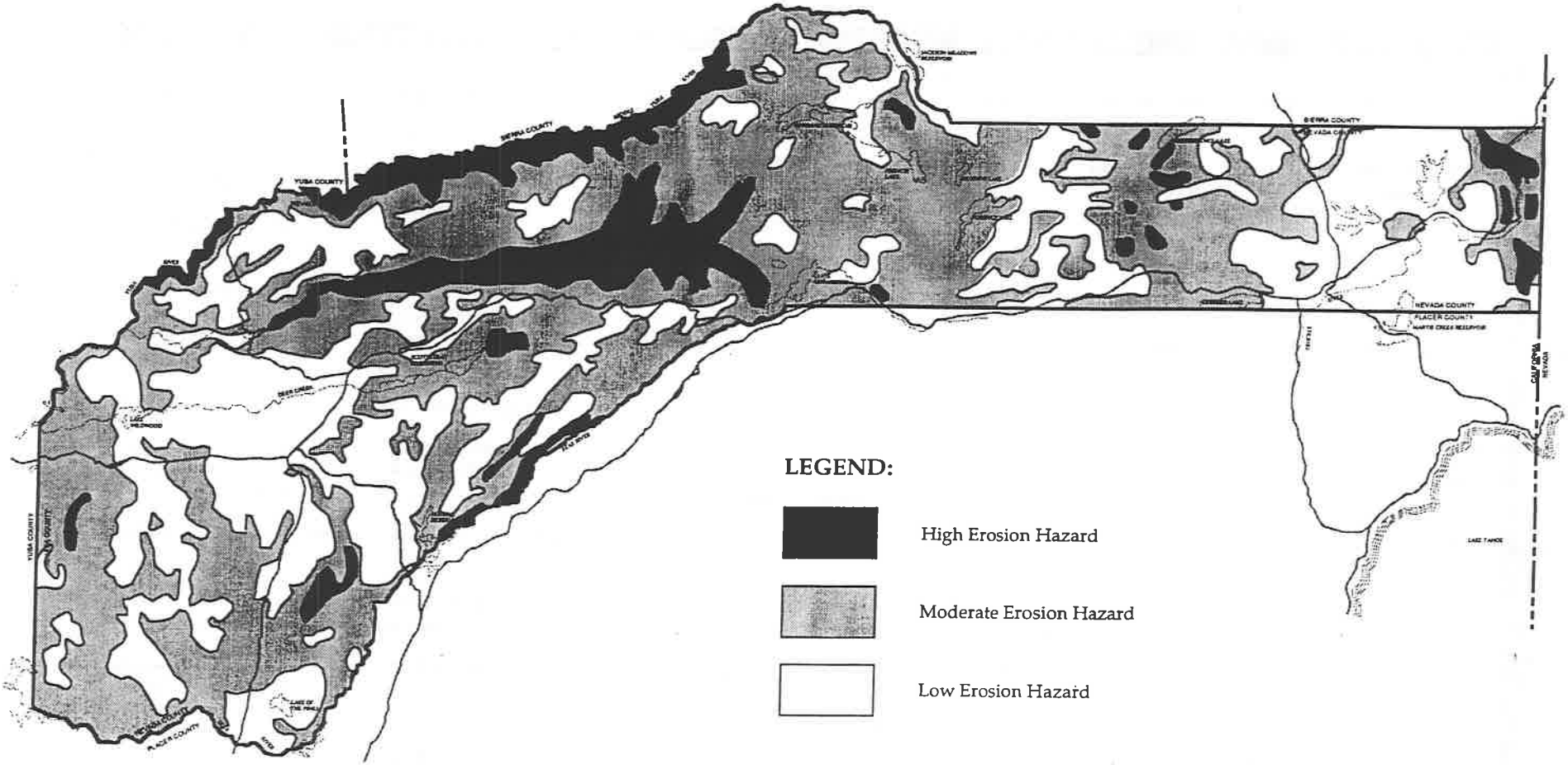
Districts/Service Areas & Areas of Concentrated Development

1" = 25,000'

FIGURE 4.2-5

TABLE 4.2-2
Soil Characteristics

Type of Soil	Topography	Slope	Permeability	Dwelling Limitations	Septic Limitations	Erosion Hazard	Agricultural Capability	Timber Capability
SOIL CLASSIFICATIONS OF THE SOIL CONSERVATION SERVICE								
Soils of the Lower and Middle Foothills								
Ahwanhee - Sierra Association	gently sloping to steep	2-50%	moderately slow to moderately rapid	slight to severe	severe	moderate to high	III-VII	low
Auburn - Sobrante Association	undulating to steep	2-50%	very slow to moderate	moderate to severe	severe	moderate to very high	III-VI	low
Trabuco - Sierra Association	gently rolling to steep	2-50%	very slow to moderately slow	slight to severe	severe	slight to very high	II-VII	low
Soils of the Mountainous Uplands								
Aiken - Cohasset Association	gently sloping to steep	2-50%	moderately slow to moderatley rapid	slight to severe	slight to severe	high	II-VI	very high
Boomer-Sites - Sobrante Association	undulating to steep	2-50%	slow to moderate	slight to severe	severe	slight to high	II-VII	low to very high
Hoda-Chaix - Musick Association	gently sloping to very steep	5-75%	moderately slow	slight to severe	severe	moderate to high	III-VII	moderately high to very high
Josephine-Sites - Mariposa Association	undulating to very steep	2-75%	moderately slow to moderate	slight to severe	severe	moderate to very high	II-VII	moderately high to very high
Secca - Boomer Association	undulating to steep	2-50%	very slow to moderate	moderate to severe	severe	slight to high	III-VII	low to very high
Placer Diggings-Tailings - Horseshoe Association	gently rolling to extremely steep	2-75% 2-75%	moderately slow to very rapid	moderate to severe	variable to severe	variable	III-VII	low to very high
SOIL CLASSIFICATIONS OF THE TAHOE NATIONAL FOREST								
Soils of the Westside								
Hurlburt-Deadwood-Putt	nearly level to fairly steep	2-30% 2-30%	moderately slow to rapid	moderate to severe	severe	moderate to high	N/A	N/A
McCarthy-Crozier-Ledmount	nearly level to fairly steep	2-30% 2-30%	moderately slow to rapid	moderate to severe	severe	moderate to high	N/A	N/A
Soils of the High Elevation								
Tallac-Meiss	level to very steep	2-75%	very slow to very rapid	moderate to severe	severe	slight to moderate	VI-VII	low to very high
Fugawec-WACA-Ahart	level to very steep	2-75%	very slow to very rapid	moderate to severe	severe	moderate to high	VII	low to very high
Rock outcrop	level to very steep	2-75%	very slow to very rapid	severe	severe	high	VII	low to very high
Soils of the Eastside								
Ever-Martis	nearly level to steep	2-50%	rapid over slow	moderate to severe	severe	moderate to high	N/A	N/A
Trojan-Kyburg-Portola	level to very steep	2-30%	moderately slow	moderate to severe s	evere	high	N/A	N/A



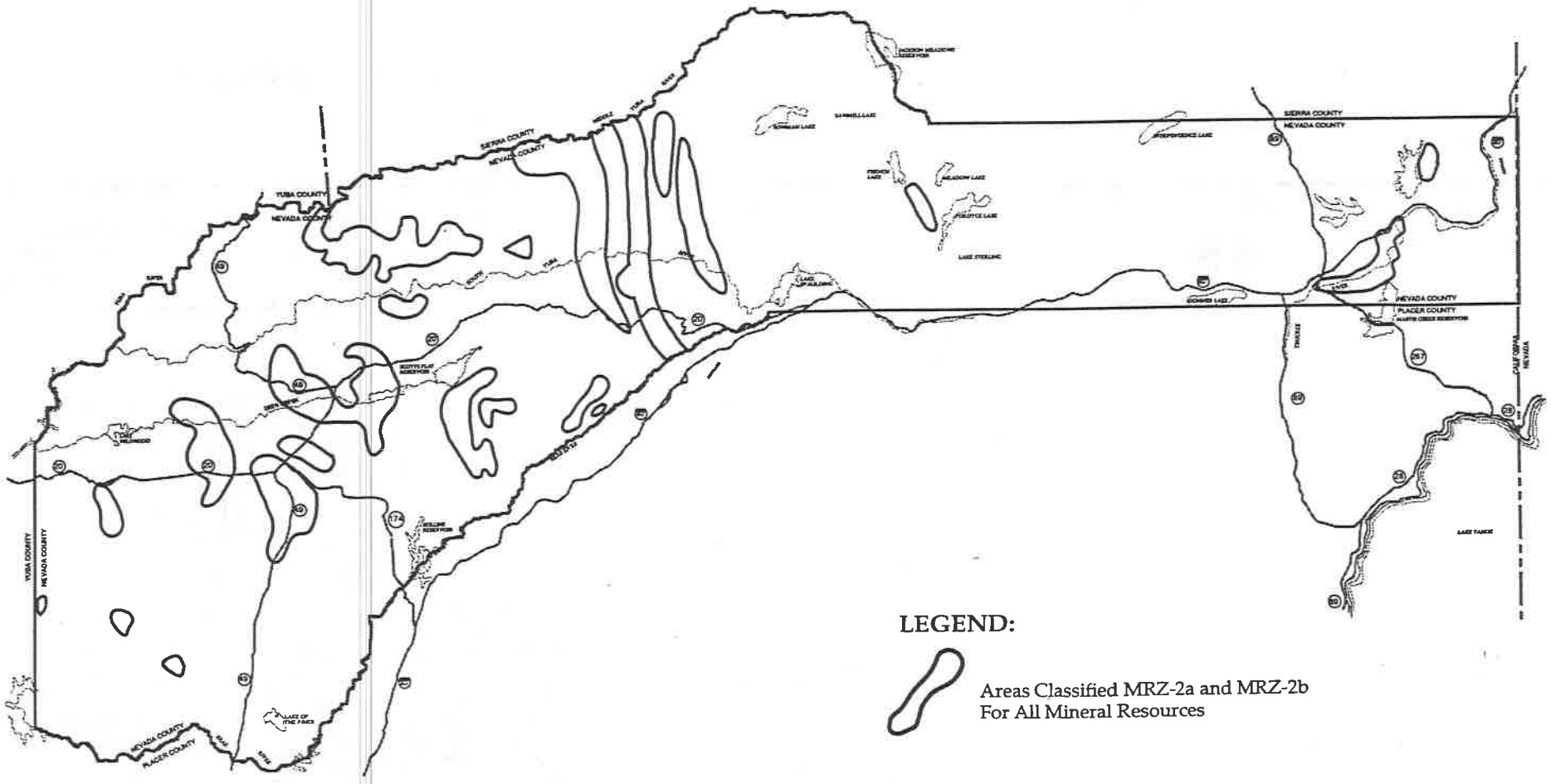
Source: Nevada County General Plan, Technical Data, 1980.

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NEVADA COUNTY GENERAL PLAN
Erosion Hazard

1" = 25,000'

FIGURE 4.2-6



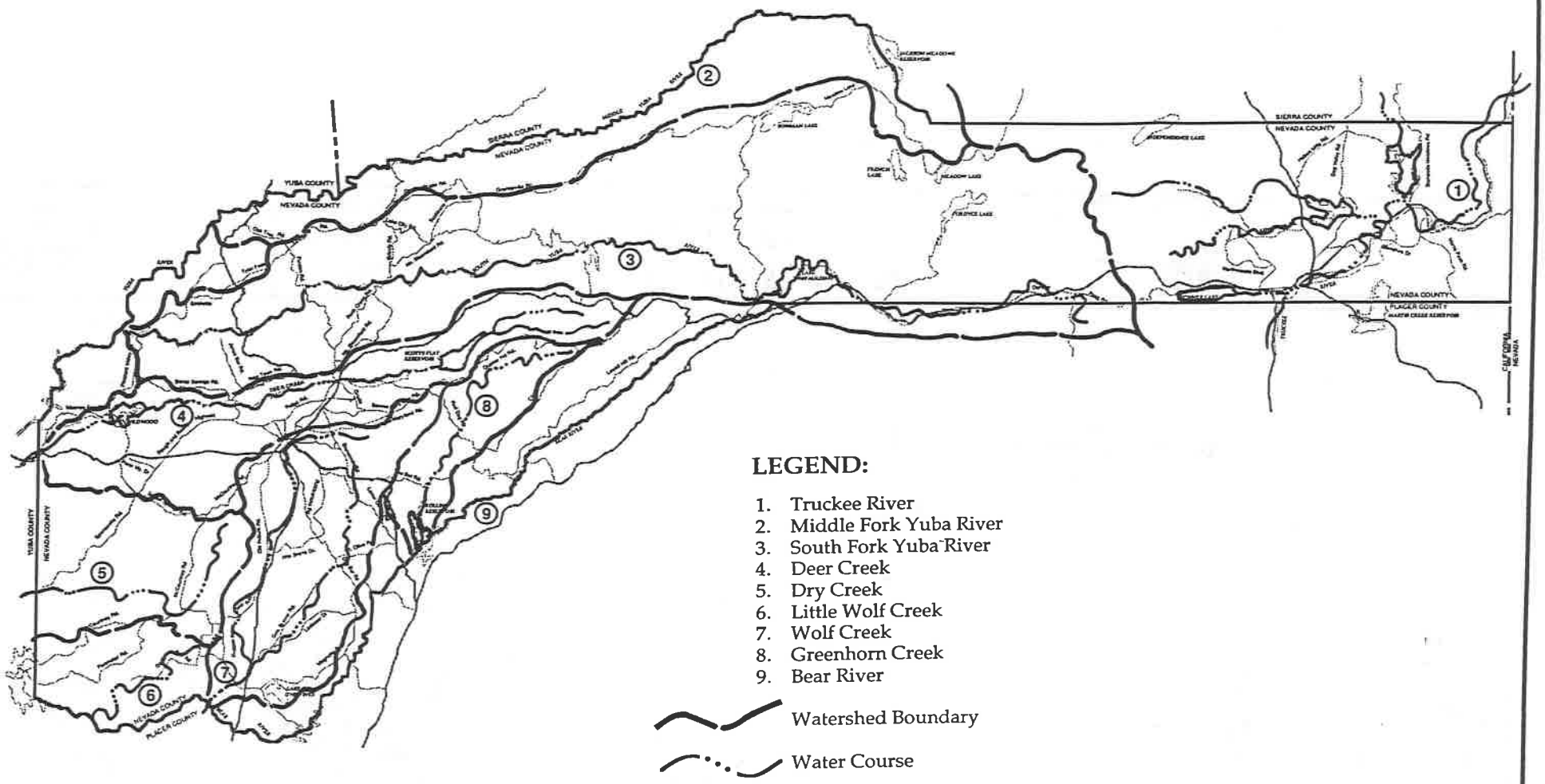
Source: California State Geologist, 1991.

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NEVADA COUNTY GENERAL PLAN
Mineral Land Classification Map
(Areas Containing Potentially Significant Mineral Deposits)

1" = 25,000'

FIGURE 4.2-7



LEGEND:

1. Truckee River
2. Middle Fork Yuba River
3. South Fork Yuba River
4. Deer Creek
5. Dry Creek
6. Little Wolf Creek
7. Wolf Creek
8. Greenhorn Creek
9. Bear River

Watershed Boundary

Water Course

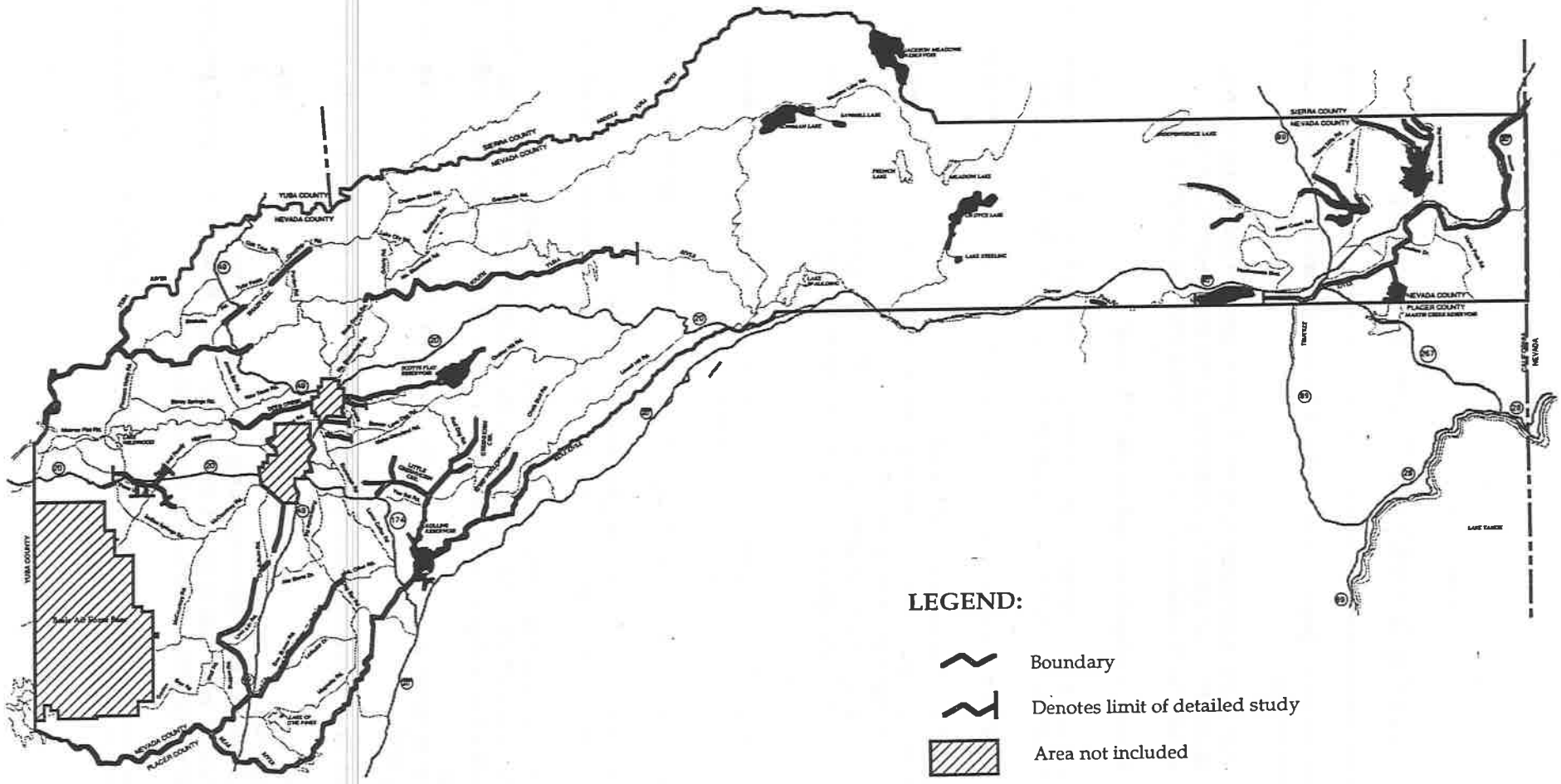
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NEVADA COUNTY GENERAL PLAN

Drainage Basins & Major Tributaries

1" = 25,000'

FIGURE 4.3-1



Source: Federal Emergency Management Agency Flood Maps

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NEVADA COUNTY GENERAL PLAN
Flood Potential Areas (up to 500 year)

1" = 25,000'

FIGURE 4.3-2

Table 4.3-2

Recommended Septic Tank/Leach Fields System Study

A. Selection of representative on-site disposal system locations from across western Nevada County upon which sampling is to be conducted.

1). On-site system locations should be representative of the different areas of soil characteristics.
2). On-site system locations should be geographically dispersed across the western County.
3). On-site system locations should be representative of the different land use classifications.

B. Disposal systems should be inspected and observed for the following:

1). Failure of the disposal system as evidenced by daylighting of sewage from the leach field or from below the leach field. Installation of leach field inspection wells would be advantageous in many instances.
2). Flooding of the leach field area from surface drainages or streams. Ponding of water over the leach field.
3). The existence of high groundwater in the area of disposal.
4). Proper wastewater disposal design, i.e. septic tank size, leach field location, setback from buildings and property lines, as well as impervious cover over leach field area.
5). Existence and location of well supplies on the same parcel and surrounding area.
6). Funding mechanisms and enforcement agencies should be identified. Study results should be used as a planning and regulatory tool.

C. In order to document conditions of well contamination from on-site disposal systems, water samples should be collected and analyzed to determine contamination.

1). Wells should be sampled at locations which are representative of the different areas of soil characteristics.
2). Wells should be sampled at locations which are geographically dispersed across the western County with a higher concentration of sampling conducted in areas where the density of development is greater.
3). Well locations should be representative of the different land use classifications.
4). Resulting data should be compared with data collected by the Department of Environmental Health in their "Raw Water Certification" program and data gathered for pre-1991 mandatory public water supply source monitoring.
5). Funding mechanisms and enforcement agencies should be identified. Study results should be used as a planning and regulatory tool.

D. Wells should be sampled for constituents affecting drinking water quality which include the following:

1). Bacteriological quality
2). General mineralogical quality
3). Chemical qualities for which drinking water standards have been adopted.
4). Results should be compared with data collected in the DEH "Raw Water Certification" program as well as the pre-1991 mandatory public water supply source monitoring.

E. Survey results should be correlated by variables which include area, soil type, and land use.

TABLE 4.4-1

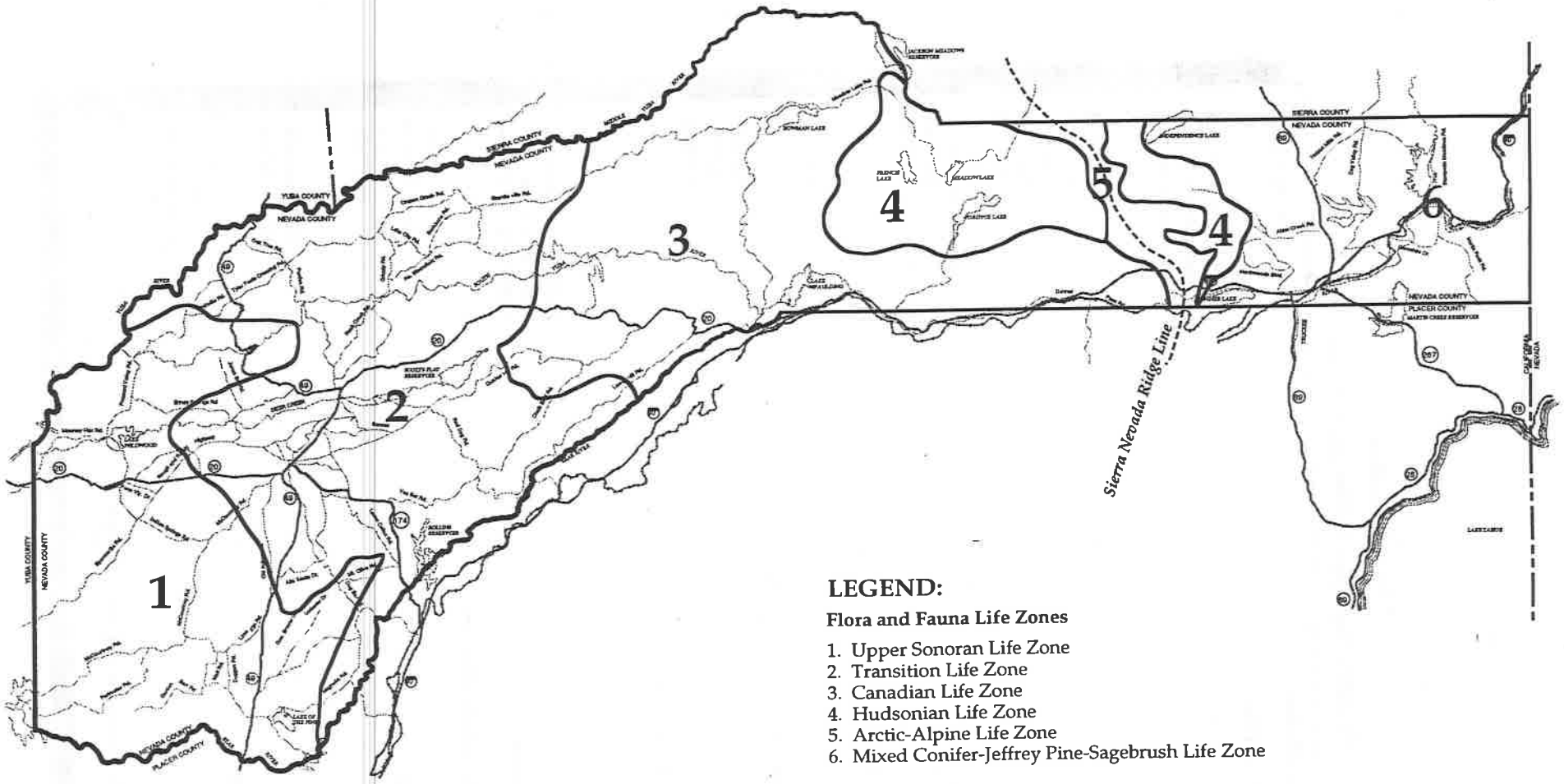
Life Zones and Habitat Types Located in Nevada County

Life Zone	General Characteristics	Typical DFG Habitat Types	Primary Vegetation	Primary Wildlife
Upper Sonoran Life Zone (1)	Exists in western portion of County; grasslands with various shrubs and trees; dry summers, moderate winters; rainfall = 15-40 in./year; growth season = 6-10 months; lack of adequate moisture	Ponderosa Pin; Closed-Cone Pine-Cypress; Montane Hardwood-Conifer; Montane Hardwood; Valley Oak Woodland; Blue Oak-Digger Pine; Valley Foothill Riparian; Montane Chaparral; Mixed Chaparral; Annual Grassland; Fresh Emergent Wetland; Riverine, Lacustrine; Urban, Orchard-Vineyard	Digger Pine; Interior Live Oak; Scotch Broom; Redbud; Buckeye; Chamise; Poison Oak; Toyon; Soap plant; Fawn Lily; Mistletoe; Buttercup; California Poppy; Bush Lupin	Red-legged frog; striped racer; common kingsnake; western rattlesnake, California jay; plain titmouse; wrentit; yellow warbler common wren; California thrasher; brown towhee; brush rabbit; grey fox; ring tail; raccoon; spotted skunk; striped skunk; mule deer; mountain lion mosquito fish; small mouth bass; large mouth bass; foothill yellow-legged frog
Transition Life Zone (2)	Between Upper Sonoran and Canadian Zones; rainfall = 25-80 in./year; growth season = 4-7 months; good for growing timber	Sierran Mixed Conifer; Ponderosa Pine; Closed-Cone Pine-Cypress; Montane Hardwood-Conifer; Montane Hardwood; Montane Riparian; Valley Foothill Riparian; Montane Chaparral; Mixed Chaparral; Chamise-Redshank Chaparral; Wet Meadow; Fresh Emergent Wetland; Riverine; Urban; Lacustrine; Orchard-Vineyard	Ponderosa Pine; Sugar Pine; Douglas Fir; White Fir; Incense Cedar; Black Oak; Black Cottonwood; Broadleaf Maple; California Dogwood; Buck Brush; Deer Brush; Mountain Misery; Western Azalea; Snow Brush; Squaw Carpet; Larkspur; Anemone; Bleeding Heart; Brown Lupin; Sierra Shooting Star; Pine Drops	Rubber boa; deer; mountain lion; California mountain kingsnake; western rattlesnake; foothill yellow-legged frog; rainbow trout; brown trout; Sacramento squawfish; band-tailed pigeon; pygmy owl; stellar jay; pygmy nut hatch; American robin; russet-backed thrush; orange-crowned warbler; Nashville warbler; spotted owl; California quail; northern goshawk; yellow warbler; yellow breasted chat
Canadian Life Zone (3)	Higher elevations extending to crest of Sierra Nevadas; rainfall = 35-65 in./year; growth season = 3-5 months	Subalpine Conifer; Red Fir; Lodgepole Pine; Sierran Mixed Conifer; White Fir; Montane Hardwood-Conifer; Montane Hardwood; Montane Riparian; Montane Chaparral; Mixed Chaparral; Chamise-Redshank Chaparral; Wet Meadow; Fresh Emergent Wetland; Riverine, Lacustrine; Urban	Red Fir; Jeffrey Pine; Lodgepole Pine; Silver Pine; Aspen; Western Yew; Green Manzanita; Huckleberry Oak; Snowbrush; White Horn; Tobacco Brush Sierra Juniper; Corn Lily; Bush Chinquapin; Sierra Vein-Orchins; Camas Tigerliliy; Snow Plan	Black bear; coyote; Pacific fisher; wolverine; pine marten; Sierra Nevada Red fox; mountain lion; snowshoe hare; stripped skunk; Allen chipmunk; golden mantled squirrel; rainbow trout; brown trout; long-toed salamander; Pacific tree frog; garter snakes; western rattlesnake; mountain white fish; northern goshawk; Williamson sapsucker; Hammond flycatcher; fox sparrow; green-tailed towhee; Lincoln sparrow; Spotted owl; black swift; yellow warbler; willow fly-catcher; yellow breasted chat

TABLE 4.4-1 (continued)

Life Zones and Habitat Types Located in Nevada County

Life Zone	General Characteristics	Typical DFG Habitat Types	Primary Vegetation	Primary Wildlife
Hudsonian Life Zone (4)	Small areas near crest of the Sierra Nevadas; highest zone trees grow; rainfall = 30-50 in./year on western slopes of crest, 15-20 in./year on eastern slopes of crest with snowfall; growth season = 2-3 months	Subalpine Conifer; Red Fir; Lodgepole Pine; Sierran Mixed Conifer; White Fir; Jeffrey Pine; Eastside Pine; Juniper; Montane Hardwood; Montane Riparian; Bitterbrush; Montane Chaparral; Wet Meadow; Fresh Emergent Wetland; Riverine; Lacustrine Urban	Whitebark Pine; Lodgepole Pine; Foxtail Pine; Mountain Hemlock; Red Heather; White Heather; Indian Paintbrush; Stone Crop	Black bear; deer; Pacific fisher; wolverine; pine marten; Sierra Nevada red fox; Pine grosbeak; rosy finch; blue grouse; northern goshawk; willow flycatcher; black swift; yellow warbler; Pacific treefrog; beaver; yellow-bellied marmot; cony; martin; brown trout; rainbow trout; Eastern brook trout; Labontan mountain ephemeral trout; Lahontan lake trout; Lahontan cutthroat trout
Artic-Alpine Life Zone (5)	Only small areas at tip of crest of Sierra Nevadas; climate severe; no trees; rainfall = 25-36 in./year, mostly snowfall; growth season = 1-2 months	Subalpine Conifer; Red Fir; Lodgepole Pine; Whiter Fir; Jeffrey Pine; Eastside Pine; Juniper; Montane Riparian; Bitterbrush; Montane Chaparral; wet meadow; Fresh Emergent Wetland; Riverine; Lacustrine; Urban	Wallflower; prickly-phlox; grasses; sedges	Deer; black bear; mountain lion; Pacific fisher; wolverine; pine marten; Sierra Nevada red fox; blue grouse; willow fly catcher; northern goshawk; black swift
Mixed Conifer-Jeffrey Pine-Sagebrush Life Zone (6)	Eastern portion of County; mixed coniferons forest with brushland; dry area with moderately hot summers; cold winters; rainfall = 10-30 in./year, mostly snowfall; growth season = 2-5 months	Subalpine Conifer; Red Fir; Lodgepole Pine; White Fir; Eastside Pine; Juniper Montane Riparian; Low Sage; Bitterbrush; Sagebrush; Wet Meadow; Fresh Emergent Wetland; Riverine; Lacustrine;	Jeffrey Pine; Lodgepole Pine; Pinon Pine; Incense Cedar; Sagebrush; Bitterbrush; Butterbrush; Mountain Mahogany; Utah Juniper; Corn Lily; Buckwheat; Shrub Pea; Fireweed	Black bear; desert jack rabbit; American badger; pocket mouse; Nuttall cottontail; kangaroo rat; grasshopper mouse; short-tailed vole; deer; wolvering; Pacific fisher; mountain lion; Eastern brook trout; mackinaw trout; brown trout; rainbow trout; Lahontan cut-throat trout; Lahontan mountain ephemeral trout; Lahontan lake trout; long-toed salamander;Pacific tree frog; yellow-legged frog; western fencelizard; sagebrush lizard; horned lizard; western rattlesnake; soy phoebe; pinon jay; black-billed magpie; grey flycatcher; vesper sparrow; blue sparrow; bruewer sparrow; northern goshawk; willow fly catcher; black swift; yellow warbler



LEGEND:

Flora and Fauna Life Zones

1. Upper Sonoran Life Zone
2. Transition Life Zone
3. Canadian Life Zone
4. Hudsonian Life Zone
5. Arctic-Alpine Life Zone
6. Mixed Conifer-Jeffrey Pine-Sagebrush Life Zone

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NEVADA COUNTY GENERAL PLAN

Flora & Fauna Life Zones

1" = 25,000'

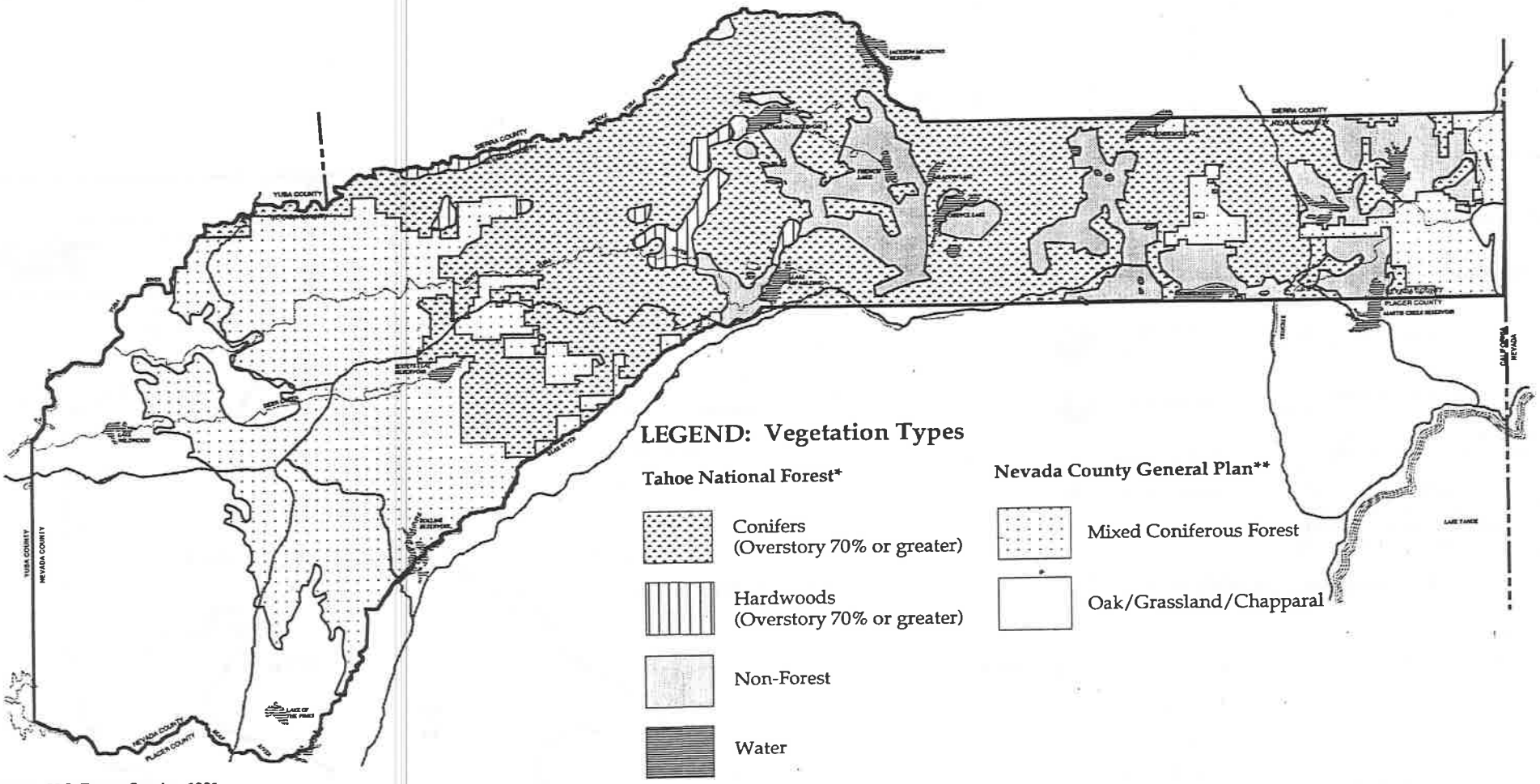
FIGURE 4.4-1

TABLE 4.4-2

Wildlife Habitats in Nevada County

Wildlife Habitats in California	Areas of County
TREE DOMINATED HABITATS	
Subalipine Conifer	Western and central
Red Fir	Western and central
Lodgepole Pine	Western and central
MIXED CONIFER	
Sierran Mixed Conifer	Central
White Fir	Central
Jeffrey Pine	Eastern
Ponderosa Pine	Western
Eastside Pine	Eastern
Juniper	Eastern
Closed-cone Pine-cypress	Western and central
Montane Hardwood-Conifer	Western
Montane Hardwood	Western and central
VALLEY FOOTHILL HARDWOOD	
Blue Oak Woodland	Western
Valley Oak Woodland	
VALLEY FOOTHILL HARDWOOD-CONIFER	
Blue Oak-Digger Pine	Western
Montane Riparian	Central and eastern
Valley Foothill Riparian	Western
SHRUB-DOMINATED HABITATS	
Low Sage	Eastern
Bitterbrush	Eastern
Sagebrush	Eastern
Montane Chaparral	Central and western
Mixed Chaparral	Central and western
Chamise-Redshank Chaparral	Central and western
HERBACEOUS-DOMINATED HABITATS	
Annual Grassland	Western
Wet Meadow	Countywide
Fresh Emergent Wetland	Countywide
Pasture	Western
AQUATIC HABITATS	
Riverine	Countywide
Lacustrine	Countywide
DEVELOPED HABITATS	
Cropland	Western
Orchard-Vineyard	Countywide
Urban	

SOURCE: *A Guide to Wildlife Habitats of California, 1988*



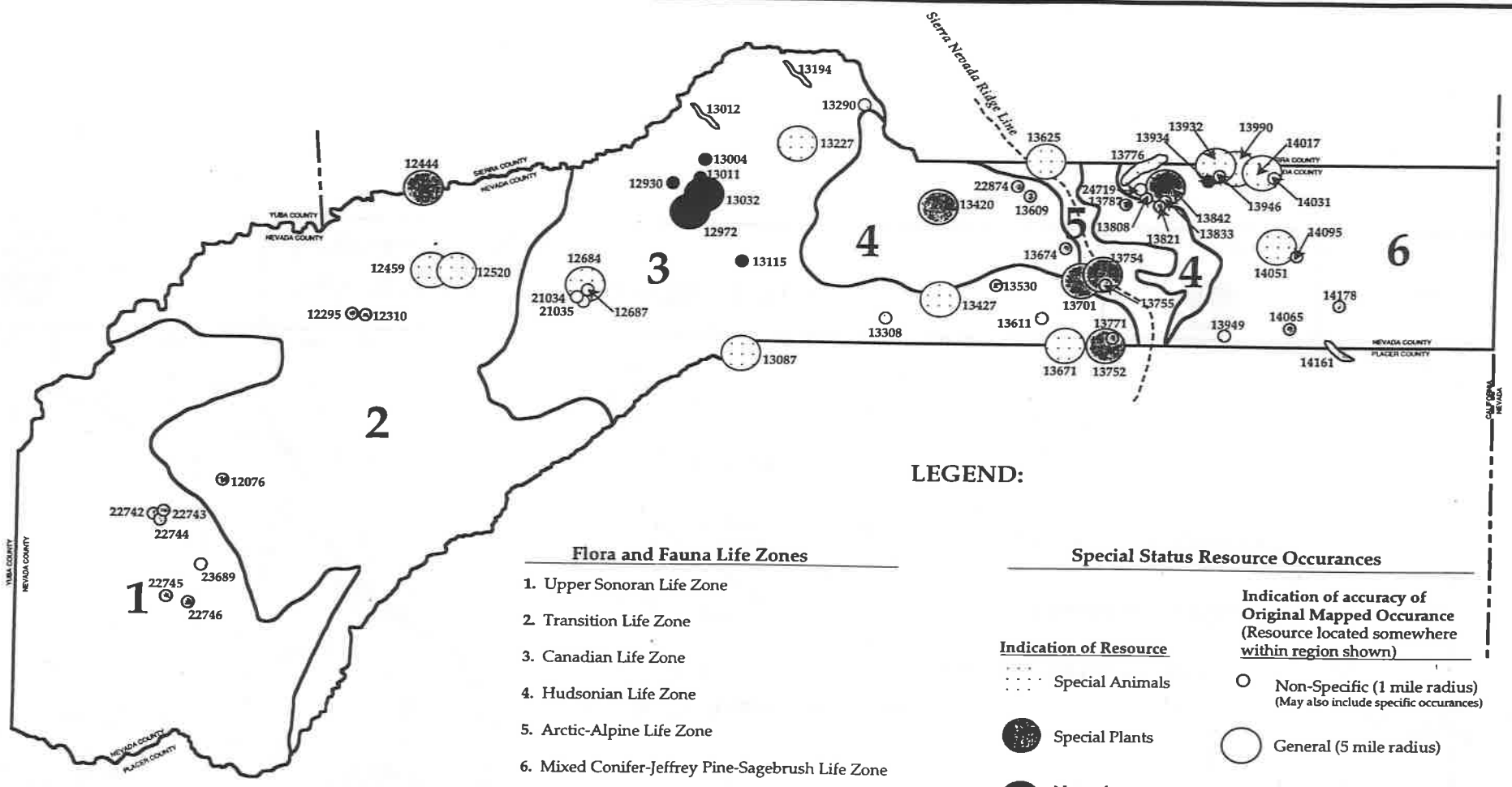
Source: *U.S. Forest Service, 1991.
**Nevada County General Plan, Technical Data, 1980.

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NEVADA COUNTY GENERAL PLAN
Vegetative Resources

1" = 25,000'

FIGURE 4.4-2



LEGEND:

Flora and Fauna Life Zones

1. Upper Sonoran Life Zone
2. Transition Life Zone
3. Canadian Life Zone
4. Hudsonian Life Zone
5. Arctic-Alpine Life Zone
6. Mixed Conifer-Jeffrey Pine-Sagebrush Life Zone

Special Status Resource Occurances

Indication of Resource

- Special Animals
- Special Plants
- Natural Communities

Indication of accuracy of Original Mapped Occurance (Resource located somewhere within region shown)

- Non-Specific (1 mile radius) (May also include specific occurances)
- General (5 mile radius)
- Specific Location

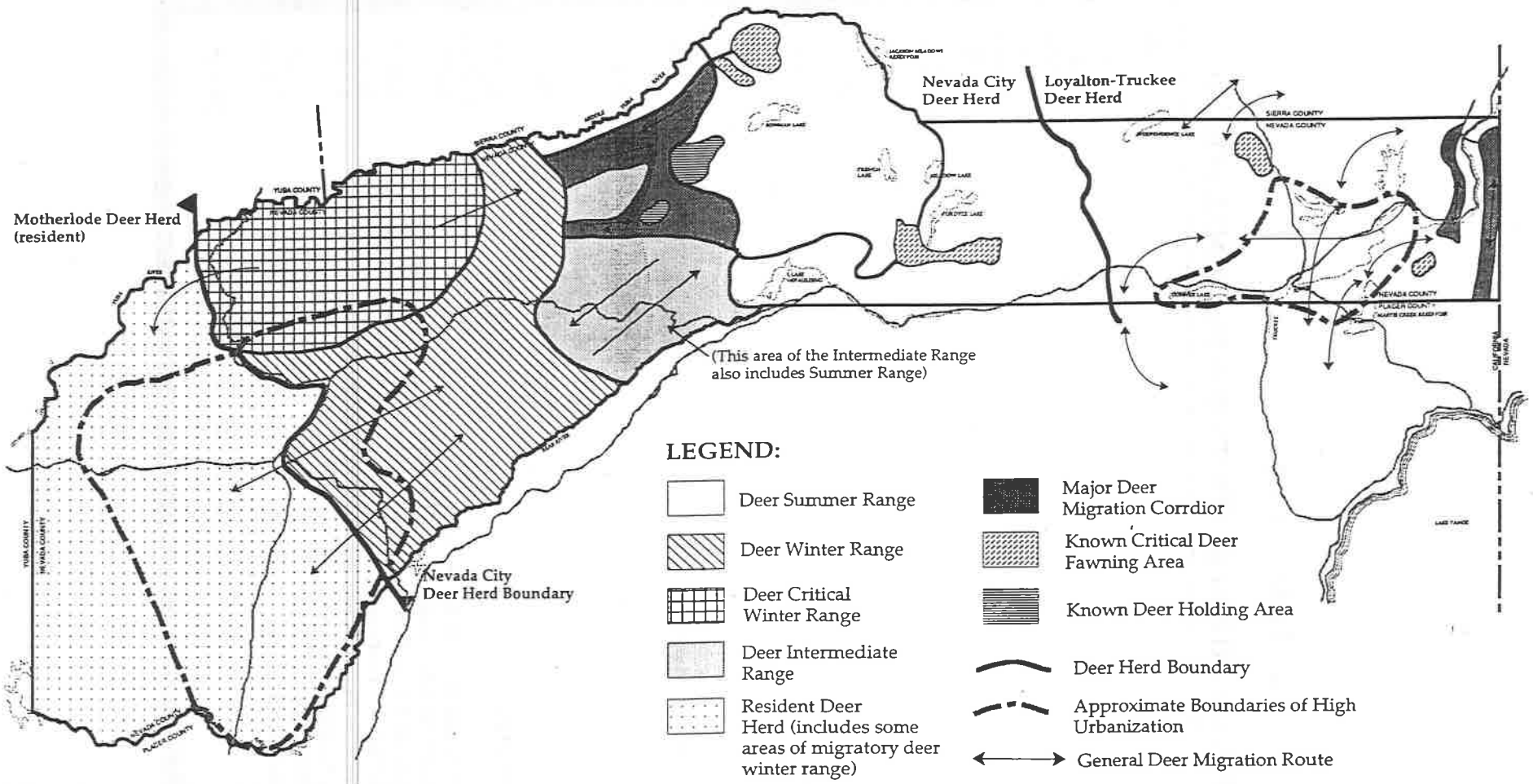
Source: California Department of Fish and Game, 1991 and 1994.

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NEVADA COUNTY GENERAL PLAN
Special Status Species

1" = 25,000'

FIGURE 4.4-3



Source: California Department of Fish and Game, 1985 and 1991.
Teale Data Center, 1991.

NOTE: Wildlife "Homerange" movement corridors are not illustrated.

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NEVADA COUNTY GENERAL PLAN
Migratory Deer Ranges

1" = 25,000'

FIGURE 4.4-4

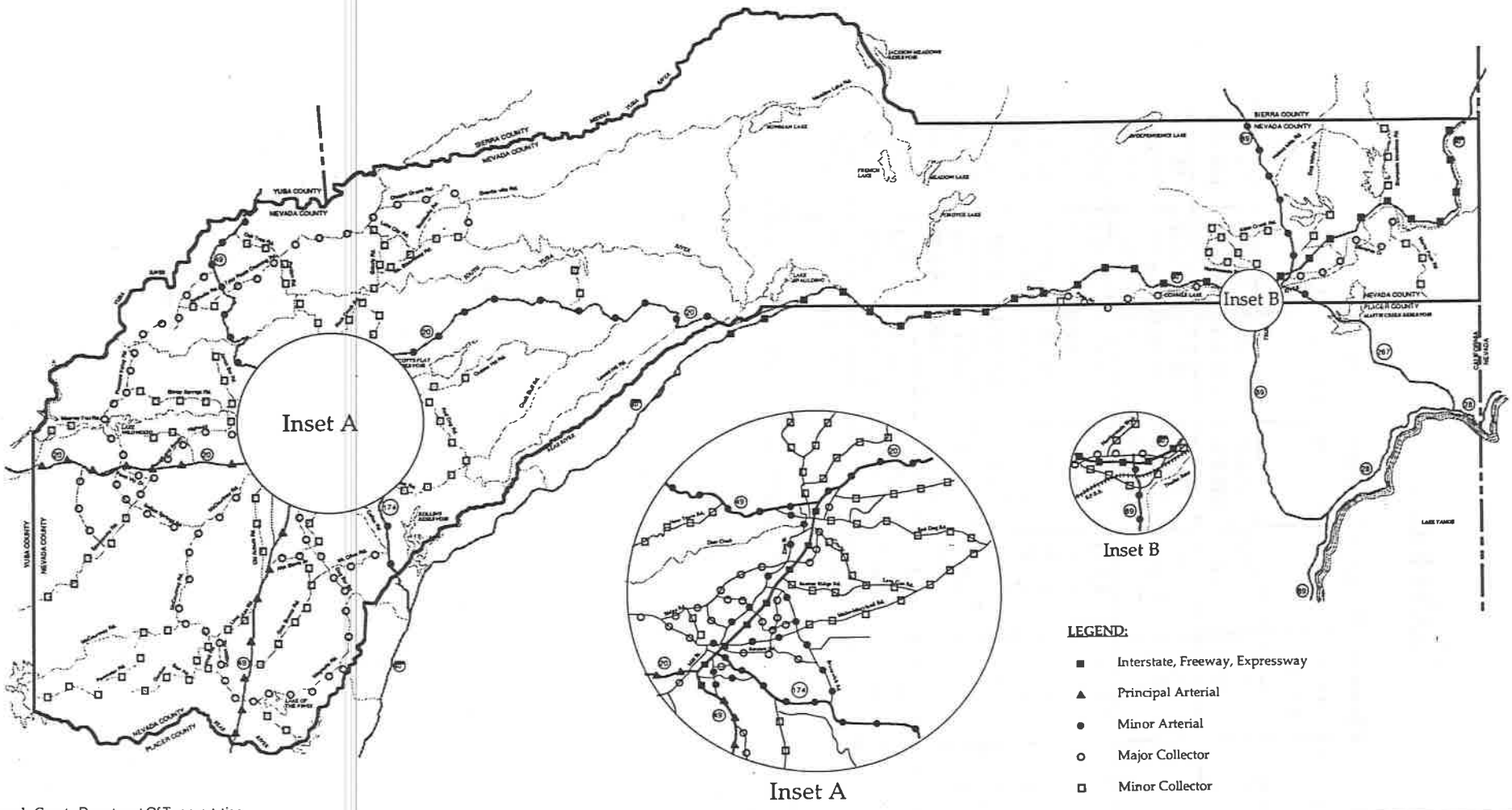
TABLE 4.4-4

CATEGORIES OF VEGETATION IN THE TAHOE NATIONAL FOREST

Timberlands	*Acres*
Mixed Conifer	361,797
Red Fir	100,818
Eastside Pine	104,281
Lodgepole Pine	9,041
Hardwood-Conifer	36,660
Reforestation and TSI Needs	16,256
TOTAL	**629,018**

Woodland Vegetation	*Acres*
Live Oak and associated hardwoods	26,483
Black Oak, Tanoak, and Madrone	5,881
Knobcone Pine	285
Digger Pine	139
Juniper	1,534
Aspen (pure stands larger than 10 acres)	75
TOTAL	**34,397**

Chaparral Vegetation	*Acres*
Brushland capable of reforestation	6,439
Areas less than 100 acres	53,748
Areas less than 100 acres with slopes over 50 percent	8,453
Basin Sage, Bitterbrush, Mountain Mahogany with Perennial Grass, and Wyethia	6,607
Huckleberry Oak, Wyethia, Forbs, Perennial Grass	2,397
Whiteleaf Manzanita, Deerbrush, Bear Clover	1,141
Tobacco Brush, Whitehorn, Greenleaf Manzanita, Huckleberry Oak, Wyethia	392
Whiteleaf Manzanita, Annual Grass, Forbs	136
TOTAL	**79,313**



Source: Nevada County Department Of Transportation

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NEVADA COUNTY GENERAL PLAN
Functional Street Classification

1" = 25,000'

FIGURE 4.7-1

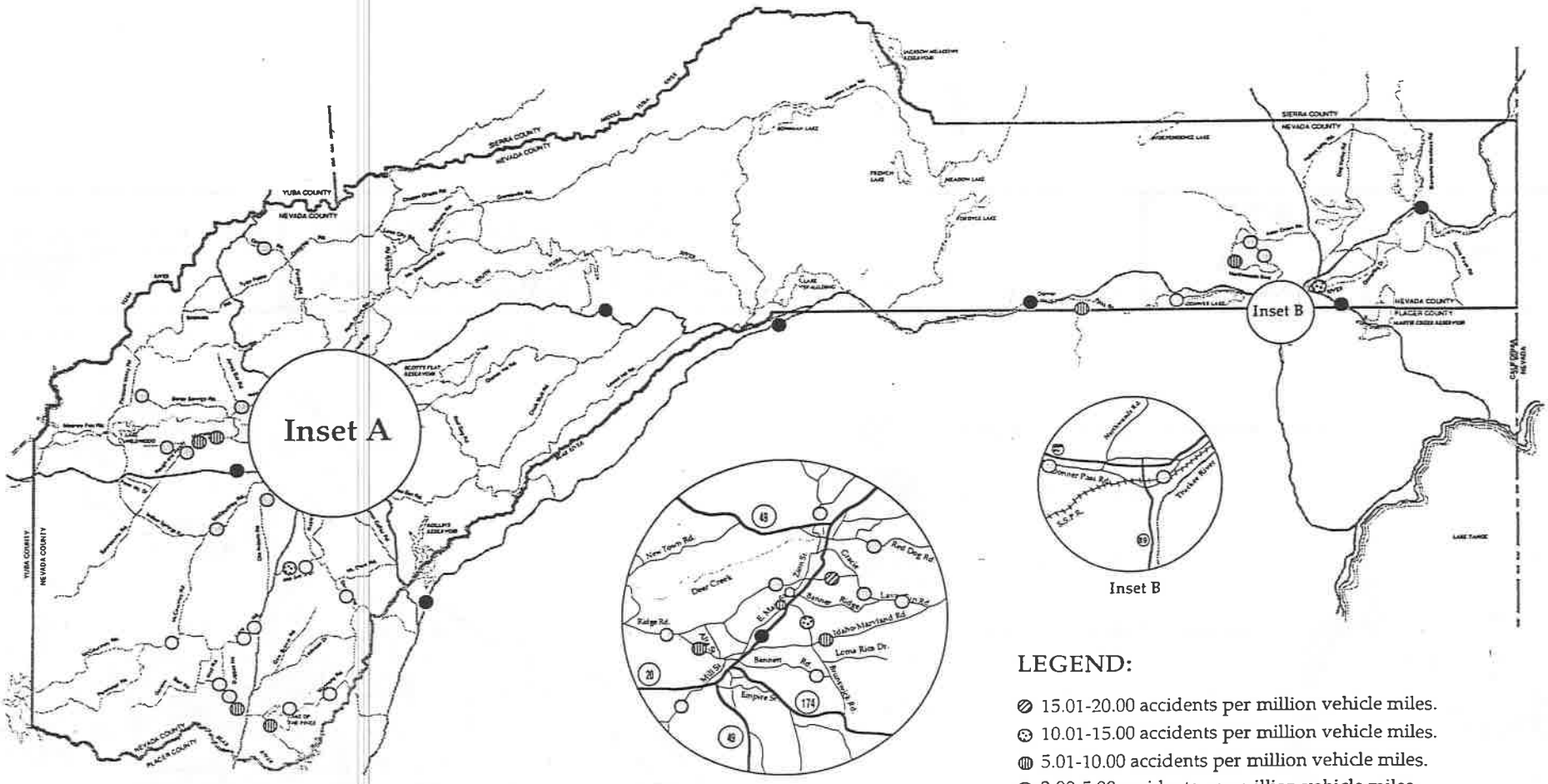
TABLE 4.7-3

Daily Planning Service Volume Criteria

Facility Type[1]	Functional Class	Lanes	Area Type[2]	LOS A	LOS B	LOS C	LOS D	LOS E
1	Interstate and Freeway	4	all	59,400	69,300	79,200	89,100	99,000
		6	all	89,100	103,950	118,800	133,650	148,500
2	Principal Arterial	2	all	11,100	12,950	14,800	16,650	18,500
		4	all	22,200	25,900	29,600	33,300	37,000
		6	all	33,300	38,850	44,400	49,950	55,500
3	Minor Arterial	2	MU- S	9,300	10,850	12,400	13,950	15,500
		2	R	6,600	7,700	8,800	9,900	11,000
		4	MU -S	18,600	21,700	24,800	27,900	31,000
		4	R	13,200	15,400	17,600	19,800	22,000
		6	all	27,900	32,550	37,200	41,850	46,500
4	Major Collector	2	all	6,600	7,700	8,800	9,900	11,000
		4	all	13,200	15,400	17,600	19,800	22,000
5	Minor Collector	2	all	5,700	6,650	7,600	8,550	9,500
		4	all	11,400	13,300	15,200	17,100	19,000
6	Ramp	1	all	6,000	7,000	8,000	9,000	10,000

1 Facility type (1-6) may not always directly coincide with functional classification of individual road segments.

2 MU = Mixed Urban area type
S = Suburban area type
R = Rural area type



Source: Average of 1984-1989 Data, Nevada County Department of Transportation. Caltrans Route Concept Reports.

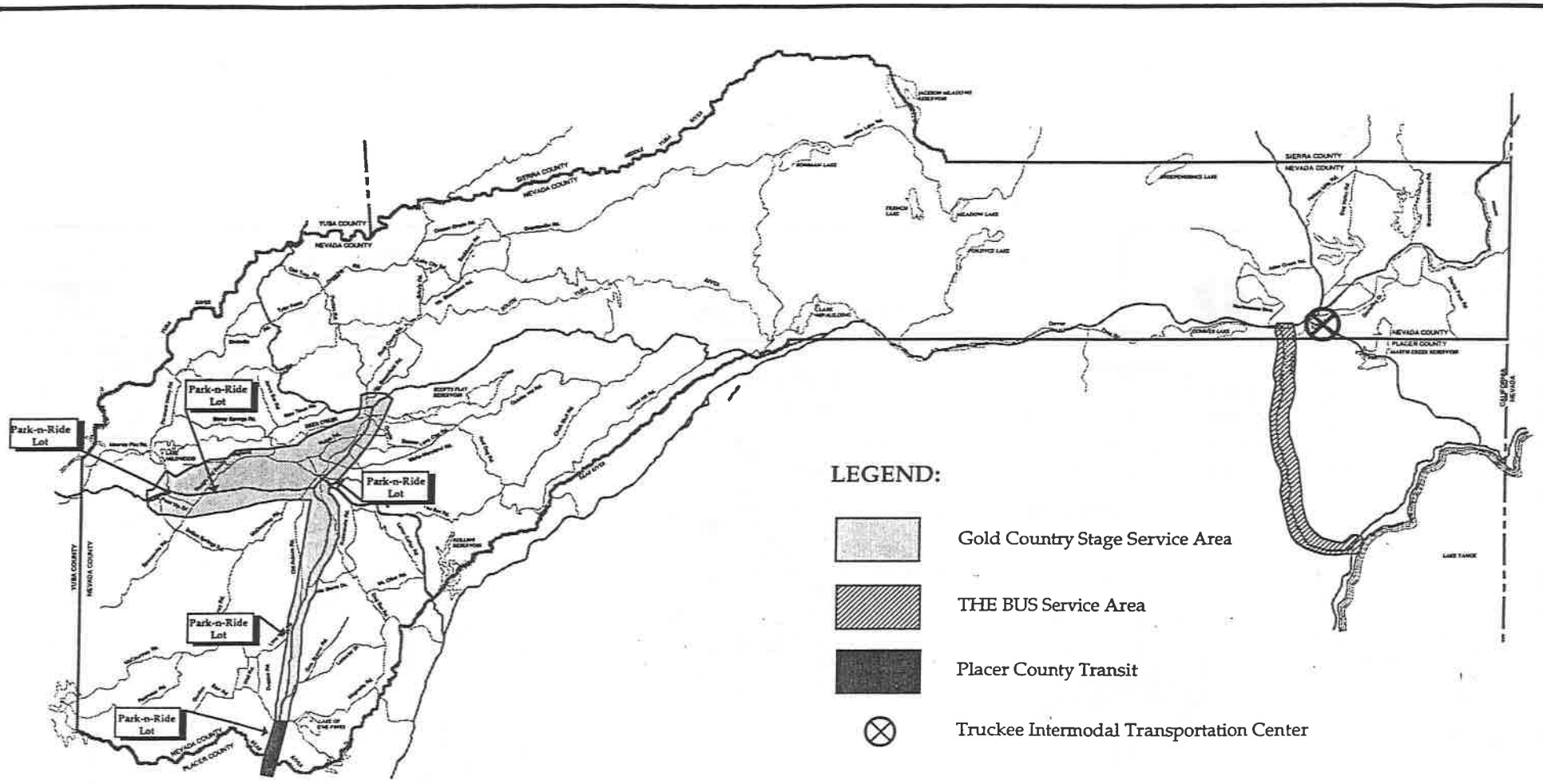
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NEVADA COUNTY GENERAL PLAN

High Accident Locations

1" = 25,000'

FIGURE 4.7-2



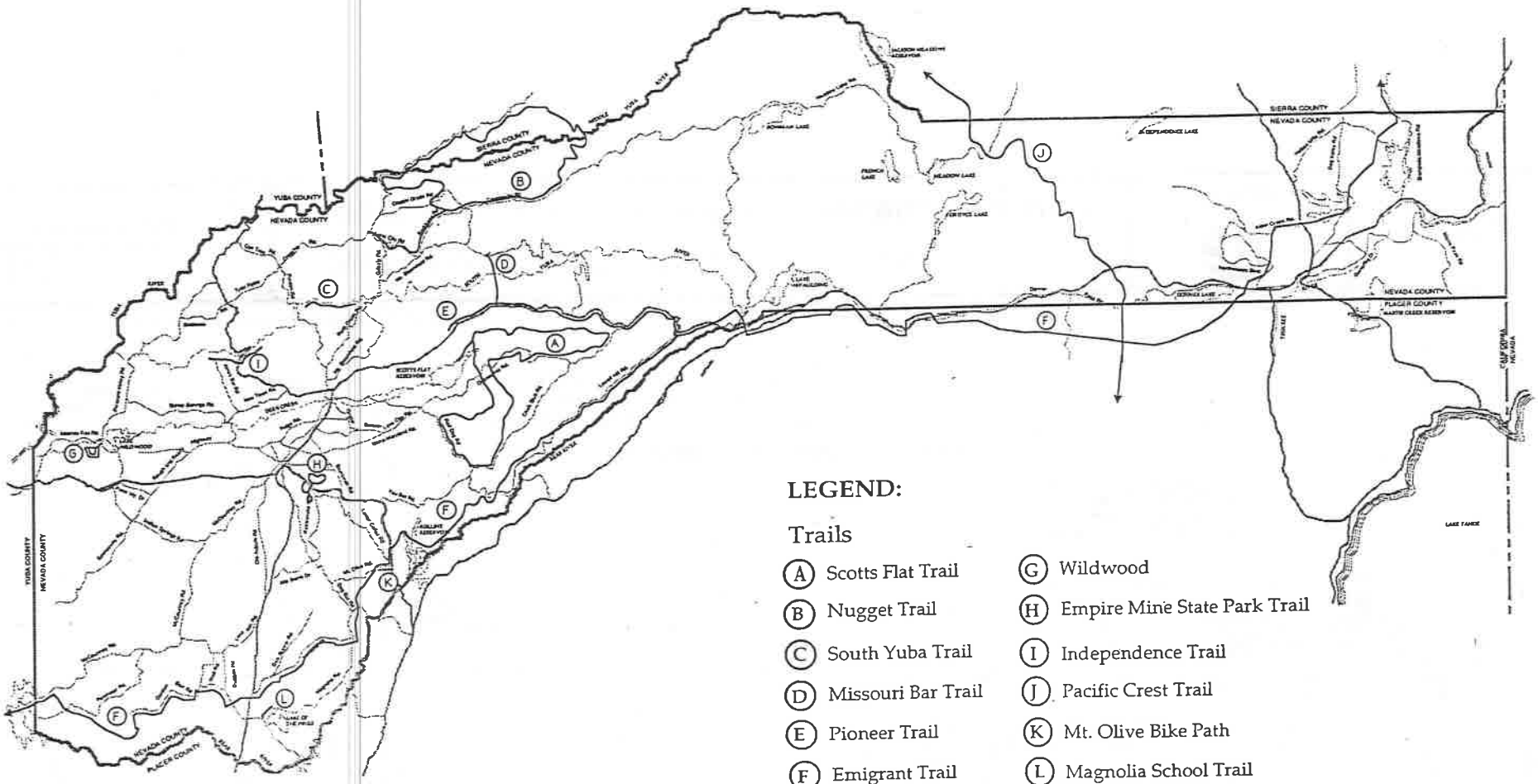
Source: Nevada County Department of Services for Transit, Aviation and Recreation

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NEVADA COUNTY GENERAL PLAN
Fixed Route Transit Services

1" = 25,000'

FIGURE 4.7-3



Source: Draft Regional Transportation Plan, Nevada County, 1990.

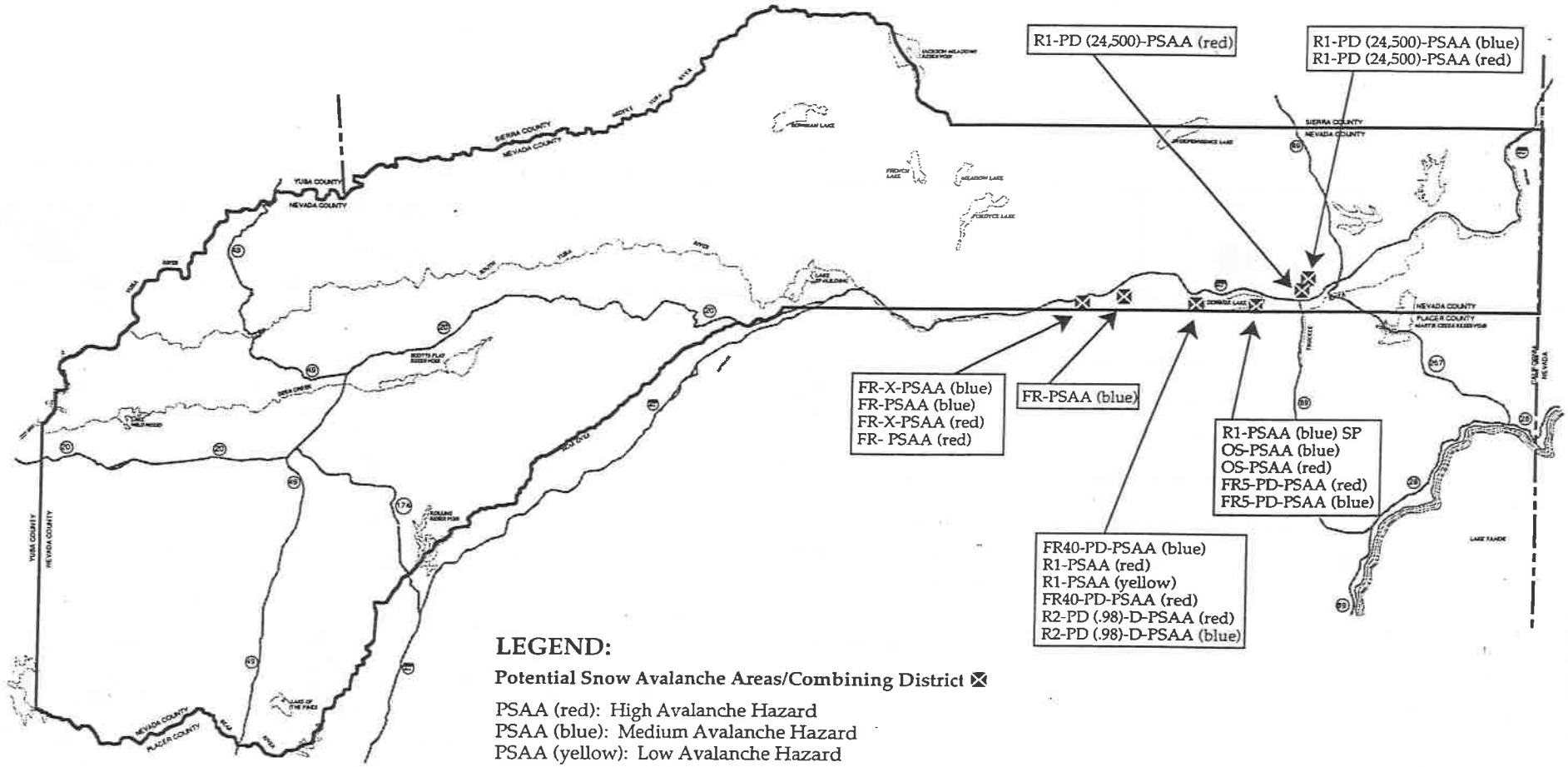
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NEVADA COUNTY GENERAL PLAN

Non-Motorized Trails

1" = 25,000'

FIGURE 4.7-4



Source: Snow Consultants, Avalanche Hazard Study, Nevada County, 1982.

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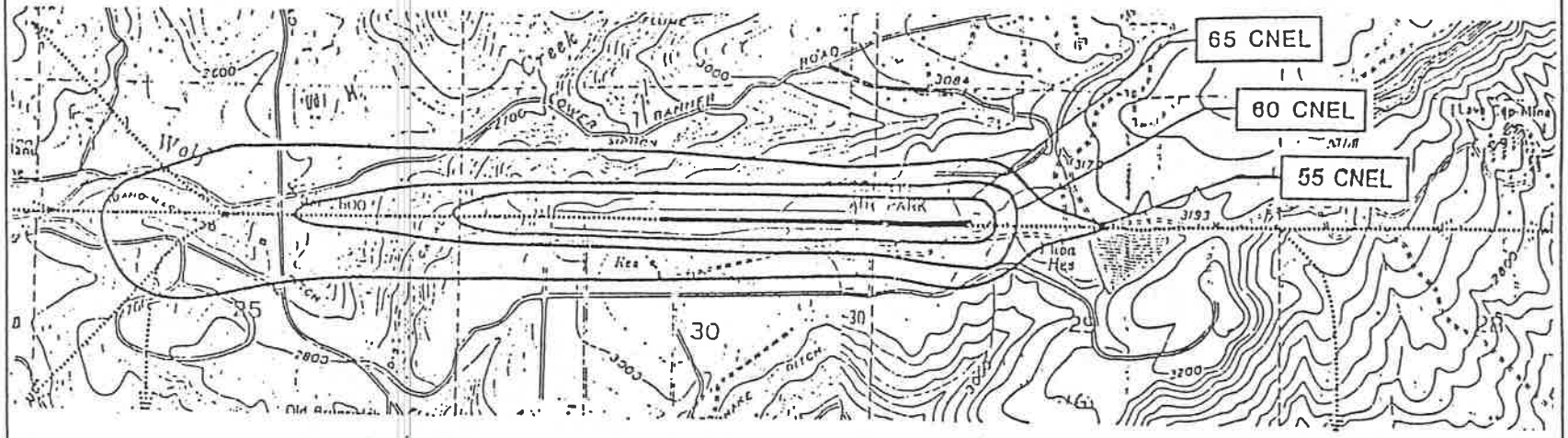
NEVADA COUNTY GENERAL PLAN
Potential Snow Avalanche Areas/Combining District

1" = 25,000'

FIGURE 4.8-1

FIGURE 4.9-1

NEVADA COUNTY AIRPARK
1989 CNEL CONTOURS



Source: Nevada County Airpark Master Plan
July 1990

BBA

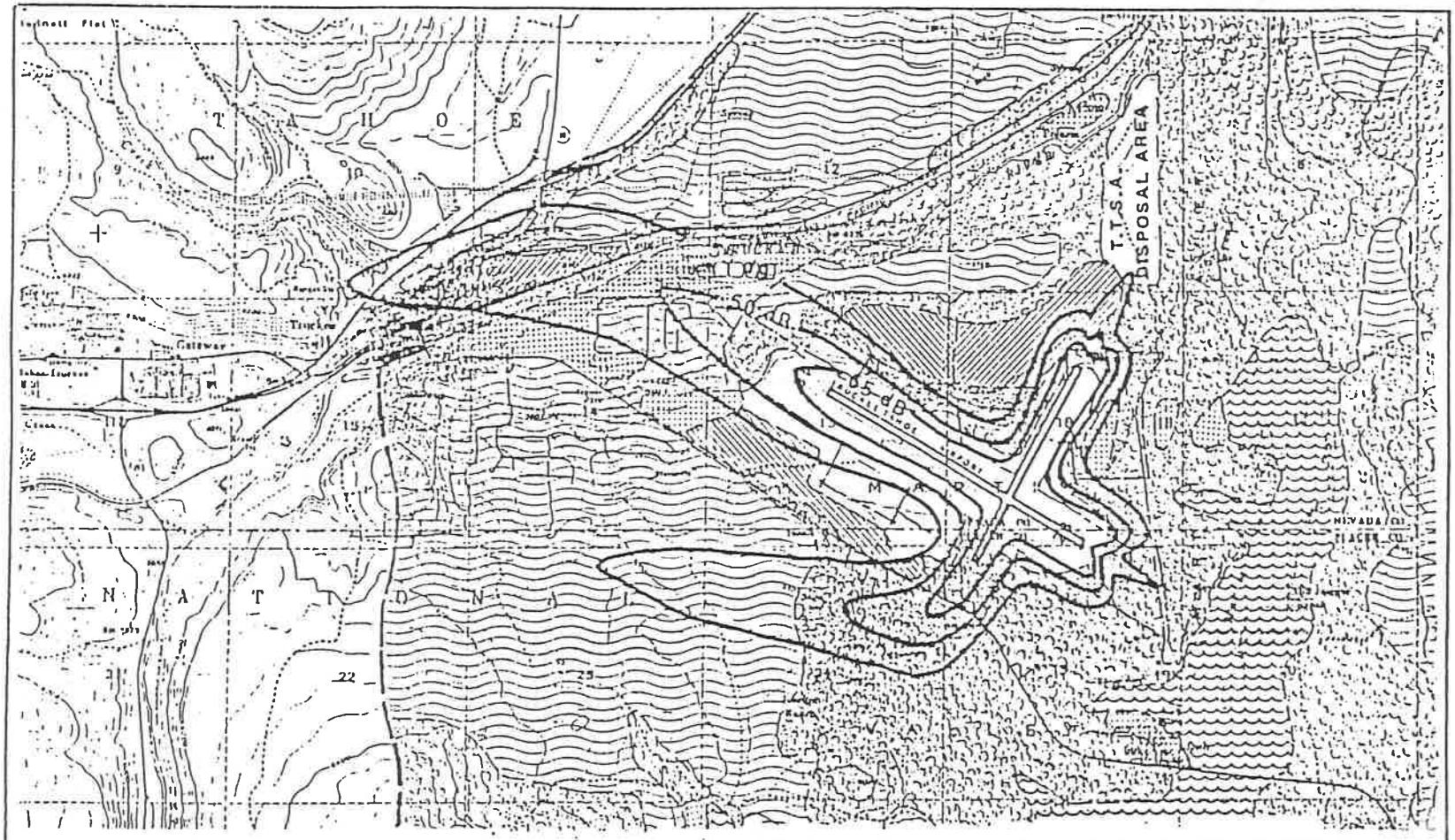


FIGURE 4.9-2 TRUCKEE-TAHOE AIRPORT 1988 CNEL CONTOURS

BBA

TABLE 4.9-2

NEVADA COUNTY LIGHT INDUSTRY NOISE LEVEL DATA

(Collected by Nevada County Staff)

Site	L_{eq}	L_{max}	Time	Date	Location
Loma Rica Industrial Pk.	38.0 46.0	76.0 83.0	7pm-7am 7am-7pm	March 1985	Grass Valley Ave./ Charles Drive
	54.9	73.8	10:30am - 10:40am	May 1993	
La Barr Meadows Industrial	39.0 38.0 32.0	69.0 72.0 64.0	8am-9am 9am-10am 10am-11am	April 1985	500' N. of Industrial Area
	53.2	60.8	12:00am 12:10am	May 1993	
Grass Valley Group	48.2	73.1	9:10am - 9:30am	June 1985	Bitney Springs Rd
	47.4	69.3	11:40am - 11:50am	May 1993	
Kingston Ln. R&D Facility	43.3	61.6	9:10am - 9:30am	June 1985	On Kingston Ln. between Magnolia School and R&D Facility
	44.6	64.7	2:25pm - 2:35pm	May 1993	
Streeter Rd. Industrial Area	52.8	69.7	10:20am- 10:40am	June 1985	On Streeter Road
	50.1	60.6	1:25pm - 1:35pm	May 1993	
West River St. Industrial Area (ABC Concrete Product)	65.4	84.6	4:55pm - 5:10pm	June 1985	East of Highway 89

TABLE 4.9-3

NEVADA COUNTY LUMBERMILL NOISE LEVEL DATA

(Collected by Nevada County Staff)

Lumber Mill	L_{eq}	L_{max}	Time	Date	Location
Agate Sales*	59.0 56.0 49.0	82.0 77.0 82.0	1pm-2pm 2pm-3pm 3pm-4pm	April 1985	On Bennett St. 300' from mill
	52.6	79.7	12:25pm - 12:35pm	May 1993	
Bohemia Mill*	73.0 74.0 49.2 63.0	89.0 86.0 66.4 82.4	11am-12pm 12pm-1am 2pm-2:35pm 10pm-10:20pm	April 1985 July 1985 July 1985	Near Brunswick Road 300' from mill 1000' West of mill Near Brunswick Road 300' from mill
	55.7	72.5	12:00pm - 12:10pm	May 1993	
Warnke Mill	63.0 63.0	82.0 81.0	2pm-3pm 3pm-4pm	April 1985	North of Idaho-Maryland Rd. 300' from mill saw & loader
	58.2	79.9	12:55pm - 1:05pm	May 1993	
Caffey-Rice Mill *	50.0 50.0	78.0 73.0	Mill not in operation Mill not in operation		
	51.1	74.3	1:20pm - 1:30pm	May 1993	
Louisiana Pacific Mill	55.6	69.7	8:40pm-9pm	July 1985	400' North of mill and South of Hwy 89

* Mill not currently in operation.

TABLE 4.9-4

NEVADA COUNTY MINING OPERATIONS NOISE LEVEL DATA

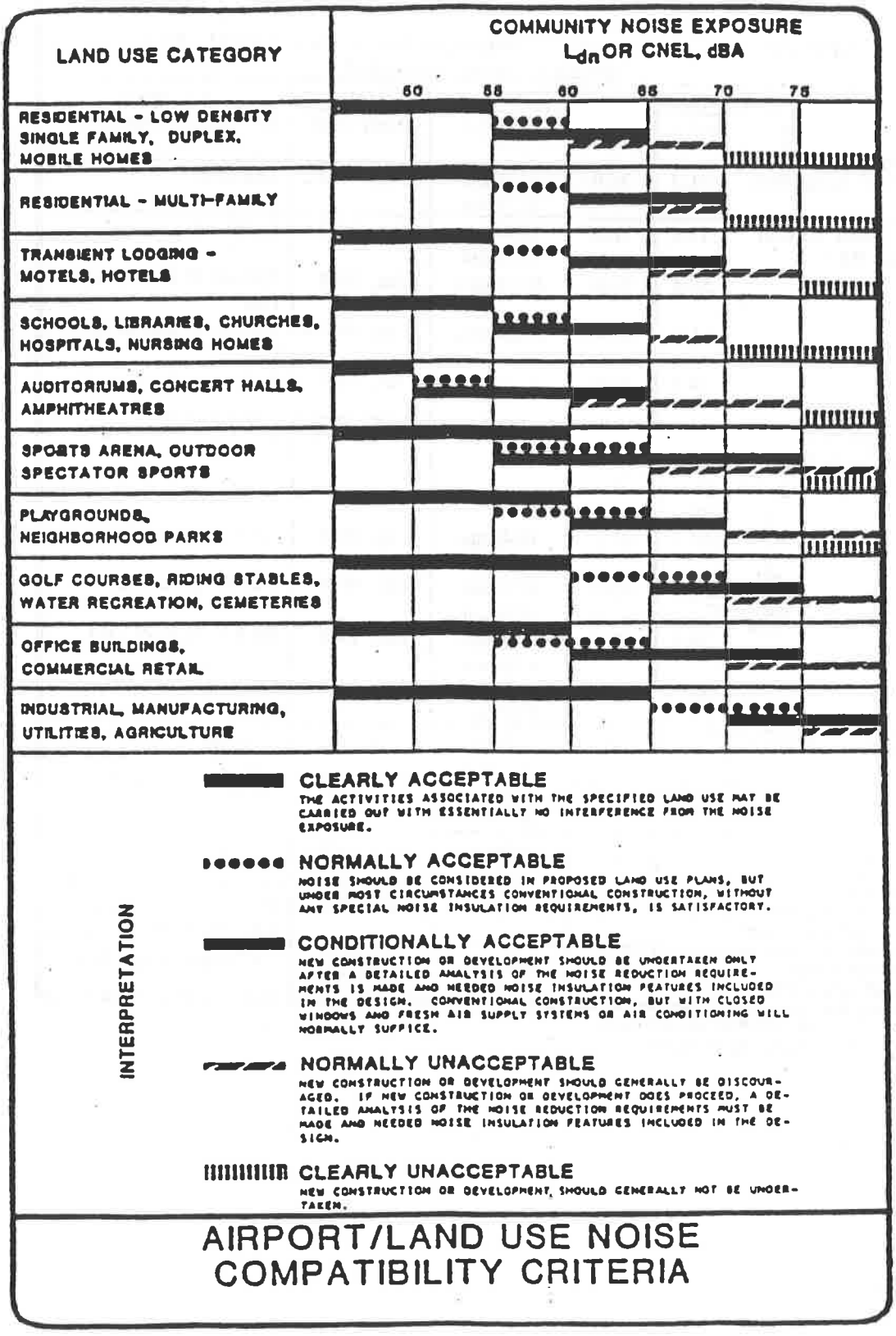
(Collected by Nevada County Staff)

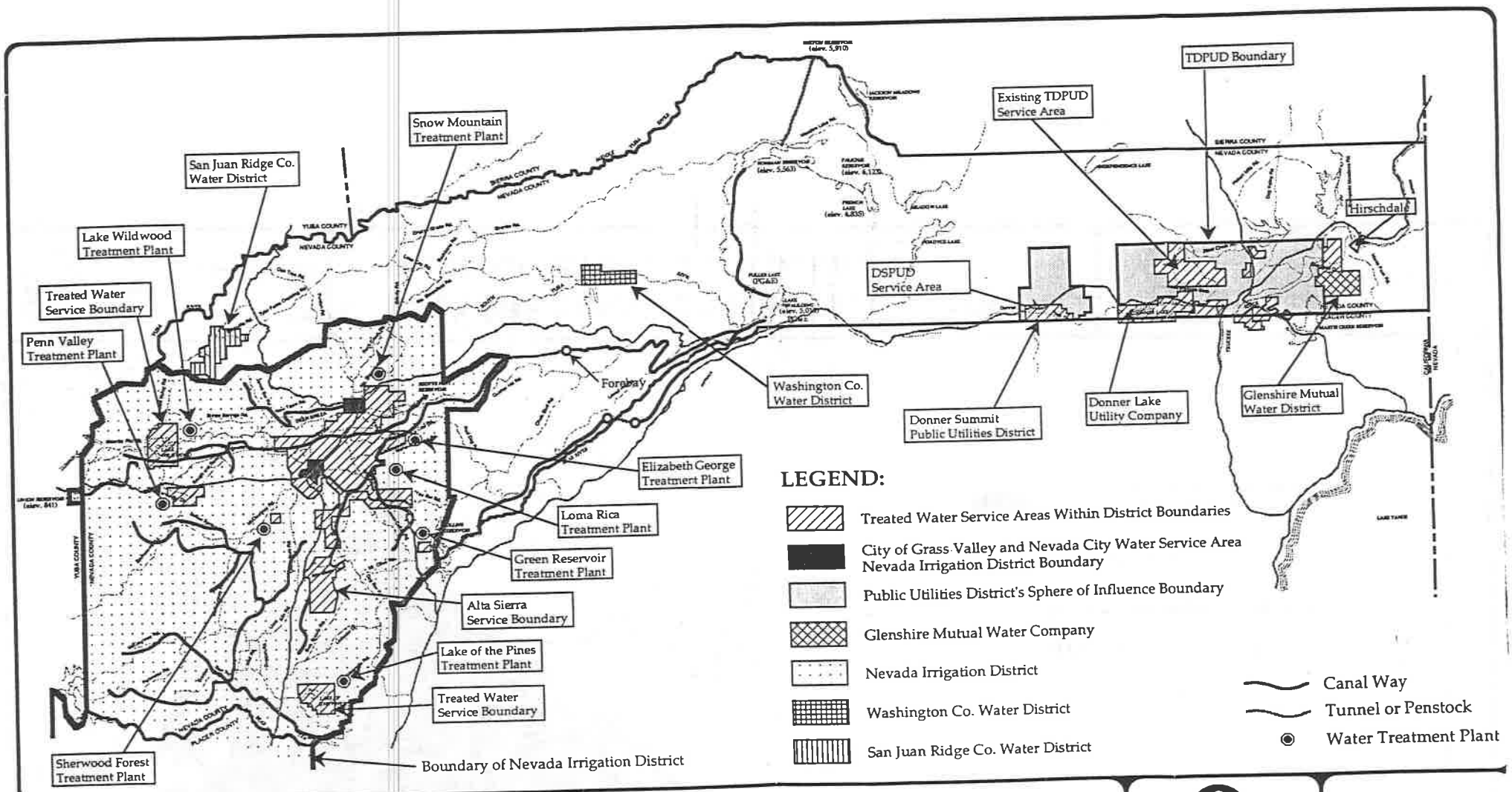
Name	L_{eq}	L_{max}	Time	Date	Location
Hansen Brothers/ Greenhorn Creek	62.0	75.0	7am-7pm	April 1985	600' south of operation
Joe Chevreaux/ Bear Creek	61.0	76.0	11:30am-11:50am	June 1985	Unknown
Cal Sierra/ Allison Ranch Rd.*	52.0	78.0	10:40am-11:00am	June 1985	Unknown
	59.4	65.6	5 minutes	Jan. 1986	100 yds @ E. Property Line
	51.9	62.4	5 minutes	Jan. 1986	200 yds @ S.E. Property Line
	49.8	64.3	5 minutes	Jan. 1986	400 yds @ W. Property Line
San Juan Gold/ Tyler Foote Rd.*	67.7	70.2	Unknown	Nov. 1985	150' from Rock Drill
	56.9	61.5			
	60.4	61.3			
	58.9	64.0			
	82.5	87.3	11:45am-11:48am	Dec. 1988	32' W. of Rock Drill
	57.9	60.3	11:55am-11:58am	Dec. 1988	200' W. of Rock Drill
	74.0	80.4	11:30am-11:37am	Dec. 1988	50' S.E. of Rock Drill
	80.4	83.4	11:22am-11:27am	Dec. 1988	50' N of Rock Drill
Sha-Neva/ Glenshire	52.4	70.1	3:20pm-3:33pm	June 1985	In Residential Area Near Rock Plant
West River Cinder/ Hirschdale Rd.	53.7	72.8	3:45pm-4:00pm	June 1985	Off Hirschdale Road
French Corral/ Pleasant Valley Rd	65.1	75.4	2:58pm - 3:03pm	July 1990	300' north of operation
Ridge Rock Quarry/ Pleasant Valley Rd**	52.7	71.5	NA	May 1990	50' southwest of access road entrance
Northstar Quarry Idaho/Maryland Rd	70.7	77.0	7:00am - 7:00pm	May 1992	200' south of operation

* Not currently in operation

** Consultant estimate

Table 4.9-5 Airport Land Use Compatibility Criteria



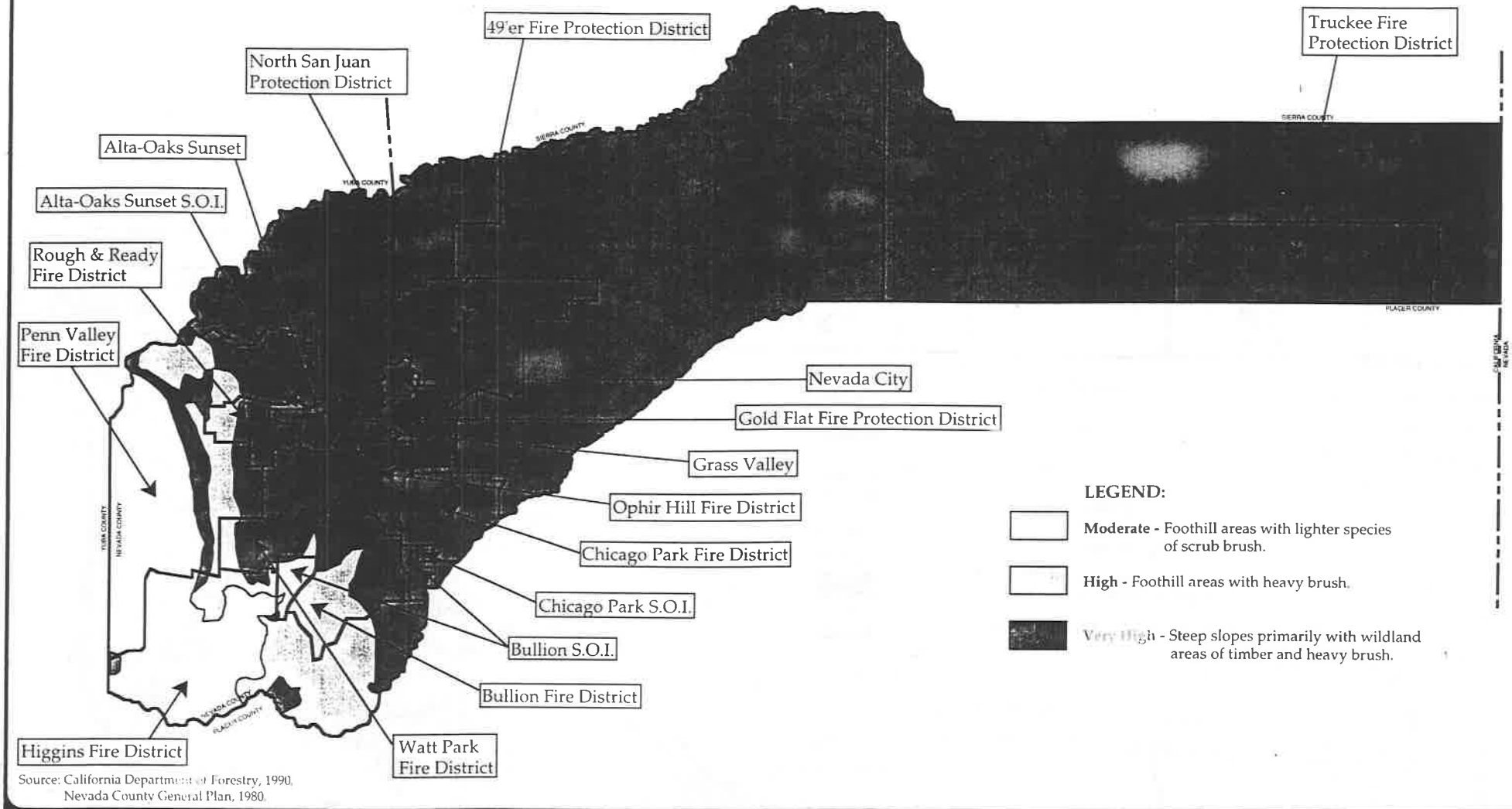


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NEVADA COUNTY GENERAL PLAN
Water Districts and Companies

1" = 25,000'

FIGURE 4.10-1



Source: California Department of Forestry, 1990.
Nevada County General Plan, 1980.

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NEVADA COUNTY GENERAL PLAN
Fire Hazard Zones and Fire Districts

1" = 25,000'

FIGURE 4.10-2