DRAFT 2007 UKIAH VALLEY AREA PLAN
REVISED DRAFT PROGRAM
ENVIRONMENTAL IMPACT REPORT

SCH# 2003072038

Prepared for:

County of Mendocino

Department of Planning and Building Services
501 Low Gap Road, Room 1440
Ukiah, California 95482

Leonard Charles and Associates

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Prepared by: **Leonard Charles and Associates**
7 Roble Court
San Anselmo, California 94960
415.454.4575

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1.0 INTRODUCTION

1.0 INTRODUCTION

1.1 PURPOSE OF THE EIR

This Revised Draft Program Environmental Impact Report (hereafter called the Draft EIR or DEIR) addresses the potential impacts of future development that would be allowed under the Draft 2007 Ukiah Valley Area Plan (UVAP). The County of Mendocino has proposed that the UVAP, an area plan that sets policy guidelines that will guide future County land use decisions for the unincorporated Ukiah Valley, be adopted as part of the Mendocino County General Plan. The UVAP has a year 2030 planning horizon. Projections of the amount of new development that can be expected over the next 20+ years have been developed as part of preparing this EIR, based on land use classifications, policies, and implementation measures included in the UVAP. This EIR identifies and assesses potentially significant environmental impacts that would or may result from this projected development.

The UVAP plan area is coterminous with the Planning Area for the City of Ukiah as shown in the City's adopted General Plan (December 1995). That plan (*Ukiah Valley General Plan and Growth Management Program*) included land use classifications and policies that would apply to portions of the Planning Area if it were annexed to the City. In 1992, at the City's request, the County Board of Supervisors made a commitment to consider the City's General Plan (once adopted) as an "area plan" for the entire Ukiah Valley.

In 1998, the Board of Supervisors directed County planning staff to revise the City's General Plan as the draft Ukiah Valley Area Plan to provide increased County perspective and greater consistency with the existing County General Plan. In January 2000, the County Planning Commission held the first public hearing on possible adoption of the City of Ukiah's General Plan as an area plan for the Ukiah Valley. Over the next two years the Planning Commission, with input from the public, made a number of modifications to the land use classifications, policies, and implementation measures to develop an area plan that provided a County perspective on land use as well as increased consistency between the area plan and other planning policies and documents, including the County's General Plan.

In 2005, the County proposed the adoption of an earlier version of this Draft 2007 UVAP (hereafter called the Draft 2002 UVAP). A Draft EIR (hereafter called the original EIR) was prepared on that plan and circulated for public review in July 2005. After receipt of public comments on the Draft EIR, the County determined that the 2002 UVAP needed to be revised to reflect the concerns of both the public and the Board of Supervisors'. The County proceeded to conduct a series of workshops and other public outreach efforts to gather public concerns and recommendations that were used to guide the plan revision process.

The main workshops and meetings held while revising the plan are listed below. Full details about the meetings/workshops, presentations made, background reports, and summaries of these meetings and workshops are available at the Department of Planning and Building Services' website at:

http://www.co.mendocino.ca.us/planningteam/uvap/doc_library.htm

- UVAP Open House (September 25, 2006) was an introductory presentation and meeting with the plan consultants. Over 100 residents attended and reviewed existing maps and the 2002 Draft UVAP. They gave initial feedback about their vision for the plan area and met with the planning consultants and County staff who answered questions.

- Eight focus group meetings (October through December 2006) with stakeholder groups and residents were held. The purpose of these meetings was for the planning team to obtain a first impression of what stakeholders and residents consider to be the assets, issues, and opportunities of the plan area.

- Community Workshop #1 (November 4, 2006) was a presentation about the plan vision, opportunities for participation, the planning process, and key planning opportunities and constraints. Over 125 people attended, and many participated in meetings of break-out groups to develop input on plan vision, assets, and constraints and opportunities.

- A Joint Policy Boards Meeting of the County Planning Commission, County Board of Supervisors, City of Ukiah Planning Commission, and Ukiah City Council (January 10, 2007) was held to present information on the plan process and constraints and opportunities. Representatives of the various boards and commissions provided input into the planning process. This meeting was attended by 15 County officials, 11 City officials, and about 60 residents.

- Community Workshop #2 (March 10, 2007) was a day-long design exercise which allowed groups of participants to allocate where new development should occur in the nine main discussion areas developed for the plan area.

- A second Joint Policy Boards Meeting of County and City officials (April 24, 2007) was held to review a number of issues that had been developed after the previous meetings. It included a presentation of an economic report prepared for the plan and summaries of the citizen input from Workshop #2. Potential land use alternatives were presented for discussion and input from the officials.

- The Board of Supervisors conducted a public meeting (June 26, 2007) to review potential land use designations for the nine plan discussion areas and to provide guidance to the planning team for developing a range of alternatives to be included in the Notice of Preparation for this EIR.

- An Open House (August 14, 2007) was held to allow residents to review all planning documents, including the Preliminary Draft of the Goals, Policies, and Implementation Measures and the three preliminary land use alternatives.

- The Board of Supervisors held a public meeting (August 21, 2007) wherein they reviewed all preliminary Draft 2007 UVAP materials and selected a preferred land use alternative. They also determined that the other two alternatives that were presented be assessed in the EIR.

- The EIR Scoping Meeting (November 5, 2007) was held to identify what issues should be assessed in this EIR.

- Plan alternatives were finalized in 2008 with a final alternative (Alternative C) added in 2010.

- The Draft 2007 UVAP was reorganized and reformatted in 2010 with additional background information added

- The Water Supply Assessment report needed to complete the Draft EIR was completed in November 2010.

- This Draft EIR was subsequently completed and submitted for public review.

This EIR has been prepared in conformance with the provisions of the *California Environmental Quality Act (CEQA) Guidelines,* as amended to date. CEQA requires that public agencies prepare and certify an EIR before carrying out projects that may have significant effects on the environment (Public Resources Code Section 21080). Preparation of an EIR is the responsibility of the "lead agency," the public agency that has the principal responsibility for carrying out or approving the project (Public Resources Code, Section 21067). The County of Mendocino is the lead agency for this EIR as it is responsible for approving and adopting the UVAP.

As such, this EIR has been prepared under contract to the County of Mendocino. It is an informational document that is intended to inform the County (the Lead Agency), other public agency decisionmakers, and the public of the significant environmental effects of the proposed project, as well as alternatives to the proposed plan. The County will consider the information in this EIR along with other information presented during the decisionmaking process when determining whether to adopt or modify the proposed plan or an alternative. The information contained in this EIR does not control the County's ultimate decision on the plan. If the County decides to approve the plan, however, then the County must respond to each significant effect identified in the EIR by making findings under Section 15091 of the *CEQA Guidelines* and, if necessary, making a Statement of Overriding Consideration under Section 15093.

1.2 SCOPE OF THE EIR

The Draft 2007 UVAP Draft EIR is a program EIR under Section 15168 of the State CEQA Guidelines. As described in CEQA Guidelines §15168(a)(3), a program EIR “may be prepared on a series of actions that can be characterized as one large project and are related...in connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program.” As a program EIR, this document focuses on the overall effect of the Draft 2007 UVAP. This analysis does not examine the effects of site-specific projects that may occur within the overall umbrella of this program in the future. The nature of area plans is such that many proposed policies are intended to be general, with details to be worked out during implementation. Thus, many of the impacts and mitigation measures can only be described in general or qualitative terms. The analysis in this program EIR is considered the first tier of environmental review, creating the foundation upon which future, project-specific CEQA documents can build. A program EIR can be incorporated by reference into subsequently prepared environmental documents to address issues such as cumulative impacts and growth inducing impacts, allowing the subsequent documents to focus on new or site-specific impacts.

It is recognized that future development allowed pursuant to the Draft 2007 UVAP will result in various impacts on the environment. Many of these areas of impact and concern are addressed by policies and measures incorporated into the Draft 2007 UVAP. In some cases, specific policies were adopted to mitigate potential future impacts. This integration of mitigations into the Draft 2007 UVAP increases environmental protection in the plan area. This EIR determines whether the policies and measures included in the plan adequately reduce the predicted impacts.

Potential impacts have been identified and evaluated based on existing conditions. A comparison of these impacts with impacts from potential development that could occur under the existing Mendocino County General Plan is included in the Project Alternatives section (Section 4.4).

It is important to reiterate that this is a Program EIR and not an EIR on site-specific impacts that could result from development on particular properties in the plan area. Site-specific analyses and mitigations will be assessed at the time that a development application is submitted. This EIR addresses the cumulative, area-wide effects of buildout over the next 20+ years in the plan area

(to year 2030). This approach is consistent with the degree of specificity required by CEQA for such EIRs. The *CEQA Guidelines* Section 15146 states:

> *The degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR.*
>
> *(a) An EIR on a construction project will necessarily be more detailed in the specific effects of the project than will be an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy.*
>
> *(b) An EIR on a project such as the adoption or amendment of a comprehensive zoning ordinance or a local 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.*

1.3 CONTENTS OF THE EIR

This section of the EIR includes a description of aspects of the CEQA process. While this information is not required in an EIR, the authors believe it aids the public in understanding what an EIR is meant to be and what information it must contain. In the past, EIRs varied considerably in scope and substance. A growing body of legal decisions has clarified what impacts are to be examined and how these impacts are to be judged. The discussion here outlines certain basic CEQA concepts.

This EIR addresses all the areas of potentially significant impact as well as other potential impact areas that CEQA requires an EIR to investigate. The environmental effects of the project are analyzed for each topic. The *CEQA Guidelines* define the effects of a project as changes from the environmental setting (i.e., existing conditions) that are attributable to the project. Particularly pertinent sections of the *CEQA Guidelines* are listed below.

> **Section 15121(a) (Information Document)** states that "an EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts."
>
> **Section 15151 (Standards for Adequacy of an EIR)** states that an EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make an informed decision taking into account the environmental consequences of the project. The evaluation of the environmental effects does not need to be exhaustive. Disagreement among experts does not make an EIR inadequate, though the EIR will summarize the main points of disagreement among the experts.
>
> **Section 15003(l and j) (Policies)** states that technical perfection is not necessary, but adequacy, completeness, and a good-faith effort at full disclosure are required. "CEQA requires that decisions be informed and balanced. It must not be subverted into an instrument for the oppression and delay of social, economic, or recreational development or advancement."
>
> **Section 15143 (Emphasis)** states that the EIR shall focus on the significant effects on the environment. The significant effects will be discussed with emphasis in proportion to their

severity and probability of occurrence. Discussion of each major topic includes criteria used to evaluate whether an environmental impact is significant or insignificant. As explained in Section 15002(g) of the *CEQA Guidelines*,

Section 15002(g) (Significance) states that a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project. The significance criteria for each topic in this EIR have been developed based on guidelines set forth in the *CEQA Guidelines* as modified in some cases by standards established by the County. This EIR lists the thresholds of significance for each area of impact and assesses whether the project's impacts exceed these thresholds. If the impact does not exceed the threshold or if the recommended mitigation measures reduce the impact below the thresholds, then the impact is considered to be less-than-significant.

1.4 PUBLIC REVIEW AND COMMENT

A. Notice of Preparation

The County of Mendocino issued an initial Notice of Preparation (NOP) of a Draft Environmental Impact Report for the original Draft 2002 UVAP on July 11, 2003. A new NOP for the Draft 2007 UVAP that is assessed in this EIR was issued on July 2, 2007. The NOP is on file for public review at the offices of the County Department of Planning and Building Services. The formal Public Review Period for the NOP extended from July 2 to August 6, 2007. The NOP was sent to 41 agencies, departments, and other entities. Formal responses were received from nine public agencies, two public groups, and five individuals, including:

- California Native American Heritage Commission
- California Public Utilities Commission
- California Department of Forestry and Fire Protection
- California Department of Transportation
- Local Agency Formation Commission of Mendocino County
- Mendocino County Executive Office
- City of Ukiah (three responses)
- Russian River Flood Control & Water Conservation Improvement District
- Ukiah Main Street Program (Tom Liden, President)
- Ukiah Valley Smart Growth Coalition (Alex de Grassy)
- Friends of Gibson Creek (Linda Sanders)
- Linda Sanders
- Pinky Kushner
- Mary Anne Miller
- Susan Knopf
- Stephen Scalmanini

These written responses are all on file for public review at the offices of the Mendocino County Department of Planning and Building Services.

Because the County Board of Supervisors had not selected a preferred alternative for the Draft 2007 UVAP at the time the original NOP was circulated, the County decided to circulate a Revised NOP in November 2007 to clearly identify the proposed project and solicit any additional input. The formal Public Review Period for the Revised NOP extended from November 5 to December 4, 2007. The NOP was sent to 41 agencies, departments, and other entities. Formal responses were received from four public agencies, two public groups, and eleven individuals, including

- California Native American Heritage Commission

- County of Mendocino Environmental Health Division
- Mendocino County Water Agency
- Mendocino County Agricultural Commissioner
- City of Ukiah
- Mendocino County Farm Bureau (Peter Johnson)
- Sierra Club, Mendocino Group, Redwood Chapter (Daniel Myers)
- Stephen Butler, Clement, Kirkpatrick, & Kenworthy
- Ukiah Valley Smart Growth Coalition (Alex de Grassi and Mary Anne Landis)
- Tony Orth
- Antonio Andrade
- Mary Anne Landis
- Ellen Faulkner
- Dori Kramer
- Ruth Van Antwerp
- Meca Wawona
- Pinky Kushner
- Darca Nicholson
- Estelle Palley Clifton
- Susan Boling Guhlke

These written responses are also on file for public review at the offices of the Mendocino County Department of Planning and Building Services.

B. EIR Scoping Meetings

The County held an EIR Scoping Meeting for public agency representatives and a second scoping meeting for all interested parties on September 5, 2007 in a Conference Room at the County offices. The agency scoping meeting was attended by representatives of the City of Ukiah Planning Department, Ukiah Police Department, Ukiah Fire Department, Ukiah Valley Fire District, Mendocino Council of Governments (MCOG), Mendocino County Department of Transportation, Mendocino Transit Authority (MTA), and CAL FIRE. The City of Ukiah, MTA, and MCOG submitted written comments, which are on file with the County Department of Planning and Building Services.

At the public scoping meeting, 44 people submitted verbal comments, and 40 people submitted additional written comments (these written comments also include letters submitted after the day of the scoping meeting).

A summary of these verbal comments plus all the written comments are on file for public review at the offices of the Department of Planning and Building Services.

A second public scoping meeting was held on December 5, 2007 following the circulation of the Revised NOP. At the public scoping meeting, 22 people submitted verbal comments. A summary of these verbal comments plus all written comments are also on file for public review at the offices of the Department of Planning and Building Services.

C. Status of the Original Draft EIR and Comments Received on That Draft EIR

The Draft EIR for the original project was circulated for public review in August 2005; the public review period closed on October 26, 2005. Where the data and analyses remain pertinent for the revised plan, data from the original Draft EIR has been incorporated into this Revised DEIR. Otherwise, new or revised analyses have been done to reflect the revised plan changing baseline conditions, and changes in the regulatory setting and requirements. This Revised Draft EIR is a

stand-alone document. It replaces the original DEIR, and there is no need to refer to that original DEIR to understand the revised plan or its impacts.

Regarding written and verbal comments submitted in 2005 on the original plan, this Revised Draft EIR is not a Response to Comment report. It is an assessment of the revised plan. Many of the comments submitted on the original DEIR are no longer pertinent and/or have been addressed in the analyses in this Revised DEIR. However, all these letters and comments remain part of the administrative record for the project. All of these comments were read. Responses to comments have been incorporated in the text when they are accurate and pertinent to the revised project. CEQA Guidelines do require that this Revised EIR include a summary of revisions to the original Draft EIR that were made. This discussion is included in Section 2.4 of this report.

The County advises all reviewers of this Revised Draft EIR that old comments on the original Draft EIR will not be responded to, and that new comments need to be submitted on this revised EIR, consistent with CEQA Guidelines Section 15088.5(f)(1) that states, "The lead agency shall advise reviewers, either in the text of the revised EIR or by an attachment to the revised EIR that although part of the administrative record, the previous comments do not require a written response in the final EIR, and that new comments must be submitted for the revised EIR. The lead agency need only respond to those comments submitted in response to the recirculated revised EIR."

D. Distribution of the Draft EIR

A public review period of 45 days is provided for this Draft EIR. This review period begins on the publication date of the Notice of Completion of the Draft EIR. Public agencies and interested individuals may submit comments on the Draft EIR in writing to Jessica Stull-Otto, Mendocino County Department of Planning and Building Services, 501 Low Gap Road, Room 1440, Ukiah, CA 95482. During the public review period, the County will also hold a public hearing to take verbal comments on the Draft EIR.

E. Certification of the Final EIR

Once the public review period is closed, a Final EIR will be prepared. The Final EIR will incorporate this Draft EIR by reference. It will contain all written and verbal comments on this Draft EIR, responses to those comments, and any revisions to the text of this Draft EIR. The Board of Supervisors will consider the EIR and certify the document. The Final EIR must be certified before any action on the UVAP can occur. After the Board has certified the EIR and, if it approves the plan, it will file a Notice of Determination with the State Office of Planning and Research and the Mendocino County Clerk.

F. Decision on Whether to Approve the Project

The *CEQA Guidelines* state that public agencies should not approve projects as proposed until all feasible means available (i.e., mitigation measures or alternatives to the project) have been employed to substantially decrease the significant effects of such projects. "Feasible means" indicate steps capable of being accomplished in a successful manner within a reasonable period of time taking into account economic, environmental, legal, social, and technological factors (*CEQA Guidelines*, Section 15364).

If an EIR determines that there will be significant impacts as the result of a project, the Board of Supervisors must make one or more of the following findings (in accordance with *CEQA Guidelines* Section 15091):

- Changes have been required in the project that would avoid or substantially reduce significant impacts;

- Such changes are the responsibility of another public agency; or

- Specific economic, social, or other considerations make the mitigation measures of the EIR or project alternative(s) infeasible.

For impacts that the County determines cannot be mitigated to a less than significant level, it would be necessary for the Board to issue a Statement of Overriding Considerations (per *CEQA Guidelines* Section 15093) that describes how benefits of the project outweigh those impacts.

After considering the Final EIR, the lead agency shall not approve a project unless all significant effects have been eliminated or reduced where feasible or the agency adopts a statement of overriding considerations finding that economic, legal, social technological or other benefits of the proposed project outweigh its unavoidable adverse environmental effects.

The EIR is a factual, objective, public-disclosure document that takes no position on the merits of the project, but rather provides information on which decisions about the project can be based. The EIR has been prepared according to the professional standards and practices of the EIR consultants' individual disciplines and in conformance with the legal requirements and informational expectations of CEQA and the State and local guidelines in place to implement it. EIR authors are listed at the end of the document.

1.5 PLANNING AREA DESCRIPTION

A. Plan Area

The proposed UVAP would guide future development on approximately 60 square miles of land (about 38,000 acres) encompassing the Ukiah Valley in central Mendocino County. The area that would be covered by the plan is hereafter referred to in this EIR as the "plan area." The Ukiah Valley is located about 50 miles north of Santa Rosa and 25 miles inland from the coast. It is a large interior basin caused by faulting and folding of the bedrock that resulted in an uplift of the surrounding terrain and depression of the valley area. Subsequent erosion of the surrounding hills filled the valley with coarse sediments of Pliocene and Pleistocene age. The upper Russian River flows through the plan area. The east fork of the river was dammed by Coyote Dam to create Lake Mendocino. The plan area is shown on Figure 1-2. The basic boundaries of the plan area include:

- On the north, east of Highway 101, the boundary is Highway 20; west of Highway 101, the boundary is an arbitrary line extending westward from Highway 20.

- On the west, the boundary is an arbitrary straight line that approximately follows the ridgeline of the first ridge to the west of the valley.

- On the east, the boundary is another arbitrary straight line located on the ridge to the east of the valley.

- On the south, the boundary is near the top of the ridge that runs along the south end of the valley.

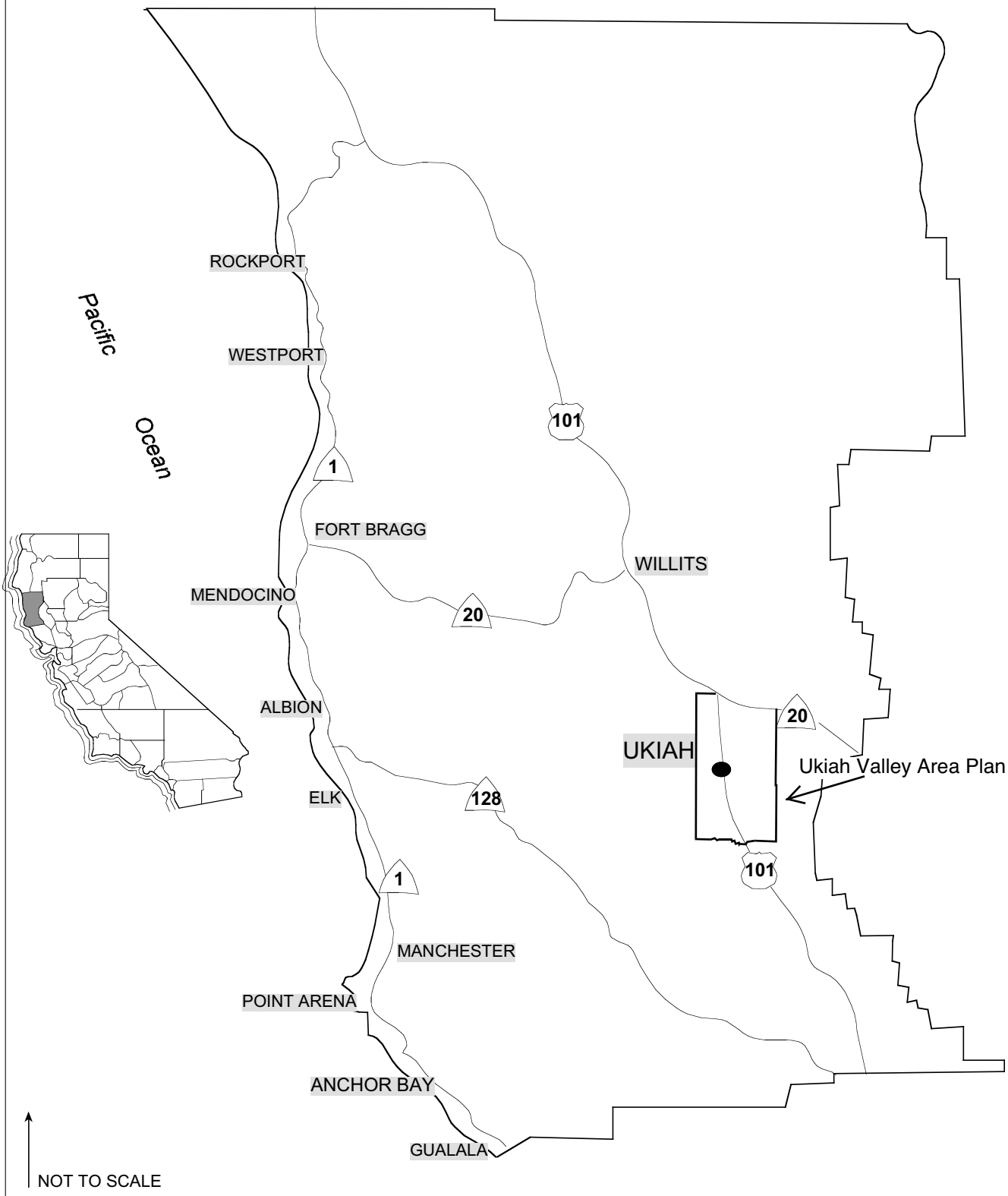


Figure 1-1 Regional Location

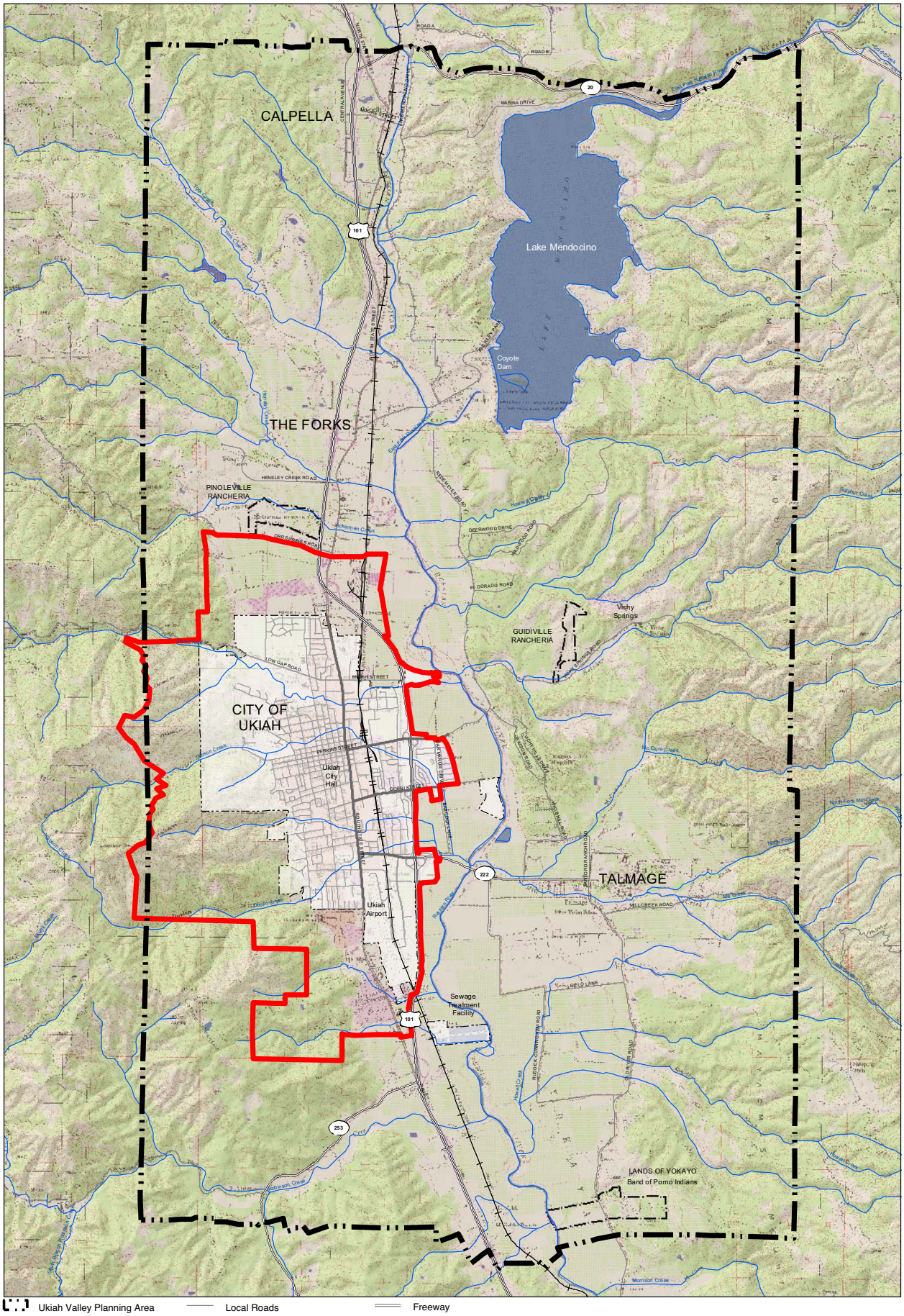


Figure 1-2 PLAN AREA

Source: Mendocino County Planning & Building Services,

B. Existing Land Use and General Plan Designations in Plan Area

The plan area contains a wide range of land uses and corresponding General Plan classifications including Rangeland, Agricultural, Rural Residential (1, 2 and 5 Acre Minimum), Remote Residential (20 and 40 Acre Minimum), Suburban Residential, Commercial, Industrial, Public Services and Public Lands. The following outlines the basic existing land use pattern and the existing General Plan designations.

- Much of the valley floor contains prime agricultural soils which historically have been used for commercial agriculture. Primary crops currently grown are wine grapes and some pears. These areas are primarily classified Agricultural.

- Some foothills and hilly areas along the edges of and within the valley have been developed with rural residential developments, including such developments as Rogina Heights, Vichy Springs subdivision, and the Deerwood subdivision. Larger lot subdivisions are located in various other locations (e.g., east and west of Calpella). These developments are primarily classified Suburban Residential and Rural Residential. Adjoining areas are largely Rangeland or Remote Residential.

- The City of Ukiah is located in the southwest quadrant of the plan area, primarily to the west of Highway 101. Future land use in this incorporated city of about 15,000 people is not addressed in the Draft 2007 UVAP (as an incorporated city, land use within its boundaries is guided by the City's General Plan).

- South of the City of Ukiah and west of Highway 101 there is existing urban development along South State Street. This development is primarily Commercial, Industrial and Suburban Residential. The South State Street area is part of a Redevelopment Area covered by the Mendocino County Redevelopment Plan (adopted in 2003). There is scattered residential development further south, extending as far as Highway 235. The County recently approved the 197-unit Garden's Gate subdivision in this area. South of Highway 235 the land is primarily used for agriculture and grazing. These areas are classified Rural Residential adjoined by Remote Residential, Agricultural, and Rangeland.

- To the east of Ukiah is the unincorporated community of Talmage, classified as Rural Community. This community once supported a large State mental hospital which was closed, sold, and is now the site of the City of 10,000 Buddhas, a Buddhist residential and religious center. Between the City of 10,000 Buddhas and Ukiah (as well as north and south of the Buddhist property) is a mix of residential development and a small amount of commercial development along Highway 222. To the east and south are scattered rural residential developments and large properties used for agriculture and grazing. These areas are classified Suburban Residential and Rural Residential and are adjoined by Remote Residential, Agricultural and Rangeland. Immediately east of the Buddhist property is the Guidiville Rancheria, now developed with single-family housing units, over which the County has no jurisdiction.

- On the east side of Highway 101, north of Talmage, is agricultural land and the Rogina Heights subdivision. Lands along the Russian River are Agricultural. Some foothill properties to the east of Redemeyer Road are Rural Residential, including the Deerwood Park, El Dorado Estates, and Vichy Springs subdivisions, and larger lot rural residential development. Further east are rangelands all along the east side of Lake Mendocino – with the exception of some large lot rural residential developments immediately south of Highway 20.

- North of Ukiah, on the west side of Highway 101, is urban residential and non-residential development, classified Suburban Residential, Commercial, and Industrial. These parcels are located between the north edge of the City and the "Lovers Lane area" (an undeveloped tract of land to the north of Lovers Lane, south of Orr Springs Road, and west of Highway 101). Most of the Lovers Lane area is classified Agricultural. North of the Lovers Lane area is a mix of residential, commercial, and industrial uses on the north side of Orr Springs Road. Much of this development is on the Pinoleville Indian Reservation, over which the County has no jurisdiction.

- On the east side of Highway 101, a mix of commercial and industrial uses (including heavy industrial such as mining, a mill site, and the former site of the Masonite plant), extends along North State Street to The Forks area (Parducci Road). This area is part of the Mendocino County Redevelopment Plan and is largely classified Industrial and Commercial.

- The north end of the North State Street area intermixes with The Forks (an unincorporated community). The Forks is a blend of residential, commercial, and industrial uses (Suburban Residential, Rural Residential, Commercial and Industrial classifications) that connects rural residential subdivisions to the east and north along the west shore of Lake Mendocino. These areas, classified Rural Residential and Remote Residential, extend to Highway 101 and the area north of the City of Ukiah.

- Northeast of The Forks is Lake Mendocino, a water supply and flood control reservoir and also a major public recreation attraction.

- Further north on the east side of Highway 101 is the unincorporated community of Calpella. Calpella originally centered around lumber mills and is now a mix of industrial, commercial, and residential uses, including a functioning mill. Parts of the Calpella area are also a part of the Mendocino County Redevelopment Plan. The community includes a variety of classifications, including Commercial, Industrial, and Suburban Residential.

- The west side of Highway 101 north of the Pinoleville Reservation (P) is primarily used for agriculture or rangeland (AG and RL) with certain exceptions, namely some rural residential development (RR) west of Calpella, York Estates, development south of Parducci Road, and the Mendocino College campus (classified Public Services) at the west end of Hensley Creek Road.

1.6 UKIAH VALLEY AREA PLAN PURPOSE, OBJECTIVES, AND DESCRIPTION

A. Mission and Vision of the Plan

The Ukiah Valley Area Plan ("the project"), if adopted, will serve as part of the County's General Plan. It will provide long-term policy direction for growth and development in the plan area over the planning period. The Draft 2007 UVAP has been developed to be consistent with the goals, policies, and implementation measures of the County General Plan.

B. Geographic Scope of the Plan

The UVAP will regulate future development of the plan area, which is shown on Figure 1-2. This includes unincorporated lands within the plan area. Land use decisions within the City of Ukiah are guided by the City's General Plan and other City planning guidelines and are not covered by the UVAP.

C. Overview of the Plan

The Draft 2007 UVAP would constitute a portion of the County General Plan. Policies and Action Items in the County General Plan will apply to development and land use in the plan area. The Draft 2007 UVAP expands on the General Plan goals and policies to provide additional guidance for land uses in the plan area. The land use classifications, policies, and implementation measures of the UVAP provide more detailed guidance for the plan area than is contained in the County General Plan adopted in 2009. The Draft 2007 UVAP contains nine elements, including policies and programs for subjects within five of the seven elements that State law requires for a General Plan. It does not contain a Noise Element nor a Housing Element. Therefore, the Noise and Housing Elements of the existing County General Plan will continue to provide virtually all policy direction in these subject areas.

D. UVAP Planning Period

The plan will be used to direct development in the plan area over the next 20 years (through 2030). Implementation measures included in the Draft 2007 UVAP will be implemented on an ongoing basis or in the "short-term" (less than 3 years), "intermediate-term" (Years 3-7), or "long-term" (over 7 years).

E. Plan Sections

1. Land Use and Community Development Section

The Land Use and Community Development Section (hereafter called the Land Use Section) designates the general distribution and intensity of uses of land for housing, business, industry, open space, education, public buildings, and other categories of public and private uses. It specifies standards of population density and building intensity in the various land use categories.

This Section is the primary statement of how land in the plan area should be used or reused in the event of redevelopment. It, therefore, sets the framework for all other elements in the plan, all of which must be consistent with one another. The Land Use Section and its policies would guide growth and the development and use of land in the unincorporated areas of the plan area through 2030. The section includes a plan area-wide land use policy framework, specific land use policies, a land use map, and an implementation program.

The proposed land use classifications for the plan area are shown on Figure 1-3. The goals of the Land Use Section are:

LU1: Create compact, mixed-use, and well-balanced communities that can achieve this plan's principles of sustainability.

LU2: Promote compatible land uses adjacent to important transportation facilities and protect against incompatible ones.

LU3: Consider the needs of education providers in the planning and project review process.

LU4: Manage future growth to ensure that essential support infrastructure is in place prior to development.

LU5: Create a business development strategy that emphasizes local ownership and/or adds value to local goods or services that re-circulates money within the community.

LU6: Establish Ukiah and Mendocino County as leaders in the development of businesses and practices that conserve resources and avoid needless consumption and waste.

LU7: Recognize that the Ukiah Valley is one community, and foster collaborative decision-making between County and City Agencies.

LU8: Ensure that there is an ongoing process of community involvement for the purposes of providing input and monitoring the success of the Ukiah Valley Area Plan.

To realize these goals, the County has established land use designations and classified properties within the plan area so that future land use will be consistent with the goals and policies of other plan elements. The Land Use Section provides land use designations to ensure that future development within the plan area preserves open space and agriculture; conserves natural resources; provides adequate park facilities; is consistent with available roads and infrastructure; is safe; and maintains the beauty of the area. The Land Use Section promotes economic sustainability and revenue sharing with the City in order to develop an equitable revenue sharing agreement to facilitate economic development, efficient resource use and resource protection, throughout the Ukiah Valley. The Section includes provisions for a growth management plan and would allow new development entitlements only if adequate infrastructure and services are available to serve that development.

In preparing the Land Use Section, the County concentrated on developing appropriate land use classification for nine areas (called "discussion areas" in the planning process) where most new development could be located. Table 1.6-1 shows the acreage of development potential for those nine areas as well as the rest of the plan area outside those nine discussion areas. The table shows buildout potential for the proposed plan, the Existing General Plan, and the land use alternatives identified by the Board of Supervisors (Alternatives A and B), the latter was somewhat revised by the County Department of Planning and Building Services based on citizen and agency input.[1] These alternatives are described and assessed in Section 4.4 of this EIR. There is a fourth alternative (Alternative C). This alternative combines the land use classifications of the Existing General Plan and the policies of the Draft UVAP. As such, the development potential for this alternative is the same as shown for the Existing General Plan. Table 1.6-2 summarizes the maximum development potential described in Table 1.6-1. For informational purposes, Table 1.6-1 provides data on the buildout potential for the City of Ukiah.

[1] The revision to the alternative was done by the staff of the County Planning Team, which was the department responsible for overseeing preparation of the UVAP. Subsequently, that department was incorporated back into the Department of Planning and Building Services. This table was generated by the Mendocino County Planning Team. The methodology that was used to develop these projections is on file with the Planning Team.

Table 1.6-1
Maximum Buildout Development Potential

	Discussion Area (DA)										
	DA #1 Calpella	DA #2 North State	DA #3 Lover's Lane	DA #5 South State	DA #6 Masonite	DA #7 Brush St. Triangle	DA #8 East Ukiah Hills	DA #9 South Ukiah Valley	Not in any discussion area	UVAP MASTER TOTAL	CITY OF UKIAH TOTAL
DRAFT 2007 UVAP											
Single Family Units	25	236	712	0	0	241	65	490	909	2,678	78
Multifamily Units	153	364	636	165	599	391	0	432	12	2,752	516
Min Com Lease Area*	68,656	411,039	187,308	263,901	493,930	135,655	0	183,729	325,191	2,069,409	1,312,983
Max Com Lease Area*	228,855	607,489	624,360	390,808	1,646,436	388,695	0	354,710	355,308	4,596,661	2,387,573
Industrial Uses	0	1,771,755	0	0	10,230,767	0	0	0	0	12,002,522	0
Public Uses	0	459,166	1,151,263	0	494,702	375,739	0	0	238,089	2,718,959	263,980
EXISTING GENERAL PLAN ALTERNATIVE & ALTERNATIVE C											
Single Family Units	28	92	3	0	0	0	1	449	857	1,430	78
Multifamily Units	137	0	0	147	0	0	0	0	12	296	573
Min Com Lease Area**	93,479	347,559	0	263,902	0	0	0	55,493	126,066	886,499	1,312,983
Max Com Lease Area**	205,654	831,574	0	359,082	0	0	0	55,493	347,481	1,799,284	2,387,573
Industrial Area	0	1,770,360	213,194	0	13,196,567	3,367,968	0	0	105,697	18,653,786	0
Public Uses	0	0	0	0	0	0	0	0	0	0	263,980
LAND USE ALTERNATIVE A											
Single Family Units	25	95	63	0	0	241	65	490	909	1,888	78
Multifamily Units	153	124	184	165	599	391	0	432	12	2,060	516
Min Com Lease Area*	68,656	287,064	74,338	263,901	493,930	135,655	0	183,729	325,191	1,832,464	1,312,983
Max Com Lease Area*	228,855	287,064	247,796	390,808	1,646,436	388,695	0	354,710	355,308	3,899,672	2,387,573
Industrial Uses	0	2,587,171	0	0	10,230,767	0	0	0	0	12,817,938	0
Public Uses	0	0	96,884	0	494,702	375,739	0	0	238,089	1,205,414	263,980
LAND USE ALTERNATIVE B											
Single Family Units	25	95	63	0	0	136	1	490	857	1,667	78
Multifamily Units	153	124	184	165	0	331	0	146	12	1,115	516
Min Com Lease Area*	68,656	135,681	74,338	392,075	0	336,446	0	183,729	163,778	1,354,703	1,312,983
Max Com Lease Area*	228,855	135,681	247,796	518,982	0	526,732	0	354,710	163,778	2,176,534	2,387,573
Industrial Uses	0	2,717,592	0	0	13,196,567	0	0	0	105,697	16,019,856	0
Public Uses	0	0	96,884	0	0	361,486	0	0	238,089	696,459	263,980

* leasable commercial space is calculated from both commercial and mixed use classification
Source: Mendocino County Department of Planning and Building Services

Table 1.6-2
Maximum Buildout Potential in the Plan Area

	Maximum Number of Dwelling Units	Maximum Commercial (square feet)	Maximum Industrial (square feet)
Draft 2007 UVAP	5,430	4.6 million	2.4 million
Existing General Plan & Alternative C	1,726	1.8 million	3.7 million
Land Use Alternative A	3,948	3.9 million	2.6 million
Land Use Alternative B	2,782	2.2 million	3.2 million

Source: Mendocino County Department of Planning and Building Services

The Section includes the policies and measures to address the following issues:

- To achieve a compact urban form, use land use planning and decision-making to promote compact development forms, mixed uses, infill, reuse, and sustainable technologies. Provide incentives for infill projects. Emphasize complete and integrated communities which encompass the facilities and activities essential to the daily life of the residents and promote community atmosphere and interaction.

- Provide adequate land supply to meet a range of housing needs and encourage diverse neighborhoods. Allow a variety of housing types and encourage diverse neighborhoods.

- Provide an economic development strategy to encourage development of economically viable industries and jobs. Facilitate investment in "value added" industries. Provide labor force training and development.

- Prepare and adopt a growth management plan and prioritize development where it can be accommodated by available infrastructure. Ensure there is adequate infrastructure before approving new development.

- Collaborate with the City of Ukiah to fund programs and evaluate planning issues in the Valley. Work to establish a tax-sharing agreement and to revise the City's Sphere of Influence.

- Annually monitor the implementation of the plan and establish annual work priorities.

- The Draft 2007 UVAP contains 16 land use classifications organized into four broad categories. The designations are listed below and shown on Figure 1-3. Except for the five Mixed-Use classifications, the land use classifications are the same as in the County's General Plan.

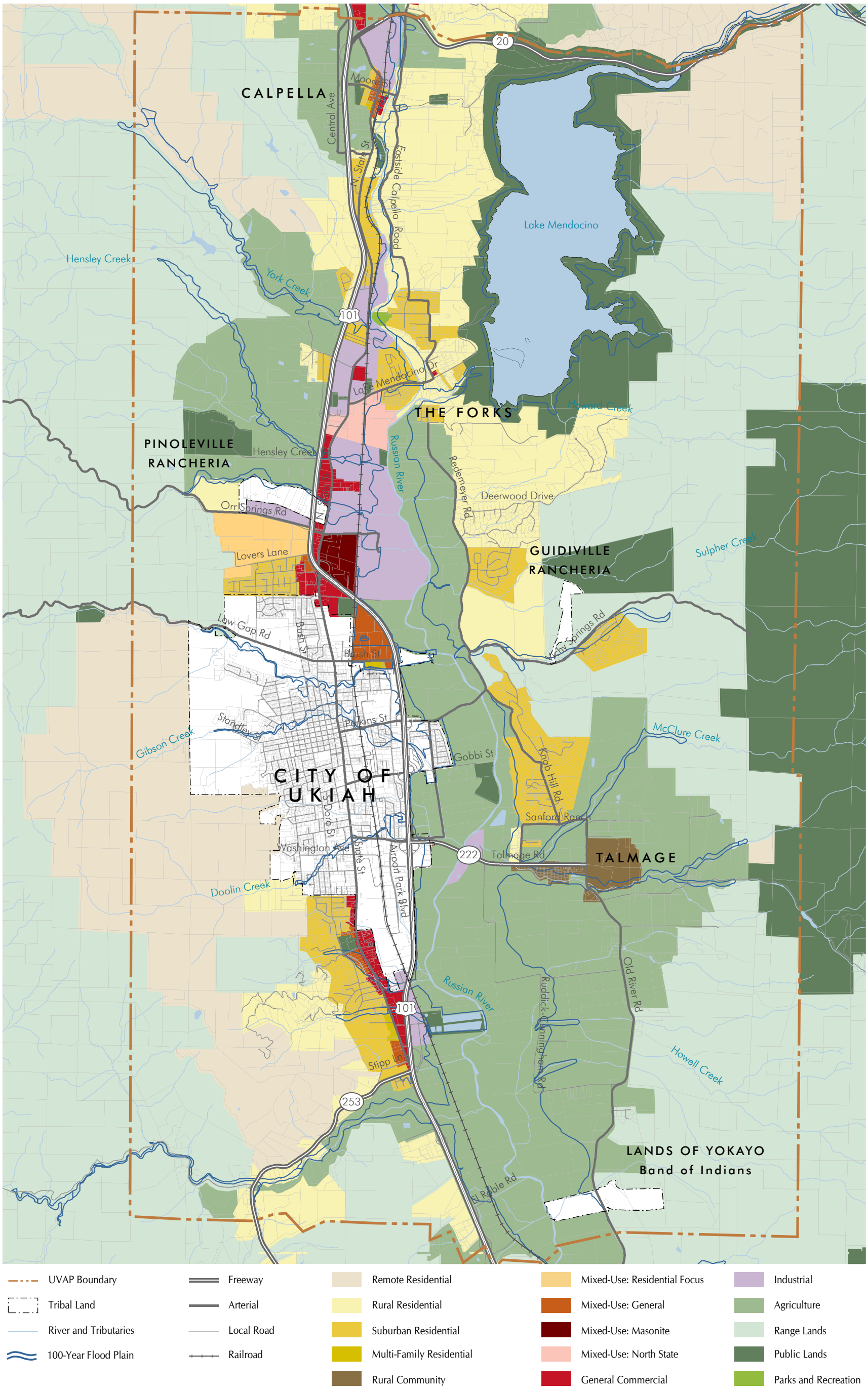


Figure 1-3 Draft 2007 UVAP Land Use Plan

- **Residential Neighborhoods**
  - Remote Residential (RMR)
  - Rural Residential (RR)
  - Suburban Residential (SR)
  - Multi-Family Residential (MF)

- **Activity Centers**
  - Rural Community (RC)
  - Mixed-Use: General (MU-2)
  - Mixed-Use: Brush Street Triangle (MLBST)
  - Mixed-Use: Lovers Lane (MU-3)
  - Mixed-Use: Masonite (MUM)
  - Mixed-Use: North State (MUNS)

- **Industry and Commerce**
  - General Commercial (C)
  - Industrial (I)
  - Agriculture (AG)
  - Range Lands (RL)

- **Open Space**
  - Public Lands (PL)
  - Public Services, Parks, and Recreation (PS)

Table 1.6-3 displays the amount of land within each of these classifications. Table 1.6-4 describes the new mixed use land use classifications.

Population and Housing Projections

Table 1.6-1 shows the maximum potential buildout that could occur given these land use designations. For purposes of this EIR, it is assumed that this buildout would occur by the year 2030. This is a 'worst case" scenario as it is very unlikely that the area would build out within that time period, and it is also very unlikely that every property owner whose property has some development potential would seek to develop that property and/or seek to develop it at the maximum allowed density.

Historically, the plan area has experienced less growth than projected for the plan area if it were to build out by 2030**.** From 1990 to 2005, the unincorporated plan area added 822 households or 2,113 new people. This is an average of 82 new households or 211 people per year; this is a 1% annual growth rate. During this same period, the City of Ukiah grew at an even slower 0.56% annual growth rate – from 14,599 people to 16,010 people.

As is explained in detail in the introduction section of Chapter 3.0 of this EIR, based on new population projections developed by the State Department of Finance, the plan area population is projected to grow by about 2,772 households or 7,127 people by 2030. This equates to about 54% of the maximum buildout allowable under the Draft 2007 UVAP.

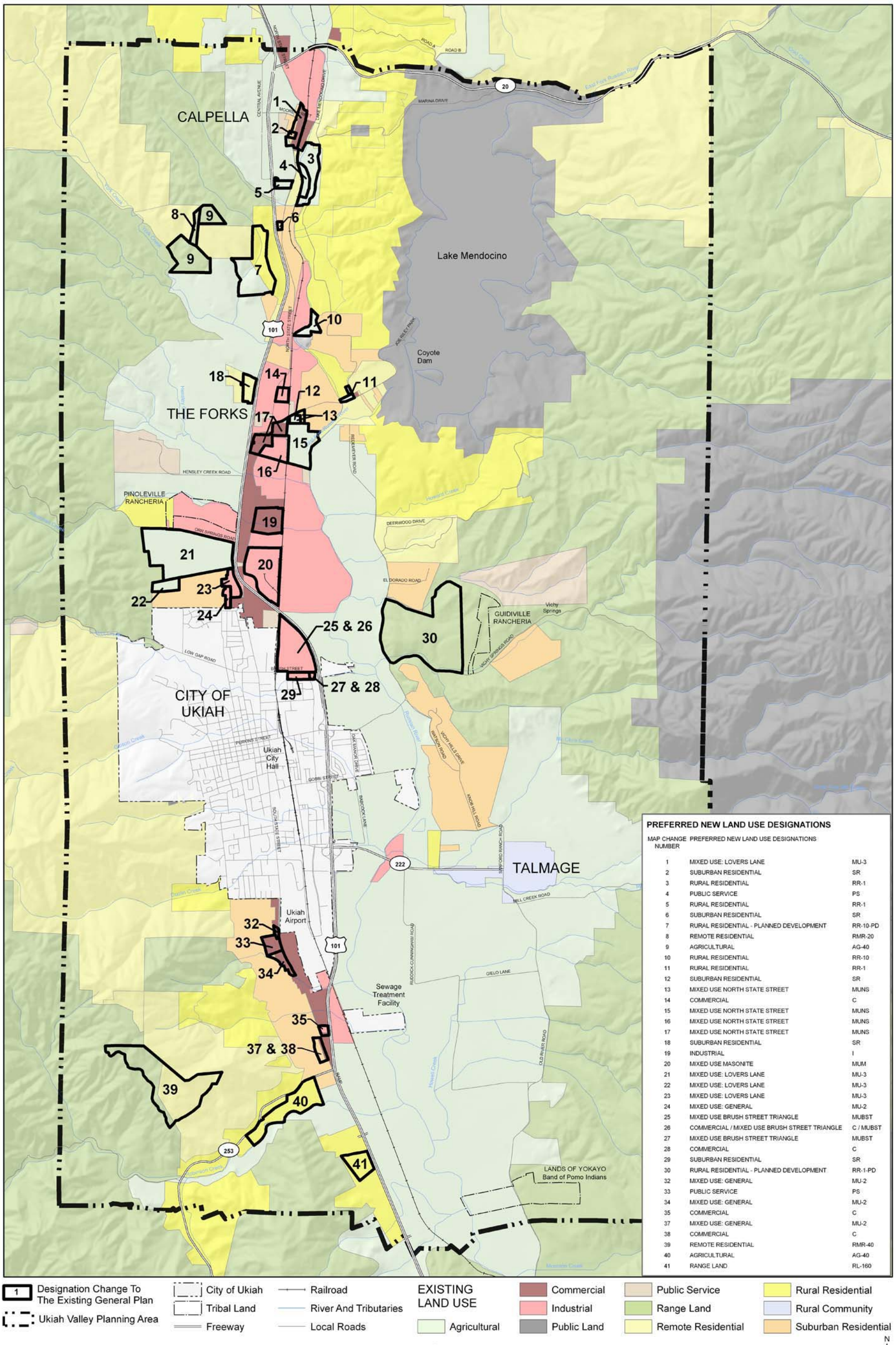
Table 1.6-3
Land Use Classifications

Residential Uses		Acreage
RMR	Remote Residential	4,593
RR	Rural Residential	3,918
SR	Suburban Residential	1,622
MF	Multi-Family Residential	22
Activity Centers		
RC	Rural Community	192
MU-2	Mixed Use: General	58
MUBST	Mixed Use: Brush Street Triangle	89
MU-3	Mixed Use: Lovers Lane	211
MUM	Mixed Use: Masonite	97
MUNS	Mixed Use: North State Street	131
Industry and Commerce		
C	Commercial	278
I	Industrial	951
AG	Agriculture	8,792
RL	Range Lands	11,827
Open Space		
PL	Public Lands	4,376
PS	Public Services	606
Total Plan Area		37,773

Source: Mendocino County Department of Planning and Building Services

Comparison with the Existing General Plan

Table 1.6-5 describes proposed land use classification changes (as designated in the current General Plan) that are included in the Draft 2007 UVAP. The table also shows whether these land use classification changes are included in the project alternatives that are assessed in Chapter 4.0 of this EIR. The table is keyed to Figure 1-4 that shows the location of these proposed changes. The County Zoning Code would need to be revised to incorporate the new land use classifications to ensure consistency between the UVAP and the Zoning Code.



PREFERRED NEW LAND USE DESIGNATIONS

MAP CHANGE NUMBER	PREFERRED NEW LAND USE DESIGNATIONS	
1	MIXED USE: LOVERS LANE	MU-3
2	SUBURBAN RESIDENTIAL	SR
3	RURAL RESIDENTIAL	RR-1
4	PUBLIC SERVICE	PS
5	RURAL RESIDENTIAL	RR-1
6	SUBURBAN RESIDENTIAL	SR
7	RURAL RESIDENTIAL - PLANNED DEVELOPMENT	RR-10-PD
8	REMOTE RESIDENTIAL	RMR-20
9	AGRICULTURAL	AG-40
10	RURAL RESIDENTIAL	RR-10
11	RURAL RESIDENTIAL	RR-1
12	SUBURBAN RESIDENTIAL	SR
13	MIXED USE NORTH STATE STREET	MUNS
14	COMMERCIAL	C
15	MIXED USE NORTH STATE STREET	MUNS
16	MIXED USE NORTH STATE STREET	MUNS
17	MIXED USE NORTH STATE STREET	MUNS
18	SUBURBAN RESIDENTIAL	SR
19	INDUSTRIAL	I
20	MIXED USE MASONITE	MUM
21	MIXED USE: LOVERS LANE	MU-3
22	MIXED USE: LOVERS LANE	MU-3
23	MIXED USE: LOVERS LANE	MU-3
24	MIXED USE: GENERAL	MU-2
25	MIXED USE BRUSH STREET TRIANGLE	MUBST
26	COMMERCIAL / MIXED USE BRUSH STREET TRIANGLE	C / MUBST
27	MIXED USE BRUSH STREET TRIANGLE	MUBST
28	COMMERCIAL	C
29	SUBURBAN RESIDENTIAL	SR
30	RURAL RESIDENTIAL - PLANNED DEVELOPMENT	RR-1-PD
32	MIXED USE: GENERAL	MU-2
33	PUBLIC SERVICE	PS
34	MIXED USE: GENERAL	MU-2
35	COMMERCIAL	C
37	MIXED USE: GENERAL	MU-2
38	COMMERCIAL	C
39	REMOTE RESIDENTIAL	RMR-40
40	AGRICULTURAL	AG-40
41	RANGE LAND	RL-160

Figure 1-4 Areas with Land Use Designation Changes

Source: Mendocino County Planning & Building Services

TABLE 1.6-4 – Mixed Use Land Use Classifications

Land use type	Mixed Use General (MU-2)	Mixed Use Lovers Lane (MU-3)	Mixed Use North State Street (MUNS)	Mixed Use Brush Street Triangle (MUBST)	Mixed Use Masonite (MUM)
Singl e Family Residential	- none -	52% of gross area 6000 sq ft lot size min.	20% of gross area 6000 sq ft lot size min.	40% of gross area 6000 sq ft lot size min.	- none -
Multi-Family Residential	allowable, no % specified	4% of gross acreage 1500 sq ft of lot size per unit	5% of gross acreage 1500 sq ft of lot size per unit	- none -	- none -
Mixed-Use: Residential and Commercial Uses	allowable, no % specified	5% of gross acreage 1500 sq ft of lot size per unit and a commercial FAR up to 1.0	5% of gross acreage 1500 sq ft of lot size per unit and a commercial FAR up to 1.0	10% of gross acreage 1500 sq ft of lot size per unit and a commercial FAR up to 1.0	50% of gross acreage 1500 sq ft of lot size per unit and a commercial FAR up to 1.0
General Commercial Uses	allowable, no % specified	- none -	30% gross acreage	14 % of gross acreage	- none -
List Industrial/ non-retail commercial	allowable, no % specified	- none -	6% of gross acreage	- none -	10% of gross acreage
Parks/Open Space/ Public	allowable, no % specified	14% of gross acreage	9% of gross acreage	11% of gross acreage	15% of gross acreage
Circulation	no % specified	25% of gross area	25% of gross acreage	25% of gross area	25% of gross acreage

Figure 1.6-5 Comparison of Land Use Differences Between the UVAP Alternative

	Land Use Change from the existing General Plan	Preferred Project	Land Use Alt. 'A'	Land Use Alt. 'B'	Land Use Alt. 'C'
1	Changes 1 acre of AG-40, 4.3 acres of SR, & 11.4 acres of C to 16.7 acres of MU-3. ✱	YES	YES	YES	NO
2	Changes 2.25 acres of split C/SR (0.75/1.5 acres), with existing apartments, to 2.25 acres of SR. ◈ 1	YES	YES	YES	NO
3	Changes 43 acres of AG-40 to RR-1, south of Calpella on Eastside Calpella Road. ◈	YES	YES	NO	NO
4	Redesignates 12.6 acres of AG-40, where the Calpella Sewage Treatment ponds are, to 12.6 acres of PS. ◈	YES	YES	YES	NO
5	Changes 8 acres of AG-40 to 8 acres of RR-1. ◈	YES	YES	NO	NO
6	Changes a 2 acre parcel on the west side of North State from R-1 to SR . ◈	YES	YES	NO	NO
7	Changes 93 acres already designated RR-10 and 53 acres of AG-40 to 146 acres RR-10-PD. ◈	YES	YES	NO 2	NO
8	Connects two discontinuous RMR-20 areas by redesignating the intervening 8.5 acres of RL-160 parcels between them to RMR-20. ◈	YES	YES	YES 3	NO
9	Changes 81 acres of active agricultural production from RL-160 to AG-40. ◈	YES	YES	YES	NO
10	Changes 12.5 acres of AG-40 parcels on Antoni Lane to RR-10. ◈	YES	YES	NO	NO
11	Redesignates 5 acres of developed AG-40 parcels to RR-1 at the northwest corner of Eastside Calpella Road and Lake Mendocino Drive. ✱	YES	YES	YES	NO
12	Redesignates 4.9 acres of developed AG-40 land to multifamily residential use (SR with an R-3 Zoning). ✱	NO	YES	YES	NO
13	Redesignates 4.9 acres of developed AG-40 and 3.6 acres SR to 8.5 acres of Mixed uses (MUNS) in the same area identified in #12. ✱	YES	NO	NO	NO
14	Changes 9.3 acres of industrial land (I) north of the intersection of North State Street and Parducci Road to commercial (C). ✱	YES	YES	NO	NO
15	Changes 56 acres of AG-40 land south of Lake Mendocino Dr. north of the Mendocino Redwood Company mill site to mixed uses (MUNS). ✱	YES	NO	NO	NO
16	Converts the vacant 29 acres of industrial (I) land east of north State St and the NPRR railroad tracks to mixed uses (MUNS). ✱	YES	NO	NO	NO
17	Changes 24 acres of vacant and occupied commercial parcels and 1 acre of Ag-40 on both sides of North State St. south of Lake Mendocino Drive to 25 acres mixed uses (MUNS). ✱	YES	NO	NO	NO
18	Changes 15.6 acres of RR-1 on both sides of Tollini Lane from to SR (12K min lot size). ◈ ✪	YES	YES	NO	NO
19	Redesignates 39 acres of commercial (C) lands on North State St. to industrial (I). ✱	YES	YES	YES	NO
20	Redesignates the 79 acre Masonite (west) site from (I) to (MUM) to allow a mix of development types. ✱	YES	YES	NO	NO
21	Converts the 187 acre Lover's Lane north agricultural area from AG-40 to mixed use with a residential use with a residential focus (MU-3).✱	YES	NO	NO	NO
22	Converts17 acres of AG-40, south of the Lover's Lane parcels to Mixed use (MU-3). ✱	YES	YES	YES	NO
23	Redesignates the 10.8 acres of mostly-vacant industrial (I) and 3.7 acres of commercial (C) of the Lover's Lane area to create 14.5 acres of mixed use (MU-3). ✱	YES	YES	YES	NO
24	Converts the remaining 4.97 acres of the industrial (I) area, west of North State St. and north of Empire Dr., to general mixed use (MU-2). ◈	YES	YES	NO	NO
25	Changes 62.8 acres of industrial (I) designation in the Brush St. Triangle to allow for mixed use development (MUBST). ✱	YES	YES	NO	NO
26	Changes 74.7 acres of industrial (I) designation in the same area as #25 above to 38.8 acres of commercial (C) and 35.9 acres of mixed use (MUBST). ✪	NO	NO	YES	NO
27	Changes the industrial (I) designation on the 2-acre parcel to (MUBST) at the intersection of Brush St. and US-101. ✱	YES	YES	NO	NO
28	Changes the industrial (I) designation on the same 2-acre parcel identified in #27 to (C). ◈ ✪	NO	NO	YES	NO
29	Redesignates the 10.8-acre RCHDC-owned property south of Brush St from industrial (I) to allow for multifamily uses (SR with an R-3 zoning). ✱	YES	YES	YES	NO
30	Converts the 267 acres of RL-160 to RR-1-PD. ✱	YES	YES	NO	NO
31	Removed as it has been annexed into the City of Ukiah.	N/A	N/A	N/A	N/A
32	Changes the northwestern and southwestern corners (5.7 acres) General Commercial (C) and 0.5 acres of SR to allow for 6.2 acres of mixed uses (MU-2). ✱	YES	YES	YES	NO
33	Redesignates the 13.6-acre site occupied by Grace Hudson Elementary School from commercial (C) to PS. ✱	YES	YES	YES	NO
34	Change the 9.9 acres of general commercial (C) and 2.2 acres of SR parcels, south of Grace Hudson, to allow for 12.1 acres of mixed uses (MU-2). ✱	YES	YES	YES	NO
35	Redesignates a 4 acre parcel south of Plant Road along South State St. from Industrial to Commercial. ✱	YES	YES	YES	NO
36	Removed as it has already been changed to SR with R-3 zoning to allow for mutlifamily development. ✱ 1	NO	NO	NO	NO
37	Redesignates the 6.1 acres of C and 15.9 acres of SR to 10 acres of SR and 12 acres of MU-2. ✱	YES	YES	NO	NO
38	Redesignates the same 22 acres in #37 on the west side of State St, north of Stipp, to 10 acres of SR and 12 acres of general commercial (C) only. ✪	NO	NO	YES	NO
39	Redesignates the western 69 acre portion of a large split-zoned parcel from RL-160 to RMR-40 match its eastern portion. ◈	YES	YES	YES	NO
40	Change 78.6 acres of RR-5, 3.7 acres of Ag-40, and 0.2 acres of RL-160 to 82.5 acres of AG-40. ◈ ✪	YES	YES	NO	NO
41	Convert a 30.6 acres RR-10 parcel along US-101 north of Burke Hill Rd to RL-160. ◈ ✪	YES	YES	NO	NO

Notes

Numbers 12 and 13, 25 and 26, 27 and 28 and 37 and 38 refer to two different options for the same physical locations. All area calculations approximate. In order to preserve the land zoned R-3, the proposed land use change for number 24 was changed from C to MU, and the acreage in numbers 37 & 38 were reduced to remove the land zoned R-3.

✱ Originated from the 2007 UVAP process

◈ Originated from the 2003 UVAP process

✪ Other origins (owner request, staff/consultant input or community suggestion)

Please refer to attached map for approximate locations

1 Rezoning under existing General Plan Designation

2 Land Use Alternative 'B' keeps the RR-10 designation where it already exists.

3 Land Use Alternative 'B' only redesignates 8.5 acres to create a contiguous RMR-20 area.

2. Community Design Section

The purpose of this optional section is to establish goals, policies and programs that will preserve and enhance the Ukiah Valley's sense of place. The Community Design Section focuses on the use of design guidelines as a planning tool to achieve the community's objectives and how the components of design relate to the visual appearance of the Ukiah Valley. Goals of this section are:

CD1: Develop an aesthetically appealing urban form that reflects the rural, small-town character of the Ukiah Valley.

CD2: Protect and enhance the natural beauty and scenic viewsheds of the Ukiah Valley.

The following is a summary of the more important policies and measures included in the section to realize these goals.

- The County will establish design guidelines for development throughout the Ukiah Valley. These guidelines will establish appropriate siting, setbacks, and landscaping to enhance the Valley's beauty.

- The County will also establish landscaping guidelines for development throughout the Ukiah Valley.

The design guidelines shall be used to conserve the beauty of the plan area, conserve native vegetation along the Russian River and its tributaries, and provide separators to avoid continuous urban sprawl.

Zoning Code Revisions

- Enhance and upgrade the appearance of the plan area's gateways.

- Avoid the use of sound walls when feasible. Encourage the undergrounding of utilities.

- Require well-designed new commercial and industrial development that includes parking lots with landscaping and lots at the rear of structures.

- Reduce night light pollution consistent with necessary safety provisions.

- Develop sign guidelines.

3. Circulation and Transportation Section

This section discusses transportation issues for the plan area. It briefly describes the existing circulation system and travel characteristics in the plan area. Policies and programs contained in this section provide a guide for decisions regarding transportation system improvements to accommodate the plan area's anticipated growth.
The goals of this section include:

CT1: Provide efficient and safe circulation throughout the Valley.

CT2: Enhance pedestrian, bicycle, and transit connectivity between land use types.

CT3: Coordinate transportation planning needs, developer obligations and construction responsibilities.

The following is a summary of the more important policies and measures included in the section to realize these goals.

- When possible, improve existing roadways and intersections in favor of building new facilities. Where increased capacity is deemed necessary on existing road segments, consider alternatives to road widening, such as alternative transportation and measures to improve system efficiency and capacity.

- Work with the Mendocino Council of Governments (MCOG) to conduct roadway studies and monitor traffic on roads that presently are operating at Level of Service C or D (see the subsequent Traffic section for a definition of Level of Service standards). Revise the projected transportation infrastructure and right-of-way needs during the review and updating of the Circulation Section. Encourage higher population, building and land use density and intensity along appropriately classified roads with existing capacity.

- When mitigation is not sufficient to maintain Levels of Service, extend existing roads or construct new roads to meet traffic demands.

- Work with local and regional agencies to define and develop an integrated transportation corridor. The integrated transportation corridor shall encompass US Highway 101, major thoroughfares, rail, air and public transportation to proactively manage travel demand by identifying underutilized capacity in the corridor and shift travel demand accordingly.

- Land use planning shall be consistent with road system capabilities that currently exist, or as modified by adopted transportation planning documents or the land use entitlement. Prioritize development applications that rely on appropriately classified existing roads with available capacity, over proposals that would require new transportation facilities and infrastructure. Only approve projects if they can provide adequate mitigation to maintain defined Level of Service standards. Require development impact fees, development agreements and other secured funding sources where necessary to fund transportation improvements to maintain an acceptable Level of Service on County roads and for all other transportation modes.

- Mitigate trips generated by new development using travel demand management strategies, such as: free transit passes, mixed use development with concentrated employment centers and residential communities, efficient walking and bicycle connections.

- Develop a comprehensive strategy to mitigate traffic and air quality impacts from new development using alternatives to the automobile, such as incentives to increase public transit ridership or construction of bus stops at convenient locations.

- Development requiring new transportation facilities will be encouraged to locate along appropriately classified existing roads with available capacity. Prior to constructing new roads or widening existing roads, other means of increasing capacity will be first considered.

- The plan contains a program to extend some existing roads and construct some new roads to meet existing and future circulation needs. These changes include widening of N. State Street, an extension of Redemeyer Road, extension of Orr Springs Road to Lovers Lane, extension of Oka Knoll Road to Stipp Lane of Highway 53, extension of Orchard Avenue to Hensley Creek Road, and extension of Hensley Creek Road and Orr Springs Road to this proposed Orchard Avenue extension.

- Work with the Mendocino Council of Governments (MCOG) and Caltrans to improve Highway 101 interchanges and develop a new southbound ramp in the Brush Street area, if a full interchange is not feasible at this site.

- Require that traffic generated by new development will have no negative impacts on existing neighborhoods. Require mitigation if the development would cause such impacts.

- Work with MCOG and the City to develop a method to update the Regional Transportation Plan. Work with MCOG to monitor traffic on roads that currently are at Level of Service C or D, and incorporate findings into regional transportation plans and updates.

- Develop a safe and integrated circulation system of routes and lanes for bicycle transportation. New development shall incorporate safe bicycle lanes in project street design. Provide incentives and technical support to encourage bicycle use in new development.
- Provide adequate pedestrian facilities and integrate pedestrian access into the circulation system of the urbanized areas of the Ukiah Valley.

- The County will take an active role in development of the Ukiah Valley rail corridor, and encourage that the railroad be reopened for freight and passenger service. Ensure that new development does not restrict rail use and that appropriate industries be sited adjacent to the rail line.

4. Water Management Section

This optional section addresses how adequate water can be provided to existing and possible future land development and how water quality of surface and ground waters can be maintained or improved.

The goals of this section include:

WM1: Promote efforts that protect and increase water supply storage and capacity.

WM2: Strike a balance between water supply infrastructure and new development.

WM3: Promote reclamation and conservation of water.

WM4: Protect water supplies from adverse impacts.

To realize these goals, the section includes numerous policies and implementation measures. Some of the more important policies and measures include:

- The County will identify additional water sources and storage capacity and identify any water rights that may be available to serve projected new development.

- The County will develop a groundwater stewardship program to provide protection for the groundwater resource and water recharge. New development proposals will be evaluated for adverse effects to groundwater or recharge areas.

- The County, working with the various water providers, will identify available resources and projected demand. For development proposals that would have a significant impact on water resources, additional analysis and proof of water will be required.

- Water conservation practices, including landscape design guidelines, will be required for new development. The County will promote water reclamation.

- Water quality will be protected by requiring a variety of best management practices when designing new projects and storm drain systems.

- To further protect water quality, new sewer and sewer extensions will be limited to urban and suburban areas, and the County will encourage that existing wastewater facilities be operated to reduce water quality impacts.

- The County will support increasing sewage treatment facility capacity to serve the projected plan area development.
- The cost of new water and wastewater facilities serving development proposed outside existing service areas would be borne solely by that new development.

5. Energy and Air Quality Section

This optional section addresses the efficient use of energy, which thereby decreases the emission of air pollutants and greenhouse gases. The section also provides policy direction for maintaining and improving air quality in the plan area. These policies are in addition to policies in the Land Use Section and the Circulation Section that promote land use patterns that reduce automobile trips, thereby reducing the emission of pollutants. The goal of this section is:

EA1: Utilize construction strategies and technology to minimize impacts to the local infrastructure and environment.

To realize this goal, the section includes numerous policies and implementation measures. Some of the more important policies and measures include:

- Revising the Zoning Code to include design review guidelines that promote energy efficiency and offer incentives for energy-efficient construction.
- Require passive solar building design in the design review guidelines.
- Encourage efforts at recycling.
- Require new development to minimize the emission of particulates (e.g., dust).
- Require clean air heating sources in new development.
- Offer development incentives to encourage green construction techniques.
- The County will develop a comprehensive strategy to reduce air quality impacts from traffic. This is in addition to policies in other elements that focus new residential development in areas that will reduce the need to use private automobiles.

6. Health and Safety Section

This section mandates the protection of the community from unreasonable risks associated with the effects of earthquake, landslides, slope instability, subsidence, and other known geologic hazards. This section includes mapping of known seismic and other geologic hazards and addresses other locally relevant safety issues such as wildland and urban fires; flooding and storm drainage; and emergency response capacity. The goals of this section include:

HS1: Consider natural and manmade hazards when planning development, and minimize potential conflicts.

HS2: Promote access to quality and affordable healthcare within the community.

The following is a summary of the more important policies and measures included in the section to realize these goals.

- Prohibit new residential development in areas that present significant environmental hazards, such as unmitigated fault hazard areas, flood ways, or areas with high liquefaction potential.
- New development in Earthquake Fault Zones will be regulated to minimize risk. Geotechnical evaluations will be required, when warranted, to identify landslide hazards and appropriate mitigation. The zoning code will be revised to include provisions for development on hillsides in general, and for development on hillsides that are located within designated risk zones that may be more prone to sliding or earth movement.

- Flood mapping will be developed. A comprehensive flood management plan for the Russian River watershed will be developed to include flood protection goals and measures to realize those goals; flood protection components; policies for managing development in dam inundation areas; and recommendations for updating regulations and development standards for the Russian River Watershed. New development in the 100-year floodplains and floodways will be more rigorously regulated. New discretionary development will be reviewed to determine methods of preventing additional downstream flooding.

- Fire safety standards will be developed and applied to new development in fire hazard areas.

- Emergency plans for fire, flood and seismic disasters will be incorporated into the County's emergency response planning. The formation of strong Neighborhood Emergency Services Teams will be encouraged.

- Increased access to heath care will be encouraged.

7. Open Space and Conservation Section

This section addresses the conservation, development, and use of natural resources, including streams and other waterways, soils, woodlands, hillsides, ridgelines, wildlife habitats, and mineral deposits. It also plans open space for preservation and the managed production of natural resources, outdoor recreation, and public health and safety. The goals included in this section are:

OC1: Maintain and enhance the area's natural resources by balancing protection, conservation, replenishment and use.

OC2: Conserve open space, hillsides, and indigenous habitats for the enjoyment of future generations.

OC3: Preserve and enhance agricultural areas to protect the economic vitality and rural identity of the Ukiah Valley.

To realize these goals, the section includes numerous policies and implementation measures. Some of the more important policies and measures include:

- The County will catalogue plan area natural resources and develop and adopt comprehensive design review guidelines to protect priority natural resource areas. Adopt a transfer of development rights program and develop and apply clustering incentives to preserve undeveloped land.

- Prioritize conservation areas. Open space should be maintained in new discretionary projects.

- Oak woodlands will be conserved by developing an Oak Woodland Habitat Inventory and Preservation Plan and requiring new development to abide by this plan.

- The Russian River channel will be conserved to provide flood control, water delivery, and fishery habitat. This includes programs to monitor gravel resupply, preserve

riparian habitat, restore tributary creeks, and limit erosion. Land uses along the river will be compatible with the above. A river planning corridor will be defined as well as the extent of surrounding riparian area within which proposed development will trigger design review, performance standard requirements and use of river design guidelines. A riparian system management plan and companion design guidelines will be developed.

- Agriculture will be protected by maintaining support for Williamson Act contracts, designating appropriate lands for agricultural use, and avoiding new development that would cause conflicts with agriculture. State-identified important farmlands will be protected. Lands classified Agriculture cannot be developed for other uses unless specific criteria are met. The County will support diversified and small-scale farming, organic farming, and integrated pest management. Buffers between agricultural uses and new development projects will be required. New development will be required to be designed to be compatible with agricultural uses.

- Revise the zoning code to include standards for locating hillside roads and structures to minimize damage to natural hillside resources.

8. Historic and Archaeological Preservation Section

This optional section is intended to present a systematic approach to preserving and protecting the cultural and historic resources of the Ukiah Valley. The goals included in this section are:

HA1: Preserve historical buildings and spaces that create a sense of place.

HA2: Protect Native American cultural and archeological resources.

The following is a summary of the more important policies and measures included in the section to realize these goals.

- The County will conduct a historic and cultural resources inventory and establish a historic preservation program that will include historic preservation guidelines. New discretionary projects will continue to undergo County review for potentially important cultural resources. Tribal notification will be required along with archaeological monitoring when warranted. Archaeological and historical resources will be archived.

- Fund, maintain and improve publicly owned historic buildings and sites.

9. Parks, Recreation and Community Facilities Section

This is an optional section that addresses parks, recreational facilities, and recreational services needed to serve the recreational needs of the future Ukiah Valley population. The goals included in this section are:

PR1: Meet the community's need for recreation, cultural resources, and on-going education.

PR2: Work with the City and other entities to ensure that there are a variety of parks, recreational facilities, and points of river access.

PR3: Promote a greater sense of community through events, gathering places and shared facilities.

The following is a summary of the more important policies and measures included in the section to realize these goals.

- Prepare a Parks and Community Facilities Needs Assessment and Master Plan. Implement priority projects.

- The County will work with the City of Ukiahto expand and to maintain the compatibility of Riverside Park with adjoining land uses.

- Prepare a plan area-wide assessment of recreational programs and needs and implement prioritized programs. Identify funding sources and explore partnerships with other providers.

- Collaborate with the City to identify properties for acquisition and potential funding sources to meet shared goals in improving public access to parks and recreational facilities. Pursue joint use agreements.

- Require park dedications or in lieu fees for new development. Determine feasibility of impact fees required to fund a share of regional recreational facilities; consider charging developers an impact fee per unit of new housing per the study findings.

- Coordinate the development and expansion of recreational trails emphasizing trails on public lands linked to existing trails. This will include formation of a trails committee. Comprehensive plans will be developed to protect property rights prior to trail acquisition or development. Route planning will be coordinated with the County's Hiking and Equestrian Trail Plan. Implement the plan.

- Coordinate connecting a network of existing and new bicycle lanes to enhance and enable the safe movement of bicycle traffic.

1.7 INTENDED USE OF THE EIR

A. Approvals Required From Lead Agency (County of Mendocino)

Once the County of Mendocino (the Lead Agency) certifies the EIR, the Planning Commission and Board of Supervisors will consider the merits of the Draft 2007 UVAP and approve, conditionally approve (including possible approval of a project alternative), or deny the Draft 2007 UVAP.

B. Approvals Required From Responsible Agencies

Responsible Agencies are agencies that must issue some form of permit or determination for the project and, thus, rely on the EIR for the environmental documentation required prior to issuing said permit. Trustee Agencies are State

agencies that have jurisdiction by law over natural resources that may be affected by a project which are held in trust for the people of the State. They include the Department of Fish and Game, the State Lands Commission, the Department of Parks and Recreation, the North Coast Regional Water Quality Control Board, and the University of California (as regards to sites within the Natural Land and Water Reserves System).

Because the "project" is a plan, no permits from other agencies are required. However, because the plan is a part of the County General Plan, it will be reviewed by a number of agencies. Agencies that may review the plan as well as agencies responsible for subsequent review of development applications sought under the jurisdiction of the area plan include the following:

1. Federal Agencies

- U.S. Army Corps of Engineers: regulates activities that have the potential to affect navigable waters under Section 10 of the Rivers and Harbors Act of 1899 (Section 10 permits) and waters of the United States under Section 404 of the Federal Clean Water Act (Section 404 permit). Section 404 of the Federal Clean Water Act regulates the discharge of fill material into "waters of the United States," which includes wetlands. Based on the Corps' determination that any wetlands to be filled are under its jurisdiction, filling of the wetlands would require a permit to alter these resources. In particular, the ACOE is responsible for maintaining Coyote Dam.

- U.S. Fish and Wildlife Service (USFWS): administers the Federal Endangered Species Act and the Marine Mammal Protection Act. The USFWS operates under a number of statutory and administrative authorities. Its basic responsibilities concern migratory birds, anadromous fish, and endangered species. The USFWS is an advisory agency to the Army Corps of Engineers on Section 404 and Section 10 projects.

- Environmental Protection Agency: oversees the analysis of the Army Corps of Engineers regarding the issuance of permits for filling wetlands under Section 404 permits and issues permits for point source discharges to waterways. The EPA shares oversight jurisdiction regarding wastewater treatment issues and funding programs with the State Water Resources Control Board.

- National Oceanic and Atmospheric Administration–Fisheries (or the National Marine Fisheries Service – NMFS): administers the Federal Endangered Species Act and the Marine Mammal Protection Act as they pertain to marine and anadromous species. NOAA–Fisheries also advises the Corps of Engineers on Section 7 and Section 404 permits for projects that could affect fish habitat. Some projects may require an Incidental Take Permit from the agency under the Endangered Species Act.

- Federal Highway Administration: responsible for funding Federal highway projects.

- Federal Transit Administration (FTA): responsible for funding transit-related programs, rural transit, special-needs transit, and other programs.

- Transportation Security Agency (Department of Transportation): responsible for security of transportation systems and facilities.

- Federal Aviation Agency: responsible for oversight and funding and operational support for air control systems, airport improvements/expansion, and airport operations.

- Federal Emergency Management Agency: oversees mapping of areas subject to flooding and other disasters. It provides relief in times of disasters. It is now part of the Department of Homeland Security.

- Bureau of Land Management: responsible for managing Federal lands under its jurisdiction.

- University of California: responsible for overseeing sites within the Natural Land and Water Reserves System.

2. State Agencies

- Regional Water Quality Control Board (RWQCB): regulates discharges to waterways through the adoption of Waste Discharge Requirements (WDR) and National Pollution Discharge Elimination System (NPDES) permits. It regulates construction activities per the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). As part of the Corps Section 404 permit review process, the RWQCB must issue a Section 401 Water Quality Certification or Waiver. The RWQCB also has regulatory authority in connection with the California Department of Fish and Game's Stream Alteration Agreement to grant Water Quality Certification (or Waiver) to cover any in-channel construction.

- Department of Transportation: initiates and oversees projects on State highways and issues encroachment permits for projects that involve work within Caltrans right-of-way. The Aeronautics Division is responsible for oversight of airports in the State.

- Office of Planning and Research: circulates EIRs for review by State agencies.

- Highway Patrol: responsible for traffic safety on State highways.

- Department of Fish and Game (CDFG): has authority to oversee work done in streams pursuant to Fish and Game Code 1601 and 1603. An applicant who proposes to substantially divert the natural flow of a stream, substantially alter its bed or bank, or use any material from the streambed must first enter into a "Streambed Alteration Agreement" with CDFG. Such an agreement would include a requirement that there be no net loss of wildlife habitat values or that lost acreage would be replaced. The Department is also responsible for the protection of plant and wildlife populations and for overseeing the California Endangered Species Act. The Federal Fish and Wildlife Coordination Act gives the CDFG authority to comment on U.S. Army Corps of Engineers permits. Any waterway subject to CDFG jurisdiction is also subject to Corps regulations.

- Department of Parks and Recreation: responsible for State park and recreational planning.

- Department of Forestry and Fire Protection: responsible for reviewing safety elements of general plans, overseeing timber harvest and management and timberland conversion, and suppressing fires in State Responsibility Area wildland areas.

- California Geological Survey: responsible for reviewing safety elements of general plans.

- State Office of Historic Preservation (OHP) has primary responsibility for the administration of historic preservation programs in California through the *California's Comprehensive Statewide Historic Preservation Plan*, as well as other laws and regulations.

- California Native American Heritage Commission works to identify, catalogue, and protect places of special religious or social significance, graves, and cemeteries of Native Americans per the authority given the Commission in Public Resources Code 5097.9.

- Department of Toxic Substances Control: oversees the cleanup of sites where hazardous substances have been released pursuant to the California Health and Safety Code, Division 20, Chapter 6.8.

3. Local Agencies

- Mendocino Council of Governments: responsible for developing the Regional Transportation Improvement Program and other regional transportation planning documents and developing housing needs allocations for the County.

- County of Mendocino: regulates land use within the plan area. Responsible for preparing the County's Storm Water Pollution Prevention Program, monitoring surface and groundwater in certain areas. Oversees drainage and roads, provides police services, and other general governmental services.

- Mendocino County Redevelopment Agency: administers redevelopment activities in the Redevelopment Project Area consisting of three subareas.

- City of Ukiah: responsible for land use decisions within the incorporated boundaries of the City.

- Local Agency Formation Commission of Mendocino County: responsible for boundary changes, Sphere of Influence determinations, and reviews of services for cities and special districts.

- Mendocino County Solid Waste Management Authority: responsible for overseeing solid waste collection and disposal in the County.

- Mendocino County Air Quality Management District: responsible for ensuring that local air quality meets State, Federal, and local air quality standards.

- Mendocino Transit Authority: provide public transit for the plan area population.

- Special Districts: numerous special districts are responsible for providing one or more services to plan area residents and businesses. Pertinent special districts include: Russian River Flood Control & Water Conservation Improvement District, Calpella-Redwood Valley Fire Protection District, Ukiah Valley Fire Protection District, Ukiah Unified School District, Mendo-Lake Community College District, Millview County Water District (CWD), Calpella CWD, Willow CWD, Rogina Water Company, Ukiah Valley Sanitation District, various lighting districts, and the Russian River Cemetery District.

2.0 SUMMARY

2.0 SUMMARY CHAPTER

This chapter provides a summary of the EIR for those readers who do not wish to read the entire report.

This section is provided in accordance with State CEQA Guidelines Section 15123. As stated in Section 15123(a) of the Guidelines, "[a]n EIR shall contain a brief summary of the proposed actions and its consequences. The language of the summary should be as clear and simple as reasonably practical." Section 15123(b) of the Guidelines states, "[t]he summary shall identify: (1) each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect; (2) areas of controversy known to the Lead Agency including issues raised by agencies and the public; and (3) issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects."

Accordingly, this summary includes a brief synopsis of the project and project alternatives, environmental impacts and mitigations, areas of known controversy, and issues to be resolved in the environmental impact report (EIR). Table 2.6-1, at the end of this chapter, summarizes potential environmental impacts, their level of significance before mitigation, mitigation measures, and levels of significance with mitigation.

2.1 Summary of Proposed Project

The County of Mendocino is considering adopting the Draft 2007 UVAP, which would then become part of the Mendocino County General Plan. The UVAP sets policy guidelines that will provide a framework for future County land use decisions throughout the unincorporated portions of the Ukiah Valley.[2] The UVAP is designed to guide development up to a year 2030 planning horizon, at which point it may potentially need to be revised. This EIR assumes the unlikely scenario of complete buildout, which would mean all development that is allowed under the land-use designations in the Draft 2007 UVAP would occur by 2030. Such buildout would entail construction of a maximum of 5,430 dwelling units, 4.6 million square feet of commercial development, and 2.4 million square feet of industrial development.

2.2 Summary of Significant Unavoidable Impacts

This EIR identifies 60 potentially significant adverse impacts that would result from future land uses allowed by the Draft 2007 UVAP. The EIR presents mitigation measures that would eliminate 35 of those impacts or reduce them to a level that is considered less than significant. However, 25 impacts would remain significant and unavoidable impacts; they are:

1. Impact 3.1-B. Land uses and development consistent with the Draft 2007 UVAP would convert farmland and prime agricultural soils to non-agricultural uses.

[2] The City of Ukiah's General Plan directs such decisions within the incorporated portions of the Valley.

2. Impact 3.1-F. Implementation of the Draft 2007 UVAP would induce growth of population in the plan area by accommodating new residences and businesses.

3. Impact 3.1-H. Construction of new commercial development and residential development could have social and economic effects that result in a physical adverse change in the environment.

4. Impact 3.2-A. Land uses and development consistent with the Draft 2007 UVAP would increase the number of persons exposed to risk of injury and death and the amount of property damage resulting from seismic events in the plan area, including impacts from surface rupture, strong seismic shaking, liquefaction, and landsliding.

5. Impact 3.3-E. Land uses and development consistent with the Draft 2007 UVAP could result in the need for new or enlarged storm drain facilities whose construction could result in adverse environmental effects.

6. Impact 3.3-G. Land uses and development consistent with the Draft 2007 UVAP would increase the transport of sediments, oils, greases, and other residues and chemicals to receiving waterways and the groundwater.

7. Impact 3.4-B. Land uses and development consistent with the Draft 2007 UVAP could result in the injury to or death of special status species of wildlife and/or destruction of habitat required by those species.

8. Impact 3.5-A. Land uses and development consistent with the Draft 2007 UVAP has the potential to adversely affect areas of archaeological or historical importance.

9. Impact 3.5-B. Land uses and development consistent with the Draft 2007 UVAP has the potential to adversely affect areas containing significant paleontological resources.

10. Impact 3.7-A. Land uses and development consistent with the Draft 2007 UVAP and buildout of the City of Ukiah would increase traffic volumes and could generate harmful emissions of air pollutants that could result in exposure of people to substantial pollution, violate air quality standards, and/or conflict or obstruct MCAQMD's air quality plan.

11. Impact 3.9-A. Future development could adversely affect scenic views along Highway 101, along other major public thoroughfares, and at gateways to the plan area.

12. Impact 3.9-B. Future development, unless carefully sited and designed, may be inconsistent with the scale and character of existing development in the surrounding area. This future development could result in views that are aesthetically offensive.

13. Impacts 3.9-C. New development will create new glare and include new lights that will adversely affect nighttime views.

14. Impact 3.10-A. New development resulting from buildout of the plan area would generate sufficient students to require the construction of new schools. The construction of those schools could have significant impacts on the environment.

15. Impact 3.10-C. New development would increase the demand for a new criminal justice center.

16. Impact 3.10-E. Future development could be placed in locations where people and structures would be exposed to potential wildland fires.

17. Impact 3.10-F. Future development in the plan area could cause conflicts with emergency response and evacuation plans.

18. Impact 3.10-G. Development under the UVAP would increase the demands on emergency medical agencies serving the plan area, potentially creating the need for the Ukiah Valley Fire District, the Redwood Valley-Calpella Fire Protection District, Ukiah Fire Department, and Ukiah Ambulance Service to acquire new facilities and equipment.

19. Impact 3.10-H. New development will increase the demand for potable water. It is possible that local water purveyors may be unable to meet the 2030 demand and will need to develop additional sources of water. The development of these new sources could have adverse environmental effects.

20. Impact 3.10-I. The increased demand for potable water could require constructing new water source, treatment, storage, or supply facilities, and construction of these facilities could have significant environmental effects.

21. Impact 3.10-K. Because future demand for wastewater services may exceed facility capacity, new or expanded facilities may need to be constructed. The construction of these facilities could have adverse environmental effects.

22. Impact 3.10-M. Future development under the UVAP would increase the plan area population, thereby increasing the demand for parks and recreational facilities. This increased demand could result in significant deterioration of existing facilities and the need for new or expanded facilities.

23. Impact 3.13-A. Land uses and development consistent with the Draft 2007 UVAP could result in greenhouse gas emissions that exceed State emission targets and would adversely affect climate.

24. Impact 3.13-B. The changing climate could cumulatively result in a decrease in water supply and increase in health hazards.

25. The project would induce growth, and this growth would have significant and unavoidable impacts (see Section 4.1).

If the Mendocino County Board of Supervisors (Board) decides to approve the plan, then the Board must adopt a Statement of Overriding Considerations. Per Section 15093 of the *CEQA Guidelines*, the Statement of Overriding Considerations must explain the

reasons approval of the plan would outweigh and override these unavoidable adverse significant impacts.

If the Board does not include the other required mitigations recommended in this EIR, then the potentially significant impacts those measures are intended to mitigate would be judged as remaining significant adverse impacts, unless the Board concludes that the EIR is incorrect in determining an impact is significant. If the Board finds that funding recommended plan actions or EIR mitigations is not feasible, then the County should consider whether the impact that such actions or mitigation measures address should be considered unmitigated and significant and unavoidable.

2.3 Summary of Project Alternatives Analysis

The State CEQA Guidelines require that an EIR evaluate a range of reasonable alternatives to the project that would feasibly attain most of the project objectives while avoiding or substantially reducing any of the significant impacts of the project. Section 4.4 of this EIR contains a full description and analysis of the following four project alternatives, and a comparison with the proposed Draft 2007 UVAP. The CEQA Guidelines require the EIR to identify which among the alternatives (including the proposed plan) is the environmentally superior alternative. This EIR assesses five alternatives: the Draft 2007 UVAP (included EIR-recommended mitigations) and four alternatives. The conclusions of the alternatives analysis in Section 4.4 are presented below.

Draft 2007 UVAP (Including EIR-Recommended Mitigations). The plan as proposed would result in construction of a maximum of 5,430 new dwelling units 7 million square feet of non-residential development. As described in Section 3.0 of this EIR, buildout under the proposed plan would result in 60 potentially significant impacts, of which 25 impacts would remain significant and unavoidable after recommended mitigations are added to the plan.

No Project - Existing General Plan Alternative. Under this alternative future land use would be guided by the existing land use classifications and the policies of the Existing General Plan. The Draft 2007 UVAP would not be adopted. As shown In Table 1.6-2, the Existing General Plan would allow substantially less development - a maximum of 1,726 additional residential units as compared to a maximum of 5,430 units under the Draft 2007 UVAP - a 72% reduction in residential development). New development would occur primarily in Calpella, the South Ukiah Valley, and the South State Street areas, and as scattered rural residential development in areas outside the main nine discussion areas. There would be minimal development in the North State Street area, and virtually no additional residential development in the Brush Street Triangle, Lovers Lane, East Ukiah Hills, and Masonite areas. There also would be a substantial decrease in the maximum amount of new commercial and industrial development that would occur under this alternative.

This substantial reduction in residential and non-residential development potential would result in a similar decrease in most impacts to environmental resources. On the other hand, the policies of the Existing General Plan are not as detailed and strong regarding plan area resources compared to the Draft 2007 UVAP policies, nor do they address the

specific issues and impacts of future development of the plan area as completely as the Draft 2007 UVAP.

Land Use Alternative A. This alternative would reduce the maximum allowed under the Draft 2007 UVAP by over 20%. As shown In Table 1.6-2, Land Use Alternative A would allow a maximum of 3,948 additional residential units as compared to a maximum of 5,430 units under the Draft 2007 UVAP). Discussion areas where residential development potential would most substantially be reduced include the Lovers Lane, Brush Street Triangle, and North State Street areas. There also would be a decrease in the maximum amount of new commercial development that could occur under this alternative. There would be an increase in the maximum amount of new industrial development that could occur. Overall, the amount of nonresidential development is less – 5.5 million square feet as compared to 7.0 million square feet.

This reduction in residential and non-residential development potential would result in a similar decrease in most impacts to environmental resources. As regards policy direction, this alternative maintains the proposed policies of the Draft 2007 UVAP. This alternative is environmentally superior to the project.

Land Use Alternative B. This alternative would reduce the maximum allowed under the Draft 2007 UVAP by about 50%. As shown In Table 1.6-2, Land Use Alternative B would allow a maximum of 2,782 additional residential units as compared to a maximum of 5,430 units under the Draft 2007 UVAP. Development potential would be substantially reduced in the North State Street and Lovers Lane areas. Residential development of the Masonite site would not be allowed, and development potential of the East Ukiah Hills would be limited to one unit. There would be some reduction in residential development potential in the South Ukiah Valley and Brush Street Triangle areas. There also would be a substantial decrease in the maximum amount of new commercial development that would occur under this alternative, but there would be an increase in the amount of new industrial development that could occur.

This substantial reduction in residential and non-residential development potential would result in a similar decrease in most impacts to environmental resources. As regards policy direction, this alternative maintains the proposed policies of the Draft 2007 UVAP. This alternative is environmentally superior to the project and Alternative A.

Land Use Alternative C – Policy Only. This alternative is a hybrid alternative that combines the policies of the Draft 2007 UVAP (the proposed project) with the land use classifications of the Existing General Plan (the No Project Alternative). As such, it would allow the least new residential and commercial development and the most new industrial development. This new development would be guided by the new policies and implementation measures of the Draft 2007 UVAP (as amended by EIR-recommended additions). Development under this alternative would have the fewest environmental impacts, and it is identified as the ***environmentally superior alternative.***

2.4 Scoping Comments, Areas of Controversy, Comments on the Original Draft EIR and Where Those Comments/Issues Area Addressed in this Revised EIR

The Draft 2007 UVAP raises issues and some areas of controversy that will be considered by County decisionmakers. Controversial issues are identified through expressions of public opinion that are obtained through public meetings or documented in the record, including comments that were submitted on the original EIR.

Some areas of controversy are not within the purview of CEQA, because that statute focuses on evaluation of significant effects to the *physical environment*. However these non-environmental issues are also included below to help provide information to County decisionmakers. Please note that these issues are **not necessarily** the conclusion of this EIR. Rather, they are issues that members of the public or other public agencies have raised about the Draft 2007 UVAP.

The main issues raised in the comments on the EIR for the Draft 2002 UVAP are also outlined below. This summary list directs the reader to that part of the EIR where earlier submitted comments are addressed.

General Process

- The plan lacks mandatory policies and implementation measures of specific nature incorporating performance standards designed to ensure compliance. *See the revised Draft 2007 UVAP.*

- Mitigations (implementation measures) leave decisions to be made at a project level, rather than providing comprehensive solutions. *See the mitigation measures in this Revised DEIR.*

Land Use

- The amount of development allowed in the Draft 2007 UVAP exceeds the carrying capacity of the area. *See Section 3.10* (*Public Services and Infrastructure) for discussions of the service limitations on growth. See Section 4.4 (Project Alternatives) for a discussion and comparison of the project with alternatives that reduce the development potential.*

- The amount of new development allowed would substantially deteriorate the rural character of the valley. *See Sections 3.1 (Land Use) and 3.9 (Aesthetics) regarding this issue.*

- Allowed development will convert valuable agricultural soils and lands to urban uses. *See the discussion of impacts to agriculture in Section 3.1 (Land Use).*

- New development should be focused within the City of Ukiah to maintain the City as the economic and cultural focus of the area. *See the discussion of economic effects on urban decay in Section 3.1 (Land Use).*

- The Masonite area should be preserved for Industrial use with perhaps Agriculture use east of the railroad tracks. *See the discussion in Section 4.4 (Project Alternatives) that addresses alternatives that incorporate this recommendation.*

- Most of the Lovers Lane area should be maintained as Agriculture. *See the discussion in Section 4.4 (Project Alternatives) that addresses alternatives that incorporate this recommendation.*

- There needs to be sufficient land available for new residential and commercial development while protecting agriculture. *See the discussion of impacts to agriculture in Section 3.1 (Land Use). See the discussion in Section 4.4 (Project Alternatives) that addresses alternatives that reduce development potential on agriculture.*

- Extending Redemeyer Road could induce additional development in the eastern hills area. *See the discussion in Section 4.4 (Project Alternatives) that addresses alternatives that eliminate this road extension.*

- There is a need for County-City cooperation in economic development, planning, and funding of improvements. *See the discussion of economic effects in Section 3.1 (Land Use).*

- Comprehensive planning is needed for the Brush Street Triangle and North State Street areas. *See the revised plan as well Section 3.1 (Land Use) that includes the requirement for a specific plan for future development of the Brush Street Triangle or Lovers Lane.*

- Is there adequate Industrial land available for future development? *See the Ukiah Valley Growth Prospects Report (EPS, March 2007) on file with the Department of Planning and Building Services.*

- The plan needs to provide for affordable housing. *See the General Plan Housing Element.*

- New development could result in urban sprawl, diminishing the distinct identity of plan area communities. *See the discussions in Section 3.1 (Land Use) about effects on communities.*

Natural Resources

- New development will cause increased flooding and will include development within the Russian River floodplain. *See Section 3.3 (Hydrology and Water Quality) that includes impact discussions of these issues.*

- New development will remove oak woodlands and adversely affect other sensitive biological habitat types. This development could damage populations of special status species. *See Section 3.4 (Biological Resources) for a discussion of impacts on these resources. See Section 4.4 (Project Alternatives) for a discussion of alternatives that reduce the impact to these resources.*

- The new development would increase pollution of streams thereby adversely affecting salmonids and other aquatic species. *See Section 3.4 (Biological Resources) for a discussion of impacts on these resources.*

- Development would remove prime agricultural soils and lands used for agriculture from production. *See Section 3.1 (Land Use) for a discussion of impacts on agricultural soils and lands. See Section 4.4 (Project Alternatives) for a discussion of alternatives that reduce the impact to these resources.*

- New development would increase pollution of the air and contribute to global climate change. *See Section 3.7 (Air Quality) and Section 3.13 (Global Climate Change) for a discussion of project impacts on these resources.*

- New development will result in the loss of open space and adversely affect the views and rural character of the area. *See Section 3.9 (Aesthetics) concerning impacts to open space views and Section 3.1 (Land Use) about effects on the character of the area.*

Public Services and Infrastructure

- The area does not have the services and resources to support allowed new growth. The amount of growth allowed under the Draft 2007 UVAP exceeds the carrying capacity of the valley. *See Section 3.10 (Public Services and Infrastructure) for discussions of the service limitations on growth. See Section 4.4 (Project Alternatives) for a discussion and comparison of the project with alternatives that reduce the development potential.*

- Too much development could strain the ability of public service providers to serve existing and new development. *See Section 3.10 (Public Services and Infrastructure) for discussions of the ability of public service providers to adequately serve projected new development.*

- There is inadequate proven water available to serve new development. Growth should be limited to what can be served by proven water sources. *See Section 3.10 (Public Services and Infrastructure) for discussions of the ability of water providers to adequately serve projected new development.*

- There is inadequate sewer capacity to serve projected development. Development should be limited to available sewer capacity. *See Section 3.10 (Public Services and Infrastructure) for discussions of the ability of wastewater providers to adequately serve projected new development.*

- Additional development in the unincorporated areas will strain the resources of the City of Ukiah and Police Departments as they need to respond to calls that cannot be met by the County Sheriff's Office and/or the Ukiah Valley Fire District. *See Section 3.10 (Public Services and Infrastructure) for discussions of the ability of police agencies to adequately serve projected new development.*

- Development of additional water sources or sewer capacity would have significant effects that should be identified and assessed, and how these new sources or facilities will be funded and constructed should be identified before allowing new

development. *See Section 3.10 (Public Services and Infrastructure) for discussions of the impact of constructing new facilities.*

Traffic

See Section 3.6 (Traffic and Circulation) for discussion of the following issues:

- Additional growth could cause traffic congestion with increased noise and air pollution.
- The increased traffic could adversely affect pedestrian and bicyclist safety.
- Buildout will increase the demand for mass transit opportunities and facilities.
- The extension of a new road from the Highway 253 area to Oak Knoll and South Dora Street would adversely affect residents in the Oak Knoll area.
- Development adjacent to the railroad tracks could adversely affect possible future rail operations.

Economic Effects

- Development of a large shopping center on the Masonite site would adversely affect existing commercial centers in the City of Ukiah and potentially cause loss of business and perhaps result in blighted conditions. *See Section 3.1 (Land Use) for a discussion of urban decay. Also, see the Fiscal and Economic Impact Analysis for the Ukiah Valley Area Plan (BAE, February 2010) on file with the County Department of Planning and Building Services.*
- Limiting the ability to develop new housing would make it difficult to provide affordable housing for much of the area population. *See the Revised Draft 2007 UVAP.*
- Reducing the amount of Industrial land limits the ability to attract industries that pay better wages than retail stores. *See the Revised Draft 2007 UVAP.*

2.5 Issues to Be Resolved

The County Board of Supervisors must take the following actions:

- Determine whether to incorporate each of the mitigation measures recommended in this EIR in the Final UVAP.
- Determine whether to approve either the Draft 2007 UVAP (including all Board-approved mitigation measures) or one of the four project alternatives, including the environmentally superior alternative (Alternative C), or a hybrid that combines elements of these alternatives.

- Approve a Statement of Overriding Considerations for all significant and unavoidable impacts, explaining why the plan or an alternative is being approved despite these remaining significant adverse environmental effects.

2.6 Summary Table of Impacts and Mitigations

Table 2.6-1, below, provides a summary of the impacts identified in this Draft EIR. The first column of the table describes the impact that would result from buildout of the project. Following each impact is a description of the level of significance resulting from that impact. Levels of significance include "beneficial," "less than significant" (that is, less than significant as measured against significance criteria established for each area of impact), "potentially significant" (i.e., significant prior to implementation of mitigation measures), or "significant."

The next column lists the policies of the Draft 2007 UVAP that address the impact. To conserve space, only the policies are listed, but it is assumed that the implementation measures for each policy will also be enacted. Where pertinent to the potential impact, policies included in the County General Plan may also listed. If the policies and implementation measures of the Draft 2007 UVAP, the County General Plan, or other existing County regulations do not sufficiently reduce the impact to a less than significant level, then mitigation measures are listed. Additions to policies or implementation measures are shown by underlining the recommended new text while deletions are struck-through. Finally, there is a column that describes the significance of the impact after mitigation measures have been implemented.

TABLE 2.6-1 - IMPACT AND MITIGATION SUMMARY

	IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
3.1	**Land Use**			
3.1-A	Land uses and development consistent with the Draft 2007 UVAP could physically divide existing communities within the plan area.	LS	No mitigation is required.	LS
3.1-B	Land uses and development consistent with the Draft 2007 UVAP would convert farmland and prime agricultural soils to non-agricultural uses.	PS	Policy OC3.1: Maintain viable Agricultural Land classifications. Policy OC3.3: Conserve agricultural lands and reduce development pressure.	PS
			EIR-Recommended Mitigation Measures: 3.1-B.1 The County shall focus future development on lands that do not contain valuable or sensitive resources. Development of sites that do not meet the following criteria will be discouraged. The following language shall be added to the end of Implementation Measure LU4.1a: <u>Priority shall be given to projects that:</u> a) Do not displace existing commercial agricultural activities; b) Do not develop sites containing prime agricultural soils; c) Convert less than one acre of oak woodland; d) Maximize green building techniques, energy conservation, and alternative energy systems; e) Maximize access to and provision of alternate transportation modes; f) Do not significantly adversely affect views from major roads or plan area gateways; g) Are not located in “high” or “very high” fire hazard areas; and/or h) Are infill projects near public transit.	SU
3.1-C	Land uses and development consistent with the Draft 2007 UVAP could result in conflicts with agricultural land uses or Williamson Act contracts resulting in cessation of farming on affected properties.	PS	Policy OC3.4: Regulate land use to maintain compatibility with existing agricultural uses.	PS
			EIR-Recommended Mitigation Measures: 3.1-C.1 The County will minimize the impacts of new development on agricultural operators. To do so, the second bullet item in Implementation Measure OC3.4d shall be revised as follows: • Building envelopes, clustered development, and commercial, industrial, civic, and sensitive uses shall be designed with buffers or setbacks from lands classified Agricultural or Range Lands. Buffers shall generally be defined as a physical separation of ~~200~~ <u>100</u> feet <u>from pasture or range lands, 400 feet from pear and apple orchards,</u>	LS

Note: B = Beneficial Impact; PS = Potentially Significant Impact; LTS = Less Than Significant Impact; SU = Significant Unavoidable Adverse Impact

TABLE 2.6-1 - IMPACT AND MITIGATION SUMMARY
(Continued)

	IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			and 200 feet from vineyards or other crops with the potential for a reduced separation when a topographic feature, substantial tree-stand, landscaped berm, watercourse or similar existing or constructed feature is provided and maintained. ~~The 200-foot setback does not apply to land classified Rural Community that is zoned Rangeland or Agricultural;~~	
3.1-D	Land uses and development consistent with the Draft 2007 UVAP could result in conversion of forest land to other uses.	LS	No mitigation is required.	LS
3.1-E	Land uses and development consistent with the Draft 2007 UVAP could result in projects that displace housing and people.	LS	No mitigation is required.	LS
3.1-F	Implementation of the Draft 2007 UVAP would induce growth of population in the plan area by accommodating new residences and businesses.	PS	No mitigation is available.	SU
3.1-G	The Draft 2007 UVAP could be inconsistent with other land use plans that have jurisdiction within the plan area.	NA	This is not an environmental impact.	NA
3.1-H	Construction of new commercial development and residential development could have social and economic effects that result in a physical adverse change in the environment.	PS	None provided.	PS
			EIR-Recommended Mitigation Measures: 3.1-H.1 The County shall require an urban decay assessment for large commercial development applications. To accomplish this objective, the following implementation measure shall be added to Policy LU7.1: **<u>LU7.1d Fiscal and Economic Impact Assessment</u>** <u>Assess the fiscal and economic impacts of each new commercial development proposals that includes over 100,000 square feet of new retail commercial development. [Timeframe: ongoing. Responsibility: Department of Planning and Building Services]</u>	SU
3.2	**Geology and Soils**			
3.2-A	Land uses and development consistent with the Draft 2007 UVAP would increase the number of persons exposed to risk of injury and death and the amount of property damage resulting from seismic events in the plan area, including impacts from surface rupture, strong seismic shaking, liquefaction, and landsliding.	PS	Policy HS1.1: Minimize risks to people and property from earthquake and landslide danger. Policy HS1.5: Minimize development in hazardous areas.	SU

TABLE 2.6-1 - IMPACT AND MITIGATION SUMMARY
(Continued)

	IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			EIR-Recommended Mitigation Measures: No additional mitigation is feasible.	SU
3.2-B	Land uses and development consistent with the Draft 2007 UVAP has the potential of exposing additional people and structures to slope failure hazard.	PS	Same policies as Impact 3.2-A.	LS
3.2-C	Land uses and development consistent with the Draft 2007 UVAP could be damaged by improper construction or siting due to soil constraints.	PS	Same policies as Impact 3.2-A.	LS
3.2-D	Land uses and development consistent with the Draft 2007 UVAP outside municipal wastewater service districts could be constrained by soils that cannot adequately dispose of treated wastewater.	LS	No mitigation is required.	LS
3.2-E	Land uses and development consistent with the Draft 2007 UVAP could result in the loss of known mineral resources or mineral resource recovery sites.	PS	Policy OC1.4: Manage gravel levels within the Russian River.	LS
3.3	**Hydrology and Water Quality**			
3.3-A	Land uses and development consistent with the Draft 2007 UVAP could occur within flood zones and would expose more people and property to flood hazards.	PS	Policy HS1.2 Minimize impacts from flooding through flood mitigation components and ongoing flood management practices including implementation of the "No Adverse Impacts" (NAI), as recommended by the Association of Flood Plain Managers. Policy WM4.1: Integrate storm water management practices that utilize and mimic natural hydrology into all aspects of development and community design, including streets and parking, homes and buildings, parks and public landscaping. Policy OC 1.1 Protect the river corridor and riparian habitat while accommodating responsible development.	PS
			EIR-Recommended Mitigation Measures: 3.3-A.1 The County shall not approve new discretionary permits for development within the 100-year floodplain of any stream in the plan area unless it can be shown that new development would not be subject to flooding. To accomplish this mitigation, the following implementation measures shall be revised or added to the Draft 2007 UVAP: **HS1.2a Flood Hazard Mapping** ~~Collaborate with the~~ Request that Federal Emergency Management Agency and other relevant agencies ~~to~~ update flood hazard mapping for the Russian River watershed.	LS

IMPACTS		SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			HS1.2c 100-Year Floodplain Development Standards and Restrictions Enforce standards and restrictions for development within the 100-year floodplain. Update standards and restrictions based on Flood Management Plan recommendations. ~~Preliminary development standards and restrictions should:~~ Until the Flood Management Plan and the No Adverse Impact Standards are adopted and the revised 100-year floodplain mapping is completed, new development within the 100-year floodplain will be required to comply with the following conditions: • Each discretionary project within the 100-year floodplain will be required, using an methodology acceptable to the County Water Agency, to identify the 100-year floodplain elevation on the site given buildout under the 2007 UVAP; • The finish floor of each new development will be constructed at least one foot above the 100-year flood elevation as defined by the above-described modeling; • Design and condition discretionary projects within the 100-year floodplain (including subdivision and use permits) and future site development to minimize fill, encroachments and impervious surfaces; and • Amend the Floodplain Combining District to require local performance standards to minimize encroachments, fill and impervious surfaces lacking stormwater runoff retention features. • To the maximum extent practical, avoid constructing critical facilities within the designated 100-year floodplain areas or areas potentially subject to inundation by dam failures (or other water impoundment facilities) or seiche. [*Timeframe: ongoing. Responsibility: Mendocino County Water Agency and Department of Planning and Building Services*]	
3.3-B	Land uses and development consistent with the Draft 2007 UVAP could occur in areas subject to seiche, mudflow, or dam inundation.	PS	Policy HS1.2 Minimize impacts from flooding through flood mitigation components and ongoing flood management practices including implementation of the "No Adverse Impacts" (NAI), as recommended by the Association of Flood Plain Managers.	LS
3.3-C	Land uses and development consistent with the Draft 2007 UVAP would result in increases in stormwater runoff and peak discharge. Existing storm drain systems, including urban creeks and the Russian River, may be incapable of accommodating increased flows, potentially resulting in on- or off-site flooding.	PS	Policy HS1.2 Minimize impacts from flooding through flood mitigation components and ongoing flood management practices including implementation of the "No Adverse Impacts" (NAI), as recommended by the Association of Flood Plain Managers. Policy WM4.1: Integrate storm water management practices that utilize and mimic natural hydrology into all aspects of development and community design, including	PS

IMPACTS		SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			streets and parking, homes and buildings, parks and public landscaping.	
			EIR-Recommended Mitigation Measures: 3.3-C.1 The County shall not approve new discretionary permits for development unless it can be shown that the development will not cause flooding of downstream properties. To accomplish this standard, the following implementation measures shall be added to the Draft 2007 UVAP: **HS1.2g Interim Stormwater Plan** Until such time as the County completes and adopts the No Adverse Impact Standards, individual project applications shall be required to analyze and mitigate drainage impacts. If such analysis identifies unmitigated and cumulative significant effects, including impacts on downstream flooding, further environmental documentation may be required. In the event that the County Department of Planning and Building Services determines that the project, when considered cumulatively with other projects to be undertaken in the drainage basin, will result in a significant effect with respect to downstream flooding, the project applicant will either: a) prepare a supplemental environmental impact report on such effect, or b) agree to modify the project to construct improvements or participate in a funding mechanism necessary to mitigate any downstream flooding impacts (such as posting a bond on funds prior to recordation of the final map in an amount to be determined by the County Department of Planning and Building Services). Failure to modify the project or to propose further environmental documentation shall be grounds for finding the project inconsistent with the UVAP. Payment of costs for drainage facilities to handle the surface runoff from new development shall be the responsibility of developers. *[Timeframe: Short-term. Responsibility: Department of Planning and Building Services]*	LS
3.3-D	Land uses and development consistent with the Draft 2007 UVAP could be located within the floodplain, displacing floodplain storage and expanding floodplain elevations. This increased runoff and floodplain displacement can result in secondary flooding, including bank instability and erosion.	PS	Same policies as Impact 3.3-C.	PS
			EIR-Recommended Mitigation Measures: 3.3-D.1 The County shall design new drainage improvements to minimize streambank erosion by adding the following implementation measure to Policy WM4.1: **WM 4.1e Streambank Protection** Develop, adopt, and oversee Best Management Practices for bank stabilization and erosion control to prevent erosion and siltation in drainage	LS

	IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			swales and streams. *[Timeframe: Short-term. Responsibility: Water Agency]*	
3.3-E	Land uses and development consistent with the Draft 2007 UVAP could result in the need for new or enlarged storm drain facilities whose construction could result in adverse environmental effects.	PS	It is not possible at this stage to recommend mitigation measures that might be needed for each future project.	SU
3.3-F	Land uses and development consistent with the Draft 2007 UVAP could result in changes to drainage patterns that could increase erosion along overland flow paths and in drainage swales and streams.	PS	Mitigation Measure 3.3-D.1 applies to this impact.	LS
3.3-G	Land uses and development consistent with the Draft 2007 UVAP would increase the transport of sediments, oils, greases, and other residues and chemicals to receiving waterways and the groundwater.	PS	Policy OC1.2: Protect and maintain the Russian River Corridor channel elevation and banks. Policy WM4.1: Integrate storm water management practices that utilize and mimic natural hydrology into all aspects of development and community design, including streets and parking, homes and buildings, parks and public landscaping.	PS
3.3-H	Agricultural use will continue to generate sediments and other pollutants that will enter area streams and degrade the water quality.	LS	No mitigation is required. However, Mitigation Measure 3.4-C.1 will further reduce the impact.	LS
3.3-I	Land uses and development consistent with the Draft 2007 UVAP not served by municipal water suppliers will withdraw groundwater from local aquifers, and in the future, municipal water suppliers might withdraw groundwater.	PS	Policy WM1.2: Protect and enhance quality of the Valley's groundwater system and long-term sustained yield.	LS
3.3-J	Land uses and development consistent with the Draft 2007 UVAP could reduce the area available to recharge the aquifer in the plan area, thereby adversely affecting groundwater supplies.	PS	Policy OC 1.1 Protect the river corridor and riparian habitat while accommodating responsible development. Policy WM1.2: Protect and enhance quality of the Valley's groundwater system and long-term sustained yield. Policy HS1.2 Minimize impacts from flooding through flood mitigation components and ongoing flood management practices including implementation of the "No Adverse Impacts" (NAI), as recommended by the Association of Flood Plain Managers.	PS
			EIR-Recommended Mitigation Measures: 3.3-J.1 The County shall not approve new development that significantly reduces groundwater recharge. To meet this standard, the following revision to Implementation Measure HS1.2e will be made. **HS1.2e Land Development Code: Flood Management** Update the zoning code to reflect Flood Management Plan	LS

	IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			recommendations. The code should also address: • Standards for retention or reduction of stormwater runoff from large paved areas as a means of reducing flood potential; • Design options for street-side infiltration; • A maximum allowable total area of impervious surfacing and mitigation measures to offset impervious areas; ~~and~~ • Requirements for incorporating drainage controls to retain on-site stormwater; • Limit impervious surfaces to a practical minimum where alluvial fans intersect the Franciscan Formation and within 100-year floodplain; and • For non-residential projects that include more than 200,000 square feet of development, consider requiring multi-level parking lots to minimize impervious surfaces.	
3.3-K	Land uses and development consistent with the Draft 2007 UVAP could cause sewer- and septic-related water quality problems.	PS	Policy WM 4.2 Protect water supplies from adverse impacts.	LS
3.4	**Biological Resources**			
3.4-A	Land uses and development consistent with the Draft 2007 UVAP could adversely affect special status species of vegetation.	PS	Policy OC2.1: Prioritize open space resources with targeted conservation and restoration efforts. Policy OC2.2: Protect natural resources while providing opportunities for compatible development.	PS
			EIR-Recommended Mitigation Measures: 3.4-A.1 The County shall protect special status plant species. To realize this standard, the time for implementation of Implementation Measures OC2.1b and OC2.2a will be revised from “intermediate” to “short-term.”	LS
3.4-B	Land uses and development consistent with the Draft 2007 UVAP could result in the injury to or death of special status species of wildlife and/or destruction of habitat required by those species.	PS	Same policies as Impact 3.4-A.	PS
			EIR-Recommended Mitigation Measures: Mitigation Measures 3.3-G.1 and 3.4-A.1 apply to this impact.	SU
3.4-C	Land uses and development consistent with the Draft 2007 UVAP could adversely affect the aquatic habitat of the Russian River and its tributaries thereby adversely affecting fish and aquatic wildlife. It could also adversely affect the riparian habitat along the streams as well as other sensitive habitat types in the area.	PS	Policy OC 1.1 Protect the river corridor and riparian habitat while accommodating responsible development. Policy OC1.2: Protect and maintain the Russian River Corridor channel elevation and banks.	PS

IMPACTS		SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			Policy OC1.3: Enhance the fisheries in the Russian River and its tributaries within the Ukiah Valley.	
			EIR-Recommended Mitigation Measures: Mitigation Measures 3.3-G.1 and 3.4-A.1 apply to this impact. In addition, the following mitigation is required. 3.4-C.1 The County shall protect riparian corridors and habitat. To realize this standard, Implementation Measures OC1.1a and OC1.1b will be revised and Implementation Measure OC1.1h will be added as follows: **OC1.1a River Corridor Planning Area** Define the river planning corridor and extent of surrounding riparian areas within which proposed development will trigger design review, performance standard requirements and use of river design guidelines. Classify "Riparian Corridors" designated in the Open Space and Conservation Section as follows: (1) "Russian River Riparian Corridor" is the corridor adjacent to the main stem of the Russian River, excluding lands located within the urban land use categories or within the jurisdiction of a city. The corridor is 200 feet from the top of the higher bank on each side of the stream as determined by the County Department of Planning and Building Services. (2) "Other Riparian Corridors" are the corridors within other land use categories along the Russian River and the designated corridors along other rivers and streams. The corridor will be 50 feet from the top of the higher bank on each side of the stream as determined by the County Department of Planning and Building Services. (3) Establish a River Corridor Combining Zoning District. Rezone all lands within the River Corridor areas to this combining district. **OC1.1b Stream Setbacks** Determine appropriate development setback distances from ~~watercourses~~ all perennial and intermittent streams, as shown on USGS topographic maps as of January 2011 (utilizing current ecological and scientific data) and specify setback requirements in the zoning code. **OC1.1h River Corridor Uses** Develop and adopt regulations establishing standards applicable to	LS

IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
		River Corridors. Until the regulations and the final Stream Setbacks are adopted, require that land use and development comply with the following principles. Allow or consider allowing the following uses within any River Corridor area: • Streamside maintenance, fire fuel management, and restoration. • Livestock grazing. • Agricultural cultivation, but not within 100 feet of top of bank for the Russian River and 25 feet for Other Riparian Corridors. • Public projects, including water-dependent public recreational facilities. • Timber operations conducted in accordance with an approved timber harvest plan. • Mining operations conducted in accordance with the County Surface Mining regulations. • Road, street, and utility crossings • Streamside maintenance, fire fuel management, and restoration. • Permitted summer dams. • Equipment turnaround and access roads associated with agricultural cultivation, provided that the affected area is the minimum necessary for these turnaround and access roads and that a minimum 25' vegetative filter strip is provided and maintained between the affected area and the top of the bank. • Vegetation removal as part of an integrated pest management program administered by the Agricultural Commissioner. Prohibit, except as otherwise listed above, grading, vegetation removal, agricultural cultivation, structures, roads, utility lines and parking lots within any streamside conservation area. Consider an exception to this prohibition if: • It makes a lot unbuildable and if vegetation removal is minimized, or • The use involves only the maintenance, restoration, or minor expansion of an existing structure or other existing use, or • It can be clearly demonstrated through photographs or other information that the affected area has no substantial value for riparian functions, or • A conservation plan is approved that provides for the appropriate protection of the biotic resources, water quality, flood management, bank stability, groundwater recharge, and other applicable riparian functions. [*Timeframe: ongoing for guiding*	

IMPACTS		SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			principles until regulations are adopted in Short-term. Responsibility: Department of Planning and Building Services]	
3.4-D	Land uses and development consistent with the Draft 2007 UVAP could result in the loss of or damage to wetlands.	PS	Same policies as Impact 3.4-A.	LS
3.4-E	Land uses and development consistent with the Draft 2007 UVAP within the plan area will result in the loss of woodland plant communities.	PS	Policy OC2.3: Preserve and restore native oak woodland and hillside habitats.	PS
			EIR-Recommended Mitigation Measures: Mitigation Measure 3.1-B.1 also applies to this impact. It gives priority to projects that do not convert substantial acreage of oak woodlands. 3.4-E.1 The County shall require that new development minimize the removal of true oaks (*Quercus* sp.) to the maximum extent feasible. To realize this standard, Implementation Measure OC2.3a will be revised and Implementation Measure OC2.3e will be added as follows: **OC2.3a Oak Woodland Habitat Inventory and ~~Preservation~~ Conservation Plan** Using the map of contiguous oak woodland (defined as a site where oaks provide at least 10% canopy cover), develop a preservation plan to bring focus to conservation efforts. Use the GIS database to record critical information about the resources. Assess current protection of these woodlands. Designate critical resource areas for ~~preservation~~ conservation and priority restoration projects based on woodlands that are most significantly intact and those that offer the highest potential for successful restoration. Work with the U.C. Extension Office, the Department of Fish and Game, and the Inland Ukiah Valley Land Trust to develop this program. Identify unique "heritage" specimen trees for special protection. **OC2.3e Oak Preservation and Mitigation** Require the identification, conservation and protection of native true oaks in the design of discretionary projects. To the maximum extent practicable (through clustering development or avoiding development in areas containing oaks), minimize the removal of oaks and other native trees and fragmentation of woodlands, require any trees removed to be replaced, preferably on the site, and provide permanent protection of other existing woodlands where replacement planting does not provide adequate mitigation. Replacement planting will be done at a ratio of at least 3:1, and	LS

	IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			planted trees will be maintained for at least 5 years with trees not surviving being replaced and maintained for 5 years. Where oak woodland conversion or fragmentation would occur, require the applicant to pay an in lieu fee equivalent to the conservation values of the site, which would require an appraisal of the site. These fees shall be used to fund the restoration projects listed in Implementation Measure OC2.3a. *[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]*	
3.4-F	Land uses and development consistent with the Draft 2007 UVAP could interfere with wildlife movement and nursery sites.	PS	Same Policies as Impact 3.4-A, plus: Policy OC2.3: Preserve and restore native oak woodland and hillside habitats.	LS
			EIR-Recommended Mitigation Measures: Mitigation Measures 3.4-A.1 and 3.4-C.1 apply to this impact.	
3.5	**Cultural Resources**			
3.5-A	Land uses and development consistent with the Draft 2007 UVAP has the potential to adversely affect areas of archaeological or historical importance.	PS	All policies in the Draft 2007 UVAP Section 10 (Historical and Archaeological Preservation) apply.	PS
			EIR-Recommended Mitigation Measures: No additional mitigation is available.	SU
3.5-B	Land uses and development consistent with the Draft 2007 UVAP has the potential to adversely affect areas containing significant paleontological resources.	PS	*General Plan Policy DE-116:* Paleontological resources studies shall be conducted at the County's discretion for all project applications. The studies should identify paleontological resources in a project area and provide mitigation measures for any resources in a project area that cannot be avoided.	PS
			EIR-Recommended Mitigation Measures: No additional mitigation is available.	SU

TABLE 2.6-1 - IMPACT AND MITIGATION SUMMARY
(Continued)

	IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
3.6	**Circulation and Transportation**			
3.6-A	Traffic generated by land uses and development consistent with the Draft 2007 UVAP will cause sections of County and City roads and certain intersections to operate at an unacceptable Level of Service.	PS	Policy CT1.1: Promote the development of an integrated transportation corridor through the Valley. Policy CT1.2: Maintain an acceptable level of service conditions on existing roadways. Policy CT1.3: Improve freeway access. Policy CT3.1: Work with Mendocino Council of Governments and the City of Ukiah to maintain an updated Regional Transportation Plan and traffic model, including a system for evaluating multiple modes of transportation within the valley. Policy CT3.2: Evaluate proposed new development impacts on roadways.	LS
3.6-B	Traffic generated by land uses and development consistent with the Draft 2007 UVAP would increase the risk of accidents involving motorists, bicyclists, and pedestrians.	PS	Policy CT2.1: Integrate pedestrian access into the circulation system of the urbanized areas of the Ukiah Valley. Policy CT3.2: Evaluate proposed new development impacts on roadways.	LS
3.6-C	Traffic generated by land uses and development consistent with the Draft 2007 UVAP could conflict with adopted policies, plans, or programs supporting alternative transportation.	PS	Policy CT1.4: Comprehensively plan for the future of the Ukiah Valley rail corridor. Policy CT2.1: Integrate pedestrian access into the circulation system of the urbanized areas of the Ukiah Valley. Policy CT2.2: Develop a safe and integrated bicycle transportation system in order to promote the use of bicycles as a viable and attractive alternative to the automobile. Policy CT2.3: Increase public transportation use by improving services. Policy CT3.1: Work with Mendocino Council of Governments and the City of Ukiah to maintain an updated Regional Transportation Plan and traffic model, including a system for evaluating multiple modes of transportation within the valley. Policy CT3.2: Evaluate proposed new development impacts on roadways. Policy LU 1.4: Continue to allow growth in High Intensity Development Corridors. Policy LU4.1: Apply growth management strategies to improve the community's ability to support and fund facilities and services.	PS

IMPACTS		SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			EIR-Recommended Mitigation Measures: Mitigation Measure 3.1-B.1 applies to this impact. 3.6-C.1 Future land use approvals shall not cause conflicts with rail service, the following additional measures shall be added to Policy CT1.4: **Measure CT1.4e Acoustic Studies** Applications for residential development within 500 feet of the railroad tracks shall require an acoustic study to show how noise levels at residences can be reduced to a level consistent with the Exterior Noise Limit Standards included in Appendix C of the Zoning Ordinance. *[Timeframe: Ongoing. Responsibility: Planning and Building Services]* **Measure CT1.4f Notification of Rail Activity** New residential development approved within 1,000 feet of the railroad will include a disclaimer that the owner and any occupant is aware of and agrees to accept any inconvenience, discomfort or disturbance associated with train traffic (including but not limited to noise, vibration, railroad crossing safety, dust, and potential risk of spills and releases of a wide variety of materials). This disclaimer will be filed with the deed for each property. *[Timeframe: Ongoing. Responsibility: Planning and Building Services]*	LS
3.7	**Air Quality**			
3.7-A	Land uses and development consistent with the Draft 2007 UVAP and buildout of the City of Ukiah would increase traffic volumes and could generate harmful emissions of air pollutants that could result in exposure of people to substantial pollution, violate air quality standards, and/or conflict or obstruct MCAQMD's air quality plan.	PS	Policy EA1.3 Maintain and improve air quality. Policy LU1.4: Continue to allow growth in High Intensity Development Corridors. Policy CT1.2: Maintain an acceptable level of service conditions on existing roadways. Policy CT1.4: Comprehensively plan for the future of the Ukiah Valley rail corridor. Policy CT2.1: Integrate pedestrian access into the circulation system of the urbanized areas of the Ukiah Valley. Policy CT2.2: Develop a safe and integrated bicycle transportation system in order to promote the use of bicycles as a viable and attractive alternative to the automobile. Policy CT2.3: Increase public transportation use by improving services	PS

TABLE 2.6-1 - IMPACT AND MITIGATION SUMMARY
(Continued)

	IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			EIR-Recommended Mitigation Measures: No additional mitigation is available.	PS
3.7-B	Traffic increases associated with the UVAP would affect local air quality in terms of carbon monoxide concentrations.	PS	Existing regulations of the Mendocino County Air Quality Management District apply.	LS
3.7-C	Land use maps associated with the UVAP do not propose new sources of odors or toxic air contaminants. However, they show sensitive land uses near sources of odors and toxic air contaminants.	PS	Policy EA1.3 Maintain and improve air quality. Policy HS1.5: : Minimize development in hazardous areas.	LS
3.7-D	Construction of future projects and use of unpaved roads may expose people to harmful levels of asbestos.	LS	No mitigation is required.	LS
3.8	**Noise**			
3.8-A	New land uses proposed as a part of the Draft 2007 UVAP could be located in areas with excessive noise.	PS	General Plan Noise Policy DE-100: The following are the County's standards for maximum exterior noise levels for residential land uses. General Plan Noise Policy DE-101: The following are noise compatibility guidelines for use in determining the general compatibility of planned land uses. General Plan Noise Policy DE-102*:* The following definitions shall be used in combination with the standards in the Noise Compatibility Guidelines shown above. General Plan Noise Policy DE-105: A 5 db increase in CNEL or Ldn noise levels shall be normally considered to be a significant increase in noise.	LS
3.8-B	Traffic resulting from new development within the plan area would increase noise levels at sensitive receptors in the area.	PS	General Plan Policy DE-98: The County will protect residential areas and other noise-sensitive uses from excessive noise by doing the following: 1) Requiring that new land uses, new roadways, and other new noise sources do not create unacceptable noise levels on adjacent parcels. 2) Allowing homes or noise-sensitive uses to be developed only in places where existing and projected noise levels will meet the exterior noise guidelines and standards shown in Policies DE-100 and DE-101. 3) Requiring that County decisions which would cause or allow an increase in noise created by stationary or mobile sources (such as development of noise-generating land uses or the construction of new or wider roadways) be informed by a noise analysis and accompanied by noise reduction measures to keep noise at acceptable levels.	LS

TABLE 2.6-1 - IMPACT AND MITIGATION SUMMARY
(Continued)

	IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			General Plan Policy DE-109: Noise barriers should be visually attractive, complement the surroundings, and require a minimum of maintenance.	
3.8-C	New development can generate new noise that adversely affects residential neighborhoods and other sensitive receptors.	PS	*General Plan Noise Policies DE-98 to DE-109* (some listed above).	LS
3.8-D	Constructing new development could cause significant increases in intense, single-event noise.	PS	None proposed.	PS
			EIR-Recommended Mitigation Measures: 3.8-D.1 The County will amend its Zoning Code noise standards to include standards to address and mitigate the temporary impacts of construction noise and ground vibration. Such standards will include restriction of construction hours to daytime periods and requirements to utilize construction noise reduction measures (e.g., use of temporary sound barriers, setbacks, equipment noise control devices, and ground vibration control measures).	LS
3.8-E	New projects could cause significant increases in groundborne noise and vibrations.	LS	No mitigation is required.	LS
3.9	**Aesthetics**			
3.9-A	Future development consistent with the Draft 2007 UVAP could adversely affect scenic views along Highway 101, along other major public thoroughfares, and at gateways to the plan area.	PS	Policy CD1 Develop an aesthetically appealing urban form that reflects the rural, small-town character of the Ukiah Valley. Policy CD1.2: Encourage development that is attractive and reflects the small-town character of the Valley. Policy CD2.1: Enhance the visual appearance of the City-County transition areas, the Valley's gateways, State Street, and US Highway 101 within the Valley. Policy CD2.3: Encourage and design the placement of utilities in a manner which improves visual appearances. Policy OC1.2: Protect and maintain the Russian River Corridor channel elevation and banks. Policy OC2.1: Prioritize open space resources with targeted conservation and restoration efforts. Policy OC2.2: Protect natural resources while providing opportunities for compatible development. Policy OC2.3: Preserve and restore native oak woodland and hillside habitats.	PS

IMPACTS		SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			Policy OC3.1: Maintain viable Agricultural Land classifications Policy OC3.2: Expand, encourage and diversify farming for local benefits and food supply. Policy LU 1.4 Continue to allow growth in High Intensity Development Corridors	
			EIR-Recommended Mitigation Measures: Mitigation Measure 3.1-B.1 applies to this impact. 3.9-A.1 To ensure that development of visually sensitive areas adjacent to Highway 101 is developed in a coordinated fashion to maximize open space and minimize visual impacts, add the following implementation measure: **LU1.2f Specific Plans** Prior to any new discretionary project approvals in the Brush Street Triangle (except for the existing application for an affordable housing project), a specific plan shall be prepared for the Brush Street Triangle to coordinate areawide circulation and infrastructure, preserve open space, provide recreational facilities, and maximize ultimate development potential. Prior to any new discretionary project approvals in the Lovers Lane area, a specific plan shall be prepared for the Lovers Lane area to coordinate areawide circulation and infrastructure, preserve open space, provide recreational facilities, and maximize ultimate development potential. *[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]*	SU
3.9-B	Future development, unless carefully sited and designed, may be inconsistent with the existing scale and character of existing development in the surrounding area. This development could result in views that are aesthetically offensive.	PS	The policies and measures described under Impact 3.9-A also apply to this impact.	SU
3.9-C	New development will create new glare and include new lights that will adversely affect nighttime views.	PS	Policy CD2.2: Reduce excessive artificial light to maintain the quality of life throughout the Ukiah Valley.	PS
			EIR-Recommended Mitigation Measures: 3.9-C.1 The nighttime visual environment shall be protected by adding the	SU

	IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			following implementation measure to Policy CD2.2: **CD2.2b Interim Design Guidelines** Until the design guidelines and landscape guidelines are adopted, the County will conduct design review of proposed discretionary projects. Outdoor lighting for new projects will not be allowed to cause light trespass and will limit light pollution to the degree feasible. The County will use as interim guidelines the *Simple Guidelines for Outdoor Lighting Regulations*[1] developed by the International Dark-Sky Association. *[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]*	
3.10	**Public Services and Infrastructure**			
3.10-A	New development resulting from buildout of the plan area would generate sufficient students to require the construction of new schools. The construction of those schools could have significant impacts on the environment.	PS	Policy LU4.1: Apply growth management strategies when reviewing discretionary projects. LU 4.2 Promote balanced development to improve the community's ability to support and fund facilities and services.	PS
			EIR-Recommended Mitigation Measures: It is not possible at this stage to recommend mitigation measures that might be needed for this future project.	SU
3.10-B	New development in the plan area would increase the demand for police response by the Mendocino County Sheriff's Office and by the Ukiah Police Department.	PS	No mitigation is required, but the County could consider altering Implementation Measure HS1.4d to have a "short-term" implementation time, and adding the following: **HS1.4e Public Service Funding** Develop and implement a regional public safety funding mechanism to provide additional staffing for the Sheriff's Office and Police Department and require new development to pay its fair share as established in that funding plan. The timeline for this measure will be "short-term."	LS
3.10-C	New development would increase the demand for a new criminal justice center.	PS	It is not possible at this stage to recommend mitigation measures that might be needed for this future project.	SU
3.10-D	Development under the UVAP would increase the demands on the fire protection agencies serving the plan area, creating the need for the Ukiah Valley Fire District and possibly the Redwood Valley-Calpella Fire Protection District and the City of Ukiah Fire Department to acquire new facilities and equipment.	PS	Policy LU4.1: Apply growth management strategies when reviewing discretionary projects. Policy LU 4.2 Promote balanced development to improve the community's ability to support and fund facilities and services. Policy LU7.1: Collaborate with the City of Ukiah to fund programs and evaluate planning issues in the Valley.	LS

1 See: *www.darksky.org/programs/simple-guidelines-for-lighting-ordinances.php.*

IMPACTS		SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			Policy HS1.4: Maintain an interagency comprehensive disaster preparedness program.	
3.10-E	Future development could be placed in locations where people and structures would be exposed to potential wildland fires.	PS	Policy HS1.3: Maintain land use and building regulations that promote fire safety. Policy HS1.4: Maintain an interagency comprehensive disaster preparedness program.	PS
			EIR-Recommended Mitigation Measures: Mitigation Measure 3.1-B.1 also applies to this impact 3.10-E.1 The County shall not allow new development in high fire hazard areas unless it can be shown that such development would not place people in danger. To realize this standard the following implementation measures shall be added to Policy HS1.3: **HS1.3b Fire Hazard Areas** Do not approve subdivision of existing parcels in areas designated by CAL FIRE as having "high" or "very high" fire hazard rating unless the responsible fire protection agency determines in writing that adequate access, evacuation routes, emergency response, and fireflow are available, and that the project complies with the most current State requirements for development in wildlands. **HS1.3 Wildfire Protection Plan** Implement the recommendations of the Wildfire Protection Plan when approving new development. Support the proposed signage and address project included in that plan and support maintenance of improvements constructed as part of the Westside Vegetation Management Plan. 3.10-E.2 Do not approve the proposed reclassification of the East Hills area (Area #30 on Figure 1-4 of this EIR).	SU
3.10-F	Future development in the plan area could cause conflicts with emergency response and evacuation plans.	PS	Policy HS1.3: Maintain land use and building regulations that promote fire safety. Policy HS1.3: Maintain land use and building regulations that promote fire safety. Policy HS1.5: Minimize development in hazardous areas.	PS
			EIR-Recommended Mitigation Measures: Mitigation Measure 3.10-E.1 applies to this impact.	SU
3.10-G	Development under the Draft 2007 UVAP would increase the demands on emergency medical agencies serving the plan area, potentially creating the need for the Ukiah Valley Fire	PS	Policy LU4.1: Apply growth management strategies when reviewing discretionary projects.	PS

	IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
	District, the Redwood Valley-Calpella Fire Protection District, Ukiah Fire Department, and Ukiah Ambulance Service to acquire new facilities and equipment.		Policy LU 4.2 Promote balanced development to improve the community's ability to support and fund facilities and services. Policy HS1.4: Maintain an interagency comprehensive disaster preparedness program.	
			EIR-Recommended Mitigation Measures: No mitigation is available.	SU
3.10-H	New development will increase the demand for potable water. It is possible that local water purveyors may be unable to meet the demand. Development of new sources of water could have significant environmental effects.	PS	Policy WM 1.1 Maintain and increase water supplies and systems for existing and future water system needs. Policy WM2.1: Strive for efficient delivery of public water services. Policy LU4.1: Apply growth management strategies when reviewing discretionary projects.	PS
			EIR-Recommended Mitigation Measures: No mitigation is available.	SU
3.10-I	The increased demand for potable water could require constructing new treatment, storage, or supply facilities, and construction of these facilities could have significant environmental effects.	PS	It is not possible at this stage to recommend mitigation measures that might be needed for this future project.	SU
3.10-J	Future development under the UVAP would generate wastewater that could exceed the collection, treatment, and/or disposal capacities of wastewater facilities serving the plan area and cause exceedances of the wastewater treatment standards established by the Regional Water Quality Control Board.	PS	Policy WM 4.2 Protect water supplies from adverse impacts. Policy LU4.1: Apply growth management strategies when reviewing discretionary projects. Policy LU 4.2 Promote balanced development to improve the community's ability to support and fund facilities and services.	LS
			EIR-Recommended Mitigation Measures: Additional mitigation is not required, but the County may wish to add the following: **WM4.2e Wastewater Planning** The County shall request that the UVSD initiate a planning process to identify the improvements needed to meet projected 20-year growth within the District. The study shall investigate expansion of the existing facility, construction of a satellite facility, pipeline replacement, wastewater reclamation and re-use, and any other method or approach to meet projected demand. *[Timeframe: Short-term. Responsibility: County Board of Supervisors]* **WM4.2f Recycled Water** Require recycled water lines be installed in new discretionary projects.	LS

	IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			[Timeframe: Short-term. Responsibility: County Board of Supervisors]	
3.10-K	Because future demand for wastewater services may exceed facility capacity, new or expanded facilities may need to be constructed. The construction of these facilities could have adverse environmental effects.	PS	No mitigation is available at this time.	SU
3.10-L	Development in the plan area would generate solid waste that would need to be accommodated at the Ukiah Valley Transfer Station and the Potrero Hills Regional Landfill.	PS	Policy LU4.1: Apply growth management strategies when reviewing discretionary projects. Policy LU 4.2 Promote balanced development to improve the community's ability to support and fund facilities and services.	LS
3.10-M	Future development under the UVAP would increase the plan area population, thereby increasing the demand for parks and recreational facilities. This increased demand could result in significant deterioration of existing facilities and the need for new or expanded facilities.	PS	Policy PR1.1: Provide a geographically balanced network of parks and community facilities. Policy PR1.3: Provide a variety of community-based recreational and educational programs. Policy PR2.1: Pursue creative funding solutions to implement park and facility development, expansion and improvements. Policy PR2.2: Pursue strategic outside funding solutions to implement program improvements. Policy PR 3.1 Host community-sponsored cultural and recreational events. Policy LU4.1: Apply growth management strategies when reviewing discretionary projects. Policy LU 4.2 Promote balanced development to improve the community's ability to support and fund facilities and services.	PS
			EIR-Recommended Mitigation Measures: 3.10-M.1 The County shall provide for ongoing park operations and maintenance, the following implementation measure shall be added to the Parks, Recreation and Community Facilities Section: **PR2.2d Ongoing Park Operations and Maintenance** Provide for ongoing funding of park operations and maintenance through assessment districts, homeowners associations, and other means. *[Timeframe: Ongoing. Responsibility: Board of Supervisors]*	SU
3.11	**Hazards and Hazardous Materials**			
3.11-A	Land use and development consistent with the Draft 2007	PS	Policy HS1.4: Maintain an interagency comprehensive disaster preparedness	LS

	IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
	UVAP would result in increased transport, use, and disposal of hazardous materials that could expose the public and environment to a significant hazard through either their routine use or an accidental release.		program. Policy HS1.5: Minimize development in hazardous areas.	
3.11-B	New development near the Ukiah Municipal Airport could expose people to risk of injury or death due to aircraft accidents.	PS	Policy LU2.1: Define acceptable standards for development in the vicinity of the airport.	LS
3.12	**Energy**			
3.12-A	The Draft 2007 UVAP land use plan could affect energy usage by creating a land use pattern that could increase the dependence on single occupancy vehicles, which would use more energy.	PS	Policy CT1.1: Promote the development of an integrated transportation corridor through the Valley. Policy CT2.1: Integrate pedestrian access into the circulation system of the urbanized areas of the Ukiah Valley. Policy CT2.2 Develop a safe and integrated bicycle transportation system in order to promote the use of bicycles as a viable and attractive alternative to the automobile. Policy CT2.3: Increase public transportation use by improving services. Policy LU 1.4 Continue to allow growth in High Intensity Development Corridors.	LS
3.12-B	Land uses and development consistent with the Draft 2007 UVAP could result in inefficient and excessive use of energy resources.	PS	Policy EA 1.1 Promote energy efficient planning practices. Policy LU5.1: Retain and attract businesses. Policy LU5.2: Facilitate investment in “value added” industries, especially in agriculture and timber. Policy LU5.3: Support small business development. Policy LU5.4: Provide labor force training and development. *Policy OC3.2* Policy CD1.1: Develop and adopt guidelines that create a sense of place for the community and protect and enhance the visual character of the Ukiah Valley.	PS
			EIR-Recommended Mitigation Measures: Mitigation Measure 3.1-B.1 applies to this impact. 3.12-A.1 Energy shall be conserved to the degree feasible by requiring the following changes and additions to Policy EA1.1:	LS

IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
		Policy EA1.1: Promote energy efficient planning practices. **EA1.1a Energy Efficiency** Coordinate with recommendations from the Energy Working Group to revise zoning code and develop design review guidelines to promote responsible design through the use of energy efficient techniques and equipment; setbacks and height limitations to promote optimal heating, cooling and cogeneration opportunities; materials and construction practices that minimize adverse environmental effects. Adopt energy efficient standards and conservation requirements and integrate them as an energy efficiency ordinance into the development review and building permit process. **EA1.1b Energy Incentives** Offer permitting incentives to encourage the use of energy-efficient construction practices and technology to minimize impacts to the local infrastructure and environment. Provide incentives such as fee reductions and expedited processing for facilities that use renewable resources for energy production. Projects that conserve more energy than the minimum required by new County energy efficient building standards will be given priority in obtaining building permits under the Growth Management Program developed under UVAP Policy LU4.1. **EA1.1c Solar Design** Integrate requirements for passive solar building design into design review guidelines. Ensure that building design maximizes air circulation, natural lighting, views, solar orientation, and shading areas to interior and exterior spaces. Require orientation of buildings to maximize solar heating during cool seasons, avoid solar heat gain during hot periods, enhance natural ventilation, promote effective use of daylight, and optimize opportunities for on-site solar generation. **EA1.1d County Facilities** The County shall adopt and implement energy efficient standards and conservation requirements for new County facilities. The County shall strive to replace its vehicle fleet with fuel-efficient vehicles. *[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]* **EA1.1e Renewable Resources** Preserve opportunities for development of renewable energy resources. Promote renewable energy. *[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]*	

IMPACTS		SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			EA1.1f Community Choice Aggregation Evaluate and pursue implementation of Community Choice Aggregation if it proves to be a cost-effective and low-risk strategy to accelerate the use of renewable resources. *[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]* **EA1.1g Green Building Standards** New construction shall comply with the California Green Building Code. Adopt and integrate green building standards into the development review and building permit process. Offer incentives to encourage green building practices. *[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]*	
3.13	**Global Climate Change**			
3.13-A	Land uses and development consistent with the Draft 2007 UVAP could result in greenhouse gas emissions that exceed State emission targets and would adversely affect climate.	PS	Policies previously listed previously under Air Quality and Energy above partially address this impact.	PS
			EIR-Recommended Mitigation Measures: 3.13-A.1 Greenhouse gas emissions shall be reduced to the degree feasible by requiring the following changes and new measures: Add the following new policy: **EA1.1h Building Code and Standards Update** Revise the County Building Code to require structures to be 25% more efficient than existing Title 24 standards in energy and water use. Where possible the County shall: • Identify technologies best suited to achieve energy efficiency goals; • Identify ideal building siting, envelope, landscaping and design standards; • Educate architects and builders in developing the new building standards; and • Update codes on an ongoing basis as legislation and technology changes. • *[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]* Revise Implementation Measure EA1.3b to say:	SU

IMPACTS	SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
		EA1.3b Clean Air Sources Update the County building code and other relevant ordinances to require that primary heat sources in all new development and additions involving space heating use ~~low/no air~~ zero emission heat sources (solar, electricity, or geothermal~~natural gas, propane or butane~~) for space heating and hot water appliances. All-electric housing and commercial structures are to be encouraged. Verify through plan-check process. Add the following new implementation measures: **EA1.1i Zero Net Energy Development** All new development shall have sufficient onsite renewable energy collection/generation devices to meet the expected annual demands of that unit. If space or other considerations preclude installation of onsite renewable generation devices, off-site installation of renewable energy sources will suffice. The applicant can choose to install the energy-generating system directly or pay an offset fee for a third party to construct the devices elsewhere. *[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]* **EA1.1j Electric Vehicle Recharging Opportunities** All new construction and vehicular related remodeling efforts in urbanized areas are required to include at least one electric vehicle recharging opportunity. Mendocino County Planning and Building Services shall codify this measure into the building code and establish specific standards such as the number of connections per unit or square feet." *[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]* **EA1.1k Fleet Vehicle Replacement Program** Mendocino County will replace their vehicle fleet with more fuel efficient and/or clean-burning models and will encourage other entities to do the same. The County promotes the use of all-electric vehicles for local use, hybrids for extended replacements. *[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]* **EA1.1l Electric Vehicle Incentives** Mendocino County shall investigate potential electric vehicle purchase incentives for individuals and/or businesses. *[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]* **EA1.1m Prepare and Adopt a Qualified Greenhouse Gas Reduction and Energy Management Plan**	

IMPACTS		SIGNIFICANCE BEFORE MITIGATION	MITIGATION	SIGNIFICANCE AFTER MITIGATION
			Mendocino County shall prepare and adopt a Qualified Greenhouse Gas Reduction and Energy Management Plan that establishes a baseline inventory of GHG emissions from all sources, GHG reduction targets that are consistent with the goals of AB32, and enforceable GHG emission reduction strategies and performance measures. Unless revised by additional analysis done while preparing this plan, the targets will be to reduce emissions 22% countywide from today's levels by 2020 and by 83% by 2050. The plan will include enforcement and monitoring tools to ensure regular review of progress in meeting the reduction targets to allow revising the plan as needed.*[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]* **EA1.1n Building Code Standardization** The County of Mendocino will work together with the incorporated cities to establish a uniform set of building standards for all new construction. *[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]*	
3.13-B	The changing climate could cumulatively result in a decrease in water supply, increase in air pollution, and increase in health hazards.	PS	Same policies required for Impact 3.13-A apply to this impact.	PS
			EIR-Recommended Mitigation Measures: Same mitigations recommended for Impact 3.13-A.	SU

3.0 ENVIRONMENTAL IMPACT ANALYSIS

3.0 ENVIRONMENTAL IMPACT ANALYSIS CHAPTER

This Chapter of the EIR includes an analysis of potential environmental impacts resulting from implementation of the Draft 2007 UVAP. As described previously in Section 1.2, this is a Program EIR, and the level of specificity provided is consistent with what is required for the environmental review of a planning document. Each future project that requires discretionary approval by the County will have to undergo separate environmental review at the time an application to develop is submitted. Development within the plan area must be assessed for consistency with the Draft 2007 UVAP once it is adopted as part of the Mendocino County General Plan and consistency with other parts of the General Plan. It should also be noted that individual projects are subject to the existing County standards for new development as codified in the Mendocino County Code.

Each area or topic of environmental concern addressed in this EIR is discussed using the following format:

A. Setting

This section includes a description of the existing physical and environmental conditions as regards the particular environmental factor under consideration (per *CEQA Guidelines* Section 15125). This section was developed after review of existing reports and mapping, discussions with County staff and other public agency staff, and field reconnaissance trips.

B. Potential Impacts and Mitigations

This section begins with a list of the criteria that are used to determine impact significance. The criteria are based on the list of impacts typically considered significant as listed in the *CEQA Guidelines*. This section includes a description of any environmental constraints that could affect Draft 2007 UVAP implementation and an analysis of all potentially significant impacts that would or could occur from development under the Draft 2007 UVAP through 2030 (per *CEQA Guidelines* Section 15126a and b).

This section identifies the level and type of impacts that are likely to result from implementation of the Draft 2007 UVAP. The generic impacts of potential growth from the land uses and level of development consistent with the Draft 2007 UVAP are discussed in addition to any other impacts that might result from the goals and policies of the Draft 2007 UVAP. All impacts are numbered consecutively by topic. Based on the significance criteria, each impact is identified as being either a potentially significant impact or a less-than-significant impact. Potentially significant impacts are followed by feasible mitigation measures that are available to reduce the magnitude of impact. No mitigation measures are required for less-than-significant impacts. Mitigation measures also are numbered to correspond to the respective impacts. In the mitigation measures, changes to policy language of the Draft 2007 UVAP are shown in the following ways: additions are shown as <u>underlined text</u>, and deletions are struck through, like this – ~~deleted sentence~~.

For each potentially significant impact, a conclusion is provided as to whether the policies and implementation measures of the Draft 2007 UVAP, as well as policies and

implementation measures included in the new County General Plan would reduce the impact to a less-than-significant level. If the policies and measures would not reduce the impact to a less-than-significant level, then additional policies or implementation measures are recommended. The discussion concludes with a determination of whether the mitigations reduce the impact to a less-than-significant level, or whether it would be a significant and unavoidable Impact. A significant and unavoidable impact is a significant impact which cannot feasibly be avoided with mitigation. These include impacts which could be partly mitigated but could not be reduced to a less-than-significant level.

The Draft 2007 UVAP includes goals, policies, and implementation measures. A goal is an expression of community values and desired outcomes – a sought after end state that is not quantifiable or time dependent. A policy is a statement derived from a goal that represents the jurisdiction's adopted position and guides action by decision-making bodies. This Draft EIR relies upon the implementation of specific goals and policies of the Draft 2007 UVAP. Implementation of the identified goals and policies would, in many instances, reduce significant impacts to a less-than-significant level; the plan is intended to be self-mitigating. The Draft 2007 UVAP also includes implementation measures. An implementation measure is a specific measure to carry out goals and policies of the plan. Implementation of measures can take time, especially when needed resources are limited and required for more than one implementation measure. The Draft 2007 UVAP provides a table in the plan appendix that summarizes responsibilities and estimated planning priority timeframes for proposed implementation measures, as follows:

Implementation measure	**Responsibility**	**Time Frame/Planning Priority**
Name of the implementation measure	Department or agency responsible to implement	A. Short-term (less than 3 years) B. Intermediate-term (3-7 years) C. Long-term (over 7 years) D. Ongoing

This Draft EIR assumes that if there is an identified funding source or that the measure can be implemented within the normal departmental workload, and it will be implemented in the short term, or it is ongoing, that the implementation measure will be implemented and can be relied upon to reduce significant impacts to a less than significant level.

If there is no identified funding source or the measure would only be implemented in the intermediate- or long-term timeframes, then this Draft EIR does not assume that the implementation measure would necessarily be implemented in a timely manner to reduce impacts. In instances where such implementation measures would be required to mitigate significant impacts, this Draft EIR may recommend, as a mitigation measure, that the implementation measure be funded and be implemented in the short-term. However, where implementation is to be done by a County department or agency and it does not require the use of outside technical consultants or extensive staff time, it is assumed that the action will be implemented by ensuring there is adequate staff through the County budget process. If there is a question whether this staffing will be available, the County should consider whether the impact that such actions or mitigation measures address should be considered unmitigated and significant and unavoidable.

In addition, a few implementation measures are to be implemented by agencies other than Mendocino County. Such instances may require additional commitment and funding by the responsible agency to be counted upon to reduce significant impacts to a less than significant level.

Finally, in reaching conclusions regarding whether the long-term impact would be reduced to a less than significant level or not, the EIR assumes that the County will implement the referenced policies and implementation measures within the defined timeframe for each implementation measure. If measures calling for adoption of various standards and regulations are not adopted, then subsequent cumulative impact analyses in project-level CEQA studies may find that the cumulative impact of that project plus other planned or probable projects is significant.

A number of people and agencies that submitted comments on the original EIR prepared in July 2005 stated that the policies and implementation measures included in the Draft 2007 UVAP should not be considered as adequate mitigation measures for a range of potentially significant impacts because the County does not have a record of implementing policies and measures recommended or required in its previous 1981 General Plan. The preparers of this EIR assume that the County, as both the project proponent and lead agency, will implement measures within the identified timeframe when it adopts the Plan regardless of what may have occurred in the past. The EIR preparers cannot make policy decisions about the County budget process. If the County believes that implementation of the measures may not occur, or at least not within the projected timeframe, then the County should revise the Draft 2007 UVAP accordingly. This EIR is based on the policies and implementation measures that the County proposes to enforce and implement.

1. Worst Case Scenario

This EIR is based on a "worst case" scenario that assumes full buildout of all vacant and obviously underutilized properties in the plan area by the year 2030. This buildout for the Draft 2007 UVAP, as well as the buildout under the existing General Plan and the Land Use Alternatives is shown on Table 1.6-1. This amount of growth significantly exceeds the amount of growth that is actually projected to occur by 2030. The *Ukiah Valley Growth Prospects* report prepared during the process of preparing the 2007 Draft UVAP projected that about 1,635 new households, or 4,201 new residents, would be added to the plan area by 2020. Extrapolating from that projection, by 2030 there would be about 2,963 new households and 7,617 new residents.[3] Projected growth would be about 57% of potential buildout in the plan area. Subsequent to the preparation of the *Ukiah Valley Growth Prospects* report, the State Department of Finance (DOF) published revised population projections for the County. The *Ukiah Valley Growth Prospects* report was based on earlier DOF projections that the County would have a 2020 population of 118,800 people. The revised projections project a 2020 County population of 102,017 people, and a 2030 population of 111,151 people. Extrapolating from this new DOF projection, the plan area population would grow by about 2,772 households or 7,127 people by 2030. This equates to about 54% of the maximum buildout allowable under the Draft 2007 UVAP. ***Nevertheless, to provide the worst***

[3] *Ukiah Valley Growth Prospects,* Economic & Planning Systems, March 2007. That report assumed a 1.63% annual growth rate for the plan area to 2020; this growth rate was used to project the 2030 population.

case analysis, the following sections of this EIR describe the impact of full plan area buildout by 2030.

Buildout under the Draft 2007 UVAP would result in the development of 2,069,409-4,596,661 square feet of new commercial development (depending on the floor to area ratio applied to each property) and 2,400,504 square feet of new industrial development, for a total of 4,469,913-6,997,165 square feet of non-residential development. Again, this is a worst case where all land where such development is allowed would be fully developed. The *Ukiah Valley Growth Prospects* report states that the amount of new development needed to serve the projected 2030 population is 1,952,089 square feet of commercial/retail space and 986,802 square feet of industrial space, for a total of 2,938,891 square feet of non-residential development.

In November 2009, voters rejected a proposal for a specific plan that would have allowed a major mixed use project on the Masonite site. This proposal and the election did not result in any changes to the Draft 2007 UVAP. In addition, potential developer of much of the Lovers Lane area has terminated its option to develop a project in that area. The Draft 2007 UVAP also does not reflect that change. This EIR therefore necessarily assesses the Draft Plan as it was developed in 2007. Possible reduced development on the Masonite site and the Lovers Lane area is addressed in the Project Alternatives section.

In subsequent impact assessments, the EIR will discuss the impacts from the projected growth and from the worst case buildout. The buildout development scenario will be used for identifying impact significance and the need for mitigation.

2. Fiscal Impacts

A number of commentors on the original Draft EIR requested that the EIR develop cost estimates for various mitigation measures (e.g. an expanded wastewater treatment facility) and explain how these improvements would be financed. CEQA does not require the EIR to develop cost estimates or financing plans. If a recommended mitigation is not economically feasible, the County would not include that mitigation in the Final UVAP. The County would need to make legal findings that explain why it finds a recommended mitigation not feasible.

Other commentors requested that the EIR assess the fiscal impacts of possible new development on specific businesses, commercial areas, or neighborhoods. CEQA (Section 15132) does not require such economic analyses unless there is evidence that these economic impacts would result in physical blight or other adverse impacts to the physical environment. In that case, CEQA requires analysis of the environmental impacts of the fiscal impact, but the economic changes need not be analyzed in any greater detail than necessary to trace the chain of cause and effect. When warranted, this Draft EIR discusses whether the economic effects of allowed new development would be sufficiently substantial to cause a physical change in the environment.

See additional analysis of these issues in the subsequent discussion of Impact 3.1-G.

3.1 LAND USE, POPULATION, AND HOUSING

A. Setting

1. Current Land Use

The plan area contains a diverse mix of land uses. Much of the valley floor east of the Russian River is in vineyards and orchards; south of the Masonite site, there are orchards and vineyards between Highway 101 and the river. There are also vineyards on lower benchlands on the west side of the valley, especially north of Pinoleville. Upper elevations of the ridges are in undeveloped open areas with some of these areas being used for cattle grazing.

The City of Ukiah is the urban center of the plan area. Residential and non-residential development within the unincorporated area borders the City, especially along the State Street corridor. Further north along the State Street corridor is The Forks community and then Calpella. To the east of Ukiah is the community of Talmage. Scattered through secondary ridge lands east of the river are a number of older residential subdivisions (e.g., Rogina Heights, Deerwood Park, Vichy Springs, etc.). There are also scattered minor and major subdivisions in other areas, such as those along Lake Mendocino Drive.

The plan area includes approximately 38,000 acres of which about 11,000 acres would be potentially developable under the Draft 2007 UVAP. The remainder of the planning area has already been developed, is public land, or is being used for agricultural and grazing uses.

Commercial agriculture remains an important economic factor in the plan area. Mendocino County grapes are processed into world-class wines. In addition to the income that agricultural operators receive from selling grapes and/or making wine, the wine industry attracts tourists interested in wine tasting and/or exploring wine country. There is also a pear industry in the valley, particularly near Ukiah. While agriculture and the processing of resources remain important components of the County economy, in recent years the economy has shifted away from traditional resource-based industries.

The greater Ukiah Valley contains 7,673 acres of commercial farmland. Commercial farmland comprises about 20% of the approximately 38,000 acres in the plan area. Of this total, 54% are planted in red wine grapes, 28% in white wine grapes, 17% in Bartlett pears, and 1% in miscellaneous crops (including other pears, cherries, olives, pistachios, walnuts, and blueberries).

2. Density of Development

Compared to surrounding counties, Mendocino County is not heavily developed. There are about 25 people per square mile in the County as compared to 165 people per square mile in Sonoma and Napa Counties; 45 people per square mile in Lake County; and 32 people per square mile in Humboldt County. The plan area is the most densely developed part of the County and, including the City of Ukiah, contains about 521 people per square mile. In addition to impacts on natural resources and urban/rural land use impacts, a lack of concentrated development makes most people in the County

dependent on automobiles for mobility. This results in more acreage needed for roads, parking lots, etc. to accommodate housing, commercial and public services, and jobs.

3. Regulatory Setting

Mendocino County General Plan

The existing General Plan establishes goals and policies that guide and direct the location and extent of future land uses, population growth, and housing in the County as well as the services and infrastructure required to accommodate them. The existing General Plan includes a Housing Element, adopted by the County and certified by the State Department of Housing and Community Development. This element contains a wide range of housing policies and programs that will contribute to opportunities for all income levels, as well as for people with special needs.

County Zoning Code

The Zoning Code implements the policies of the General Plan; it is the primary land use tool used by the County in reviewing and regulating new development. The code contains criteria for making findings of approval, allowing certain uses, and placing, locating, and controlling the form of new structures.

County Redevelopment Agency

Redevelopment agencies operate under the provisions of the State Community Redevelopment Law (CRL). The CRL allows a designated project area to receive focused public attention and financial investment to reverse deterioration trends, specifically through the allocation of the tax increment dollars in the project area. The public funds can be used to rehabilitate housing stock, revitalize business environments, and create jobs. The plan area includes one redevelopment project that contains three redevelopment areas – Calpella (44 acres), North State Street (550 acres), and South State Street (178 acres) (see Figures 3-1 to 3-3).

Local Agency Formation Commission

According to state law, every county in California is required to have a Local Agency Formation Commission (LAFCo). This independent agency is responsible for reviewing, approving, or disapproving changes in boundaries of all jurisdictions within County boundaries, including annexations, detachments, and new formations. All incorporated cities have a district boundary, as do many other public agencies that provide services such as sewage collection, water, community lighting, fire protection. Each LAFCo is comprised of representatives of the County, cities, special districts, and the public.

LAFCos are intended to discourage urban sprawl, preserve open space and agricultural land, and provide government services efficiently. The LAFCo is responsible for defining a Sphere of Influence for each local agency that describes the area within which properties are eligible to be annexed to a city or district.

The Mendocino County LAFCo is required to conduct comprehensive, regional studies of municipal services (Municipal Service Reviews, or MSRs) in conjunction with reviews of city and special district spheres of influence. These spheres of influence are to be

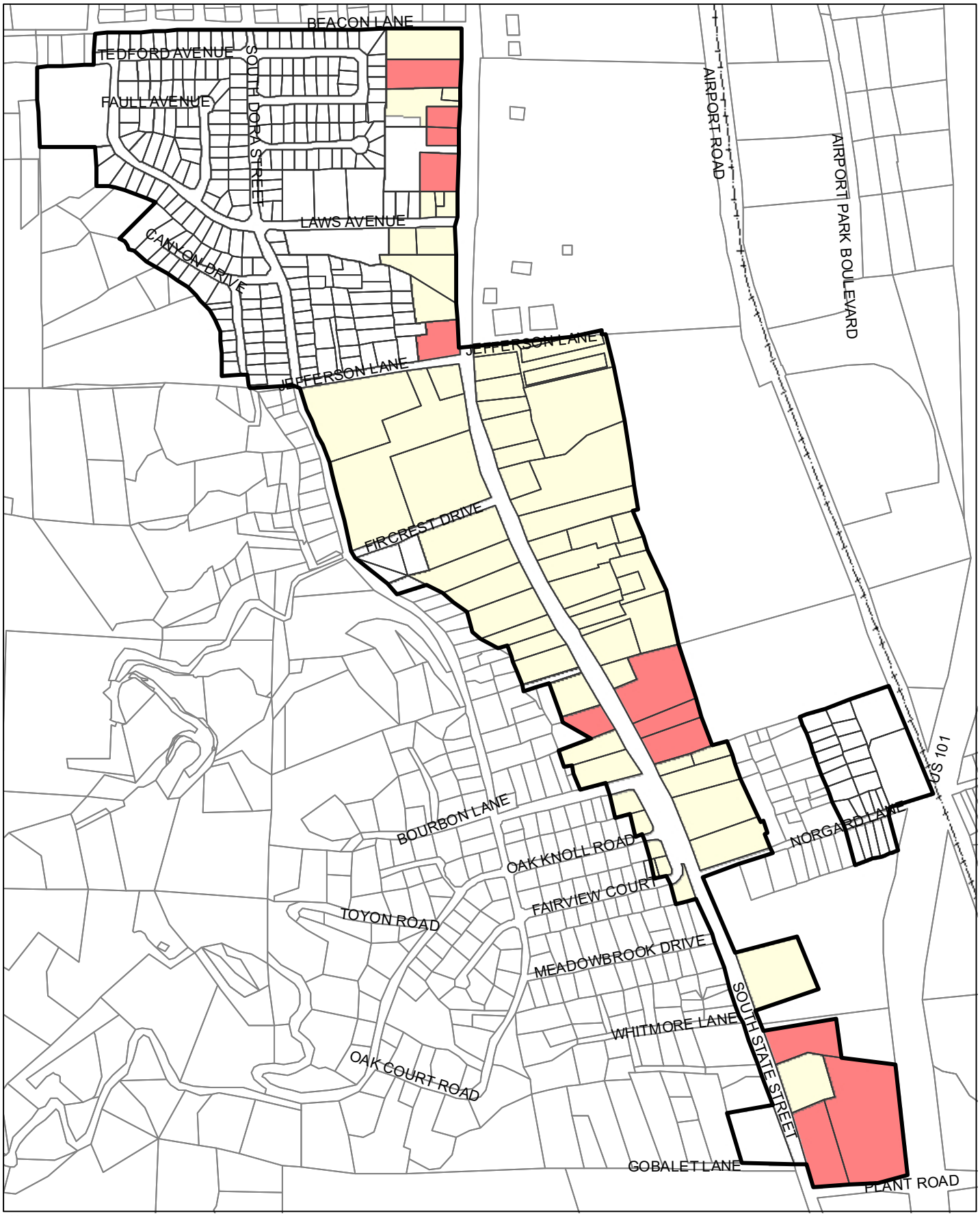


Figure 3-1 SOUTH UKIAH REDEVELOPMENT AREA

Source: This map was prepared by the Department of Planning and Building Services, April 2007.
The zoning information portrayed on this map is for display purposes only.
Contact the Mendocino County Department of Planning and Building Services for the exact zoning on a specific parcel.

Limited Commercial

General Commercial

510 255 0 510 Feet

N

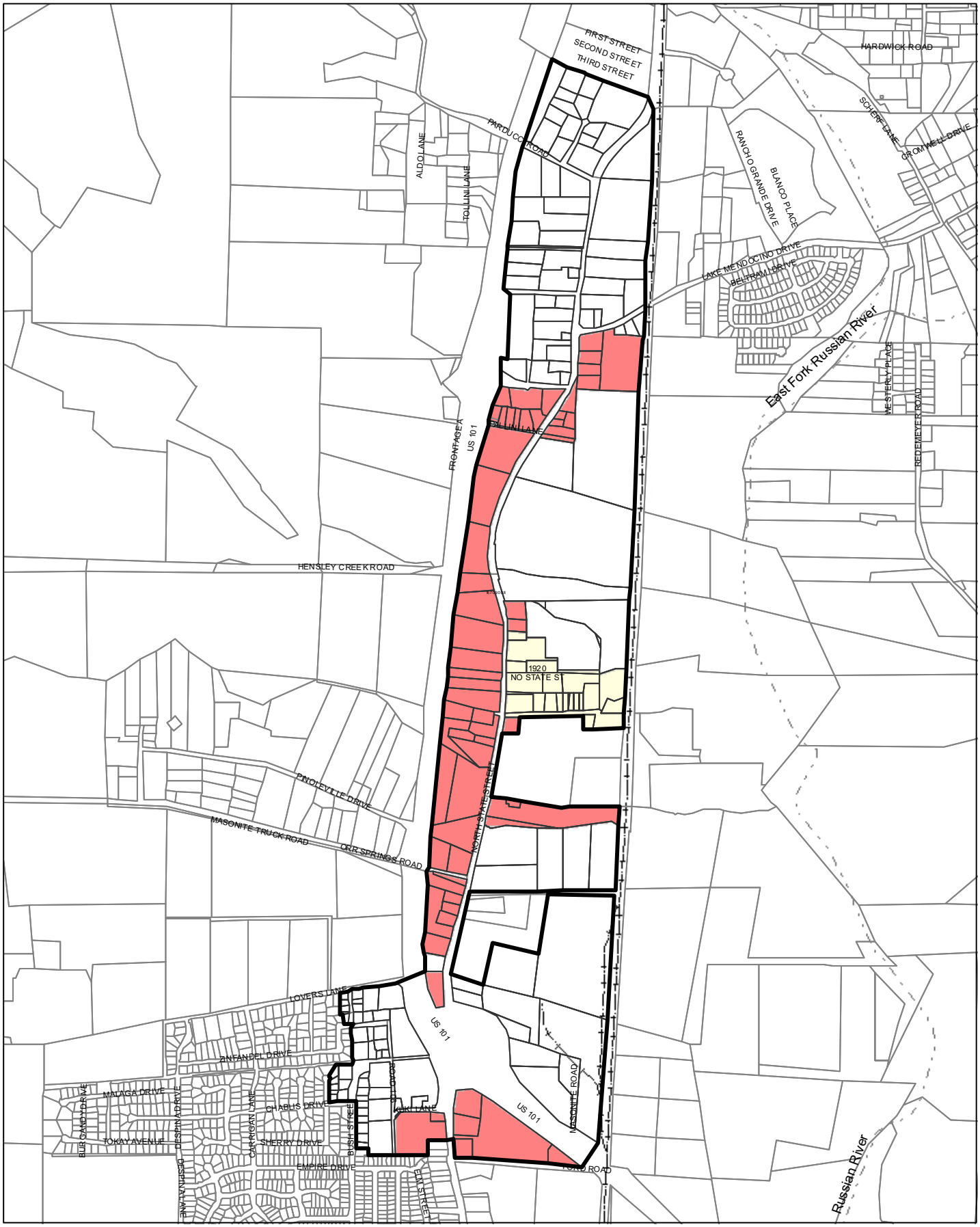


Figure 3-2 NORTH UKIAH REDEVELOPMENT AREA

Source: This map was prepared by the Department of Planning and Building Services, April 2007.
The zoning information portrayed on this map is for display purposes only.
Contact the Mendocino County Department of Planning and Building Services for the exact zoning on a specific parcel.

Limited Commercial

General Commercial

450 225 0 450 Feet

N

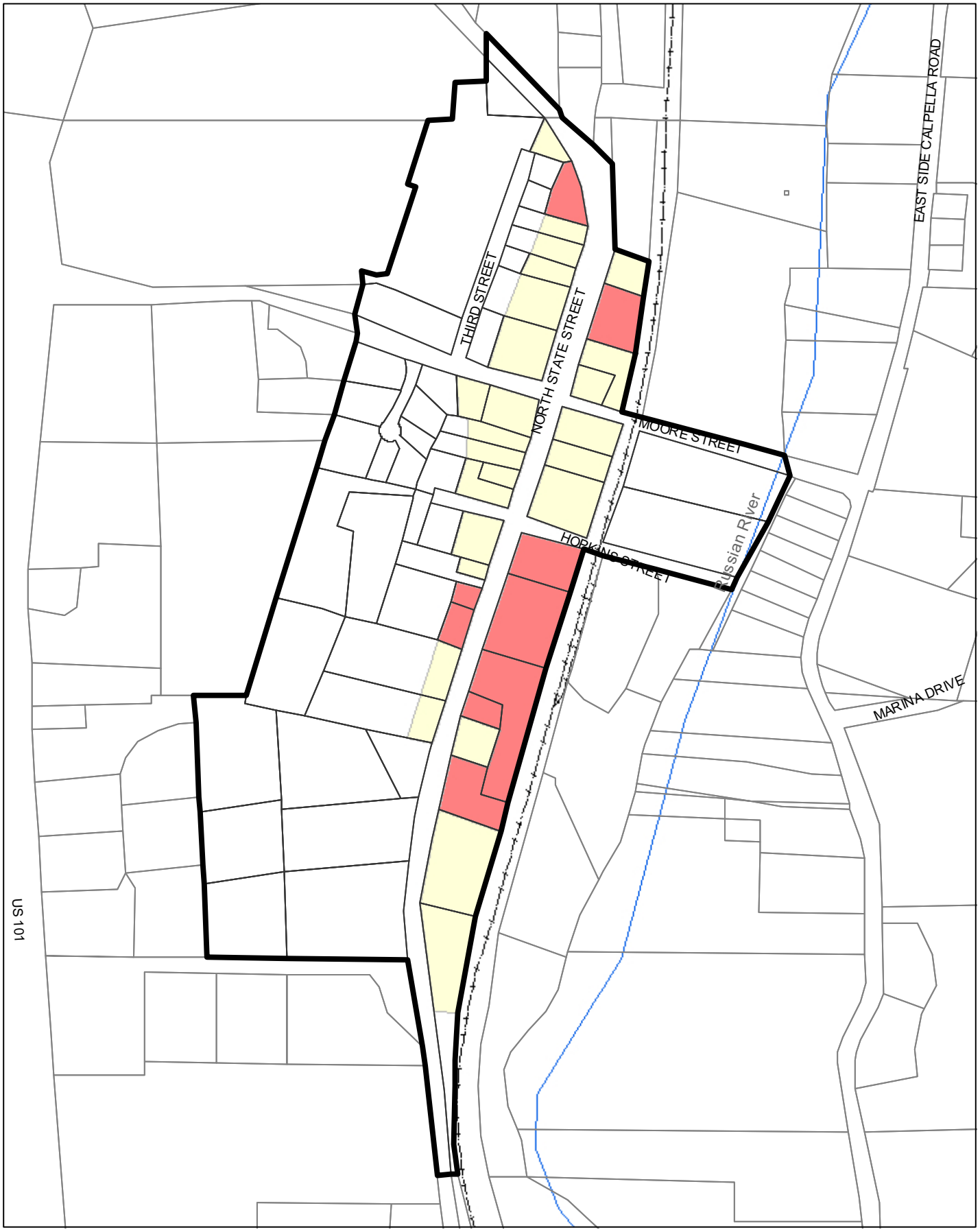


Figure 3-3 CALPELLA REDEVELOPMENT AREA

Source: This map was prepared by the Department of Planning and Building Services, April 2007.
The zoning information portrayed on this map is for display purposes only.
Contact the Mendocino County Department of Planning and Building Services for the exact zoning on a specific parcel.

Limited Commercial
General Commercial

updated every five years, and the MSRs must be conducted prior to or in conjunction with sphere updates. The Mendocino County LAFCo has requested the required information from the City and the special districts in the plan area that is needed so the required MSRs and sphere updates can be completed per State law.

City of Ukiah General Plan

The City of Ukiah's General Plan (*Ukiah Valley General Plan and Growth Management Program*) controls land use within the incorporated City limits. If unincorporated areas within its sphere of influence are annexed to the City, then the City's General Plan would then also become the guiding document for future land use in the annexed areas. As noted previously, the UVAP plan area is coterminous with the Planning Area for the City of Ukiah as shown in its General Plan. The City's plan included land use classifications and policies that would apply to portions of the Planning Area if they were annexed to the City.

B. Potential Impacts and Mitigations

1. Criteria Used to Determine Impact Significance

Buildout under the Draft 2007 UVAP would have a significant impact if it would:

- Physically divide an established community.
- Convert prime farmland ("Prime Farmland," "Unique Farmland," or "Farmland of Statewide Importance (Farmland),") as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- Conflict with existing zoning for agricultural use or a Williamson Act contract.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural uses.
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).
- Result in the loss of forest land or conversion of forest land to non-forest use.
- Displace a substantial amount of existing housing, necessitating the construction of replacement housing elsewhere, or displace a substantial number of people, necessitating the construction of replacement housing elsewhere.
- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);

- Conflict with any applicable habitat conservation plan or natural community conservation plan.

- Conflict with any applicable land use plan, policy, or regulation of any agency with jurisdiction over the project.

2. Impacts

There is no adopted habitat conservation plan or natural community conservation plan for any part of the plan area, so there would be no impact per the seventh criterion listed above.

Division of Communities

Impact 3.1-A Land uses and development consistent with the Draft 2007 UVAP could physically divide existing communities within the plan area.

By and large, the Draft 2007 UVAP concentrates development potential along the State Street corridor between Highway 253 and Lake Mendocino Drive, the Lovers Lane area, and the Brush Street Triangle area, with scattered development in Calpella and outlying areas. This area is already developed with various residential and non-residential uses. Future development would result in infill of developed areas or northern and southern extensions of greater Ukiah. The development allowed under the Draft 2007 UVAP would not divide an existing community. Policies and implementation measures included in the Draft 2007 UVAP would not result in any division of an existing community in the planning area. The impact is ***less than significant***, and no mitigation is required.

Farmland and Prime Agricultural Soils

Impact 3.1-B Land uses and development consistent with the Draft 2007 UVAP would convert farmland and prime agricultural soils to non-agricultural uses.

The Draft 2007 UVAP would reclassify approximately 430 acres from the Agriculture land use classification to non-agricultural uses. This loss of agriculturally-classified lands would be offset by reclassifying about 133 acres from range land or residential uses to Agriculture. Buildout under the Draft 2007 UVAP would result in a net reduction of about 497 acres that are currently under cultivation and conversion of 694 acres of important farmlands (lands designated by the State as Prime Agricultural Land, Agricultural Land of Statewide Significance, or Unique farmland) to other uses.[4]

[4] The State Department of Conservation has completed a Draft Important Farmlands Map for the plan area (December 2006). This map identifies lands containing Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland). This map appears to identify these prime Farmlands where there are existing vineyards or orchards. Areas that are fallow or vegetated with grasses are listed as Rangeland despite the fact that a number of these properties recently or historically were planted with grapes, pears, or other crops and are listed as prime soils in the County Soil Survey (i.e., capability class I or II, including Feliz Russian, Pinnobie, Pinole, Cole, Xerofluents soil series).

Table 3.1-1 shows the amount of area currently classified as Agriculture that would be classified for an alternate use; it also shows the amount of land that is currently used to grow grapes that could be developed with alternate uses. The table also shows how much Farmland and County-defined prime soils could be lost to development. These data are shown for the Draft 2007 UVAP as well as the four alternatives assessed in this EIR. The areas being reclassified are shown on Table 1.6-5 and Figure 1-4.

New development allowed under the Draft 2007 UVAP could result in the net loss of about 500 acres of lands currently used for commercial agriculture ("cultivated acreage") as well as additional acreage of prime range lands, as well as prime agricultural soils that currently are undeveloped but are already designated for non-agricultural uses (mainly in the North State, Masonite, South Ukiah Valley, and the Brush Street Triangle areas). This 500-acre loss of agricultural lands would be about 8% of the commercially famed lands within the plan area. There would also be a loss of at least 280 acres of range lands.

The Draft 2007 UVAP would focus development pressure on those areas where past County land use decisions have already allowed substantial residential and/or non-residential development. The main exception would be the Lovers Lane discussion area. Though this area is bordered by suburban and urban development on its north and south sides, commercial vineyards are located throughout the Lovers Lane discussion area.

The proximity of residential uses to agricultural uses does pose some operational restraints on the agricultural operators. It is possible for commercial agriculture to operate near, and adjacent to, residential development and even schools, though the County Agricultural Commissioner strictly limits and in some cases prohibits spraying of restricted materials on these sites. Over recent years, many of the restricted use pesticides have now been replaced by safer products. While vineyard operators continue to farm these vineyards, their ability to farm could be significantly reduced if they were confronted with a major plant disease that required the use of insecticides or other chemicals.[5] Most vineyard operators have switched to using wettable or flowable sulfur rather than sulfur dust, especially when vineyards are adjacent to or near residences. There are many examples of vineyards and orchards operating adjacent to urban uses (e.g., Calpella, Talmage, and Lovers Lane areas). The proximity of urban uses may make it more difficult to farm, but it does not eliminate or significantly reduce the possibility of agricultural use of these soils and land. However, it is possible that proximity to residential uses may affect the owners' long-term commitment to agricultural use and investment in the property.

The County Agricultural Commissioner has stated that he prefers not to see any agricultural lands or soils converted to non-agricultural use. These soils are very rare in the County and once developed will never be available again (at least in the intermediate-term time frame) for agricultural use. However, he notes that the Brush Street Triangle, the undeveloped land adjacent to the Westfork Subdivision south of Lake Mendocino Drive, and the South Ukiah area have long been slated and classified for alternate uses. In addition, he notes that the three main owners of vineyards in the South Ukiah area had past opportunities to have the land rezoned to Agriculture and opted to retain the SR classification. While he would prefer that these areas also remain

[5] Tony Linegar, personal communication, 9/29/10.

available for commercial agriculture, he recognizes that past land use decisions have targeted these areas as logical extensions of Ukiah.[6]

Objections were made to the preliminary classification as “prime farmland” of certain lands in the Lovers Lane area by representatives of one of the landowners in that who own about 150 acres). Representatives stated in a response to the NOP that the preliminary State mapping of prime farmlands shown on Figure 3-4 is in error because the lands do not meet all of the State's criteria for defining prime farmland, namely the criterion regarding irrigation. The State's criterion says that Prime Farmland and Farmland of Statewide Importance must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping. However, Unique Farmland (which is one of the three categories that comprise "Farmland" in the significance criteria) does not include this criterion of being used for irrigated crops. It is defined as:

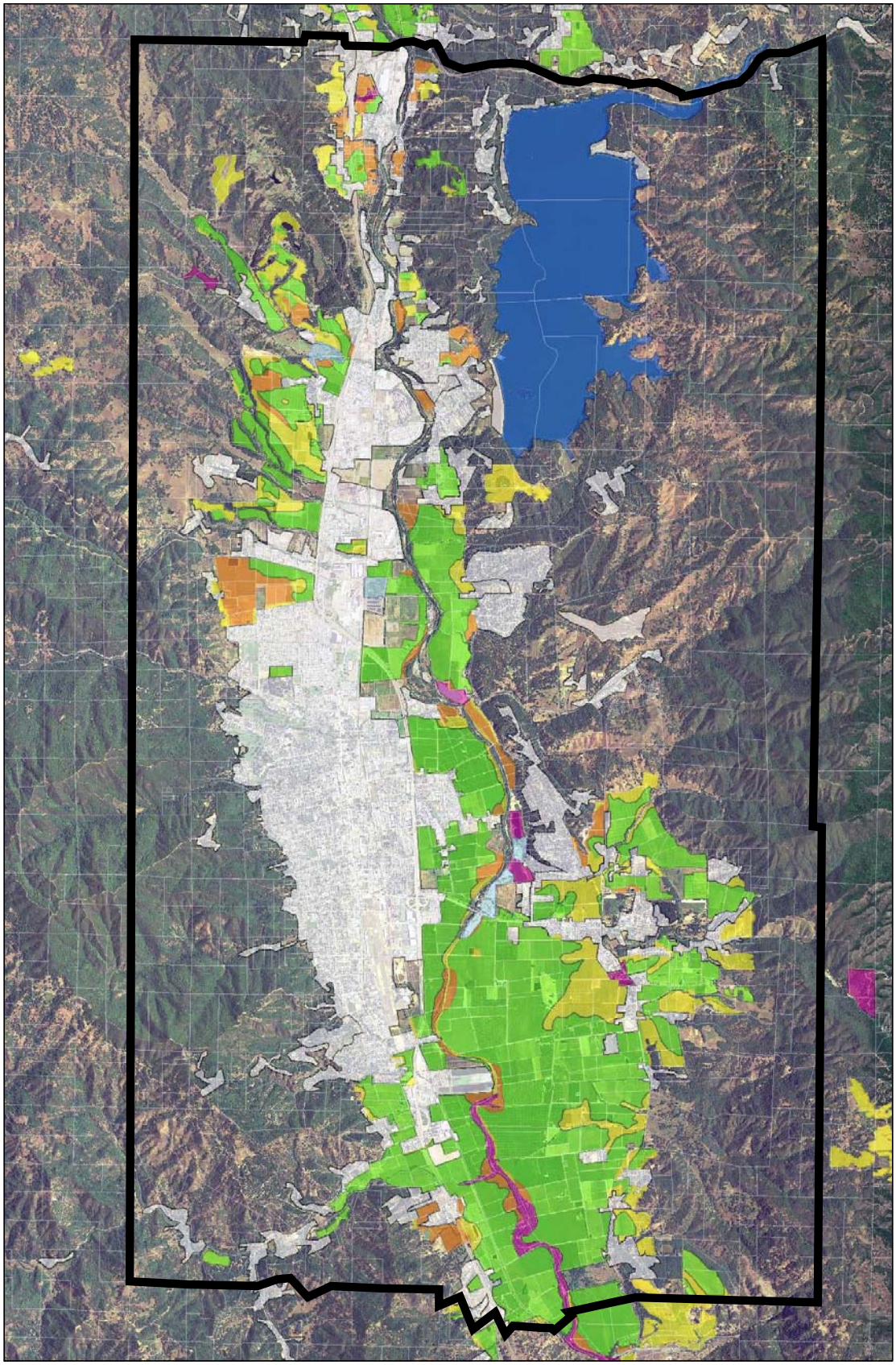
Unique Farmland is land which does not meet the criteria for Prime Farmland or Farmland of Statewide Importance, that has been used for the production of specific high economic value crops at some time during the two update cycles prior to the mapping date. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality and/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.

The vineyards in question in the Lovers Lane area have been irrigated in the past five years. The representative of the owner stated that the current owner does not have rights to water needed for irrigation. To determine the availability of water for this particular property is outside the scope of this EIR and would need to be addressed at the time an application is made to develop that property. What is known is that the soils on this site:

- are soils that meet the State's criteria for Unique Farmland;
- most are prime agricultural soils as defined by the County's General Plan (and would therefore be considered Farmland of Local Importance per the State's definition);
- have been irrigated in the past five years; and
- currently support vineyards.

The net loss of up to 500 acres of commercial agricultural lands and prime agricultural soils and over 280 acres of prime range lands would be a potentially significant impact. The loss of additional prime agricultural soils not included in those properties being reclassified would also be part of this potentially significant impact.

[6] Tony Linegar, personal communication, 9/29/10.



UVAP boundary
Parcel Boundaries
Developed Land
Vacant or Disturbed
Grazing Land (unshaded)
Prime Ag
Statewide Importance
Unique Farmland
Native Vegetation
Open Water

0 0.1 0.2 0.4 0.6 0.8 1 Miles

Figure 3-4 Farmland Designation

Source: Mendocino County Planning & Building Services

Table 3.1-1
Farmland Acreage That Would Be Converted to Other Use

	Agriculturally Designated Land (AG)	Under Williamson Act Protection	Cultivated Area	"Farmland"	Prime Farmland	Farmland of Statewide Importance	Unique Farmland
DRAFT 2007 UVAP							
Existing Area	9,068.2	2,686.1	6,216.2	7,241.0	5,215.5	630.3	1,395.2
Potential Subtractions	-430.0	-150.7	-662.5	-694.2	-363.4	-210.2	-120.6
Potential Additions	+133.5	0.0	+165.4	+37.9	+28.0	+5.4	+4.5
Net Area Size	**8,771.7**	**2,535.4**	**5,719.1**	**6,584.7**	**4,880.1**	**425.5**	**1,279.1**
LAND USE ALTERNATIVE A							
Existing Area	9,068.2	2,686.1	6,216.2	7,241.0	5,215.5	630.3	1,395.2
Potential Subtractions	-178.9	-17.6	-489.3	-523.3	-317.0	-97.1	-109.2
Potential Additions	+133.5	0.0	+194.8	+37.9	+28.0	+5.4	+4.5
Net Area Size	**9,022.8**	**2,668.5**	**5,921.7**	**6,755.6**	**4,926.5**	**538.6**	**1,290.5**
LAND USE ALTERNATIVE B							
Existing Area	9,068.2	2,686.1	6,216.2	7,241.0	5,215.5	630.3	1,395.2
Potential Subtractions	-65.6	-17.6	-534.9	-574.4	-368.1	-97.1	-109.2
Potential Additions	+59.1	0.0	+194.8	+37.9	+28.0	+5.4	+4.5
Net Area Size	**9,061.7**	**2,668.5**	**5,876.1**	**6,704.5**	**4,875.4**	**536.6**	**1,290.5**
EXISTING GENERAL PLAN ALTERNATIVE and ALTERNATIVE C							
Existing Area	9,068.2	2,686.1	6,216.2	7,241.0	5,215.5	630.3	1,395.2
Potential Subtractions	0.0	-17.6	-520.8	-558.3	-367.9	-83.3	-107.1
Potential Additions	0.0	0.0	+194.8	+37.9	+28.0	+5.4	+4.5
Net Area Size	**9,068.2**	**2,668.5**	**5,890.2**	**6,702.6**	**4,875.6**	**552.4**	**1,292.6**

Notes:
"Farmland" = The total of State-designated Prime Farmland, Unique Farmland, and Farmland of Statewide Importance as shown on Figure 3-4
Potential Subtractions = reclassification or conversion by new development
Potential Additions = Reclassification of land with residential classifications to the Agricultural classification. This includes one 60-acre parcel that is currently classified as RL.
Source: Mendocino County Department of Planning and Building Services, 2006.

As noted above, the Draft 2007 UVAP Land Use Map designates certain areas for growth while designating as Agriculture most of the undeveloped valley bottom east of the Russian River, the area east of Highway 101 south of the Masonite area, and the benchlands west of Highway 101 north of the Pinoleville Rancheria. In addition, the Open Space and Conservation Section contains a number of policies and measures aimed at protecting agricultural resources. ***Policy OC3.3*** encourages the conservation of agricultural lands by encouraging Williamson Act contracts, land trusts, and transfer of development rights. ***Policy OC3.1*** establishes criteria that must all be met before properties with an Agriculture classification are reclassified to another use. These criteria include that:

- The project shall not result in a need for premature expansion of infrastructure in conflict with other Area Plan policies.

- The project shall not have a significant adverse effect on agricultural uses in the area.

- The project site is substantially unusable for agricultural purposes due to encroaching adjacent nonagricultural uses.

- The proposal must achieve the long-range goals of the General Plan and Area Plan for the area as it exists prior to the proposal.

These are essentially the same criteria incorporated into *General Plan Policy RM-106*. This policy also includes collaboration with the school district to guard against impacts on agricultural lands from future siting of new schools. *General Plan Policy OC4.4* regulates future land uses to ensure compatibility with existing agricultural uses. This policy prohibits new development that would have unmitigated adverse impacts on existing agricultural uses. This policy includes a prohibition of developing new commercial or industrial uses on agricultural lands unless the uses are directly related to agricultural uses or are conducted as secondary to an agricultural operation. The policy also requires buffers between new residential development and existing agricultural uses and notification of new buyers of the County's Agricultural Nuisances and Consumer Disclosure.

To conclude, the policies of the Draft 2007 UVAP and existing General Plan policies provide strong protection for agricultural uses and lands in the future. However, the plan itself would result in the net conversion of about 300 acres of land classified for agricultural use to other uses, convert about 500 acres of commercial agriculture to other uses, and convert about 700 acres of land that the State designates as important Farmland to other uses. These are ***potentially significant impacts.***

Mitigation Measures

The County could reduce this impact by reclassifying some parcels back to AG. Any reclassifications would be considered more a project alternative rather than a mitigation measure, since the County Board of Supervisors was aware that these areas supported prime agricultural soils and commercial operations at the time the Draft 2007 UVAP was selected as the preferred plan alternative. See the discussion of project alternatives for

alternatives that maintain agricultural land use for all or most of the Lovers Lane discussion area.

The impact could be decreased by prioritizing new development on sites that do not contain prime agricultural soils. ***Policy LU4.1*** states that the County will develop a Growth Management Plan that will identify priority protection areas where development should be discouraged or prohibited. It will identify an annual growth rate for new housing units and commercial services. In addition, it will identify phasing areas where growth can be accommodated and prioritized in sequence. Therefore, the following mitigation is recommended:

3.1-B.1 The County shall focus future development on lands that do not contain valuable or sensitive resources. Development of sites that do not meet the following criteria will be discouraged. The following language shall be added to the end of Implementation Measure LU4.1a:

Priority shall be given to projects that:

a. Do not displace existing commercial agricultural activities;

b. Do not develop sites containing prime agricultural soils;

c. Convert less than one acre of oak woodland;

d. Maximize green building techniques, energy conservation, and alternative energy systems;

e. Maximize access to and provision of alternate transportation modes;

f. Do not significantly adversely affect views from major roads or plan area gateways;

g. Are not located in “high” or “very high” fire hazard areas; and/or

h. Are infill projects near public transit.

Impact Significance After Mitigation

While the Draft 2007 UVAP policies and measures provide good protection for remaining lands classified Agriculture and Range Land, the plan would result in the loss of these irreplaceable resources. The recommended mitigation measure would delay the time for conversion (and in time the agricultural use may prove sufficiently valuable that conversion would not be sought). However, it is entirely possible that potential developers of properties with prime agricultural soils might be the only applicants for the growth management plan's annual allocation for new permits. It is also possible that by 2030, all proposed building sites might be developed. The only mitigation measure that would reduce this impact to a less than significant level is to maintain the Agriculture classification for all parcels currently so classified as well as reclassifying other undeveloped lands containing prime agricultural soils as Agriculture. It is considered

unlikely that all these reclassifications would be approved. Therefore, the impact is considered to be ***significant and unavoidable.***

Agricultural Use, Williamson Act Contracts, and Farmland Conversion

Impact 3.1-C **Land uses and development consistent with the Draft 2007 UVAP could result in conflicts with agricultural land uses or Williamson Act contracts resulting in cessation of farming on affected properties.**

Properties classified for Agriculture and Range Land that are outside the target growth areas should not experience significant growth. However, some new development will occur as individuals build houses on existing legal parcels. New residential development in agricultural areas is typically problematic in that new residents may not be accustomed to the noise, dust, and other nuisances that frequently occur in areas being actively farmed. These new residents may then file a complaint with the County Agriculture Commissioner who may then require additional controls on agricultural practices. The County has addressed this problem by adopting an "Agricultural Nuisances and Consumer Disclosure" ordinance which states that agricultural uses have precedence over new residential uses. The ordinance requires the right-to-farm acknowledgment in ***Policy OC3.4*** to be recorded with the County Recorder. The policy also prohibits new development that would have unmitigated adverse impacts on existing agricultural uses; prohibits developing new commercial or industrial uses on agricultural lands unless the uses are directly related to agricultural uses or are conducted as secondary to an agricultural operation; and requires buffers between new residential development and existing agricultural uses. The policy establishes "project compatibility requirements" that require new development to be compatible with Agricultural and Range Land uses. These requirements include limiting new residential subdivisions to a maximum density of one unit per 5 acres adjacent to Agricultural lands and one unit per 10 acres adjacent to Range Lands. Higher densities can be considered provided the project includes adequate buffers and mitigations to offset potential land use conflicts.

The County General Plan also contains policies aimed at protecting Agricultural land uses by minimizing conflicts with those uses (*Policy RM-107*) Discretionary projects shall not undermine the integrity and economic viability of agricultural operations by causing or contributing to piecemeal land use conversion, land fragmentation, urban encroachment, the introduction or concentration of incompatible uses on lands adjoining or within agricultural areas, or the extension of growth-inducing urban services such as public water or sewers (*Policy RM-108*). *Policy RM-109* requires discretionary projects and parcels created by land divisions to be designed and sized to be compatible with contiguous properties classified as Agricultural Lands or Range Lands, including buffers. County policy also requires right-to-farm notification.

While right-to-farm ordinances may reduce successful agricultural nuisance claims, the fact remains that commercial farming produces impacts such as noise, dust and odors and often uses of pesticides and other chemicals that can illegally "drift" off the target property. Right-to-farm ordinances cannot override State laws that prohibit such drift.

As such, the County Agricultural Commissioner may require additional spray restrictions that can adversely affect an agricultural operator's ability to farm.

The County Agricultural Commissioner reports that in fiscal year 2009-2010, the Department of Agriculture received 6 complaints from the public regarding illegal pesticide activities or drift. He states that this number of complaints could be considered average for drier years where there was low spray activity (due to low rainfall and low pest conditions). Years of high rainfall in the spring months and early summer months generally lead to fungus pest conditions necessitating the application of fungicides, and this can lead to higher numbers of complaints.

There have also been years in which the Department received dozens (over 50-60) of spray complaints for applications of pesticides to crops not considered to be agricultural, and other applications (although not agricultural, they fall under the Department's purview). Non-typical applications that legally fall under the definition of agricultural use include timber and forestry applications. Other applications include treatment of utility and road rights-of-ways, and parks and landscape maintenance. Many of the spray complaints regarding forestry involve housing in close proximity to timber operations.[7]

Right-to-farm ordinances cannot totally mitigate other impacts such as noise, dust and odors that are an inherent result of even well-operated agricultural activities, and efforts to reach compromises can also adversely affect agricultural operator's ability to farm. In addition, the presence of residents living adjacent to or near vineyards and orchards can result in trespass, theft, or vandalism of equipment, all of which make it difficult for agricultural operators to stay in business. Dog predation can also affect animal husbandry operations.

While all these factors negatively affect agricultural operators, as was explained in the previous impact, they do not prohibit farming nor cause a significant reduction in farming near developed areas in the plan area.

The Draft 2007 UVAP generally limits new residential development on prime agricultural lands east of the Russian River, east of Highway 101 south of the Masonite area, and on the west side of Highway 101 north of the Pinoleville Rancheria. For the next 20+ years, assuming the County does not approve further amendments to the General Plan, these three areas will remain the agricultural centers of the plan area. It is not expected that growth allowed under the Draft 2007 UVAP would further erode the ability of farmers to farm these three areas. In areas already adjacent to residential development, operators have adjusted their operations to coexist with these residential neighbors.

Except for the Lovers Lane area, plan area properties that have Williamson Act contracts (7,674 acres) are all located on lands to remain classified as Agriculture or Range Land.[8] In classifying the Lovers Lane area for mixed use development, the County has specifically recognized that this area would be used for non-agricultural uses. Because of this, the loss of Williamson Act contracts for this area would not be considered a

[7] Tony Linegar, personal communication, 9/29/10.
[8] Based on a review of a map of the plan area showing Williamson Act contract properties, provided by the County Department of Planning and Building Services.

significant impact so long as the proper withdrawal process is followed. Loss of Williamson Act contracts in this area would not be expected to affect Williamson Act contracts in other portions of the plan area. Future development would not have direct effects on these properties so long as the legal requirements of the contracts are fulfilled.

While Draft 2007 UVAP and General Plan policies would generally reduce the impact to remaining agricultural operations to a less than significant level, one of the implementation measures under ***Policy OC3.4d*** that addresses buffers should be revised. Otherwise, there would be a potentially significant impact on agricultural operations

Mitigation Measures

Implementation Measure OC3.4d requires a 200-foot buffer between existing agricultural operations and new development (for certain projects that require discretionary approval). However, discussions with the County Agricultural Commissioner indicate that a 200-foot buffer is appropriate for vineyards but more than what is needed for pasture or range lands (a 100-foot buffer is adequate) and less than what is needed for pear and apple orchards (a 400-foot buffer is needed due to the increased use of restricted materials and non-restricted materials on these fruits).[9]

3.1-C.1 The County will minimize the impacts of new development on agricultural operators. To do so, the second bullet item in Implementation Measure OC3.4d shall be revised as follows:

- Building envelopes, clustered development, and commercial, industrial, civic, and sensitive uses shall be designed with buffers or setbacks from lands classified Agricultural or Range Lands. Buffers shall generally be defined as a physical separation of ~~200~~ 100 feet from pasture or range lands, 400 feet from pear and apple orchards, and 200 feet from vineyards or other crops with the potential for a reduced separation when a topographic feature, substantial tree-stand, landscaped berm, watercourse or similar existing or constructed feature is provided and maintained. ~~The 200-foot setback does not apply to land classified Rural Community that is zoned Rangeland or Agricultural;~~

Impact Significance After Mitigation

The policies and measures of the Draft 2007 UVAP, as amended, provide a strong framework for preserving agriculture in areas classified for Agriculture or Rangeland.

[9] Restricted materials can only be applied after approval of a permit from the Agricultural Commissioner (AC). The permit allows the AC to place conditions on where the materials can be applied, when, under what temperature and weather conditions, and whether as a dust or liquid, aerial or nonaerial, etc. Many chemicals are non-restricted and can be applied by anyone with a Operator Identification Number. The AC cannot issue conditions on the application of these materials. However, if the operator allows the non-restricted material to drift off the site, then the operator can be fined and punished for this infraction. Linegar, *op.cit.*

The impact would be reduced to a ***less than significant*** level by those policies and measures.

Impacts to Forest Land

Impact 3.1-D Land uses and development consistent with the Draft 2007 UVAP could result in conversion of forest land to other uses.

None of the plan area is designated as Forest Land nor zoned for Timber Production Zone. However, there are areas within the plan area that contain woodland stands that the State would define as forest land. These areas are in the hills to the west and east of the valley. Development in those areas would be large lot residential development.

Timber resources are not addressed in the Draft 2007 UVAP. However, the new County General Plan contains numerous policies aimed at protecting these resources and preventing conversion of prime timberlands. For example, *Policy R122* prohibits rezoning and development of prime timberland unless it is determined to be in the public interest, managing the land for timber production is no longer sustainable, and a Timberland Conversion Permit is approved by the State.

It is not expected that new development would result in substantial timberland conversion. In addition, existing general Plan policies provide protection for these resources. Given these policies, the impact would be ***less than significant.***

Displacement of Housing and People

Impact 3.1-E Land uses and development consistent with the Draft 2007 UVAP could result in projects that displace housing and people.

It is possible that reuse, redevelopment or conversion to other uses of certain properties in the North State Street, the South State Street, Calpella, and the South Ukiah areas will remove or rehabilitate older buildings currently used for housing, and replace that housing with either new or rehabilitated housing or new non-residential development. Over the long term, population increase and migration combined with changes in land use classifications and opportunities for development will result in considerably more new housing than would be lost by such redevelopment.

It is expected that many to most of the housing units that would be removed or rehabilitated are in a relatively dilapidated condition and were identified as evidence of "blight" in the *Mendocino County Redevelopment Project*. Thus, over the long term, redevelopment of such buildings would benefit the community as a whole. However, over the short term, demolition of such units could remove housing, and demolition or rehabilitation could especially reduce housing that can be afforded by low and very low income households. For example, the *Report on the Redevelopment Plan*[10] identified 14

[10] *Report on the Redevelopment Plan, Volume 1*, John B. Dykstra & Associates, 2003.

old motels/tourist cabins on the State Street corridor (from the time when State Street was Highway 101) that have been converted to long-term occupancy. Most of these buildings have deteriorated and suffer from overcrowding. The Redevelopment Plan also found that many of the residential buildings in the Redevelopment Area (the area includes most urbanized part of South State Street corridor, North State Complex from City Limits to just north of Parducci Road, and Calpella) are 50 to 100 years old, and many of these homes are not in good condition. The Plan rated all buildings (residential and non-residential) in the Redevelopment Area on a scale of 1 to 5 with Ranking 1 applied to buildings that have very extensive physical/structural deficiencies and Ranking 2 having extensive physical/structural deficiencies. Of the total 813 buildings in the Redevelopment Area, 132 (16%) are Ranking 1 and 367 (45%) are Ranking 2. The Redevelopment Plan recommends redevelopment of these buildings and areas. The potential loss of housing units affordable to low and very low income households and the consequent displacement of people would be a potentially significant impact.

The Draft 2007 UVAP does not contain a new Housing Section and does not directly address housing issues. The County's existing Housing Element applies to housing issues. By encouraging mixed land uses, the Draft 2007 UVAP indirectly would result in additional multi-family housing units, and such units are more affordable than single-family residential development.

The County's Housing Element (amended and adopted in 2010) contains numerous policies to address housing for low income households, including:

Policy 1.2: Encourage the development of affordable housing and supporting infrastructure and services by local agencies (including the Redevelopment Agency), non-profit, for-profit housing developers, and Indian housing authorities through financial assistance, local cooperation agreements, partnerships, and regulatory incentives.

Policy 3.1: Encourage the development of an adequate supply of housing and range of housing densities and types to meet the diverse needs of County residents.

Policy 3.4: Encourage the development of an adequate supply of housing and range of housing densities and types to meet the diverse needs of County residents.

Policy 3.5: Encourage the development of an adequate supply of housing and range of housing densities and types to meet the diverse needs of County residents.

Policy 6.1: Encourage the development of an adequate supply of housing and range of housing densities and types to meet the diverse needs of County residents.

Policy 6.2: Encourage the development of an adequate supply of housing and range of housing densities and types to meet the diverse needs of County residents.

The Housing Element includes a number of Actions to implement these policies. It is expected that the County will require mitigation to offset any loss of housing, especially housing for low and very low income households as part of approving projects that would demolish or redevelop existing residences. The County has rezoned about 50 acres within the county to R-3 (Multi-Family Residential) where multi-family development would be "by right" (without requiring County discretionary permits) and is proposing additional acreage for multi-family development in the Draft 2007 UVAP. In March 2009, the County adopted an Inclusionary Housing ordinance. The ordinance applies to new subdivisions and includes requirements for housing that is affordable for lower income households and reflects the real costs of housing development.

At a program level, the existing Housing Element policies and actions address this impact and reduce it to a ***less than significant*** level. It is important that the County review development applications to implement these policies in order to maintain affordable housing in the plan area. While many of these housing units may be dilapidated and in need of redevelopment, it is important to remember that these often less than desirable units provide a critical housing need in areas like the plan area where even new "affordable" units are well beyond the resources of many very low and low income households.

Growth and Concentration of Population

Impact 3.1-F **Implementation of the Draft 2007 UVAP would induce growth of population in the plan area by accommodating new residences and businesses.**

The *Growth Prospects* report prepared for the Draft 2007 UVAP projected that the population of the unincorporated plan area would grow from 15,262 people in 2005 to 19,463 people in 2020.[11] However, this projection was based on projections made by the Mendocino Council of Governments for use in the County's Housing Element 2010 update. MCOG's projections were based on earlier projections made by the State Department of Finance where the State projected a 2020 population for Mendocino County of 118,800 people. Subsequent to the preparation of the Housing Element, the State revised its projections for the County to reflect the slower than expected growth that occurred between 1990 and 2003. The State projects a County population of 102,017 people by 2020, 111,151 people by 2030, 121,780 people by 2040, and 134,358 people by 2050.

Therefore, the population projection for the plan area could be high. Population projections are always questionable since they tend to be backward looking (i.e., they look at past growth rates and often tend to project a similar growth rate into the future,

[11] *Ukiah Valley Growth Prospects*, Economic & Planning Systems, 2007.

witness how the State reduced its earlier projection for 2020 from 118,800 to 102,017 people).

Regardless of what the projected population would be, revisions to land use classifications incorporated into the Draft 2007 UVAP would provide potential for development of 5,430 new dwelling units, which would add about 13,575 people to the area population (see Figure 1-4 and Table 1.6-5 that shows where the reclassifications would occur). It could take several decades for such buildout to occur, and full buildout is unlikely as some landowners will not seek subdivision or maximum development of their properties. However, as previously stated, for purposes of the EIR analysis, it will be assumed that this maximum buildout will occur and that it will occur by 2030.

Buildout of the plan area under the land use classifications and policies of the existing General Plan (EGP) would result in 1,726 new dwelling units and 4,315 new people. The Draft 2007 UVAP substantially increases the amount of population growth possible in the plan area.

Population growth consistent with that projected for the Draft 2007 UVAP would result in secondary impacts related to public services and utilities. These impacts are described in ***Section 3.10 (Public Service)*** of this EIR.

To summarize, the Draft 2007 UVAP would accommodate, and thereby induce, a substantial increase in the population of the plan area. ***Policy LU4.1*** states that the County will develop a Growth Management Plan that will identify priority protection areas where development should be discouraged or prohibited. It will identify an annual growth rate for new housing units and commercial services. In addition, it will identify phasing areas where growth can be accommodated and prioritized in sequence. This growth is a ***potentially significant impact.***

Mitigation Measures

Policy LU4.1 provides the County with a mechanism to control the amount of residential and/or commercial development. The previous Mitigation Measure 3.1-B.1 provides a priority listing to be used when developing this growth management program. In preparing this plan, the County will review the data contained in this EIR vis-à-vis the maximum growth allowed by the Draft 2007 UVAP or whatever plan alternative is adopted to determine the maximum annual growth that will be permitted per priority area.

The impact can also be addressed by reclassifying parcels to land use classifications that allow less new residential development. Such reclassifications are considered a project alternative since the County Board of Supervisors were aware of this potential population increase when selecting the Draft 2007 UVAP as the preferred alternative. See ***Section 4.4, Project Alternatives*** of this EIR for a discussion of four alternatives that reduce the amount of potential residential development.

Impact Significance After Mitigation

The growth management plan may limit new development to a level that reduces the impact of growth to a less than significant level. However, without knowing when that plan will be approved and what the growth targets will be, the impact remains ***significant and unavoidable.***

Inconsistency with Plans

Impact 3.1-G The Draft 2007 UVAP could be inconsistent with other land use plans that have jurisdiction within the plan area.

The Draft 2007 UVAP is the County's revision of the City of Ukiah's adopted General Plan as it relates to the unincorporated area. The City of Ukiah's adopted General Plan provides policies that addresses future development within the plan area at the time such land is annexed to the City.

As noted previously, in 1992 the County Board of Supervisors made a commitment to consider the City's General Plan as an "area plan" for the entire Ukiah Valley at the City's request. In 1998, the Board of Supervisors directed County planning staff to revise the City's General Plan as the Draft Ukiah Valley Area Plan to provide increased County perspective and greater consistency with the existing County General Plan. In January 2000, the County Planning Commission held the first public hearing on possible adoption of the City's General Plan as an area plan for the Ukiah Valley. Over the next two years, the Planning Commission with input from the public made a number of modifications to the land use classifications, policies, and implementation measures to develop an area plan that the County felt provided a strong County perspective on land use and increased consistency of the area plan with the County's General Plan and other planning policies and documents.

In 2005, the County proposed to adopt that modified General Plan as the Draft 2002 UVAP. A Draft EIR was prepared on that plan and circulated for public review in July 2005. After receipt of public comments on the Draft EIR, the County determined that revisions to the draft plan were needed to address the public concerns. The result is the current project – the Draft 2007 UVAP.

The Draft 2007 UVAP is substantially consistent with the City's goals for the plan area as expressed in its General Plan. However, there are areas where the two documents differ, mainly because the County changed the land use classifications and deleted or revised certain policies or measures included in the City's Plan. Because the City has no jurisdiction over unincorporated lands, even unincorporated lands within their Sphere of Influence, there is no potential inconsistency per the significance criterion. There is no impact. Even if there is an inconsistency, this inconsistency is not considered an environmental impact, since plans are not part of the physical environment, and CEQA requires EIRs to identify adverse impacts to the physical environment. It is ultimately the responsibility of the County Planning Commission and Board of Supervisors to

determine whether there are any plan inconsistencies, and whether said inconsistencies cause significant environmental impacts.

Nevertheless, the County should be aware of these inconsistencies, particularly those that affect lands within the City's revised Sphere of Influence, since these lands may, at some time, be annexed to the City. The following summarizes consistency with City land use classifications. It should be noted that the current City Council may hold different concepts of what development should be allowed in these areas. However, because those concepts have not been codified or adopted as part of the City's General Plan, the following discussion of consistencies and inconsistencies is necessarily based on the adopted City General Plan.

South Ukiah Valley. The City's General Plan (GP) designates this area almost entirely for low density residential use, which allows up to 6 dwelling units per acre. The Draft 2007 UVAP classifies most of the area as SR, which is consistent with the City's classification. However, the Draft 2007 UVAP also includes a general mixed use classification along a part of South State Street.

South State Street. The City's GP designates the part of this area along both sides of South State Street for commercial uses with a small amount of industrial land south of the airport. To the west of this roadside commercial development, the area is mainly classified low density residential (with some high density residential). The Draft 2007 UVAP adds mixed use designations to areas along the west side of South State Street, which would substantially increase the residential potential. It also replaces the industrial designation south of the airport with a commercial classification. This is inconsistent with the City's classification.

Brush Street Triangle. The City's GP designates most of the area as commercial with a small amount of industrial near the railroad line. The Draft 2007 UVAP would include multi-family and mixed use, and parkland. This is inconsistent with the City's classification.

Lovers Lane. The City designates this area as the "Lovers Lane Master Plan Area," which indicates that the area can be developed with mixed uses subject to approval of a master plan. The Draft 2007 UVAP is consistent with this designation as it would allow mixed uses.

Masonite. The City's GP designates the area as the "North State Commercial Industrial Complex," which allows only commercial and industrial development. The Draft 2007 UVAP would allow mixed use, including residential development on the part of the area west of the railroad tracks. This would allow additional commercial and residential development. The Draft 2007 UVAP would be inconsistent with the City's classification since the Draft 2007 UVAP allows possible residential use on the Masonite site.

North State Street. The City's GP classifies the southern part of this area as "North State Commercial Industrial Complex," which is intended for commercial and industrial uses, while the northern part of this area is classified as the Forks Rural Community, which allows high density residential, commercial, and industrial uses. The Draft 2007

UVAP is consistent with the City classification of the northern end of the area as it allows industrial, commercial, and residential uses in that area.

Calpella. The City's GP designates this area as Calpella Rural Community which allows residential, commercial, and industrial uses. The Draft 2007 UVAP allows this same mix of uses and would be considered consistent with the City GP classification.

East Hills. The City's GP classifies the western half of this area as rural residential allowing one unit per 10 acres. The eastern half is classified rangeland that allows one unit per 160 acres. The Draft 2007 UVAP designates the entire site as rural residential, though, County staff estimates buildout of the site as only 65 units due to site constraints. This is inconsistent with the City's classification.

Consistency with the County General Plan

The intent of the Draft 2007 UVAP is to provide comprehensive, long-term policy direction for the plan area by refining and supplementing the policies of the County General Plan to focus on issues of importance in the Ukiah Valley. In general, the policies and measures included in the Draft 2007 UVAP are more specific than General Plan policies. Once adopted, the UVAP will be part of the General Plan. In reviewing the 2009 County General Plan, the Draft 2007 UVAP is consistent with the goals and policies included in the General Plan.

Other Plans

The Draft 2007 UVAP is essentially consistent with other plans governing specific resources in the plan area, including the County RTP, Ukiah Pedestrian and Bikeways Plan, the County Bikeways Plan, and the Airport Comprehensive Land Use Plan. However, if any inconsistencies are discovered, the County will need to determine whether the 2007 UVAP or the other pertinent plan needs amendment to eliminate the inconsistency.

In summary, for the plans where consistency is legally an issue, there are no apparent policy inconsistencies. The County Planning Commission and Board of Supervisors are responsible for final identification of such inconsistencies, and if they are found, then either the Draft 2007 UVAP or the General Plan may need to be amended to eliminate that inconsistency. There is ***no environmental impact***.

Urban Decay Effects

Impact 3.1-H **Construction of new commercial development and residential development could have social and economic effects that result in a physical adverse change in the environment.**

A number of commentors on the original EIR expressed concern about the possibility of a large big-box shopping center being constructed on the Masonite site. The ballot initiative requesting voter approval of a specific plan allowing mixed use development of the Masonite site was rejected by the voters in November 2009. A number of these

commentors also requested that the EIR include various economic analyses to assess the impacts of new development on existing businesses in the area. Section 15131 of the CEQA Guidelines requires such a fiscal analysis if there is evidence of a risk that the fiscal impacts would be sufficiently severe as to result in a physical change of the environment, which is typically interpreted to mean that existing businesses would close and the buildings would remain empty resulting in urban blight. The principal concern for most commentors requesting these analyses was the potential for a large big box shopping center on the Masonite site. A proposed specific plan for this area was rejected by the voters in November 2009. An application has been filed for development on that site, but that application has been deemed incomplete and will need to be amended/revised to reflect the Draft 2007 UVAP land use classifications and policies before it is considered by the County.

In response to these concerns, a *Fiscal and Economic Impact Analysis for the Ukiah Valley Area Plan (UVAP)* was prepared.[12] This report compared the revenues and costs of the project and the four project alternatives as well as an alternative the consultants devised. The latter alternative, called the Market Constrained Alternative, is based on the amount of growth that the consultants believe would be most likely to occur by 2025.[13] The projected growth used for the Market Constrained Alternative is substantially less, and much more realistic, than the buildout projections used in this EIR for the project and the four alternatives.

The consultants (BAE) evaluated the potential impacts of the proposed project and alternatives on existing retail space in the Ukiah Valley, examining the possibility that the development of new retail space as proposed under the different scenarios may lead to closures of existing retail stores. Such closures could result in "urban decay." Recent court cases indicate that to satisfy fully the requirements of an EIR, the economic analysis must start with the economic impacts, and follow the causal chain to assess the likelihood of new retail space causing existing space to become vacant, and following that outcome, determine the potential for urban decay and physical deterioration of existing retail centers and nodes. In this context, urban decay would result only if all of the following occurred: (1) the project results in an economic impact so severe that stores might close as a result; (2) buildings and/or properties, rather than being reused within a reasonable time, would remain vacant; and (3) such vacancies would cause the buildings and/or properties to deteriorate, and lead to the decline of the associated or nearby real estate.

The report concluded that development allowed under the Draft 2007 UVAP projected to occur by 2025 would likely result in long-term vacancies in existing retail space. These vacancies could occur either through existing retailers moving into the new space, or new retailers creating competition that would force existing retailers out of business. To the extent the housing market may be constrained such that buildout of the residential portions of the plan area could lag retail construction, the oversupply could be even greater, creating even higher risk of long-term vacancies. Given the slow growth in the

[12] Bay Area Economics, February 5, 2010; the report is on file with the Mendocino County Department of Planning & Building Services.

[13] The Market Constrained Alternative includes development of 381 single-family units, 447 multi-family units, and 923,160 square feet of commercial development, of which 621,217 square feet would be retail commercial.

Ukiah Valley and the larger trade area, it is unlikely that this space would be re-tenanted even over a period of many years, and given the lack of reasonable expectation of reuse in the long-term property owners would be more likely to allow deterioration or to abandon properties entirely. As a result, there is the likelihood of a significant level of urban decay if buildout of the retail area as designated occurs.

BAE describes how the project allows for more development than would occur under normal market conditions through the analysis horizon of 2025. They assumed that about 1.8 million square feet of new commercial development would be constructed by 2025, whereas the Market Constrained Alternative they developed (i.e., the alternative that is based on a more reasonable outcome of local supply and demand) assumed about 620,000 square feet of new commercial development. They note: "It is also important to consider that the UVAP Project and Alternatives call for more development than would occur under normal market conditions through the analysis horizon of 2025. In reviewing these findings it is important to note that only the Market Constrained Alternative could conceivably occur over the next 15 years. The other scenarios call for far more growth than could be expected to occur during that time frame."

Despite these caveats, for the Year 2025, the maximum commercial buildout allowed under the Draft 2007 UVAP would result in urban decay. The possible environmental impacts could include:

- There would be visual impacts from run-down or abandoned buildings in the downtown area of Ukiah, existing shopping centers, or other commercial areas in the valley.

- These run-down areas could attract vandals and be the target of other criminal activity, including vagrancy, theft, and illegal occupancy. Such criminal activity would cause further deterioration of buildings with consequent visual impacts.

- Abandoned or deteriorated buildings would be more likely to burn, either from neglect, illegal occupancy, or arson.

- This increased criminal activity would increase the calls for service from police, fire, and emergency medical agencies.

These potential impacts that would result from excessive commercial development are ***potentially significant impacts.***

Fiscal Impact

The fiscal impact analysis of the BAE report focuses on projecting the balance of County revenues and County service costs associated with the Draft 2007 UVAP and project alternatives at buildout. The analysis focuses exclusively on the County's General Fund, the main source of discretionary dollars.

All development scenarios would have a relatively modest fiscal impact to the County General Fund. As shown in Table 3.1-2, the model finds that the development scenarios have net fiscal impacts ranging from an annual deficit of $1.5 million to an annual

surplus of $655,000. These variations all represent less than one percent of the County's 2008-2009 General Fund, and can be considered close to neutral, given the broad scale of this analysis, the associated margin for error, and the conservative assumptions in the model.

The No Project Alternative (the Existing General Plan in Section 4.4 of this EIR), Alternative C, and Market Constrained Alternative show slightly greater revenues relative to costs. Two factors contribute to this finding. First, revenues are strongly driven by sales taxes, the largest revenue component in this model. In turn, new households add directly to the service population and associated costs. The Market Constrained and No Project Alternatives have the highest ratio of retail space relative to new households. Therefore, these scenarios have the highest ratio of revenues relative to costs, at 1.22 and 1.01, respectively. In comparison, the Proposed Project has a lower ratio of retail space to residential development, and therefore shows a lower revenue-to-cost ratio (0.92). These findings suggest that from a fiscal perspective, new retail development generally proves more beneficial to the County than development of new homes.

Second, the average cost methodology used by the fiscal impact model assumes that costs increase directly in line with service population. In fact, for some services, costs are more "lumpy," rising only when certain thresholds are passed, and when capacity is exceeded. For example, the County Sheriff patrol staff may be able to accommodate a marginal increase in service population without new costs. The model, however, assumes that every increase in service population raises costs. An average cost method, therefore, is more conservative and has the potential to overstate costs and assign greater weight to the service population in determining the net fiscal impact.

In reviewing these findings it is important to note that only the Market Constrained Alternative could conceivably occur over the next 15 years. The other scenarios call for far more growth than could be expected to occur during that time frame. Therefore, the actual fiscal impact that the County will likely experience from growth through 2025 would be on the order of a $655,000 annual surplus under the Market Constrained Alternatives.

Impacts on Wages

Other commentors on the original EIR asked about the impacts of new businesses paying lower wages than jobs that might be displaced in the city. This is not a CEQA-related issue, though it certainly may be important to the Board of Supervisors when considering the merits of future development proposals. Neither the City nor County receives revenue from income taxes. If it were true that future jobs paid less than the existing jobs, then there could be fewer expenditures on goods that generate sales tax. However, it is speculative that there would be a substantial decline in the overall sales tax revenues flowing to the City or County.

Table 3.1-2
Net Fiscal Impact

Projected Revenues	Draft 2007 UVAP	Existing General Plan & Alternative C	Land Use Alternative A	Land Use Alternative B	Market Constrained Alternative
Sales Tax	$5,415,000	$2,590,000	$4,763,000	$3,193,000	$1,554,000
Property tax revenues	4,159,000	2,058,000	3,201,000	2,616,000	724,000
Property transfer tax	280,000	119,000	214,000	160,000	48,000
Property tax in-lieu of vehicle licenses	1,546,000	752,000	1,250,000	939,000	298,000
Motor vehicle in lieu (MVIL)	51,000	16,000	37,000	26,000	8,000
Business license fees	57,000	43,000	52,000	44,000	9,000
Other revenue	6,077,000	2,666,000	4,749,000	3,550,000	931,000
Subtotal revenues	**$17,585,000**	**$8,244,000**	**$14,266,000**	**$10,528,000**	**$3,572,000**
Projected Costs					
Public protection	9,520,000	4,176,000	7,440,000	5,561,000	1,459,000
Health and sanitation	1,918,000	841,000	1,499,000	1,120,000	294,000
Public assistance	872,000	275,000	634,000	446,000	133,000
Recreation and culture	64,000	28,000	50,000	37,000	10,000
Education	251,000	79,000	183,000	128,000	38,000
Public ways and facilities	616,000	481,000	360,000	270,000	94,000
General government	5,802,000	2,485,000	4,507,000	3,353,000	889,000
Subtotal costs	**$19,043,000**	**$8,154,000**	**$14,794,000**	**$11,005,000**	**$2,917,000**
Net fiscal surplus or (deficit)	**($1,458,000)**	**$90,000**	**($528,000)**	**($477,000)**	**$655,000**
Impact as % of costs	-0.9%	0.1%	-0.3%	-0.3%	0.4%
Revenues as % of costs	0.92	1.01	0.96	0.96	1.22

(a) All cost and revenue figures are in 2008 dollars.
Sources: County of Mendocino Final Budget for Fiscal Year 2008-2009; BAE, 2009.

Mitigation Measures

3.1-H.1 The County shall require an urban decay assessment for large commercial development applications. To accomplish this objective, the following implementation measure shall be added to Policy LU7.1:

> **LU7.1d Fiscal and Economic Impact Assessment**
> Assess the fiscal and economic impacts of each new commercial development proposals that includes over 100,000 square feet of new retail commercial development. [Timeframe: ongoing. Responsibility: Department of Planning and Building Services]

Alternatively, the County could reduce the amount of land classified for Commercial use, or it could include annual limits for new commercial development as part of the plan's recommended Growth Management Plan. These changes are both considered as alternatives to the project rather than specific mitigations. See ***Section 4.4, Project Alternatives*** of this EIR where these alternatives are addressed.

Impact Significance After Mitigation

The mitigation will allow the County to more precisely determine the economic and fiscal impacts that any large development applications would have. While the mitigation reduces the impact, it does not eliminate the possibility that the County would approve a project even if the required urban decay study showed that there was some potential for urban decay. It is possible that the County would override such an impact because the project and other aspects that outweighed this impact. As such, the potential for urban decay remains a ***significant and unavoidable impact.***

3.2 GEOLOGY AND SOILS

A. Setting

1. Regional Geologic Setting

The heterogeneous bedrock within the hills bordering the Ukiah Valley is composed of the Franciscan Complex (also called the Franciscan Assemblage), a series of principally metasedimentary units which trend northwestward and are in structural (tectonic) contact with each other. The Ukiah Valley is believed to be a relatively young "pull-apart" basin. Faulting and folding of the bedrock resulted in an uplift of the surrounding terrain and depression of the valley area. Subsequent erosion of the surrounding hills filled the valley with coarse sediments of Pliocene and Pleistocene age.

2. Topography

The Ukiah Valley is relatively flat, as evidenced by the fact that the elevation near the Russian River at the north end of the plan area is about 650 feet and at the south end it is about 560 feet, describing a 90 foot elevation change in about 11 miles. The ridges to the east and west rise sharply from the valley, reaching elevations as high as 2,500 feet at Cleland Mountain near the southwest corner of the plan area. Elevations along the western ridge tend to average 1,000 to 1,700 feet, while elevations along the eastern edge of the plan area average 1,400 to 1,600 feet. There are higher elevations in the northeast portion of the plan area, reaching a maximum elevation of about 2,400 feet.

3. Faulting and Seismicity

Mendocino County is located just south of the southern end of the Cascadia Subduction Zone (CSZ), a thrust fault zone that delineates the convergent margins of several major tectonic plates.[14] The Gorda Plate, located west of the CSZ, is being subducted beneath the westward over-thrusting continental North American Plate. A third plate, the Pacific Plate, moves laterally in relation to the other two plates. The on-shore margin between the Pacific and North American Plates is known as the San Andreas Fault, located just off-shore in northern Mendocino County and on-shore in the Manchester to Gualala area of southern Mendocino County. The off-shore margin between the Gorda and Pacific Plates is known as the Mendocino Fault and marks the southern boundary of the CSZ. As a result of ongoing tectonic activity associated with the CSZ and the San Andreas and Mendocino Faults, the north coast region of California, including Mendocino County, is a dynamic region of California subject to high levels of seismicity.[15]

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[14] *Planning Scenario in Humboldt and Del Norte Counties, California, for a Great Earthquake on the Cascadia Subduction Zone*, T. Toppozada et al, 1995, California Division of Mines and Geology, Special Publication 115; and *Living on Shaky Ground – How to Survive Earthquakes and Tsunamis on the North Coast,* Lori Dengler and Kathy Moley, 1995.

[15] *Background Report for the County of Mendocino General Plan Update*, Pacific Municipal Consultants, 2003.

A second fault, the Maacama-Brush Fault, extends through the Ukiah Valley. Previous geologic mapping[16] indicates several fault breaks in the Ukiah Valley considered to be the result of recent (Holocene) movements associated with the Maacama-Brush Fault zone. The current Earthquake Fault Zone (EFZ) map is based on a 1981 evaluation (FER-111) performed by the California Division of Mines and Geology. The evaluation included a review of several previous geologic reports.[17] The Maacama-Brush Fault zone is shown on Figure 3-5.

The surface expression of this fault occurs as a series of closely spaced, sub-parallel fault traces within a zone that is more than a mile wide in some places. The Maacama-Brush Fault is the northernmost segment of a series of closely related faults within the San Andreas Fault system that includes the Hayward, Rodgers Creek and Healdsburg Faults to the south. Historically, the Maacama-Brush Fault has generated only a few moderate earthquakes.[18] However, an abundance of micro-earthquakes are clearly associated with the fault. A M5.6 earthquake was reported to have occurred in the Ukiah area in 1869. Additionally, several earthquakes in the magnitude range of 4, with the strongest a 4.9, were recorded in the Ukiah area in 1977-78. Surface fault creep, very slow movements across known fault locations, has been documented along the Maacama-Brush Fault at locations east of Willits and Ukiah. The maximum capable earthquake magnitude estimated for the Maacama-Brush Fault is a moment magnitude of 7.3.[19] Based upon empirical data, using the length of the fault, the maximum credible earthquake for the Maacama-Brush Fault is M7.25$\pm$0.25. Peak bedrock acceleration for a 7.25$\pm$0.25 magnitude earthquake on the Maacama-Brush Fault would be 0.7g.[20]

The historically active San Andreas Fault is about 28 miles to the southwest of the plan area. It is capable of generating very strong earthquakes. The last major earthquake on this portion of the San Andreas Fault was the 1906 “San Francisco” earthquake, which was one of the most severe in California history. Intensities were estimated at M7.9 (8.3 on the old Richter scale or in the range of VI to VIII on the Modified Mercalli Scale). This earthquake caused severe shaking in Mendocino County and extensive structural damage, particularly along the southern coast of the County, but also in the interior valleys. Many brick buildings in the Ukiah area were severely damaged: almost all chimneys fell, and much of the ornamental facing and plaster on buildings was cracked and loosened. Ground rupture associated with this earthquake occurred from Santa Cruz to Manchester and offshore. It is reported that the lateral displacement across the fault was as much as 25 feet at Manchester during the 1906 earthquake.

Since the 1906 earthquake, very little seismic activity has been recorded on the San Andreas Fault to the north of San Francisco. The U.S. Geological Survey (USGS) has estimated that the North Coast segment of the San Andreas Fault has a 10% probability of generating an M6.7 or greater earthquake during the period of 2000 through 2030 (Working Group, 1999). The maximum credible earthquake for the San Andreas fault is estimated to be 8.3 Magnitude.

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[16] *Recent Breaks Along the Maacama Fault Zone, Laytonville to Hopland, California*, E. H. Pampeyan et al, 1981.
[17] Pampeyan et al, 1981.
[18] Toppozada et al, 2000.
[19] *Background Report for the County of Mendocino General Plan Update*, *op. cit.*
[20] *Draft Foundation Investigation – Orchard Avenue Bridge at Orr Creek*, Taber Consultants, 2002.

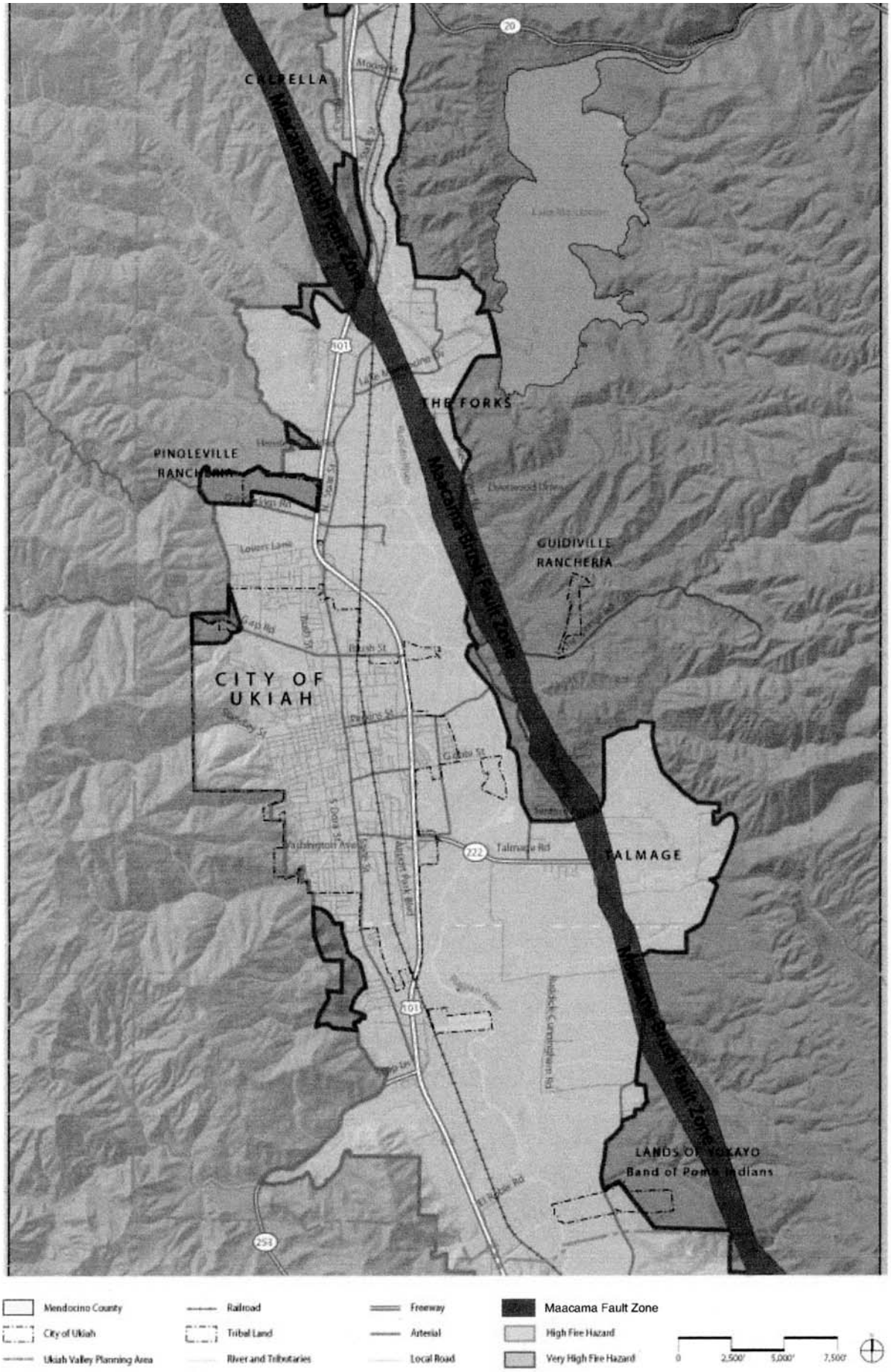

Figure 3-5 MAACAMA-BRUSH FAULT ZONE

Source: Mendocino County Planning & Building Services

In addition to the San Andreas and the Maacama-Brush Faults, it is possible there are other smaller faults in the valley and adjacent foothills. These faults may be active or may become activated in the future. The intensity of future shaking will depend on the distance of the site from the earthquake focus, magnitude of the earthquake, and response of the structure to the underlying soil and/or rock.

The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621 *et seq.*) restricts development on the surface traces of known active faults mapped by the State Geologist. The plan area fault that falls under the Alquist-Priolo Act is the Maacama-Brush Fault. The Seismic Hazards Mapping Act (Public Resources Code Section 2690 *et seq.*) also directs the State Geologist to map potential ground shaking, liquefaction, earthquake-triggered landslide and other identifiable earthquake-related hazards in California. At the present time, the mapping program is focusing on the San Francisco Bay and Los Angeles areas.

Areas that fall within an Earthquake Fault Zone (EFZ) require that a site-specific fault rupture hazard study be performed prior to subdivision or construction of habitable structures. Single-family wood-frame or steel-frame dwellings that do not exceed two stories are exempt from this provision, provided that they are not part of a development consisting of four or more dwellings.

Portions of the Maacama-Brush Fault are currently zoned as an EFZ, as shown on Figure 3-5. The 2003 Background Report for the County of Mendocino General Plan Update[21] (hereafter called the Background Report), prepared for the current General Plan update, reports that as public funding and scientific study allow and earthquakes occur, additional portions of the Maacama-Brush Fault are likely to be zoned as an EFZ. Many municipalities (e.g., San Jose and Los Angeles) have established special studies zones for known faults that have not yet been studied and zoned by the State of California. Figure 9-1 in the Background Report shows areas where the County may desire to consider establishing special fault rupture hazard study requirements. These are based on active and potentially active fault designations.[22] That map identifies most of the valley bottom and lower slopes as being within the area that the authors of the Background Report believe should be considered for zoning as an EFZ.[23]

Development in the plan area is subject to seismic safety standards for the design and construction of buildings as specified in the Uniform Building Code for Seismic Zone 4.[24] Areas within Zone 4 are those expected to experience maximum magnitudes and damage in the event of an earthquake. In addition, the *Unreinforced Masonry Law* (Government Code Section 8875 *et seq.*) requires cities and counties within Seismic Zone 4 to identify hazardous unreinforced masonry buildings and to adopt regulations to abate (fix) potentially dangerous buildings through retrofit or demolition. The County enacted its Unreinforced Masonry Building Ordinance in 2002.

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[21] *Background Report for the County of Mendocino General Plan Update*, *op. cit.*
[22] *Fault Activity Map of California and Adjacent Areas*, Charles W. Jennings, 1994.
[23] *Ibid*.
[24] The Seismic Zone rating system sets forth specific factors used in structural engineering calculations for seismic safety.

4. Landsliding

Detailed maps of landslides and unstable slopes in the entire plan area have not been prepared. However, specific areas have been mapped. For example, the hillside areas west of Ukiah were mapped for landslides in 1991.[25] The associated report was prepared at the request of the City of Ukiah and is a contribution to the State's Landslide Hazard Identification Program. The purpose of the report was to evaluate landslides and related geologic hazards in the western hills area near Ukiah, and to make recommendations for future safe development in the area. Similar studies and mapping have not been completed for other hillside areas.

The mapping and study that was done for the Ukiah hillside area showed the hillsides having very steep slopes, bedding planes, and weak rock types that would constrain road and home development in this area. Because roads cannot exceed 20% grade (and should not, for safety reasons, exceed 16% grade), roads traveling up ridges must traverse and switchback the contours to reach higher elevations. Construction of these long access roads on steep cross slopes is difficult and has the potential for causing landslides and soil erosion with subsequent adverse effects on fish and aquatic wildlife. Similar constraints and impacts would be expected on other hillside areas within the plan area.

A generalized map prepared for the Background Report for the General Plan update includes a map showing areas of moderately and highly unstable geological formations. The valley bottom is not classified as either moderately or highly unstable. The hillsides on the west side of the valley, south of Orr Springs Road, are classified as moderately unstable. Areas north of Orr Springs Road are classified as highly unstable. On the east side of the valley, the entire hillside area is classified as highly unstable. Because much of the underlying geologic formations are associated with the Franciscan Formation, which is known to have poor slope stability characteristics, the hilly areas should all be considered prone to landsliding.

5. Plan Area Soils

The Ukiah Valley bottomland soils are mainly Feliz Russian while the bordering soils on the benchlands are mainly Pinole-Yokayo-Redvine.[26] The higher elevation lands to the west include Hopland-Yorktree-Witherell soils in the south, Hopland-Sanhedrin-Kekawaka soils west of Ukiah, and Yorkville-Yorktree-Squawrock soils to the west of Calpella. The higher elevations to the east include Maymen-Etsel-Snook soils to the south end of Lake Mendocino and then Hopland-Yorktree-Witherell soils to the east of Lake Mendocino.

Many of these soils are subject to shrink-swell, compression, and liquefaction. Some portions of the plan area contain high water tables. Soils subject to shrink/swell and compression can change character when subject to loading, resulting in cracking and

[25] *Landslides and Engineering Geology of the Western Ukiah Area, Central Mendocino County, California,* California Division of Mines and Geology, 1991.
[26] The soil units listed here are General Soil Units as mapped and described in the *Soil Survey of Mendocino County, Eastern Part, and Trinity County, Southwestern Part, California*, U.S. Department of Agriculture, Soil Conservation Service, 1991.

potential failure of roads, foundations, and other improvements. Soil liquefaction is a type of ground failure which may occur when loose to medium dense, saturated granular soils (sand and silt sands) undergo a rapid loss in shear strength due to an increase in pore pressure within the soil mass. This total loss of shear strength is induced by strong ground shaking associated with earthquakes. The liquefaction potential of soils is dependent upon depth to the water table, thickness and location of granular layers, relative density of granular layers, maximum acceleration produced by the earthquake, and the number of cycles of strong ground shaking. Liquefaction most commonly occurs in soils composed of the loose fine sands and silt sands associated with a high water table such as that which occurs in portions of the plan area.

Dynamic densification occurs in gravels, sands, and silty sands which are in the loose state but are not saturated. These soils settle abruptly during strong to violent ground shaking and can cause differential movement at the ground surface as well as damage to utilities and structures. When sandy and silty soils that have high water content are subjected to earthquakes, the solid soil particles enter into suspension. This causes the soil to become like quicksand and no longer able to support structures. While saturated soils are most prone to liquefaction, this effect can also occur under conditions of lower moisture content. Soils prone to liquefaction, listed in decreasing susceptibility, are artificial fill, sand, and alluvium.

Expansive soils are common in the plan area, particularly where clay-rich Franciscan rocks are present or within seasonally wet basin areas. Near-surface expansive clays shrink and swell where subject to seasonal soil moisture variations. When at or very near the ground surface, expansive soils can be recognized by the appearance of ground cracks that open during the dry season and close during the rainy season. Structures, pavements, concrete slab and other improvements can experience significant damage from this seasonal shrinking and swelling process if not designed to address the presence of expansive soils. Expansive clays can also accelerate soil creep and landslide development on slopes. Mapping done for the Background Report for the General Plan update shows that over half of the plan area contains soil types that are rated as "high" or "medium" in terms of potential soil expansion.

There are areas of serpentine soils within the plan area. Development on such soils can result in adverse effects on health. This issue is discussed in detail in ***Section 3. 7 (Air Quality).***

6. Mineral Resources

The only mineral resources that are being actively mined in the plan area are instream and terrace sources of aggregate. Currently, Granite Construction Company takes gravel from three bars and two terraces on the Russian River within one-quarter mile of Talmage Road (REC 1-83). This company operates under vested rights and generally produces 50,000-100,000 cubic yards of material per year. The California Department of Fish and Game monitors the gravel bars and limits the amount of material that can be removed to ensure that the stream and fishery are not adversely impacted.[27]

[27] *Upper Russian River Gravel Management Plan – Production and Demand Report*, Leonard Charles and Associates, 1996 and interviews with Julie Price on 1/21/04 and Jordan Main 1/23/04.

7. Regulatory Setting

State Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) was enacted in 1975 to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property and the environment. The Act applies to anyone, including government agencies, engaged in surface mining operations in California (including on federally managed lands) which disturb more than one acre or remove more than 1,000 cubic yards of material cumulatively from one site. This includes, but is not limited to, prospecting and exploratory activities, dredging and quarrying, streambed skimming, borrow pitting, and the stockpiling of mined materials. This law is implemented by the State Department of Conservation, Office of Mine Reclamation, the State Mining and Geology Board, and County regulations as described below.

SMARA also establishes a mineral lands inventory process overseen by the State Geologist and the Mining and Geology Board and subject to local public review. This is designed to ensure that mineral deposits of State or regional significance are identified and protected for future extraction. However this inventory has not been conducted for Mendocino County.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (formerly the Alquist-Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults in California. This act was discussed above under the heading of Faulting and Seismicity.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a seismic hazard zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design. The California Geological Survey (formerly the California Division of Mines and Geology) has not completed preparation of a Preliminary Seismic Hazards Map for the plan area. The hazards maps will depict areas susceptible to landsliding and liquefaction, and be accompanied by a report describing the basis for the maps. The State is developing the seismic hazards maps first in areas with the highest growth.

Mendocino County Regulations

The County General Plan and Zoning Ordinance include policies and standards relevant to mining. The Surface Mining and Reclamation Ordinance (Mendocino County Code, Chapter 22.16) generally subjects operations that disturb or displace a cumulative total of 1,000 cubic yards of material, including overburden, to County and State SMARA requirements. A use permit must be obtained from the County prior to mining, which includes approval of a reclamation plan detailing site closure, and financial assurances to guarantee that reclamation is carried out. The State Department of Conservation provides technical review. Because the Granite Construction Company operates under Vested Rights, it is not required to have a use permit, but it is required to have an approved reclamation plan.

B. Potential Impacts and Mitigations

1. Criteria Used For Determining Impact Significance

Land uses and development consistent with the Draft 2007 UVAP would have a significant impact if it:

- Exposes people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving any of the following:
    - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault.
    - Strong seismic shaking.
    - Seismic-related ground failure, including liquefaction.
    - Landslides.
- Results in substantial soil erosion or the loss of topsoil. (Discussed in Impact 3.3-G under the following section on Hydrology and Water Quality).
- Is located in a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and could potentially result in on- or off-site landsliding, lateral spreading, subsidence, liquefaction, or collapse.
- Is located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property.
- Has soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems, where sewers are not available for the disposal of wastewater.

- Results in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State.

- Results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

2. Project Impacts

This section will describe the potential geology and soils impacts resulting from buildout of the Draft 2007 UVAP as per the significance criteria listed above.

Seismic Hazard

Impact 3.2-A **Land uses and development consistent with the Draft 2007 UVAP would increase the number of persons exposed to risk of injury and death and the amount of property damage resulting from seismic events in the plan area, including impacts from surface rupture, strong seismic shaking, liquefaction, and landsliding.**

The plan area is seismically active and includes a mapped Earthquake Fault Zone (EFZ) running the length of the plan area. Construction of new residences, other structures, roads, and other infrastructure in a seismically active area exposes additional people to risk of injury or death, and exposes improvements to risk of failure or destruction.

Seismic shaking of a particular area is affected by a variety of factors, such as distance to seismic source, fault type, magnitude of earthquake, and soil or rock properties at the site. Sites underlain by unconsolidated soils typically experience amplified seismic shaking, relative to sites underlain by bedrock. Amplification is even greater in areas with loose or soft soil, and/or shallow groundwater.

Seismic ground motions resulting from shaking are commonly measured based on peak horizontal accelerations (in units of gravity). The U.S. Geological Survey has prepared probabilistic earthquake ground motion hazard maps for several design-level earthquakes. These maps consider all the known seismic sources that may impact a given area. Mapping showing active and potentially active faults, landslides, and unstable slopes done for the Background Report are based on the USGS maps for the Design Basis Earthquake (DBE), Upper Bound Earthquake (UBE) and Maximum Capable Earthquake (MCE), respectively. The DBE for a site is the estimated ground motion that has a 10% probability of exceedance in a 50-year period. The DBE is used for most commercial, industrial and residential construction. The UBE or MCE are used for essential service facilities or other critical structures.

Background Report mapping shows that much of the plan area is potentially subject to seismic damage. Hilly areas within the plan area are subject to seismic damage and landsliding that would be exacerbated by an earthquake. For example, the 283-acre property east of Redemeyer Road proposed for reclassification from Range Land to Rural Residential, which would allow one-unit lots, is located in a hilly area classified as

having a highly unstable geologic formation. The EFZ also passes through the western side of this site. The Maacama-Brush Fault EFZ passes through The Forks portion of the North State Street area where new development would be allowed. A risk to human safety exists unless new development in these areas and other areas within or adjacent to the EFZ is properly constructed.

As mentioned previously, the Background Repor*t* shows most of the plan area as possibly affected by earthquake fault zones. That report states that the County may wish to consider establishing special fault rupture hazard study requirements for the area mapped as potentially affected by faults. Geotechnical studies done for other EIRs in the plan area indicate the potential for active faults on sites in the area (for example, the Lovers Lane area), corroborating the suggestions in the Background Report.[28]

Construction of new residences, businesses, and other buildings or improvements in areas subject to seismic activity would increase the risk of injury or death, as well as potentially result in damage to or destruction of improvements.

The Draft 2007 UVAP contains policies and implementation measures that address these issues. The Health and Safety Section of the Draft 2007 UVAP contains ***Implementation Measure HS1.5a*** that would revise the zoning ordinance to prohibit new residential development in high hazard areas. Implementation measures under ***Policy HS1.1*** specifically address the risks associated with seismic activity. This policy requires designation of areas where earth movement and landsliding might occur. The policy prohibits construction in earthquake fault zones unless adequate mitigation measures, recommended by geotechnical studies, are included. The policy also requires geotechnical evaluations in areas where there is potential geologic risk as determined through ***Implementation Measure HS1.5a***, and prohibits new development where major earth movement may occur. ***Implementation Measure HS1.1a*** requires revision of the zoning code to include provisions to address earth movement on hillsides. These policies and measures are consistent with County General Plan policies aimed at protecting people and improvements from seismic activity (*Policies DE-231 60 DE-234*).

These policies and measures in the Draft 2007 UVAP and the General Plan provide substantial protection against seismic damage and would reduce the impact of seismic ground shaking. However, it would not be possible to fully mitigate the impact for the more severe seismic events that may occur. For small and moderate seismic events, the impact of strong seismic shaking would be generally reduced to less-than-significant levels. However in the case of more severe seismic events such as the maximum credible earthquake, the potential for property damage and bodily injury would remain. Therefore, this would be a ***significant and unavoidable impact.***

<u>Slope Instability</u>

Impact 3.2-B **Land uses and development consistent with the Draft 2007 UVAP has the potential of exposing additional people and structures to slope failure hazard.**

[28] Geotechnical Report in *Lovers Lane Draft EIR,* Leonard Charles and Associates, 1994.

Weak soil and/or rock conditions, slope gradient and the influence of water are the primary factors that contribute to landsliding. As mentioned in the Setting section, the Background Report (Figure 9-3) shows many areas within the plan area as potentially having unstable slopes and landslides. Slopes that are stable under static conditions may be marginal enough that the introduction of dynamic forces due to seismic shaking may cause failure. This is particularly true on steeper slopes or if the earthquake occurs when the soil/rock conditions are wet, for example due to rainfall, natural or manmade drainage, septic systems, irrigation, etc. Existing over-steepened slopes (i.e., steep-sided stream channel banks) may be particularly susceptible to failure as a result of seismic shaking. As such, areas of the County that are closer to major seismic sources, such as the Maacama-Brush Fault, should be considered more prone to landsliding than other portions of the plan area due to the additional impact of seismic shaking to slope stability.

All hillside areas on the east side of the plan area and the western hillside area north of Orr Springs Road are mapped as having highly unstable geologic formations. The hillside areas on the west side south of Orr Springs Road are mapped as moderately unstable. However, within this area of moderately unstable slopes are a number of locations with existing landslides or with steep unstable slopes (see the study done for the hill area west of Ukiah).[29] All hillside development in the plan area could be potentially affected by existing landslides or new landslides caused by site grading. Unless new development is properly sited and constructed, buildings and other improvements could be damaged or destroyed by landslides causing potential injury or death. As the Draft 2002 UVAP stated, "The Ukiah Valley presents a wide variety of geotechnically related challenges to development. Both native slopes and those modified by grading require special consideration in the Ukiah Valley. For the most part, these can be resolved through creative design and construction techniques. Grading plans and site design are important means of overcoming geologic hazards. Geotechnical investigations, with site-specific information for grading or construction, form the backbone for hazard mitigation in the planning process".[30] The potential for landsliding with resulting property damage and personal injury or death is a ***potentially significant impact***.

The Draft 2007 UVAP contains policies and implementation measures that address these issues. As described under Impact 3.2-A, the Draft UVAP contains ***Implementation Measure HS1.1c*** that requires geotechnical evaluations in risk zones and ***Implementation Measures HS1.5a*** and ***HS1.1b***, which all require appropriate mitigation or avoidance of areas subject to landsliding.

Landsliding impacts would be generally reduced to a ***less than significant*** level for new development through implementation of the Draft 2007 UVAP and existing County policies (including enforcement of the current UBC).

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[29] *Ukiah Western Hills Constraint Analysis*, Leonard Charles and Associates, 2001.
[30] *Draft 2007 UVAP*, p. 5-2.

Unstable Soil Constraints

Impact 3.2-C **Land uses and development consistent with the Draft 2007 UVAP could be damaged by improper construction or siting due to soil constraints.**

Almost any building site in the plan area contains soils that could cause damage to or failure of buildings or other improvements unless the development is properly designed and constructed. Depending on the location within the plan area, there are soils that are subject to expansion, densification (compaction), and/or liquefaction. Damage caused by improperly sited and designed improvements could result in injury or death to area residents and employees. This is a ***potentially significant impact.***

Settlement can result if the native soils are porous or weak such that the weight to a building or other structure causes the soil to compress. This can occur in native soils or in man-made fills. Non-uniform or differential settlement can occur if the compressible soil section beneath the structure is of variable thickness, if the soil is heterogeneous, or if there are variable loads imposed across the footprint of the structure. In pavement sections, differential settlement is common when utility trench backfill is improperly compacted. The kind of damage caused by settlement and differential settlement are similar to that caused by expansive soil (e.g., tilted and cracked floor slabs, uneven floors in buildings, cracked pavements, etc.). As with expansive soils, standard geotechnical engineering procedures and soil testing, proper design and testing, and quality control can identify compressible soil during construction.

A special category of settlement is liquefaction. This category of subsidence is triggered by seismic shaking and impacts areas underlain by granular soils that are saturated by groundwater. This impact is related to both seismic shaking (i.e., the triggering mechanism), as well as soil and groundwater conditions. Liquefaction is the transformation of water saturated granular soils from a solid state to a liquid state as a result of an increase in the inter-granular (or pore) water pressure caused by intense ground shaking. The kinds of damage caused by liquefaction include sudden collapse or overturning of structures, collapse of pavements, and in some cases lateral spreading. As with settlement resulting from compressible soils and expansive soils, standard geotechnical engineering procedures and soil testing, proper design and testing, and quality control can identify liquefiable soils during site exploration.

Overall, modern soil engineering practices have improved greatly so that subsidence and settlement damage can be reduced to levels that are generally considered acceptable by applying knowledge about the kinds of soils, their strengths, the groundwater conditions and by properly designing and constructing fills and foundations.

The Draft 2007 UVAP contains implementation measures that address this issue. It requires geotechnical evaluations within risk zones (***Implementation Measure HS1.1c***) and requires new development to avoid areas of unmitigated hazard (***Implementation Measure HS1.5a***). The County General Plan contains previously-cited policies to address seismic problems. The County mainly depends on the Uniform Building Code

and its standard building permit procedures for assessing and dealing with soil constraints.

The Draft 2007 UVAP and existing policies and building standards would substantially reduce the risks of soil failure, especially for common soil problems such as expansive soils. The impact would be reduced to a ***less than significant*** level.

Septic Suitability of Soils

Impact 3.2-D **Land uses and development consistent with the Draft 2007 UVAP outside municipal wastewater service districts could be constrained by soils that cannot adequately dispose of treated wastewater.**

Where municipal sewer services are unavailable, new development would be required to develop and operate on-site septic systems, including leachfields. Some soil types are not appropriate for leachfield disposal. Soils with limitation on their suitability for septic systems are described by categories designated as low, moderate, or severe. The determinants for this rating are based on slope, soil depth, permeability, depth to seasonal high water table, and whether or not the soil is subject to inundation or ponding. The adverse effects of the impacts associated with septic suitability of soils can be avoided through proper soil percolation testing and septic system design, careful construction monitoring, as well as post construction system monitoring and maintenance. In order to design an adequate septic system, however, the site conditions must be recognized through appropriate field-testing during specified times of the year, as required by the County Department of Environmental Health. Procedures employed in soils testing and percolation testing are found in the present County regulations. By applying appropriate field testing and using current practices for septic system location and design, construction monitoring, and post construction monitoring and maintenance, adverse impacts due to septic suitability of soils can be reduced to levels that are acceptable. For the purposes of this analysis, the impact is considered to be reduced to a less than significant level if all currently available geotechnical engineering and construction practices are implemented. By applying such standards to future projects in the planning area, the impact of septic suitability of soils can be essentially eliminated. Because the regulations discussed above would considerably reduce potential septic suitability of soils impacts, this would be a ***less than significant impact***.

Mineral Resources

Impact 3.2-E **Land uses and development consistent with the Draft 2007 UVAP could result in the loss of known mineral resources or mineral resource recovery sites.**

The existing aggregate mining done by Granite Construction Company is carried out under a Vested Right at three gravel bars on the Russian River and two terrace pits adjacent to the river; all the sites are within 0.25 miles upstream of their concrete plant at 900 Talmage Road. The facility on Talmage Road, in addition to providing concrete and

aggregates, recycles concrete and is a mineral recovery site. These sites are classified for agriculture or industrial use. The Draft 2007 UVAP does not propose any development of these sites, or allow uses that would be incompatible with continued aggregate mining and processing. The Granite Construction plant is in an area classified as Industrial. A second Granite Construction Company facility at 4210 North State Street contains as asphalt plant. Asphalt is recycled at this facility, so it is a mineral recovery site. This area is classified as Industrial, and this classification would allow the continued use of the mineral recycling facility. Future development near either plant would not threaten the existing mineral recovery sites.

In 2010, the County approved Granite Construction Company's application to conduct river terrace mining on a site adjacent to Ackerman Creek on the west side of the Russian River, northeast of the Masonite site. This site is classified as Industrial as is the area surrounding the site. This use is consistent with the land use classification in the 2007 Draft UVAP.

Future development could be sited on mineral resources or a mineral recovery site. This would be a ***potentially significant impact.***

The Draft 2007 UVAP contains ***Policy OC1.4*** that will establish minimum riverbed elevation that limits gravel harvesting to levels that do not exceed resupply of Russian River gravel. *Policy RM-65* in the General Plan states that environmental protection is a high priority during mineral extraction and associated processing operations, and in site reclamation.

These policies codify existing requirements that the Department of Fish and Game currently imposes on Granite Construction Company, restricting removal of gravel from the gravel bars to an amount that will not harm the fishery. The County does not have the ability to restrict Granite Rock gravel extractions, since the work is done under a Vested Right. Thus, this policy and measures would not substantially alter Granite Construction Company's existing ability to extract gravel from the river. However, the policies will apply to the new application.

The State Geological Survey has not conducted a survey of important mineral resources within Mendocino County but may do so in the future. Other extraction or mineral recovery operations could be proposed within the plan area in the future. The *Russian River Aggregate Resources Management Plan,* which determines gravel resupply levels, was completed by the Mendocino County Water Agency (MCWA).[31] According to MCWA staff, this plan was not adopted by the County. There is neither staff nor funding at the Department of Fish and Game, the Geological Survey, or MCWA to re-evaluate gravel resupply levels in the Russian River.[32]

The Draft 2007 UVAP would have a less than significant impact on known mineral resources and mineral resource recovery sites. In addition, the County General Plan has several policies protecting mineral resources. The County Surface Mining and

[31] In 2010, the County Water Agency became an entity within the County Department of Planning and Building Services; it no longer exists as a separate agency.
[32] Dennis Slota, MCWA, personal communication, 2/10/05.

Reclamation Ordinance also regulates possible future extraction and reclamation, and requires a reclamation plan for sites with Vested Rights.

Given these polices and measures, mineral resources and mineral resource recovery sites would be protected for utilization of those resources. The impact would be reduced to a ***less than significant*** level.

3.3 HYDROLOGY AND WATER QUALITY

A. Setting

1. Climate

Approximately 38 inches of precipitation falls each year on the plan area. Most of the precipitation is in the form of rain, which falls mainly during the winter. Snowfall is primarily limited to higher elevations, which are mainly to the east and north of the plan area. Rainfall is often from brief, intense storms, which move in from the northwest. Virtually no rainfall occurs during the summer months.

2. Surface Water Hydrology

The entire plan area is a part of the Ukiah and Coyote Valley sub-basins of the Russian River Watershed. The sub-basins (which are much larger than the plan area) cover an area of approximately 418 square miles. The plan area drains by overland flow to roadside ditches, swales, storm drain inlets, and intermittent stream channels that feed into perennial tributaries and the Russian River. Major tributaries of the Russian River which drain the plan area (starting at the north end of the plan area) include: York, Hensley, Howard, Ackerman, Sulphur, Orr, Gibson, Doolin, McClure, Mill, Howell, and Robinson Creeks.

Lake Mendocino is within the plan area. Coyote Dam, which creates the man-made lake, was constructed in 1958 by the U.S. Army Corps of Engineers. The dam is on the East Fork of the Russian River, located approximately 3 miles northeast of Ukiah. The lake has a storage capacity of about 122,400 acre-feet of water, with a surface area of 1,922 acres. The 160-foot high by 3,500-foot long dam, maintained by the Army Corps of Engineers, provides flood control, water conservation, and recreational opportunities like hiking, water skiing, and boating.

The U.S. Army Corps of Engineers is in the process of preparing an EIS/EIR on a proposal to raise Coyote Dam by 36 feet, in order to expand the storage capacity of the lake to 199,000 acre-feet. One of the alternatives that will be assessed in that EIS/EIR is to increase seasonal water storage. Utilizing the existing dam and reservoir, the water surface elevation could be raised from 748 feet elevation to 761.8 feet elevation for seasonal use between April 1 and October 15. This would provide an additional 25,700 acre-feet of storage. The Mendocino County Inland Water and Power Commission would need to demonstrate that this extra storage capacity is needed for current demands and would not result in excess storage of water that would unnecessarily flood recreational areas and access roads.[33]

Coyote Dam has blocked the movement of gravel into the main stem of the Russian River. The result has been a downcutting of the streambed below the dam. Since the dam was constructed approximately 6,000 acre-feet of sediment have collected in the reservoir (reducing the storage capacity from 122,400 acre-feet to 116,470 acre-feet.

[33] Federal Register, Vol. 72, No. 67, p. 17524, April 9, 2007.

The loss of gravel from the East Fork plus instream gravel mining reportedly caused the streambed at Ukiah to drop 16 feet between the mid-1960s and the mid-1980s. In the past the Mendocino County Water Agency (MCWA) measures cross sections of the river at certain bridges, as part of work initiated when it developed the *Russian River Aggregate Plan* (which was never adopted by the County). MCWA staff state that, in general, the downcutting in the plan area has slowed.

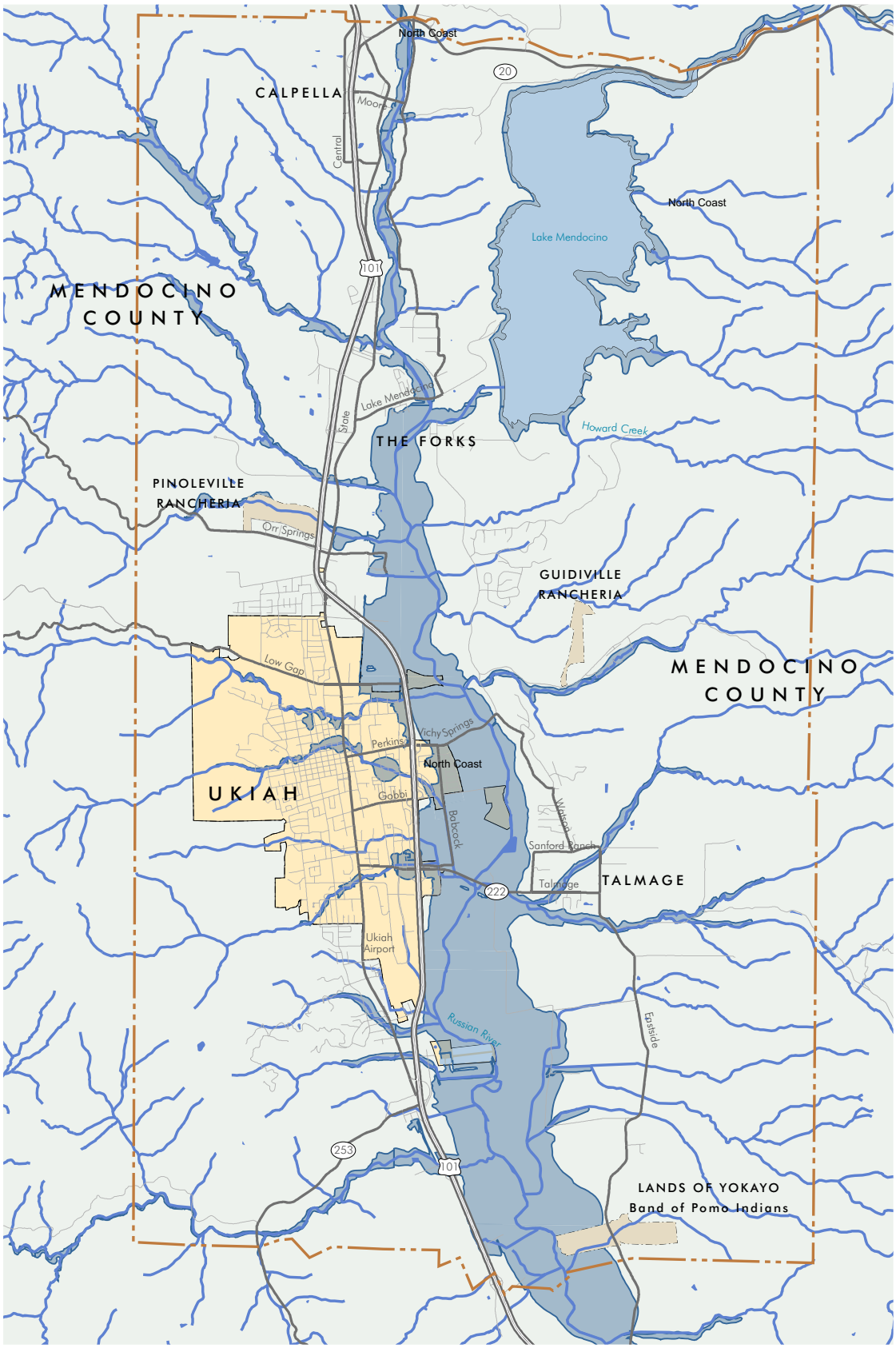
3. Flooding

Annual runoff in the Russian River drainage is highly variable. Historically, flooding occurred on a frequent basis. The annual discharge is 1,600,000 acre-feet with the extremes varying from 4% of normal (1977) to 265% of normal (1983) at the Hacienda Bridge in Sonoma County, which is the gauging station which is farthest downstream on the Russian River. There are four gauging stations in Mendocino County. The maximum daily mean discharge of record on the West Fork of the Russian River was 18,900 cubic feet per second (cfs) on December 21, 1955. Other daily maximums include 18,700 cfs for the East Fork of the river on December 22, 1964; 13,300 cfs downstream of Coyote Dam on the East Fork on December 21, 1955; and 45,000 cfs at Hopland on December 22, 1955. Since the construction of Coyote Dam, the maximum discharge below the dam was 7,350 cfs on January 24, 1970.

As noted above, Coyote Dam was constructed, in part, to control flooding on the Russian River. The watershed above the dam is about 105 square miles, or about 7.1% of the total Russian River watershed. As part of building the dam, the Army Corps of Engineers constructed 91 channel stabilization projects along a 15-mile stretch of the river from Calpella to about 5 miles north of Hopland. These channel stabilization projects were necessary to control bank erosion caused by dam releases. The Army Corps and the Russian River Flood Control and Water Conservation Improvement District are responsible for maintaining these projects.[34]

While Coyote Dam reduced the size and frequency of flooding, flooding continues along the river as well as along its tributaries. Figure 3-6 shows the mapped 100-year floodplain for the river and its tributaries. The “100-year flood” is a flood that has a one percent chance of being equaled or exceeded in any given year. The land area subject to inundation by the base flood is referred to as the “100-year floodplain.” The 100-year floodplain is delineated on Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (FEMA) for regulatory purposes concerning flood insurance. The floods that occurred at the beginning of 2006 extended beyond the floodplain as shown on the adopted FEMA maps. The maps are out of date; FEMA has recently updated these maps and they are scheduled for adoption on June 1, 2011. Generally, development within a floodplain is discouraged as it not only subjects structures and other development to flood waters, but also can increase flood elevations by displacing storage capacity in the floodplain. The Mendocino County Floodplain Combining District allows development in the floodplain if the building floor is elevated above the base flood level.

[34] *History of the Development of the Water Resources of the Russian River*, Robert F. Beach, February 2002.



Mendocino County
City of Ukiah
Ukiah Valley Planning Area
Railroad
Tribal Land
River and Tributaries
Freeway
Arterial
Local Road
100-year Flood Plain

0 2,500' 5,000' 7,500'

Figure 3-6 100-Year Floodplain

Source: Mendocino County Planning & Building Services

There are a number of areas particularly susceptible to flooding. Mill Creek, in the vicinity of Talmage, has inadequate capacity to carry even minor storm flows. There is recurring flooding in the vicinity of its confluence with the Russian River. A major portion of the residential development in Talmage is subject to flooding from Mill and McClure Creeks, particularly the Talmage Court neighborhood.[35] Much of the east side of Ukiah frequently floods between Highway 101 and the river (specifically, the Oak Manor neighborhood and the area between Babcock Lane and Highway 101, south of Gobbi Street).

4. Dam Inundation

If Coyote Dam were to fail during a major earthquake, or for some other unforeseen reason, much of the lower-lying part of the plan area would be flooded. Occurrence of dam failure would likely result in deaths and injuries and cause substantial property damage.

5. Surface Water Quality

The North Coast Regional Water Quality Control Board (RWQCB) is responsible for ensuring the quality of the water in the plan area. The goals and standards for water quality are established in the *North Coast Basin Plan*. This plan identifies ways to curb water pollution in order to maintain the "beneficial uses made of water." These "uses" form the basis for all water quality protection efforts. Beneficial uses, include domestic and municipal water supply, preservation and enhancement of fish and wildlife, and recreation. Beneficial uses of water demand different physical or chemical criteria for their protection. Because of this, water quality objectives for a given stream (or water source) are geared to "the most sensitive use." The most sensitive beneficial uses supported by the Russian River include uses associated with the cold-water fishery and municipal and domestic water supply.[36]

The most critical water quality problems within the plan area are sedimentation and water temperature. The major sources of sediment include 1) erosion from barren or poorly vegetated soils, 2) erosion from the toes of slides along stream channels, and 3) sediment input from unpaved roads. Human-caused sources of sedimentation are a by-product of current and historical land uses, including logging, agriculture, mining, road construction, continued use of unpaved roads, and other development-related activities within the County.

Water temperature is affected by the volume of water flowing in the stream, the amount of sunlight reaching the water surface, and the daily average air temperature. Elevated water temperature may adversely affect different life stages of anadromous fish (i.e., species that migrate from the ocean to freshwater streams to spawn and breed). Shade cover from riparian vegetation has been reduced through historical land uses, as well as by high flows occurring during the major 1964 flood.

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[35] *International Institute of Philosophy and Ethics Draft EIR*, Leonard Charles and Associates, 2001.
[36] *Water Quality Control Plan, North Coastal Basin*, Regional Water Quality Control Board, North Coast Region, 2007.

Long-term presence of toxic substances have rarely been detected during river monitoring. Sediment sampling in 1985, 1986, and 1995 detected no pesticides in sediments. Monitoring of heavy metals exhibited no trends except for higher zinc levels downstream of heavily urbanized areas. Toxic substance sampling in resident fishes and in transplanted (i.e., caged) freshwater clams as part of the North Coast RWQCB's Surface Water Ambient Monitoring Program has occasionally detected pesticides and/or heavy metals in tissues. There is one toxic substance that shows a consistent trend, which is the presence of mercury in fish from Pillsbury, Mendocino, and Sonoma Lakes.[37]

The Clean Water Team (First Flush Volunteer Project) conducted monitoring of runoff from the first major storm of 2002 (November 6-8, 2002) throughout the Russian River watershed, including at three locations in the plan area. There has not been subsequent "first flush" monitoring due to lack of funding. One local monitoring site was on Gibson Creek, one was on the West Fork of the Russian River, and one was on the East Fork of the Russian River above Lake Mendocino. This monitoring indicated that water quality in the Russian River in the Ukiah area was better than at many downstream locations, while water quality in Gibson Creek (as measured at Gobbi Street) was more polluted. For example the sampling showed 200 MPN/100ml of *E. coli* at the East Fork of the Russian River sampling station, 740 at the West Fork station, and 6,900 at the Gibson Creek station. Diazinon is a wide range insecticide used for control of pests in yards and gardens and which is highly toxic to many species of crustaceans and aquatic insects. Diazinon concentrations in the water ranged from 30 mg/L at the East Fork, 60 at the West Fork, and 120 at the Gibson Creek stations. Total Suspended Solids (TSS) ranged from 22 mg/l at the West Fork (the East Fork was not sampled for TSS) to 25 mg/l at the Gibson Creek station.[38] These samples are typically worst case conditions since they measure the runoff from the first major storm, and this storm is washing off pollutants that may have collected on streets and other impermeable surfaces for many months. However the data give a picture of how smaller tributaries that drain urbanized areas can contribute significant pollution to the river.

The RWQCB monitors water quality at a station on Mill Creek at Talmage Road. This is one of four RWQCB monitoring stations on the Russian River used for the Surface Water Ambient Monitoring Program (SWAMP); the other three stations are at Cloverdale, Healdsburg Memorial Beach, and Johnson's Beach. Mendocino County Water Agency monitors water temperature on the Russian River. In general, the data show that water quality in Ukiah is better than at downstream monitoring sites. While there is some indication of organic compounds associated with agricultural practices, the concentrations are very low, approaching the No Detection threshold.

The State's Municipal Storm Water Permitting Program regulates stormwater discharges from Municipal Storm Systems. Municipal Storm System permits were issued to jurisdictions in two phases. Under Phase I, which started in 1990, the RWQCBs have adopted National Pollutant Discharge Elimination System (NPDES) stormwater permits for medium (serving between 100,000 and 250,000 people) and large (serving 250,000

[37] *Russian River Draft Biological Assessment*, Entrix, Inc., 2004, prepared for the U.S. Army Corps of Engineers and the Sonoma County Water Agency.
[38] *2002 Russian River First Flush Summary Report*, Revital Katznelson, Clean Water Team, the Citizen Monitoring Program of the State Water Resources Control Board, June 2003.

people) municipalities. Most of these permits are issued to a group of co-permittees encompassing an entire metropolitan area. These permits are reissued as the permits expire. As part of Phase II, the State Water Resources Control Board (SWRCB) adopted a General Permit for the Discharge of Storm Water from Small Municipal Storm System (WQ Order No. 2003-0005-DWQ) to provide permit coverage for smaller municipalities.

The Municipal Storm System permits require the discharger to develop and implement a Stormwater Management Program with the goal of reducing the discharge of pollutants to the Maximum Extent Practicable (MEP). MEP is the performance standard specified in Section 402(p) of the Clean Water Act. The management programs specify what Best Management Practices (BMPs) will be used to address certain program areas. The program areas include public education and outreach; illicit discharge detection and elimination; construction and post-construction; and good housekeeping for municipal operations. In general, medium and large municipalities are required to conduct chemical monitoring, though small municipalities are not.

As required by Phase II, the County has developed a Stormwater Management Program. The program was specifically developed for the urbanized area around Fort Bragg and Ukiah, as these two cities were listed as urban areas subject to the Phase II requirements (and each city has developed and adopted its own Stormwater Pollution Prevention Program). The Program applies to the urbanized areas as well as to all projects that meet the Phase II requirements. The Program contains over 50 Activities/Best Management Practices aimed at reducing sedimentation and pollution of waterways.

Under the Phase II NPDES program, which went into effect on March 10, 2003, construction sites disturbing between one and five acres of land are also required to obtain coverage under the General Construction Activity Stormwater Permit. Permit applicants are required to prepare a Stormwater Pollution Prevention Plan (SWPPP), implement construction-related BMPs, monitor discharges, and implement post-construction BMPs. Typical construction BMPs include temporary soil stabilization measures (e.g., mulching, seeding); storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or stormwater; and using filtering mechanisms at drop inlets to prevent contaminants from entering storm drains. Typical post-construction management practices include street sweeping and cleaning of stormwater inlet structures.

In December 2010, the County adopted a Stormwater Ordinance and a Standard Urban Storm Water Mitigation Plan. This Ordinance and Plan describes how developers and others cannot pollute the storm drain system or surface waters. The County can require the use of BMPs to prevent such pollution.

6. Impaired Water Bodies and the TMDL Process

Section 303(d) of the Clean Water Act (CWA) requires states to develop a list of impaired water bodies where technology based on effluent limits or other legally required pollution control mechanisms are not sufficient or stringent enough to meet water quality standards. A pollution control plan, called a Total Maximum Daily Load (TMDL), must be

developed for each water body and the pollutant or stressor causing impairment on the 303(d) List. The TMDL serves as the means to attain and maintain water quality standards for the impaired water body, allowing for seasonal variations and an appropriate margin of safety.

The SWRCB is responsible for making determinations for the 303(d) List of Impaired Water Bodies. The 303(d) List is promulgated by the EPA, which prepares the TMDL according to a prioritized schedule. The RWQCBs prepare Technical Support Documents that form the basis for SWRCB and EPA actions. The RWQCBs are also responsible for developing and carrying out the TMDL implementation plans subsequent to plan approval by the State Office of Administrative Law and EPA.

The most sensitive beneficial uses of the Russian River are associated with the cold water fishery and municipal and domestic water supplies. The Russian River provides habitat for coho salmon and steelhead trout, which are listed as threatened species under the Federal Endangered Species Act (ESA). The Russian River is on the 303(d) list associated with excessive sediment and temperature (RWQCB, 2006). It is anticipated that development of implementation plan(s) for Russian River TMDL(s) will follow the processes used for other streams in Mendocino County. The RWQCB is aggressively working with local governments and agencies within the Russian River watershed to reduce water quality impacts associated with temperature, sedimentation, dissolved oxygen, and aluminum.[39] The implementation plan for the Russian River is pending dependent on completion of plans for other impaired streams.

7. Groundwater

Groundwater is water occupying openings, cavities, and spaces below the land surface, in the zone of saturation. These zones of saturation are often referred to as aquifers. The chief source of water is precipitation, but only a fraction of the precipitation that falls on a given area percolates into the subsurface to become groundwater. Some is returned to the atmosphere by plants in a process called evapotranspiration, while the remainder generally becomes surface runoff.

Within the plan area, groundwater is found in two distinct geologic settings: the valley bottom and the adjacent hillside areas. The distinctive geologic attributes of each unit result in differences in water-bearing properties. Hillside areas are underlain by consolidated rocks of the Franciscan and Knoxville Formations. The consolidated rocks are commonly dry and generally supply less than 5 gallons per minute of water to wells.[40]

The valley is underlain by thick deposits of valley fill. Valley fill occupies about 70 square miles in Ukiah Valley. The fill has been subdivided into continental basin deposits, continental terrace deposits, and Holocene alluvium. Wells completed in the continental deposits produce water slowly because of the fine-grained material and consequent low permeability. Wells completed in continental terrace deposits generally yield between 1 and 10 gallons per minute; though yields as high as 100 gallons per

[39] *Background Report for the County of Mendocino General Plan Update*, *op. cit.*
[40] *Ibid.*

minute have been reported. The Holocene alluvium is the most productive aquifer in Ukiah Valley and can provide sufficient water for sustained pumpage from municipal and irrigation wells. The average yield of 155 domestic wells was 220 gpm (a range of 15 to 600 gpm), while the average for 36 municipal and irrigation wells was 115 gpm with a range of 36-115 gpm.[41] It is estimated that the Ukiah Valley aquifer has a storage capacity of about 90,000 acre-feet in the upper 100 feet of the most productive area and another 45,000 acre-feet in terrace deposits along the edge of the valley. Abundant rainfall generally recharges these basins to capacity. Seasonal water-level fluctuations since the 1950s have been nearly constant, except during periods of drought.[42]

Groundwater is used by several municipal water suppliers in the plan area, and also is the source of water for agricultural irrigation and for residences outside the boundaries of County water districts or other suppliers. In many cases, it is unclear whether wells in the plan area are tapping actual percolated groundwater aquifers or the underflow of the Russian River (i.e., that the aquifer is actually an ancient stream channel that is being replenished by flow of the river); the underflow is not technically considered groundwater (see the subsequent discussion of water in ***Section 3.10 (Public Services and Utilities)*** for further details about the use of groundwater).

8. Groundwater Recharge

Groundwater recharge is the replacement of water in the groundwater reservoir. This replacement water occurs in the form of precipitation, surface runoff, irrigation, and in some cases by imported water. The rate of recharge varies with the pattern of precipitation, evapotranspiration, and permeability of the subsurface materials and overlying soil.

Recharge for the plan area groundwater basins comes primarily from infiltration and deep penetration of precipitation and intercepted runoff in stream channels and permeable soils of alluvial fan areas along the margins of valleys.

Sound management of groundwater resources requires knowledge of groundwater basin properties and dynamics of local ground and surface water systems. Limiting groundwater withdrawals to the amount of water recharged to the aquifer is termed “sustained yield.” The geohydrologic consequences of overdrafting groundwater may include land subsidence, degradation of water quality as poorer quality water migrates to overdrafted areas, permanent loss of storage capacity through compaction, and diminished baseflow to streams.

The Department of Water Resources (DWR) Northern District and the U.S. Geological Survey have limited groundwater-monitoring programs in Mendocino County. Monitoring is conducted primarily in and around Ukiah. Monitoring is inconsistent, as many wells have not been monitored since the early 1980s. Groundwater level measurements are made in spring when levels are highest and/or in fall when levels are lowest. Measurements for all State-registered wells in Mendocino County, some dating back to

[41] *Ukiah Valley Groundwater Basin*, California's Groundwater Bulletin 118, Department of Water Resources.
[42] *Ibid.*

the 1960s, are available at the DWR Northern District's Internet site and in printed reports.

Groundwater levels in the past 30 years have remained relatively stable, with typical seasonal fluctuations, but no significant long-term trends. Water levels indicate that basins fill to capacity each spring. During drought conditions, increased drawdown occurs during summer months with less recovery in winter months. Post-drought levels have rebounded to approximately the same as pre-drought conditions.

In February 2002, DWR and the Mendocino County Water Agency entered into a cooperative agreement to initiate additional well monitoring in Anderson and Sanel Valleys due to projected future development, which will rely heavily on groundwater. There are two new wells in Sanel and Anderson Valley, respectively. The additional monitoring is part of the Governor's Dry Year Planning Studies program and is intended to bring more clarity to the capacity, yield, and health of aquifers underlying these valleys. Data from the monitoring of these wells will be available on the DWR website mentioned above. MCWA is conferring with the City of Ukiah about possibly doing well monitoring in Ukiah Valley, but so far no program has been developed.[43]

9. Groundwater Quality

Water quality in the plan area is generally good, though certain locations experience high boron levels (around the valley edges), with anecdotal reports of poor water quality along the west edge of the plan area.[44]
Potential for groundwater contamination in the valley bottom is increased because of the shallow depth of the water table. For example, the groundwater level at the site of the Ukiah Solid Waste Transfer Station on the east side of Highway 101 south of Ukiah is 1.5 to 6 feet.[45] Areas underlain by permeable materials or with poor surface drainage, excavation sites, areas where septic tanks are in use, and agricultural areas with heavy applications of fertilizers or pesticides are at greatest risk of contamination. Other potential factors that may lead to potential groundwater contamination include urban runoff and improperly drilled or sealed wells.

B. Potential Impacts and Mitigation Measures

1. Criteria Used For Determining Impact Significance

Land uses and development consistent with the Draft 2007 UVAP would have a significant impact if it:

- Violates any water quality standards or waste discharge requirements.
- Substantially depletes groundwater supplies or interferes substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a

[43] Roland Sanford, personal communication, 2/21/08.
[44] *Ukiah Valley Groundwater Basin*, op.cit.
[45] *Ukiah Solid Waste Transfer Station Draft EIR*, Leonard Charles and Associates, 1999.

lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

- Substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

- Substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increases the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

- Creates or contributes runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provides substantial additional sources of polluted runoff.

- Otherwise substantially degrade water quality.

- Places housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood delineation map.

- Places structures within a 100-year flood hazard area that would impede or redirect flood flows.

- Exposes people or structures to significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.

- Is subject to inundation by seiche, tsunami, or mudflow.

- Results in or requires the construction of new stormwater drain facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

2. Project Impacts

This section will describe the potential hydrology and water quality impacts resulting from buildout of the Draft 2007 UVAP as per each of the significance criteria discussed above.

Development within Areas Subject to Flooding

Impact 3.3-A **Land uses and development consistent with the Draft 2007 UVAP could occur within flood zones and would expose more people and property to flood hazards.**

Constructing new residences or businesses within the 100-year floodplain would expose people to injury or death and result in substantial damage to structures and other improvements should a flood occur. For the areas where the most growth is anticipated,

the following areas would be most affected by flooding (albeit, generally quite shallow flooding): about 50% of the North State Street area and Masonite area, almost all of the Brush Street Triangle and about 10% of the area classified for RR-1 development on the east side of the Russian River south of Calpella. Table 3.3-1 describes the approximate amount of new development that would be allowed in the floodplain as it is currently mapped; the table shows the development potential for the proposed plan as well as the three plan alternatives.

Table 3.3-1
New Potential Development Within the Russian River 100-Year Floodplain

	Number of New Dwelling Units	Commercial (square feet)	Industrial (square feet)
Draft 2007 UVAP	1,139	0.2-0.6 million	2.0 million
Existing General Plan and Alternative C	184	0.1-0.2 million	2.7 million
Alternative A	816	0.2-0.6 million	2.0 million
Alternative B	651	0.5-0.7 million	2.0 million

Source: Mendocino County Department of Planning and Building Services

Substantial new development is not proposed or projected in the areas within the County's jurisdiction that currently experience the most frequent flooding, namely the area east of Ukiah along the Russian River and the Talmage area. The Talmage area is mainly built out and few if any new units are expected in the area subject to flooding. The area between Talmage and Ukiah is classified as Agriculture.

The County currently requires that new buildings be constructed so that the floor of the living or working space elevated at least one foot above the level of the 100-year flood as shown on the FEMA maps.

These existing requirements, plus other County restrictions on developing within the 100-year floodplain, should provide adequate protection from flooding. However, the FEMA 100-year floodplain mapping is based on projected buildout given the General Plans of the pertinent jurisdictions at the time that the map was prepared. The maps for the Ukiah Valley were prepared in 1983, prior to the adoption of the new City of Ukiah General Plan, General Plan Amendments approved by the County, and this Draft 2007 UVAP. These plans and amendments have allowed or would allow more development than predicted when the 1983 FEMA maps were prepared. Again, these maps are being updated and new maps will be adopted in June 2011.

In addition, allowing development within a floodplain puts people at risk even if the floor of their dwelling is one foot above the predicted 100-year floodplain level. Access roads and streets may be at lower elevations impeding emergency response and evacuation. Floods could be of greater intensity than the predicted 100-year flood, thereby causing flooding of homes. Finally, additional development within the watershed could increase flood elevations.

The Draft 2007 UVAP addresses this flooding impact in several polices and implementation measures contained in the Health and Safety Section. Measures under

Policy HS1.2 state that the zoning ordinance will be revised to prohibit new development within the floodway (though such development is already prohibited by FEMA). This would avoid development within the most hazardous portion of the floodplain and ensure that new development does not impede or alter the flow in the floodway. ***Implementation Measure HS1.2a*** states that the County will request that FEMA to update floodplain mapping so as to provide accurate mapping of the area affected by flooding. ***Implementation Measure HS1.2b*** states that the County will develop a comprehensive flood management plan. This plan would include:

- Specific flood protection goals and means to realize those goals;
- Better-defined buildout calculations given new floodplain mapping;
- Floodplain protection actions including: structural improvements like overflow channels, environmental restoration and river parkway concepts, mitigations such as restoring active floodplain areas and floodproofing improvements, and floodplain management practices such as requiring increased elevation for new buildings in the floodplain;
- Policies for managing development in dam inundation areas; and
- Recommendations for updating regulations and development standards in the watershed.

Implementation Measure HS1.2c also requires that development standards within the floodplain be updated based on the flood management plan recommendations and that these revised standards be enforced. Until the flood management plan is completed, new development within the floodplain would be required to minimize fill, encroachments, and impervious surfaces (unless stormwater retention facilities are included). ***Implementation Measure HS1.2e*** states that the County would revise its Zoning Code to require new development to retain or reduce runoff from development sites, thereby reducing peak runoff and flooding.

Implementation measures included under ***Policy WM4.1*** states that the County would develop plans and standards to reduce peak runoff from new development. ***Policy OC1.1*** sould develop a riparian systems management plan that would describe the function of each plan area stream and describe how it will be managed, which may include management for stormwater drainage and flooding. ***Policy HS1.2*** states that the County will adopt the No Adverse Impact Standards for floodplains that have been developed by the Association of State Floodplain Managers. These standards require flood studies for new development based on plan area buildout. They require that new development not increase the floodway elevation or flood-flow velocity, and not decrease floodplain storage. These standards are to be adopted within the first two years following UVAP adoption. This policy has also been incorporated into the new General Plan (*General Plan Policy DE-199*), though the General Plan does not contain a timeline for adoption of the Standards.

Developing the recommended flood management plan and the No Adverse Impact Standards, and amending the Zoning Code to codify new development standards within the floodplain would likely limit exposure of residents and businesses in the newly mapped floodplain to flooding. However, the Draft 2007 UVAP states that the floodplain management plan would not be completed for 3-5 years. Adoption of a final plan and requisite amendment of the Zoning Code could take longer. The No Adverse Impact

Standards are slated to be adopted sooner. However, until the floodplain mapping is completed and the flood management plan and the No Adverse Impact Standards are adopted and codified into the Zoning Ordinance, the guidance that the Draft 2007 UVAP provides for regulating new development within the floodplain is limited to ***Policy HS1.2***, which states that new development will minimize filling in the floodplain and the amount of encroachment and impervious surface. These policies and measures are all consistent with policies in the new County General Plan calling for compatible uses of floodplain land (*General Plan Policies DE-192 to DE-200*). *General Plan Policy DE-198* states that new lots that do not have a flood-free buildable area cannot be created.

Therefore, the Draft 2007 UVAP does not provide adequate protection for new development within the floodplain. The impact remains ***potentially significant.***

Mitigation Measure

3.3-A.1 The County shall not approve new discretionary permits for development within the 100-year floodplain of any stream in the plan area unless it can be shown that new development would not be subject to flooding. To accomplish this mitigation, the following implementation measures shall be revised or added to the Draft 2007 UVAP:

HS1.2a Flood Hazard Mapping
~~Collaborate with the~~ Request that Federal Emergency Management Agency and other relevant agencies ~~to~~ update flood hazard mapping for the Russian River watershed.

HS1.2c 100-Year Floodplain Development Standards and Restrictions
Enforce standards and restrictions for development within the 100-year floodplain. Update standards and restrictions based on Flood Management Plan recommendations. ~~Preliminary development standards and restrictions should:~~ Until the Flood Management Plan and the No Adverse Impact Standards are adopted and the revised 100-year floodplain mapping is completed, new development within the 100-year floodplain will be required to comply with the following conditions:

- Each discretionary project within the 100-year floodplain will be required, using an methodology acceptable to the County Water Agency, to identify the 100-year floodplain elevation on the site given buildout under the 2007 UVAP;
- The finish floor of each new development will be constructed at least one foot above the 100-year flood elevation as defined by the above-described modeling;
- Design and condition discretionary projects within the 100-year floodplain (including subdivision and use permits) and future site development to minimize fill, encroachments and impervious surfaces; and
- Amend the Floodplain Combining District to require local performance standards to minimize encroachments, fill and impervious surfaces lacking stormwater runoff retention features.

- To the maximum extent practical, avoid constructing critical facilities within the designated 100-year floodplain areas or areas potentially subject to inundation by dam failures (or other water impoundment facilities) or seiche.

[*Timeframe: ongoing. Responsibility: Mendocino County Water Agency and Department of Planning and Building Services*]

Impact Significance After Mitigation

The revisions and additions to the policies would require that new development is constructed so that finish floors are above the predicted 100-year flood elevation. This would reduce the impacts to below the significance criterion so that the impact would be ***less than significant***. However, there would remain the risk from storms greater than the predicted 100-year event as well as evacuation/emergency response problems when the area is flooded. Though additional mitigation is not needed to reduce the impact to a less than significant level, the County could consider reclassifying lands within the floodplain to Agriculture or Recreation to avoid urban development in the floodplain. This would eliminate the impact plus have the benefits of maintaining agricultural use of lands suitable for agriculture; providing additional area for groundwater recharge, additional wildlife habitat, and recreational opportunities; and maintain open space views.

Flooding from Dam Failure

Impact 3.3-B **Land uses and development consistent with the Draft 2007 UVAP could occur in areas subject to seiche, mudflow, or dam inundation.**

Areas potentially subject to mudflow have not been mapped for the plan area. It is likely they are similar to areas prone to landsliding. Protections from geologic and seismic hazards were addressed in the previous section on Geology and Soils. A seiche is an oscillation of the water surface in a lake or other body of water caused by an earthquake. Similar to a tsunami, a seiche can cause wave action that threatens buildings and people near the lake. No seiche predictions have been developed for Lake Mendocino, but the impacts are not expected to be significant since there are no homes near the shore.

A major earthquake could cause failure of Coyote Dam. The most current published information finds that the dam meets seismic safety standards.[46] There are also preliminary studies that indicate that the dam spillway is not adequately sized to handle the maximum probable flood. If that were true, then the dam could overtop, which might threaten its integrity.[47] If dam failure were to occur, it would likely cause a major loss of life and property. Figure 8.1 of the Draft 2007 UVAP shows the area that would be inundated if the dam were to fail. Much of Calpella, The Forks, the North State Street area, the Masonite area, and eastern Ukiah would be inundated. This is a ***potentially***

[46] Based on personal communication from Sally Palacio to Pam Townsend, 1/30/07, which is based on the 1986 *Preliminary Dynamic Response Analysis*.
[47] Roland Sanford, personal communication, 2/21/08.

significant impact. Table 3.3-2 lists the amount of new development within the Coyote Dam inundation zone allowed under the Draft 2007 UVAP and the land use alternatives.

Table 3.3-2
New Potential Development Within the Coyote Dam Inundation Zone

	Number of New Dwelling Units	Commercial (square feet)	Industrial (square feet)
Draft 2007 UVAP	2,337	1.5-3.3 million	2.4 million
Existing General Plan and Alternative C	409	0.66-1.4 million	3.7 million
Alternative A	2,016	1.4-3.0 million	2.6 million
Alternative B	969	1.1-1.4 million	3.2 million

Source: Mendocino County Department of Planning and Building Services

To address this impact, the Draft 2007 UVAP includes ***Implementation Measure HS1.2b*** that recommends development of a flood management plan. This plan will include policies for managing development in the dam inundation area. The addition to ***Implementation Measure HS1.2c*** described in Impact 3.3-A would limit the location of critical facilities within the inundation zone.

The EIR prepared for the County General Plan found this impact to be less than significant because the dam is regulated by the Division of Safety of Dams of the California Department of Water Resources and is routinely inspected during its impoundment life, which includes monitoring for compliance with seismic stability standards. This EIR concurs with that conclusion, and the impact is ***less than significant.***

Flooding Caused by New Development

Impact 3.3-C **Land uses and development consistent with the Draft 2007 UVAP would result in increases in stormwater runoff and peak discharge. Existing storm drain systems, including urban creeks and the Russian River, may be incapable of accommodating increased flows, potentially resulting in on- or off-site flooding.**

The potential development of as many as approximately 5,430 new residential units and 6 million square feet of new non-residential development would result in a substantial increase in the amount of impermeable surface in the watershed. Because pavement, roofs, and other impermeable surfaces do not allow rainfall to permeate into the soil, this increase in impermeable surface causes an increase in the total amount of runoff and the speed at which water runs off. These changes can increase the severity, frequency, and/or duration of flooding. Determining the precise effects of this impact would require detailed hydrologic analysis for the entire watershed. For example, a site developed in a downstream stretch of a river might not adversely affect flooding and could even decrease flooding. This is because runoff could leave the site and enter the river before

the main flow coming from further upstream, whereas in its undeveloped state, the runoff would be slower and potentially coincide with the main upstream flow and add to that main flow. This is a brief example of the complexity of calculating the effects on flooding from development of any particular site.

New development along tributaries of the Russian River could cause flooding along those tributaries. For example, the EIR prepared for the International Institute of Philosophy and Ethics in Talmage determined that new non-residential development on that site could exacerbate flooding in Talmage downstream on Mill Creek.[48] The County correspondingly required on-site detention facilities so the project would not aggravate the existing flooding problem.

Since at this time the location and type of construction and the amount of impervious surfaces are not known, it is not possible to provide quantitative calculations and mapping of the possible increase in flood elevations or flood frequency. However, the increased amount of impermeable surface will increase overall runoff which will potentially increase the severity, duration, and/or frequency of flooding. It is likely that future floodplains would exceed those shown on the FIRM maps and on Figure 3-6 .

Several policies and implementation measures of the Draft 2007 UVAP address potential drainage and flooding issues associated with future development and land uses. As discussed in Impact 3.3-A, ***Policy HS1.2*** would require the County to develop a flood management plan. This plan would address flooding issues in the plan area and develop regulations to guide new development. However, it could take many years to adopt such a plan, change the Zoning Ordinance to incorporate its recommendations, and implement those recommendations. Another measure under this policy would develop a stormwater management program to minimize flooding damage to agricultural operations in the plan area.

Policy WM4.1 states that the County will, to the extent practical, design stormwater drainage facilities within the plan area in accordance with the *Guidelines for the Standard Urban Storm Water Mitigation Plan* (SUSWMP guidelines) and the *Mendocino County Road and Development Standards.* ***Policy OC1.1*** contains measures to develop a riparian systems management plan that would describe the function of each plan area stream and describe how it will be managed, which may include management for stormwater drainage and flooding. This plan would be developed by the County Water Agency within two years of plan adoption. However, funding and implementation of this plan is slated for the intermediate term, and no funding source has been identified at this time.

Policy HS1.2 states that the County will adopt the No Adverse Impact Standards that have been developed by the Association of State Floodplain Managers. These standards require flood studies for new development based on plan area buildout. They require that new development not increase the floodway elevation or flood-flow velocity, and not decrease floodplain storage. These standards are to be adopted within the first two years following plan adoption.

[48] *International Institute of Philosophy and Ethics Draft EIR, op. cit.*

Because the existing FEMA maps are out of date, the amount of new development that could occur under the Draft 2007 UVAP would exacerbate the flooding identified in the existing FEMA maps, and the Draft 2007 UVAP does not ensure that the allowed new development would not cause additional flooding, at least over the next 2-3 years, the impact would remain ***potentially significant.***

Mitigation Measures

3.3-C.1 The County shall not approve new discretionary permits for development unless it can be shown that the development will not cause flooding of downstream properties. To accomplish this standard, the following implementation measures shall be added to the Draft 2007 UVAP:

HS1.2g Interim Stormwater Plan
Until such time as the County completes and adopts the No Adverse Impact Standards, individual project applications shall be required to analyze and mitigate drainage impacts. If such analysis identifies unmitigated and cumulative significant effects, including impacts on downstream flooding, further environmental documentation may be required. In the event that the County Department of Planning and Building Services determines that the project, when considered cumulatively with other projects to be undertaken in the drainage basin, will result in a significant effect with respect to downstream flooding, the project applicant will either: a) prepare a supplemental environmental impact report on such effect, or b) agree to modify the project to construct improvements or participate in a funding mechanism necessary to mitigate any downstream flooding impacts (such as posting a bond on funds prior to recordation of the final map in an amount to be determined by the County Department of Planning and Building Services). Failure to modify the project or to propose further environmental documentation shall be grounds for finding the project inconsistent with the UVAP. Payment of costs for drainage facilities to handle the surface runoff from new development shall be the responsibility of developers. *[Timeframe: Short-term. Responsibility: Department of Planning and Building Services]*

Impact Significance After Mitigation

The policies and the revised measure listed above provide for retaining or reducing runoff to prevent flooding and ensuring that downstream drainage systems can adequately transport project-generated flows. The recommended implementation measure ensures that until such time as the County develops and adopts floodplain and drainage plans that new discretionary development would not cause additional flooding. Flooding will still occur within the floodplain, but this flooding is part of the existing setting. The policies and measures of the UVAP would ensure that new development does not increase the area affected by flooding, the depth of flooding, or the increase in flood velocity. The impact would be reduced to a ***less than significant*** level.

Impede or Redirect Flows in Flood Hazard Areas

Impact 3.3-D **Land uses and development consistent with the Draft 2007 UVAP could be located within the floodplain, displacing floodplain storage and expanding floodplain elevations. This increased runoff and floodplain displacement can result in secondary flooding, including bank instability and erosion.**

The Draft 2007 UVAP would continue to allow new development within the 100-year floodplain of the Russian River. As discussed above under Impact 3.3-A, the Draft 2007 UVAP contains several policies and implementation measures to mitigate the risks to people and improvements from developing within the floodplain. Especially relevant is ***Implementation Measure HS1.2a*** that states that the County will adopt the No Adverse Impact Standards for floodplains. These standards specify that new development cannot increase flood-flow velocity nor displace floodplain storage. Implementation of this policy to not displace floodplain storage, along with standard FEMA policies and current County zoning regulations in flood zones, would prevent most occurrences of flood flow impedance and flow redirection.

However, flood damage can also be defined more broadly to include bank failure and streambed and bank erosion during high flow events. Therefore, the geomorphic consequences of building in 100-year flood hazard areas associated with the obstruction or redirection of flood flows and increased downstream channel instability from increased flows and increased flood flow velocities also need to be considered.

The development of currently vacant land areas within floodplains, especially in rural areas that have not previously had drainage improvements made, typically involves the modification of minor surface waterways and tributary stream courses. Where development occurs within the floodplain of a larger stream course, most often some form of channel modification is required, either locally to accommodate new storm drainage outfalls, or as is sometimes the case, local stream re-alignment and structural bank stabilization. The practice of lining channel banks with rock riprap and other hard structures can cause cross bank and downstream channel instability problems. In some cases where the toe or face of the structures encroach into the stream channel, this can also redirect flow, constrict channels (causing backwater flooding effects), or increase local turbulence and flow velocities (causing bank erosion).

Local storm drainage modifications, stream channel alterations, and structural bank stabilization measures can create significant flooding impacts. In some cases these include redirecting or moving existing flooding and channel instability problems cross channel or downstream, or by changing the timing of peak flows and the point of discharge of runoff.

The Draft 2007 UVAP contains several policies that would reduce displacing floodplain storage and ensure that new development does not exacerbate flooding. These policies are listed in the discussion of Impact 3.3-C. Structures placed in the floodplain are allowed, but only outside the floodway such that they would not be expected to substantially impede or substantially redirect flood flows. However, these regulations and policies would not avoid alteration of the channel environment nor would they avoid new

construction in flood hazard areas. Therefore, this would be a ***potentially significant impact***.

Mitigation Measures

3.3-D.1 The County shall design new drainage improvements to minimize streambank erosion by adding the following implementation measure to Policy WM4.1:

> **WM 4.1e Streambank Protection**
> Develop, adopt, and oversee Best Management Practices for bank stabilization and erosion control to prevent erosion and siltation in drainage swales and streams. *[Timeframe: Short-term. Responsibility: Water Agency]*

Impact Significance After Mitigation

The policies of the Draft 2007 UVAP and the recommended mitigation reduce the impacts associated with flow impedance and redirection of flood flows. The impact would be ***less than significant.***

New Storm Drain Facilities

Impact 3.3-E **Land uses and development consistent with the Draft 2007 UVAP could result in the need for new or enlarged storm drain facilities whose construction could result in adverse environmental effects.**

As discussed previously in Impact 3.3-C, land uses and new development that may occur in the plan area would increase runoff. It is possible that existing storm drain facilities may not be able to transport this increased runoff without causing localized flooding. While on-site drainage facilities may be required to satisfactorily transport project-generated flows, the cumulative impacts of all new projects could exceed the capacity of older, existing storm drain facilities. The resulting flooding would be a potentially significant impact as described in Impact 3.3-C. Constructing new storm drain facilities could result in site-specific impacts at the locations where those facilities are installed. For example, new development may require the replacement of a downstream culvert or drain pipe which is of insufficient size to transport the new flows. Digging up the ground to replace the culvert or pipe could cause potentially significant impacts to sensitive vegetation, wetlands, streambanks, etc. This construction could cause potentially significant noise impacts, traffic delays, and other impacts.

Constructing new flood control facilities that might be recommended in the riparian system management plan called for in ***Policy OC1.1*** or the comprehensive flood management program called for in ***Policy HS1.2*** could cause similar impacts on the environment. These would be ***potentially significant impacts.***

Mitigation Measures

These storm drain and/or flood improvement projects would either be conducted by a County agency or department or by a private developer as a condition of approval for a project requiring a discretionary permit. In either case, the project would be subject to CEQA review and mitigation to reduce any impacts. The CEQA review would include requirements that the project comply with the policy direction of the Draft 2007 UVAP, the General Plan, and existing regulations and requirements contained in the County code and/or State and Federal regulations. Without knowing the precise project and where it would be constructed, it is not possible at this stage to recommend mitigation measures that might be needed for each project.

Impact Significance After Mitigation

While it is possible that all site- and project-specific impacts may be reduced to a less than significant level, this cannot be predicted at this time. Because it is possible that one or more of these improvements might have significant effects that cannot be satisfactorily mitigated, the impacts will be considered ***significant and unavoidable*** at this program level of analysis. Specific project applications will need to be reviewed to determine impact significance.

Changes to Drainage Patterns Leading to Streambank Erosion

Impact 3.3-F **Land uses and development consistent with the Draft 2007 UVAP could result in changes to drainage patterns that could increase erosion along overland flow paths and in drainage swales and streams.**

New development could alter existing streams or streamcourses. This alteration could result from a substantial increase in site runoff, which results in the cutting of a new streambed, widening or altering the existing streambed, or from purposely covering or altering a stream channel. The latter is most likely in large developments where intermittent (or ephemeral) streamcourses are covered to allow development with underground piping replacing the stream. Another type of action is the aforementioned downcutting of the Russian River due to Coyote Dam and also to increased runoff in the river. These are all potentially significant impacts.

The Draft 2007 UVAP contains policies and implementation measures that address these issues. ***Policy HS1.2*** states that the County will adopt a comprehensive flood management program that would not increase peak flows through existing channels. Measures under ***Policy OC1.1*** stream setbacks, management of the river corridor, and reduction of erosion and sedimentation. Erosion and sedimentation are major factors in changing the course of streams, so these policies would reduce the impact. Increased flows is another significant factor in changing streamcourses. Adoption of the No Adverse Impact Standards for floodplains (***Policy HS1.2***) would ensure that flood-flow velocities would not be increased due to new development allowable under the Draft 2007 UVAP. Finally, ***Policy OC1.2*** states that the riverbed and banks will be maintained

and that the County will work with other agencies to resupply river gravel. The reduction in gravel resupply has historically been the most significant cause of streamcourse alteration

The policies and implementation measures of the Draft 2007 UVAP provide an adequate policy framework for the County to maintain the basic streamcourse alignment of the plan area. However, the policies do not specifically address streambank erosion caused by increased runoff and changes in the drainage pattern. The impact is ***potentially significant.***

Mitigation Measures

Mitigation Measure 3.3-D.1 applies to this impact.

Impact Significance After Mitigation

The additional implementation measure addresses erosion impacts to drainage courses. The impact would be reduced to a ***less than significant*** level, and no additional mitigation is required at this program level.

Impact 3.3-G **Land uses and development consistent with the Draft 2007 UVAP would increase the transport of sediments, oils, greases, and other residues and chemicals to receiving waterways and the groundwater.**

The Russian River has been characterized as impaired, and at times, in violation of water quality standards listed in the Basin Plan for one or more pollutants, mainly sediment and elevated temperature. While many of the pollutants that have impaired the river can be attributed to historical agricultural practices and similar land uses, runoff from development in the unincorporated area has contributed to water quality degradation. Continued impairment of water quality could potentially threaten adopted water quality standards and the beneficial uses of water bodies, as defined by the RWQCBs in the Basin Plan for the North Coast area.

Development and maintenance of land uses such as residential, commercial, industrial, and public facilities (e.g., roads, schools, and wastewater facilities) creates additional impervious surfaces and automobile use. Additionally, this development can result in the use of materials that can impair water quality such as fertilizers and pesticides (e.g., for landscaping) and toxic chemicals (e.g., for industrial uses or energy production). Water, typically as rainfall, moves over these impervious surfaces where it picks up and carries away natural (e.g., sediment) and human-made pollutants (e.g., oil, pesticides, etc.) and deposits them into streams, rivers, wetlands, and eventually coastal waters. Runoff from these uses is one component of water pollution known as non-point source pollution (i.e., having many diffuse sources).

Several different types of pollutants, including sediment, organic compounds, nutrients, trace metals, bacteria and viruses, and oil and grease compounds, are common in runoff from these uses. Sediment sources include roads and parking lots, as well as

destabilized landscape areas, streambanks, unprotected slopes and denuded or disturbed areas. Sediment also transports pollutants such as trace metals, nutrients, and hydrocarbons that attach to each particle. Organic compounds are derived from automotive fluids, pesticides, and herbicides. Nutrients include nitrogen, phosphorus, and other organic compounds that can be found in organic litter, fertilizers, food waste, sewage, and sediment. Sources of trace metals include motor vehicles, roofing and construction materials, and chemicals. Animal wastes, sanitary sewer overflow, and trash handling areas can contribute bacteria and viruses. Sources of oil and grease compounds include motor vehicles, food service establishments, and fueling stations.

All soils are subject to rain and wind erosion when they are stripped of vegetation or other cover. Some soil types are more prone to erosion than others, based on the characteristics of the soil and the topography where such soils are found. Generally, exposing soils on hillsides will result in more erosion and loss of soils from the site than grading on flatter sites.

Exposed soils are subject to raindrop impact and erosion via overland runoff. Such erosion could convey sediments downslope to roadway ditches, storm drain inlets, intermittent channels, and eventually to one of the permanent tributaries of the Russian River and the river itself.

Improperly designed and maintained unpaved roads are a major source of sediment input to streams. As is discussed in greater detail in the Setting section, the State is in the process of preparing pollution control plans to drastically reduce sedimentation in North Coast streams, including the Russian River. One of the requirements of these plans (called Total Maximum Daily Load, or TMDL) is to reduce human-caused sedimentation to streams on all properties within the watershed by 90%. The principal target for reduction, in most cases, is erosion from unpaved roads.

As described in the Setting section, the NPDES Phase I and II stormwater permitting programs regulate municipal storm drain systems, industrial facilities, and construction sites. Under the NPDES permitting program, the preparation and implementation of Stormwater Pollution Prevention Plans (SWPPPs) are required for construction activities. Project applicants may also be required (depending on the nature of the project) to develop a long-term SWPPP or a long-term Stormwater Management Program (SWMP) to cover potential stormwater pollution associated with site development after construction. The long-term SWPPP and/or SWMP must identify potential sources of pollution that may be reasonably expected to affect the quality of stormwater discharges as well as identify and implement BMPs that ensure the reduction of these pollutants during stormwater discharges. For most commercial and residential development, the NPDES program requirements apply only to stormwater pollutants within runoff during construction activities. The program does not require long-term water quality BMPs upon project completion. The County Water Agency has noted that the problem with these SWPPPs and SWMPs is that they are not reviewed and monitored. The County has recently adopted a Stormwater Ordinance and a Standard Urban Storm Water Mitigation Plan that allow the County to require implementation of BMPs to prevent pollution of receiving waterways.

In compliance with Phase II requirements, the MCWA has prepared a Mendocino County Stormwater Management Program (MCSMP), which has been approved by the RWQCB. The City of Ukiah has adopted its own plan. The County's plan contains numerous activities and Best Management Practices to improve water quality. These include educational measures to educate the public about how not to pollute, controlling hazardous materials sites, inspections to control illegal discharges, controlling wash water of commercial vehicles, controlling runoff pollution from projects, and other measures.

The Draft 2007 UVAP contains policies and implementation measures that address these water quality issues. ***Policy OC1.2*** requires that new development follow performance standards to protect the river and tributaries from erosion, sedimentation and degradation of water quality. ***Policy WM4.1*** requires use of Best Management Practices (BMPs) to address non-point source pollution and to minimize grading in new development. However, development and adoption of the BMPs is an intermediate-term priority, so it could be several years before these BMPs are adopted and implemented.

The County General Plan contains policies to protect water quality, including *General Plan Policies RM-19* to *RM-23*. These policies require that new development use Best Management Practices, Low Impact Development techniques, and other measures to protect water quality. *General Plan Policy RM-61* states that development on slopes shall be located, designed, constructed and managed as follows to protect soil resources, and minimize soil loss and erosion:

- Slopes over 15%: Limit land uses, densities, intensities and disturbances, vegetation removal, and hydrologic modifications on slopes exceeding 15%.

- Slopes 20% or more: In addition to standards for slopes over 15%, establish slope stability requirements for areas with, or directly adjacent to, slopes of 20% or greater within geologic units susceptible to slope failure and areas of mapped landslides.

- Slopes 30% or more: In addition to standards for slopes over 20%, discourage road and building site construction in areas that exceed 30% slopes or cross slopes.

In addition, new industrial development is required to comply with the RWQCB's Industrial Storm Water Program. The Industrial Storm Water General Permit Order 97-03-DWQ (General Industrial Permit) is an NPDES permit that regulates discharges associated with 10 broad categories of industrial activities. The General Industrial Permit requires the implementation of management measures that will achieve the performance standard of Best Available Technology economically achievable (BAT) and Best Conventional pollutant Control Technology (BCT). The General Industrial Permit also requires the development of a Storm Water Pollution Prevention Plan (SWPPP) and a monitoring plan. Through the SWPPP, sources of pollutants are to be identified and the means to manage the sources to reduce stormwater pollution are described. The General Industrial Permit requires submittal of an annual report.

With the County's recent adoption of a Stormwater Ordinance and a Standard Urban Storm Water Mitigation Plan, the County now has the ability to review SWPPPs and SWMPs. This and other Draft 2007 UVAP policies and other existing regulations would reduce the impact to a ***less than significant*** level.

Water Quality – Agricultural Uses

Impact 3.3-H **Agricultural use will continue to generate sediments and other pollutants that will enter area streams and degrade the water quality.**

Disking and ground preparation of the 6,216 acres of land in the plan area that is commercially cultivated results in bared earth that can erode when exposed to rainfall. The eroded sediments can be transported to area streams. Residues from the use of agricultural chemicals to produce crops on these lands can also be transported to area streams. Agricultural use is a major source of sediment in the area. However, this is an existing situation. It is expected that most sites that can grow grapes or other crops have already been planted, though there is the possibility that additional marginal properties might be converted to agricultural use. The Draft 2007 UVAP would reduce the amount of land currently under cultivation by 662 acres, so it would not exacerbate this existing situation.

The Draft 2007 UVAP does not contain any policies directed towards reducing water quality impacts from agricultural uses. However, because the plan would not increase agricultural use in the plan area, the impact is ***less than significant***, and no mitigation is required. However, see the subsequent discussion of Impact 3.4-C. Mitigation 3.4-C.1 would address the existing water quality effects from agriculture.

Groundwater Impacts – Withdrawals

Impact 3.3-I **Land uses and development consistent with the Draft 2007 UVAP not served by municipal water suppliers will withdraw groundwater from local aquifers, and in the future, municipal water suppliers might withdraw groundwater.**

Approximately 544 dwelling units could be built in areas not served by a public water suppliers. This rural residential development would be dependent on wells to provide water. If too many homes are developed in the same area, and are reliant upon a concentrated pumping source, it could result in the aquifer being locally overpumped. This could result in water levels dropping in existing wells. This would particularly be the case for remote subdivisions where a number of homes were dependent on a mutual well or closely spaced individual wells; such a development could have inadequate water or adversely affect existing wells in the area. It is also possible that the increase in impermeable surfaces in the plan area could substantially interfere with aquifer recharge (see discussion under Impact 3.3-J).

As discussed in the Setting section, over the past 30 years, groundwater levels in the valley bottom have remained relatively stable, with typical seasonal fluctuations, but with no significant long-term shifts. It is estimated that the Ukiah Valley aquifer has a storage capacity of about 90,000 acre-feet in the upper 100 feet of the most productive area and another 45,000 acre-feet in terrace deposits along the edge of the valley. The State has calculated that there is a safe annual yield of 10,000 acre-feet of water available in this groundwater basin.[49] Water levels indicate that basins fill to capacity each spring. During drought conditions, increased drawdown occurs during summer months with less recovery in winter months. Post-drought levels have rebounded to approximately the same as pre-drought conditions. However, the hillside aquifers are much more limited and sensitive to overdrafting and drought.

The Water Supply Assessment prepared by the Mendocino County Water Agency (on file at the offices of the County Department of Planning and Building Services) notes that if in the future the State determines that all groundwater in the valley is underflow of the Russian River, then existing well users would need to file an application for river diversion. Because water in the river is fully allocated, there technically would not be any legal water available to serve these existing or future users. It is speculative at this time that the State would make such a decision and what the effect of that decision would be. It is entirely possible that if this groundwater were deemed subsurface flows of the river that the yield for the river would be reassessed (since currently the percolated water flowing into the valley basin is not counted as part of the Russian River flow).

Policy WM1.2 is aimed at protecting groundwater resources in the plan area. It would develop a groundwater protection program that would identify the available groundwater resources, annual recharge, and measures needed to ensure long-term viability. Water Agency staff has noted that groundwater standards for the inland area of the County are out of date. It is assumed that the groundwater protection plan would include an update of these standards. New development proposing to use groundwater would be assessed for impacts to the resource. The groundwater protection program would be an intermediate-term project, though the requirement to assess project impacts on aquifers would be an ongoing and short-term action.

The aquifer underlying the Ukiah Valley is substantial. It is not expected that additional development of rural residences scattered through the plan area would result in the aquifer being depleted. In addition, possible municipal use of this aquifer (given the estimated safe yield of 10,000 acre-feet per year) would not adversely affect the aquifer, since this annual yield far surpasses the total amount of water needed to serve new development (see ***Section 3.10, Public Services and Utilities*** for additional analysis). In addition, the cited policy requires assessment of larger discretionary projects to ensure that these larger projects do not deplete the groundwater resource. The impact would be ***less than significant***, and no mitigation is required.

[49] California Department of Water Resources, *Ukiah Valley Groundwater Basin*, Bulletin 118, 2003.

Groundwater Impacts – Aquifer Recharge

Impact 3.3-J **Land uses and development consistent with the Draft 2007 UVAP could reduce the area available to recharge the aquifer in the plan area, thereby adversely affecting groundwater supplies.**

Currently, annual rainfall is replenishing groundwater aquifers in the plan area. New development will increase impervious surfaces and potentially block water from percolating into the ground and replenishing the aquifer. The total developable area for the Draft 2007 UVAP is estimated to be approximately 1,110 acres. If this area were developed at an average Floor-to-Area ratio (FAR) of 0.4 (that is, 40% of the area of the site is being developed), then about 440 acres of additional impervious surface would be added, This is about 1.2% of the total area within the plan area.

To address this issue, the Draft 2007 UVAP includes the previously described ***Policy WM1.2*** that is aimed at protecting groundwater resources, including recharge areas. It also includes ***Policy OC1.1*** that states that the County will develop and adopt a riparian systems management plan. One of the components of that plan would be to manage streams for aquifer recharge. ***Policy OC1.1*** requires stream setbacks, which will protect areas immediately adjacent to streams as recharge areas. Classification of most of the valley bottom east of the Russian River as Agriculture preserves this major recharge area. ***Policy HS1.2*** describes a flood management plan that includes measures to promote on-site infiltration of runoff, runoff retention during peak flow periods, and maximizing pervious surfaces on development sites; these measures would all reduce the impact. While these policies substantially reduce the impact, it remains ***potentially significant.***

Several commentors on the Draft EIR prepared for the 2002 UVAP suggested that the UVAP limit impervious surfaces where the alluvial fans intersect the Franciscan Formation; use multi-level parking lots rather than large lots; and limit impervious surfaces in the floodplain. These recommendations would further reduce the impact and have been added to ***Implementation Measure HS1.2e*** below.

Mitigation Measures

3.3-J.1 The County shall not approve new development that significantly reduces groundwater recharge. To meet this standard, the following revision to Implementation Measure HS1.2e will be made.

HS1.2e Zoning Code: Flood Management
Update the zoning code to reflect Flood Management Plan recommendations. The code should also address:

- Standards for retention or reduction of stormwater runoff from large paved areas as a means of reducing flood potential;
- Design options for street-side infiltration;

- A maximum allowable total area of impervious surfacing and mitigation measures to offset impervious areas; ~~and~~
- Requirements for incorporating drainage controls to retain on-site stormwater;
- Limit impervious surfaces to a practical minimum where alluvial fans intersect the Franciscan Formation and within 100-year floodplain; and
- For non-residential projects that include more than 200,000 square feet of development, consider requiring multi-level parking lots to minimize impervious surfaces.

Impact Significance After Mitigation

With the addition of the revised language the aquifer recharge area for the plan area's main aquifer would be protected. The impact would be reduced to a level that is ***less than significant***, and no additional mitigation is required at a program level. However, if the County believes that funding the short-term timeframe for implementing protective actions under Policy OC1.2 or Implementation Measure HS1.2e is unlikely or infeasible, then this impact should be considered significant and unavoidable.

Water Quality – Wastewater

Impact 3.3-K **Land uses and development consistent with the Draft 2007 UVAP could cause sewer- and septic-related water quality problems.**

The Mendocino County Department of Planning and Building Services calculates that 1,046 of the possible new residences will be in areas unserved by municipal sewer systems. These residences would need to be served by private on-site sewage treatment and disposal systems. Unless these systems are properly constructed and designed, they could pollute surface water and groundwater and have a significant health impact. This is a potentially significant impact. Septage hauled from septic systems is disposed of at four existing sites, the closest one to the plan area being the Hopland PUD treatment plant. The County Division of Environmental Health has determined that there is not an immediate concern regarding adequate sites for septage disposal.[50]

The Ukiah Valley Sanitation District and the Calpella County Water District operate municipal wastewater treatment and disposal systems. These systems operate under a Waste Discharge Requirements (WDR) permit issued by the RWQCB. Currently, these municipal plants are operating per their WDR. However, as described in more detail in ***Section 3.10 (Public Services and Utilities***), the RWQCB is assessing the UVSD facility to determine whether its pond discharge system is discharging to the underflow of the Russian River. If that turns out to be the case, then the UVSD will need to develop alternative disposal facilities.

[50] Brian Hoy, personal communication, 49/08.

The Draft 2007 UVAP contains ***Policy WM4.2*** that states that the County will reduce water quality impacts from community sewage systems and onsite septic systems by limiting sewer extensions. The policy also states that the County will protect water quality by supporting increased treatment facility capacity, though areas outside existing service districts would be served by alternative treatment systems. The municipal systems also must meet all State-mandate requirements for protecting water quality.

All private septic systems must be designed and constructed to meet all County Division of Environmental Health requirements. Septage must be hauled to an approved receiving facility.

Conformance with existing County requirements for regulating private septic systems would be expected to reduce health and environmental impacts arising from those systems to a ***less than significant*** level. County implementation of the Division of Environmental Health's recommendation regarding a "Long-term Septage Management Plan" would address any future problems associated with disposal of that septage. No additional mitigation measures are required at a program level. Continued compliance with the WDRs for the two municipal treatment and disposal systems would reduce water quality impacts from those facilities to a ***less than significant*** level.

3.4 BIOLOGICAL RESOURCES

A. Setting

1. Biological Communities

Vegetation mapping done for the Background Report (Figure 8D-1 of that report) indicates that the plan area supports four main plant communities: Mixed Evergreen Forest, Grasslands, Agricultural Lands, and Oak Woodlands. In addition, there are limited areas supporting other biological communities. These plant communities determine, to a large extent, the habitat features required for wildlife and fish. The dominant plant communities in the plan area are described below.

Mixed Evergreen Forest

Much of the hilly portions of the plan area are vegetated with primarily native species of trees, shrubs, grasses, and herbaceous plants. The basic vegetation community type is Mixed Evergreen Forest.[51] This is a plant community that contains a mix of trees and shrubs that may dominate nearby habitats, such as Coast Live Oak Forest, Tan Oak Forest, Upland Redwood Forest, Alluvial Redwood Forest, Upland Douglas Fir Forest, Knobcone Pine Forest as well as various chaparral communities. Within the plan area various types of trees or chaparral may dominate depending on the slope steepness and orientation, soil type, presence of water, and other microclimatic conditions.

The basic Mixed Evergreen Forest community is typically located on slopes at elevations from 200-3,000 feet. The community typically borders Redwood Forest or Douglas Fir Forest. Common species include Douglas fir, coast redwood, California bay, Oregon white oak, California black oak, madrone, tan oak, and knobcone pine. Oaks tend to be a more dominant element of the woodland at lower elevations. Conifers, while a part of the woodland mix throughout the habitat type, tend to become more dominant at higher elevations and in tributary stream canyons.

There are areas of Northern Mixed Chaparral spread throughout portions of the plan area. Common species are various species of manzanita, chamise, mountain mahogany, ceanothus, and poison oak. There are also scattered grasslands with the various woodland and shrub communities.

The Mixed Evergreen Forest provides more food sources than a true conifer forest. This forest type provides habitat for Pacific giant salamander, rough-skinned newt, western toad, western fence lizard, western skink, southern alligator lizard, ringneck snake, racer snake, gopher snake, western terrestrial garter snake, western terrestrial aquatic snake, and western rattlesnake. Birds using the forest include turkey vulture, osprey, sharp-shinned hawk, Cooper's hawk, red-tailed hawk, golden eagle, American kestrel, band-tailed pigeon, barn owl, western screech owl, Anna's hummingbird, acorn woodpecker, northern flicker, western wood peewee, scrub jay, plain titmouse, white-breasted nuthatch, house wren, varied thrush, solitary vireo, yellow-rumped warbler, hermit

[51] *Preliminary Descriptions of the Terrestrial Natural Communities of California*, Robert F. Holland, 1986.

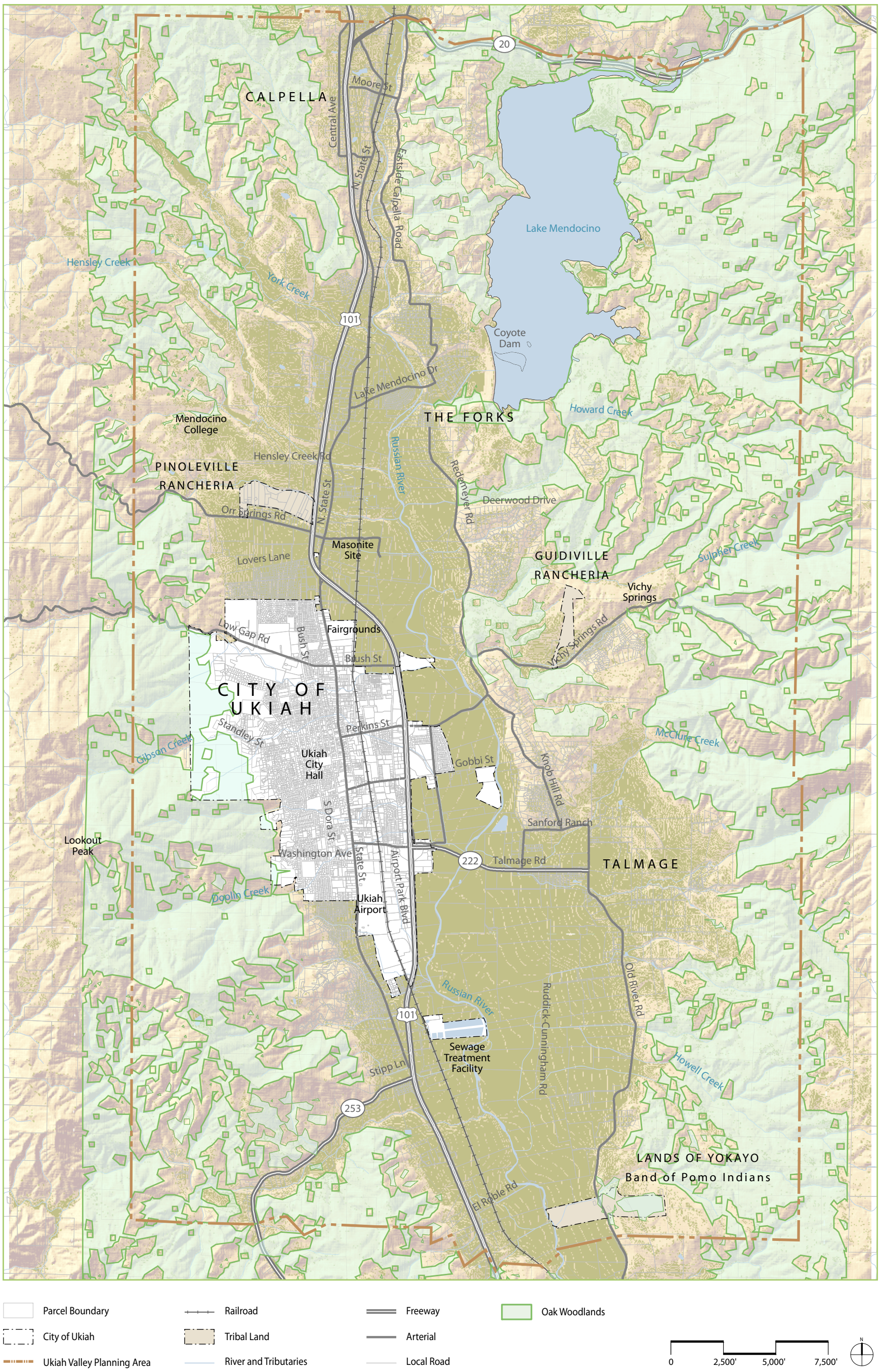

Figure 3-7 Oak Woodlands within the Ukiah Valley

Source: Mendocino County Planning & Building Services

warbler, fox sparrow, and house finch. Small mammals that commonly occur would include Pacific shrew, Trowbridge shrew, brush rabbit, black-tailed hare, California ground squirrel, deer mouse, pinyon mouse, and dusky-footed woodrat. These forests provide habitat for several bat species including little brown myotis, Yuma myotis, long-eared myotis, fringed myotis, long-legged myotis, big brown bat, and red bat. Carnivores that frequent these forests include gray fox, raccoon, striped skunk, bobcat, and mountain lion.

Non-native Grasslands

Non-native grassland communities occur throughout the plan area and are dominated by annual and perennial grasses and forbs. Grasslands in the plan area are often maintained by cattle grazing in areas that might otherwise develop forest or chaparral communities. A variety of grassland types, including Annual Grassland, Perennial Grassland, Montane Meadow, and Wet Meadow, occur within the plan area. While there are scattered grasslands in many parts of the plan area, the Background Report mapped the main grassland community to the north of Orr Springs Road, south of Calpella, and west of Highway 101. Grasslands also occur in the band of lower slopes, between agriculturally developed parts of the valley and the upper slopes vegetated with the Mixed Evergreen Forest.

Community composition in grassland varies depending on habitat characteristics. Areas that are heavily grazed or otherwise disturbed are characterized by annual grasses and forbs. Dominant species in these areas may include brome, wild oats, Italian ryegrass, and others. In areas lacking disturbance, and on slopes with a high serpentine content, perennial grasses such as purple needlegrass and creeping wild rye are dominant. Most native grassland in Mendocino County has been replaced by non-native invasive plants, though it is likely that there are pockets of native grassland spread throughout the plan area.

Grasslands commonly grade into various shrub and tree habitats. They form where grazing, fires or other disturbances have cleared a previously present community, or where locally wet soils restrict tree and shrub growth. These conditions often result in a very abrupt line between grasslands and adjoining plant communities.

Many wildlife species use grasslands for foraging, but some require special habitat features such as cliffs, caves, ponds, or woody vegetation for cover, breeding, and resting habitat. Grasslands may also provide forage for migratory waterfowl on a seasonal basis.

Wet meadows are generally too wet for use by small mammals except during the late summer and autumn. The forbs and palatable grasses found in wet meadows are important forage for deer, and also provide breeding and nesting habitat for red-winged blackbirds, other birds, and for amphibians. Freshwater emergent wetlands are among the most productive wildlife habitats in Mendocino County. They provide food, cover, and water for reptiles, mammals, amphibians, and more than 160 species of birds.

These habitats provide a wide variety of wildlife species with necessary life history requirements. Grasslands generally support fewer amphibians and reptiles than the

forest or woodland habitats but some commonly occurring species are California tiger salamander, California slender salamander, western toad, Pacific treefrog, western fence lizard, coast horned lizard, western skink, racer snake, gopher snake, common kingsnake, common garter snake, western terrestrial garter snake, western aquatic garter snake, night snake, and western rattlesnake.

The ample seed source produced by the annual and perennial grasses, as well as the supported insect life, provides food for California quail, killdeer, mourning dove, white-throated swift, northern flicker, black phoebe, Say's phoebe, western kingbird, horned lark, tree swallow, cliff swallow, barn swallow, northern mockingbird, loggerhead shrike, rufous-crowned sparrow, lark sparrow, savannah sparrow, western meadowlark, Brewer's blackbird, pine siskin, lesser goldfinch, and American goldfinch.

Small mammals are also prevalent in these grassland habitats. Such species as the vagrant shrew, ornate shrew, brush rabbit, black-tailed hare, California ground squirrel, Botta's pocket gopher, California kangaroo rat, western harvest mouse, deer mouse, pinyon mouse, California vole, and house mouse either burrow in the rocky soil or build nests and runways through the taller grasses in search of small insects and seeds. Bats such as Yuma myotis, western pipestrelle, big brown bat, red bat, pallid bat, and Brazilian free-tailed bat forage over these open habitats, particularly along woodland or shrub-scrub ecotones.

Abundant populations of small to medium sized birds and mammals also attract predatory birds and mammals such as black-shouldered kite, northern harrier, sharp-shinned hawk, red-tailed hawk, ferruginous hawk, rough-legged hawk, golden eagle, American kestrel, merlin, peregrine falcon, common barn owl, western screech owl, great horned owl, burrowing owl, long-eared owl, short-eared owl, gray fox, long-tailed weasel, badger, striped skunk, and bobcats.

Oak Woodlands

Blue Oak Woodland is an increasingly rare habitat found in California's foothills. In Mendocino County, it is most common in the hills east of Highway 101 from Ukiah to the Sonoma County line. Characteristically, blue oak communities occur on dry, rocky slopes in infertile soils. Conditions are often too harsh to support other hardwood or oak woodland communities. Livestock grazing, low seedling recruitment, and land conversion are contributing to the gradual loss of Blue Oak Woodland throughout the State.

Blue Oak Woodland are dominated by blue oaks, which form an open canopy over a community of generally annual grasses and forbs. While blue oaks are the most common trees, coast live oaks also occur along drainages and in slightly moister areas. Foothill pines often grow in blue oak-pine communities, and form a sparse overstory over a denser blue oak canopy. Other oak woodlands in the plan area are uncommon, but include Coast Live Oak Forest (81310), which is dominated by coast live oak, and Valley Oak Woodland/Savanna (71130), which is dominated by valley oak.

Oak woodlands are one of the area's most diverse and productive habitats. Many species of amphibians and reptiles are expected to occur here, including rough-skinned

newt, California newt, arboreal salamander, western toad, Pacific tree frog, foothill yellow-legged frog, western fence lizard, western skink, southern alligator lizard, ringneck snake, racer snake, gopher snake, common kingsnake, western terrestrial garter snake, western terrestrial aquatic snake, night snake, and western rattlesnake.

A wide variety of birds use these woodlands for foraging and cover. These include the wood duck, turkey vulture, California quail, mourning dove, common poorwill, whitethroated swift, Anna's hummingbird, Allen's hummingbird, Lewis woodpecker, acorn woodpecker, Nuttall's woodpecker, downy woodpecker, hairy woodpecker, northern flicker, western wood-pewee, Pacific-slope flycatcher, ash-throated flycatcher, western kingbird, violet-green swallow, Steller's jay, scrub jay, American crow, plain titmouse, bushtit, white-breasted nuthatch, Bewick's wren, house wren, ruby-crowned kinglet, blue-gray gnatcatcher, Swainson's thrush, wrentit, northern mockingbird, loggerhead shrike, orange-crowned warbler, yellow-rumped warbler, Townsend's warbler, rufous-sided towhee, chipping sparrow, fox sparrow, golden-crowned sparrow, dark-eyed junco, western meadowlark, house finch, and lesser goldfinch.

A number of small mammals commonly inhabit and forage in these woodlands, including Virginia opossum, black-tailed hare, Sonoma chipmunk, California ground squirrel, western gray squirrel, deer mouse, dusky-footed woodrat, long-eared myotis, fringed myotis, long-legged myotis, California myotis, silver-haired bat, western pipestrelle, big brown bat, red bat, hoary bat, Townsend's big-eared bat, pallid bat, and Brazilian free-tailed bat.

Common predatory birds and mammals that hunt or nest in these habitats are black-shouldered kite, sharp-shinned hawk, Cooper's hawk, red-tailed hawk, golden eagle, American kestrel, merlin, peregrine falcon, gray fox, ringtail, raccoon, long-tailed weasel, badger, striped skunk, mountain lion, and bobcat. Mountain lions frequent oak woodlands because of the relatively high number of deer and availability of hunting cover that occur in this habitat.

The oak woodland and oak savanna habitats are preferred by black-tailed deer as they provide a diversity of food plants and cover for reproduction. Additionally, the mast or acorn drop in the fall is considered an important dietary component for deer and wild pig in California.

Seasonal Wetlands (Cismontane Swale/Vernal Pools)

Vernal Pools are uncommon but spread through the plan area, particularly on flatter areas. These pools support a variety of plants adapted to saturated or inundated soil conditions, including various species of rush, spikerush, and sedge. Vernal pools also support certain special status species of plants that are adapted to the hydrologic and soil conditions that form the pools. This vegetation type can intergrade with similar wet meadow types such as Vernal Pool and Coastal and Valley Freshwater Marsh.

North Coast Riparian Woodland.

The North Coast Riparian Woodland occurs along streams within the plan area. The vegetation is comprised of dense broad-leafed, winter deciduous riparian forests that

include willows, white alder and big-leaf maple. Alder and maple are the dominant riparian trees in the lower bank zone. Upper banks include increasing amounts of live and valley oaks. The understory is composed of various shrubs, vine, berry, and other species. The area along some streams, as well as other scattered locations, can also support Upland Redwood Forest.

Riparian woodlands are exceptionally productive habitats in that they function as escape cover, thermal cover, migration corridors, nesting, and foraging habitat for a diverse vertebrate community. Commonly occurring amphibians and reptiles include Pacific giant salamander, rough-skinned newt, California newt, California slender salamander, Pacific tree frog, western pond turtle, western fence lizard, western skink, southern alligator lizard, rubber boa, ringneck snake, sharp-tailed snake, race, California whipsnake, common kingsnake, common garter snake, western terrestrial garter snake, western aquatic garter snake, night snake, and western rattlesnake.

The North Coast Riparian Woodlands provide valuable nesting and foraging habitat for a number of birds such as black-crowned night heron, wood duck, hooded merganser, turkey vulture, California quail, band-tailed pigeon, mourning dove, Anna's hummingbird, Allen's hummingbird, belted kingfisher, Lewis woodpecker, acorn woodpecker, northern flicker, Pacific-slope flycatcher, black phoebe, ash-throated flycatcher, violet-green swallow, tree swallow, barn swallow, plain titmouse, white-breasted nuthatch, Bewick's wren, winter wren, golden-crowned kinglet, Swainson's thrush, varied thrush, northern mockingbird, warbling vireo, yellow warbler, yellow-rumped warbler, rufous-sided towhee, chipping sparrow, dark-eyed sparrow, lesser goldfinch, and evening grosbeak.

Small mammals that commonly nest or forage in riparian woodlands include Virginia opossum, vagrant shrew, ornate shrew, Pacific shrew, broad-footed mole, shrew mole, Sonoma chipmunk, California ground squirrel, western gray squirrel, western harvest mouse, deer mouse, pinyon mouse, dusky-footed woodrat, California vole, Norway rat, little brown myotis, Yuma myotis, long-eared myotis, fringed myotis, long-legged myotis, California myotis, silver-haired bat, western pipestrelle, big brown bat, red bat, hoary bat, and Brazilian free-tailed bat. Additionally, deer and wild pigs frequently use these areas for foraging and escape cover.

The abundance of small birds and mammals results in a relatively high diversity of avian and mammalian predators that typically hunt these woodlands. These predators include the osprey, black-shouldered kite, sharp-shinned hawk, Cooper's hawk, red-shouldered hawk, rough-legged hawk, American kestrel, merlin, common barn owl, western screech owl, great horned owl, northern pygmy owl, long-eared owl, northern saw-whet owl, gray fox, ringtail, raccoon, long-tailed weasel, stripped skunk, mountain lion, and bobcat.

Aquatic Habitats

Various types of aquatic habitats occur throughout the plan area. Lacustrine (lake) habitats are depressional bodies of fresh water (including dammed streams), which vary from large perennial lakes to shallow, seasonal ponds and playas. The largest lacustrine habitat in the plan area is Lake Mendocino; other smaller ponds occur throughout the plan area. Riverine or riparian habitats occur throughout the plan area and include seasonal and perennial streams, rivers, and drainages.

Palustrine wetlands, which are shallow freshwater systems, may also be dominated by shrub or by forest. In the plan area, palustrine wetlands are most often associated with grasslands.

Vegetation in aquatic habitat varies with depth, flow rate, and salinity. Deep water habitats lack rooted vegetation and are instead characterized by suspended algae (phytoplankton). Shallower waters may contain rooted vascular plants.

Wildlife species composition in aquatic habitats is highly variable. Lacustrine and slow moving riverine habitats generally have a high abundance of zooplanktonic organisms. These small organisms are important for the organisms that feed on them, particularly aquatic invertebrates (typically insects and worms) and fish. Fish species occur in most perennial waters, and invertebrates occur in most perennial and seasonal habitats. A number of birds, mammals, reptiles, and amphibians make use of aquatic habitats, and they are dependant on them for a portion or all of their life cycle. It should also be noted that these habitats are essential for both resident and migratory waterfowl.

Wildlife species utilizing aquatic habitat include Pacific giant salamander, several species of newts and frogs, western pond turtle, western terrestrial garter snake, several species of loons and grebes, great blue herons, egrets, a wide variety of ducks and geese, osprey, bald eagle, coyote, raccoon, and northern river otter.

Agricultural

Agricultural areas occur on arable lands throughout California. For the purposes of this habitat description, the agricultural biological community includes vineyards, orchards, row crops, and pasture. Rangelands would typically be in the grassland, oak woodland, or mixed evergreen forest communities.

Agricultural areas in the plan area occur primarily on the valley floor and lower elevations. The recent trend of increased acreage in grape production has resulted in conversion of land previously not utilized for agriculture. In particular, many vineyards in the County occur at higher elevations above valley floors in the foothills or on hilltops.

Presently, the majority of agricultural land in Mendocino County is dominated by vineyards, followed by pear and apple orchards, row crops and pasture. Typically, agricultural fields are monotypic. However, trees are sometimes planted as windbreaks at field edges, and some ruderal (weedy) vegetation can be found along roadsides, at field edges, between rows, and under the canopies in orchards and vineyards. Cover crops are frequently planted between rows in vineyards and orchards, creating microhabitat for insects and other wildlife.

Agricultural lands can grade into any habitat type. In the plan area, they most commonly are associated with grasslands, urban areas, hardwood forests, and oak woodlands. Transitions between these habitats may be abrupt, particularly marking the edge of urban and cultivated areas.

Because of their high degree of disturbance, agricultural areas generally have a low habitat value for wildlife, although a number of species adapted for disturbed conditions can be found. Fruit orchards, vineyards, and pasture provide food and cover for squirrels, numerous birds, raccoons, and deer. Species that take advantage of these food sources are feral pigs, ring-necked pheasant, American crows, field mice, moles, voles, gophers, jackrabbits, gopher snakes, rattlesnakes, king snakes, kites, kestrels, golden eagles, barn owls, herons, Canadian geese, quail, mourning doves, buffleheads, cormorants, mallards, egrets, rats, coyotes, opossums, and striped skunk.

Urban

The urban classification is characterized by human modifications to the environment, and includes all ranges of urban development from metropolitan to suburban areas, as well as rural communities. Plant composition in urban areas is highly variable, and can include areas with an abundance of exotic ornamental plants as well as areas dominated primarily by native vegetation. The wildlife value of urban habitats varies from very low in dense, highly urbanized areas, to relatively high in areas with a lower human density and a significant amount of natural vegetation remaining.

The most densely developed urban areas provide wildlife habitat for western scrub-jay, rock dove, northern mockingbird, European starling, and house finch. Associated mammals include raccoon, Norway rat, little brown myotis, Virginia opossum, squirrels, and striped skunk. Suburban areas provide habitat for a greater diversity of native birds and mammals, such as wrentits, bushtits, oak titmouse, chestnut-backed chickadee, California quail, coyote and deer.

2. Special Status Species

Special status species are taxa listed as endangered or threatened by the U.S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration–Fisheries (NOAA–Fisheries), or California Department of Fish and Game (CDFG); taxa designated as candidates for listing by the above agencies, or any species of concern or local concern by USFWS, NOAA–Fisheries, and/or CDFG. For plants, special status species include species listed in the Inventory of *Rare and Endangered Plants of California* prepared by the California Native Plant Society (CNPS). Special Status Species of California include:

- Plant and animal species designated as threatened or endangered under Section 4 of the Federal Endangered Species Act;

- Species designated as rare, threatened, or endangered by California Department of Fish and Game under the California Endangered Species Act;

- Species that are recognized as candidates for listing by agencies with resource management responsibilities such as USFWS, U.S. Forest Service (USFS), U.S. Bureau of Land Management (BLM), and California Department of Fish and Game;

- Species defined as species of concern by the USFWS or CDFG;

- Species considered rare, threatened, or endangered pursuant to Section 15380 of the CEQA Guidelines;

- Species protected by California Fish and Game Code Sections 3503, 3503.5 and 3511;

- Species protected by the Federal Migratory Bird Treaty Act (16 U.S.C. 703-712);

- Bald and golden eagles protected by the Federal Bald and Golden Eagle Protection Act (16 U.S.C. 668a-d); and

- Plant species listed in the *Inventory of Rare and Endangered Plants of California* prepared by CNPS.

Table 3.4-1 identifies the listed and special status species having the potential to be affected by projects occurring in the plan area.[52] Species listed in the California Natural Diversity Data Base (CNDDB) as occurring within the County are also included in Table 3.4-1; they are mapped on Figures 8D-2a and 8D-2b of the Background Report.

The biological communities with the greatest number of special status species are the aquatic ecosystems, including wetlands and streams. They provide habitats for many of the most sensitive fish, birds and mammals. The aquatic ecosystems also provide habitat for special status plants. The biological communities with the least number of special status species are the grassland, urban, and agricultural communities. However, within these broad categories, there are sensitive habitats such as wetlands and serpentine soils that do support a variety of special status species.

While Table 3.4-1 lists a number of special status plants that could be located within the plan area, most of these are unlikely to actually be present. The CNDDB reports three special status plants within the plan area: Burke's goldfields, Baker's meadowfoam, and Mendocino bush mallow. Based on project EIRs prepared on projects within the plan area, those species most likely to be present include: Burke's goldfields, Baker's meadowfoam, Mendocino bush mallow, great burnet, and Douglas's pogogyne.

Wildlife

As shown on Table 3.4-1, as many as 28 special status species of birds, 5 species of amphibians and reptiles, 3 species of mammals, 2 species of insects, one species of freshwater shrimp, and 4 species of non-salmonid fish may reside in or use the plan area. Based on 15 EIRs and Initial Studies that LCA has prepared over the past 25 years for sites within the plan area, the terrestrial special status wildlife most likely to reside in the area include: grasshopper sparrow, olive-sided flycatcher, Vaux's swift, hermit warbler, yellow warbler, white-tailed kite, little willow flycatcher, peregrine falcon, rufous hummingbird, Allen's hummingbird, northern spotted owl, sharp-shinned hawk, Cooper's hawk, red-legged frogs, foothill yellow-legged frogs, spadefoot toads, and pond

[52] The Table is taken from the table presented in the *Background Report*, as amended to exclude species that do not inhabit the plan area.

turtle. The only special status species of wildlife that the CNDDB identified within the plan area include foothill yellow-legged frogs, northwestern pond turtle, and osprey.

Salmonids

Of particular importance when considering future planning for the area are the three listed salmonid species that inhabit the Russian River and many of its tributaries. These three species include Central California Coast coho salmon (*Oncorhynchus kisutch*), Central California Coast steelhead (*Oncorhynchus mykiss*), and California Coastal chinook salmon (*Oncorhynchus tshawytscha*). Habitat conditions for salmonids in the plan area are highly variable. Generally, the smaller tributaries and headwater portions of larger tributaries serve as the primary spawning and rearing areas, while the larger tributaries serve as migration corridors as well as spawning areas for steelhead and occasionally chinook. Many of the tributaries have been channelized in the lower areas, resulting in aggradation, loss of riparian habitat, and dewatering (e.g., Ackerman and Robinson Creeks). Creeks passing through Ukiah (Orrs, Doolin, and Gibson) have been culverted, boxed, and/or paved over for some to much of their length. Where development has occurred in tributary headwaters, flood control channels have aggraded, resulting in frequent flooding and channel adjustment (e.g., Mill Creek). While lower sections of tributaries are frequently impaired, conditions almost universally improve upstream on each tributary.

The Russian River watershed lies within the Central California Coastal Evolutionarily Significant Unit (CCCESU), as delineated by the NOAA–Fisheries. Within the CCCESU, coho salmon and steelhead are listed as threatened under the Federal Endangered Species Act (FESA). Coho are also listed as endangered under the California Endangered Species Act (CESA). The Russian River also supports the southernmost naturally-spawned population of Chinook salmon; they are listed as threatened under the Federal Endangered Species Act (FESA).

Flows in the Russian River are regulated via the State Water Resources Control Board's Decision 1610 that establishes minimum streamflow requirements and the Sonoma County Water Agency's (SCWA) existing water right Permit 12947A that requires that it meet minimum flow standards in the Russian River by releasing water from Lake Mendocino for the purpose of maintaining minimum streamflows necessary to support listed fish and other instream uses.

The operation of Lake Mendocino has also been the subject of a Biological Opinion, which was released by NOAA-Fisheries on September 24, 2008. This Biological Opinion analyzes the impact of water diversions and dam operations on salmon and steelhead. The Biological Opinion concluded that continued operation of Lake Mendocino, as proposed by the USACE and the Sonoma County Water Agency, could jeopardize the continued existence of Central California Coast (CCC) steelhead, CCC Coho salmon, and California Coastal Chinook salmon, and therefore prescribes an RPA (Russian River Reasonable and Prudent Alternative) that the USACE and Sonoma County Water Agency have begun to implement in lieu of historic reservoir operation protocols.

Table 3.4-1
Special-Status Species Potentially Occurring in the Ukiah Valley Vicinity

Species	Federal	State	CNPS[1]	Habitat
Plants				
Sonoma manzanita (*Arctostaphylos canescens ssp. sonomensis*)	—	—	1B	MCH (serpentine)
Hopland (= Raiche's) manzanita (*Arctostaphylos stanfordiana ssp. raichei*)	—	—	1B	MCH (serpentine)
marsh sandwort (*Arenaria paludicola*)	E	E	1B	RIV, LAC (freshwater marsh)
marsh milkvetch (*Astragalus pycnostachyus var. pycnostachyus*)	—	—	1B	RIV, LAC (freshwater marsh)
Point Reyes blennosperma (*Blennosperma nanum var. robustum*)	—	R	1B	RIV, LAC, AGS (wetlands)
Thurber's reed grass (*Calamagrostis crassiglumis*)	—	—	2	AGS (wetlands)
swamp harebell (*Campanula californica*)	—	—	1B	AGS, RIV, LAC (wetlands)
California sedge (*Carex californica*)	—	—	2	AGS, RIV, LAC (wetlands)
livid sedge (*Carex livida*)	—	—	1A	RIV, LAC (wetlands)
deceiving sedge (*Carex saliniformis*)	—	—	1B	AGS, (wetlands)
Rincon Ridge ceanothus (*Ceanothus confusus*)	—	—	1B	MCH, MHW (serpentine)
Vine Hill ceanothus (*Ceanothus foliosus var. vineatus*)	—	—	1B	MCH
Davy's clarkia (*Clarkia davyi*)	—	—	—	AGS
supple daisy (*Erigeron supplex*)	—	—	1B	AGS
stinkbells (*Fritillaria agris*)	—	—	4	AGS, MCH, OAW (serpentine)
Roderick's fritillary (*Fritillaria roderickii*)	—	E	1B	AGS
American manna grass (*Glyceria grandis*)	—	—	2	AGS, RIV, LAC (wetlands)
glandular dwarf-flax (western flax) (*Hesperolinon adenophyllum*)	—	—	1B	MCH, AGS, OAW (serpentine)
Bolander's horkelia (*Horkelia bolanderi*)	—	—	1B	AGS (wetlands)
water howellia (*Howellia aquatilis*)	T	—	2	RIV, LAC, AGS (wetlands)
Burke's goldfields (*Lasthenia burkei*)	E	E	1B	AGS (wetlands)
Contra Costa goldfields (*Lasthenia conjugens*)	E	—	1B	AGS (wetlands)
Colusa layia (*Layia septentrionalis*)	—	—	1B	MCH, AGS, OAW (serpentine)
western lily (*Lilium occidentale*)	E	E	1B	AGS (wetlands)
Baker's meadowfoam (*Limnanthes bakeri*)	—	R	1B	AGS (wetlands)

Table 3.4-1
Special-Status Species Potentially Occurring in the Ukiah Valley Vicinity

Species	Federal	State	CNPS[1]	Habitat
Milo Baker's lupine (*Lupinus milo-bakeri*)	—	T	1B	AGS, OAW, MHW
Mendocino bush mallow (*Malacothaamnus mendocinensis*)	—	—	1A	MHW
Baker's narvarretia (*Navarretia leucocephala ssp. bakeri*)	—	—	1B	OAW, MHW, AGS (wetlands)
Gairdner's yampah (*Perideridia gairdneri ssp. gairdneri*)	—	—	4	MCH, AGS, (wetlands)
Douglas's popogyne (*Popogyne Douglasii ssp. parviflora*)	—	—	3	MCH
Nuttall's pondweed (*Potamogeton epihydrus ssp. nuttallii*)	—	—	2	RIV, LAC (wetlands)
maple-leaved checkerbloom (*Sidalcea malachroides*)	—	—	1B	AGS
marsh checkerbloom (*Sidalcea oregana ssp. hydrophila*)	—	—	1B	AGS, MHW (riparian/meadow)
beaked tracyina (*Tracyina rostrata*)	—	—	1B	AGS, OAW, MHW
showy Indian clover (*Trifolium amoenum*)	E	—	1B	AGS (serpentine)
Wildlife				
California freshwater shrimp (*Syncaris pacifica*)	E	E	—	RIV
northwestern pond turtle (*Clemmys marmorata marmorata)*	—	SC	—	RIV, LAC
Northern red-legged frog (*Rana aurora aurora*)	—	SC	—	LAC, RIV
California red-legged frog (*Rana aurora draytonii*)	T	SC	—	LAC, RIV
foothill yellow-legged frog (*Rana boylii*)	—	SC	—	RIV
green sturgeon (*Acipenser medirostris*)	T	SC	—	RIV
Russian River tule perch (*Hysterocarpus traski pomo*)	—	SC	—	RIV
coho salmon – central CA coast (*Oncorhynchus kisutch*)	T	E	—	RIV
Central California Coastal steelhead (*Oncorhynchus mykiss irideus*)	T	—	—	RIV
California coastal chinook salmon (*Oncorhynchus tshawytscha*)	T	—	—	RIV
California red tree vole (*Arborimus pomo*)	—	SC	—	MHW
pale big-eared bat (*Corynorhinus townsendii pallescens*)	—	SC	—	OAW, MCH
Pacific western big-eared bat (*Corynorhinus townsendii townsendii*)	—	SC	—	MHW
Bats (*Myotis* species): long-eared myotis bat (*Myotis evotis*);	—	SC	—	MCH, OAW, MHW

Table 3.4-1
Special-Status Species Potentially Occurring in the Ukiah Valley Vicinity

Species	Federal	State	CNPS[1]	Habitat
fringed myotis bat (*Myotis thysanodes*); long-legged myotis bat (*Myotis volans*); Yuma myotis bat (*Myotis yumanensis*)				
Cooper's hawk (*Accipiter cooperii*)	—	SC	—	MHW, OAW
northern goshawk (*Accipiter gentilis*)	—	SC	—	MHW
sharp-shinned hawk (*Accipiter striatus*)	—	SC	—	MHW, OAW
grasshopper sparrow (*Ammodramus savannarum*)	—	SC	—	AGS
short-eared owl (*Asio flammeus*)	—	SC	—	AGS
Long-eared owl (*Asio otus)*	—	SC	—	MHW
Vaux's swift (*Chaetura vauxi*)	—	SC	—	MHW
olive-sided flycatcher (*Contopus cooperi*)	—	SC	—	MHW, OAW, MCH
yellow warbler (*Dendroica petechia brewsteri*)	—	SC	—	MHW, RIV
white-tailed kite (*Elanus leucurus*)	—	FP	—	AGS, CRP
little willow flycatcher (*Empidonax traillii brewsteri*)	—	E	—	MHW, MCH,
American peregrine falcon (*Falco peregrinus anatum*)	—	E	—	MCH, AGS, MHW,
common loon (*Gavia immer*)	—	SC	—	LAC
bald eagle (*Haliaeetus leucocephalus*)	—	E	—	LAC, MHW, (old growth)
loggerhead shrike (*Lanius ludovicianus*)	—	SC	—	AGS, OAW, MHW, MCH
osprey (*Pandion haliaetus*)	—	SC	—	MHW, LAC
purple martin (*Progne subis*)	—	SC	—	MHW, OAW
bank swallow (*Riparia riparia*)	—	T	—	MHW, OAW
northern spotted owl (*Strix occidentalis caurina*)	T	S	—	MHC

Notes: E = Endangered, T = Threatened, SC = California Species of Special Concern, SA = CDFG "Special Animal," FP= California Fully Protected Animals
CNPS Categories: 1B = Plants rare, threatened, or endangered in California and elsewhere, 2=Rare/Endangered in California; more common elsewhere, 3 = Plants for which more information is needed, and 4 + Plants of limited distribution
Montane Hardwood – MHW; Chaparral – MCH; Grasslands – AGS; Oak Woodland – OAW; Agricultural – CRP; Urban – URB; Aquatic Habitats – LAC, RIV

Source: *Background Report for the County of Mendocino General Plan Update,* PMC, 2003, CNDDB data provided by the Mendocino County Planning Team, and LCA.

The Russian River RPA, the scope of which includes operations at Warm Springs Dam in Sonoma County and the management of the Russian River estuary at Jenner, generally prescribes a reduction in minimum instream flows downstream of Lake Mendocino.

Since the listing of these salmonid species, a variety of agencies have examined their status and ways of maintaining existing populations and improving habitat conditions to increase the populations. Some of the studies and projects addressing salmonids in the plan area include:

- The City of Ukiah has had stream enhancement plans prepared for Orrs Creek, Gibson Creek, and Doolin Creek. These plans have no implementation associated with them and have not resulted in any on-the-ground project nor any stream enhancement.

- SCWA monitors for steelhead and salmon on the Russian River and its tributaries using electrofishing and scuba surveys.

- A watershed geomorphic analysis and rapid sediment evaluation of the Forsythe Creek watershed was prepared (project funded by CDFG and U.S. Bureau of Indian Affairs). This project consists of quantifying the degree of already-known watershed degradation and does not include funding of any actual on-the-ground projects or any improvement in watershed conditions.

- The Federal Recovery Planning Memorandum of Understanding provides a coordinated approach to developing methods for improving the fishery in the general area. The MOU includes the Army Corps, CDFG, NMFS, and six counties in the north-central planning area. Mendocino County Water Agency staff states that this MOU has not resulted in any work projects which have improved the habitat conditions.
- Mendocino County is a part of FishNet 4C which is a multi-county-based salmonid protection and restoration program bringing together the six Central California Coastal Counties (4C) of Mendocino, Sonoma, Marin, San Mateo, Santa Cruz, and Monterey. In light of the salmonid listings, and recognizing the need to address County land management regulations and practices which affect salmonid populations, supervisors from the six counties formed FishNet 4C. FishNet 4C teams in each county are comprised of supervisors and staff from public works, planning, parks, open space, and special districts. No Fishnet 4C project has occurred in Mendocino County. The goal of this organization is to facilitate effective local actions that will maintain and improve water quality and riparian habitat, provide increased assistance and education for local government and the private sector, and encourage cooperation and coordination between all levels of regulatory responsibility for fishery restoration.

- The County is also part of a second multi-county organization, called the Five Counties Salmonid Conservation Effort (5-C Program), which addresses salmonid issues in Mendocino County rivers other than the Russian (the Russian River is the northern extent of the CCCESU). The Five Counties group prepared an assessment of County General Plan policies as regards their effectiveness in maintaining and

supporting salmonids. In implementing the recommendations of this study, the Five Counties group prepared *The Water Quality and Stream Habitat Protection Manual for County Road Maintenance in Northwest California Watersheds*. The primary resource benefits occurring through the 5-C Program have been the assessment and removal of fish barriers. However, most of this work has occurred in Humboldt, Del Norte and, Siskiyou Counties. No 5-C projects have occurred in the Russian River watershed, with the sole exception of the sediment source assessment from County roads. While the assessment and quantification of sediment sources has occurred, no implementation projects to reduce sediment loading in the Russian River watershed have occurred and none are planned as of this writing.

- The Department of Fish and Game has prepared the 2002 Draft Russian River Basin Fisheries Restoration Plan that describes the completed projects and restoration goals for the entire watershed.

3. Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA, Section 1600 of the California Fish and Game Code, the California Coastal Act, California Department of Forestry and Fire Protection directives, and Section 404 of the Federal Clean Water Act. The sensitive habitats that include any sizable acreage within the plan area include the following:

Serpentine Soils and Rock Outcrops

Areas of serpentine or rock-outcrop dominated soils are known to support a large number of special status species. Vegetation on serpentine and rock outcrop soils can vary drastically from adjacent non-serpentine soils due to the harsh soil conditions existing on these sites. Serpentine soils and rock outcrops occur frequently on ridgelines throughout California, and are common in the northern and eastern portions of Mendocino County. While serpentine outcrops do occur in the plan area, most of these outcrops are at higher elevations further to the east or west of the valley, though there are some east of Perkins Street and east of the river.

Wetlands/Waters of the United States

Wetland habitats, including fresh and salt marsh, seasonal wetlands, lakes, ponds, streams, and rivers, are protected under Section 404 of the Federal Clean Water Act. These habitats support numerous special status plant and animal species, and are known to be highly productive and diverse ecosystems.

Oak Woodlands

As described previously, oak woodlands are an important habitat type that is being lost throughout the State. As described in the section below, the County is required to provide mitigation for development that would result in the conversion of oak woodlands. Figure 3-7 shows the extent of oak woodlands in the plan area.

Wildlife Migration Corridors

Wildlife migration corridors are important for the movement of migratory wildlife populations, including large mammals such as deer and bear and smaller mammals such as raccoons and weasels. Amphibians often require the ability to move between wetlands and other aquatic systems such as streams to in order to forage and breed successfully. These wildlife movements may occur on a seasonal or even daily basis.

Corridors provide foraging opportunities and shelter during migration. Generally, wildlife migration corridors are established migration routes for many species of wildlife. In wooded areas, these corridors often occur in open meadow or riverine habitats and provide a clear route for migration in addition to supporting ample food and water sources during movement.

Land use activities, including clearing, grading, timber harvest, and road construction often bisect habitats so they lose their connectivity. Small mammals, amphibians, and reptiles may not be physically able to cross large developed areas and/or they may be subject to predation by domestic dogs, cats, and other predators. Along with larger wildlife species, small animals are subject to road kill whenever they attempt to cross roadways.

4. Regulatory Framework

The following plans, acts, and regulations are related to preservation of Special Status Species and biotic habitat.

- **California Department of Fish and Game (CDFG) Regulations.** The CDFG has direct jurisdiction pursuant to Fish and Game Code Sections 1601-1603 in regard to any proposed activities which will use materials from streambeds, or will divert, obstruct, or change the natural flow or bed of any river, stream, or lake designated by the department. Sections 1601-1603 allow the CDFG to review projects and propose reasonable modifications to proposed construction for the protection of a fish and game resource that may be substantially affected by such construction. CDFG requirements are included in a Streambed Alteration Agreement. The Department is also responsible for the protection of plant and wildlife populations, and for overseeing the California Endangered Species Act.

- **U.S. Army Corps of Engineers (USACE or Army Corps).** The USACE has direct jurisdiction over activities which will alter fresh water wetlands pursuant to Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by "ordinary high water marks" on opposing channel banks. Wetlands are habitats with soils which are intermittently or permanently saturated or inundated. The resulting anaerobic conditions support plant species known as hydrophytes which show a high degree of fidelity to such soils. Wetlands are identified by the presence of hydrophytes, hydric soils (soils intermittently or permanently saturated by water), and wetland hydrology according to methodologies outlined in the 1987 Corps of Engineers Wetland Delineation Manual. In locations where wetlands are present, a jurisdictional study is

required. In cases where the wetland acreage to be filled is small and no sensitive rare or endangered species occur in the area, it is possible that filling will be authorized under certain Nationwide Permits. These Nationwide Permits apply in limited circumstances where the Corps has determined that the fill will not constitute a significant impact on the environment if carried out according to the limitations and conditions of the pertinent Nationwide Permit.

If the proposed fill is not authorized under a Nationwide Permit, the applicant would be required to obtain approval under the individual permit program administered by the Corps under Section 404. When an individual permit is required, the Corps analysis will include a determination of whether the project is "water dependent." The analysis per Section 404(b)(1) must include an analysis of practical alternatives to filling of wetlands. If the Corps authorizes a permit, it can require mitigations for the loss of jurisdictional wetlands. The Corps is required to consult with the U.S. Fish and Wildlife Service, NMFS, the EPA, and California Department of Fish and Game in carrying out its discretionary authority under Section 404. No permit can be issued until the RWQCB issues a certification (or waiver of such certification) that the proposed activity will meet State water quality standards. If an applicant is able to demonstrate that proposed filling of wetlands is necessary and that there is no practicable alternative to this filling, then the project mitigation plan would be reviewed by the U.S. Fish and Wildlife Service in relation to their mitigation policies.

- **California Regional Water Quality Control Board Regulations.** If any authorization of wetland fill is required from the US Army Corps of Engineers, then “401 Certification” from the California Regional Water Quality Control Board (CRWQCB) would also be necessary in order to make the Corps permit valid. This requires notification of the CRWQCB of the proposed action, payment of their processing fee (which will be based on the acreage of wetland fill), awaiting their public notice period, and addressing any substantial comments that might be registered on behalf of the public or the CRWQCB itself. Obtaining 401 Certification typically takes approximately two months, and can be pursued either concurrently with the Corps process or any time thereafter as long as no physical wetland impacts are incurred before obtaining the approval. Full documented compliance with CEQA must be provided to the CRWQCB before they will complete the 401 Certification.

- **Regulations for Oak Woodlands Protection**. The State Public Resources Code (Section 21083.4) states that if a county determines that a project in its jurisdiction may result in a conversion of oak woodland that would be considered significant under CEQA, then mitigation for this impact is required. The mitigation can include 1) conservation of oaks on the site; 2) replanting oaks (can be used for a maximum of 50% of the required mitigation); 3) contribution to the Oak Woodlands Conservation Fund; and/or 4) other mitigations developed by the county.

- **U.S. Fish and Wildlife Service (USFWS).** USFWS administers the Federal Endangered Species Act (ESA) and the Marine Mammal Protection Act. The U.S. Fish and Wildlife Service (USFWS) operates under a number of statutory

and administrative authorities. Its basic responsibilities concern migratory birds, anadromous fish, and endangered species. If a project involves a "take" of a federally listed species, then USFWS must approve the permit for this "taking." "Take" is defined by the ESA as harassing, harming, pursuing, shooting, wounding, trapping, capturing, or collecting any listed wildlife species. Take may include significant habitat modification or degradation that kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter.

Take incidental to an otherwise lawful activity may be authorized by one of two procedures. If a Federal agency is involved with the permitting, funding or implementing of the project, then initiation of formal consultation between that agency and USFWS, pursuant to Section 7 of the ESA, is required if it is determined that the proposed project may affect a federally listed species. Such consultation would result in a biological opinion that addresses anticipated effects of the project on listed and proposed species and may authorize a limited level of incidental take. If a Federal agency is not involved with the project, then an "incidental take" permit pursuant to Section 10(a) of the ESA should be obtained.

The USFWS is an advisory agency to the Army Corps on Section 404 and Section 10 projects. The USFWS will review mitigation plans for these projects. The USFWS identifies four different resource categories with criteria and mitigation goals for each. The Fish and Wildlife Service will review the resources on a site and assign a category to each. Each category has a specific set of mitigation requirements.

- **National Oceanic and Atmospheric Administration-National Marine Fisheries Service (NMFS or NOAA-Fisheries) Regulations.** NMFS administers the Federal Endangered Species Act and the Marine Mammal Protection Act as they pertain to marine and anadromous species. The service also advises the Army Corps of Engineers on Section 7 and Section 404 permits for projects that could affect fish habitat.

- **The Federal Migratory Bird Treaty Act.** This Act prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses birds, parts of birds, bird nests, and bird eggs.

- **Regulations for Birds of Prey.** Birds of prey are protected in California under provisions of the California State Fish and Game Code which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Stingiformes (birds of prey) or to take, possess, or destroy the nests or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction of projects during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance which causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFG.

B. Potential Impacts and Mitigation Measures

1. Criteria Used For Determining Impact Significance

Land uses and development consistent with the Draft 2007 UVAP would have a significant impact if it:

- Has a substantial adverse effect, either directly or through habitat modification on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service.

- Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service.

- Has a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, and coastal wetlands) through direct removal, filling, hydrological interruption, or other means.

- Interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites.

- Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan).

In addition to the above, CDFG guidelines consider a project to have a significant impact if it were to cause a change in species composition or result in the measurable degradation of sensitive habitats such as wetlands, oak woodlands, and/or perennial grasslands. State Public Resources Code (Section 21083.4) states that if a county determines that a project in its jurisdiction may result in a conversion of oak woodland that would be considered significant under CEQA, then mitigation for this impact is required.

2. Project Impacts

This section discusses the potential impacts from the Draft 2007 UVAP as per each of the criteria discussed above. The County does not have a tree protection ordinance or other ordinance protecting biological resources. There is no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved habitat

plan covering the plan area. There would be no impact per these two criteria. Potential impacts for all other criteria are described below:

Special Status Species of Plants

Impact 3.4-A **Land uses and development consistent with the Draft 2007 UVAP could adversely affect special status species of vegetation.**

New development in undisturbed areas on the valley floor could affect vernal pool or wetland habitats supporting special status species such as Burke's goldfields and Baker's meadowfoam. However, there are few areas left on the valley bottom that have not already been heavily disturbed by agricultural or residential activities. New development in the foothills and on higher elevations could damage populations of special status species, though such species have not been identified on sites where CEQA reviews have occurred or as shown in the CNDDB. The one exception to this is a CNDDB listing of the Mendocino bush mallow, which is now considered extinct.

While it is not expected that there are many areas supporting special status plants, it is always possible that future development sites could contain populations of these species. New development that removed these populations or altered the site conditions necessary for their survival (e.g., altered the site drainage needed for vernal pool species) would have a potentially significant impact.

The Draft 2007 UVAP contains policies and measures that address this potential impact. ***Policy OC2.1*** contains measures to catalogue the natural resources of the plan area, and develop and adopt comprehensive design review guidelines to protect priority natural resource ***Policy OC 2.2*** requires new development to maintain important open space. Implementation Measures under these policies call for prioritizing areas to be preserved, and allowing transfer of development rights to protect sensitive areas.

The County General Plan contains *Policy RM-28* calling for the protection of Special Status Species and other sensitive biological resources. The policy includes an Action Item to develop CEQA standards requiring disclosure of impacts to all sensitive biological communities during review of discretionary projects. It establishes standards to determine when mitigation is required, including:

- Sensitive Biotic Communities – For all sensitive biotic communities, restore or create habitat at a “no net loss” standard of habitat value. Where it is determined that restoration or creation are ecologically infeasible, preserve at a 2:1 ratio for habitat lost.

- Oak Woodland – Maintain and improve oak woodland habitat to provide for slope stabilization, soil protection, species diversity and wildlife habitat through the following:

    - Preserve, to the maximum extent possible, oak trees and other vegetation that occurs near the heads of drainages or depressions to maintain diversity of vegetation type and wildlife habitat as part of agricultural projects.

- Comply with the Oak Woodlands Preservation Act (PRC Section 21083.4) to conserve the integrity and diversity of oak woodlands, and retain, to the maximum extent feasible, existing oak woodland and chaparral communities and other significant vegetation as part of residential, commercial, and industrial approvals.

- Provide appropriate replacement of lost oak woodlands or preservation at a 2:1 ratio for habitat loss.

General Plan Policy RM-74 states that discretionary development shall be designed or conditioned to achieve no net loss of sensitive resources. *General Plan Policy RM-75* states that protection of existing sensitive resources is the highest priority. Onsite replacement or offsite replacement, protection or enhancement is less desirable. *General Plan Policy RM-76* limits land use density and intensity within and adjacent to critical wildlife habitats, such as wetlands, deer wintering range, old growth forests, and riparian corridors.

In addition to existing and proposed County policies, impacts to special status plants must be assessed and mitigated as part of the CEQA review of all discretionary projects. The California Department of Fish and Game has the legal responsibility to review and comment, when warranted, on project effects on special status species and any mitigations recommended.

Existing policies and proposed policies as well as existing CEQA requirements would reduce the potential impact to special status plants. However, the proposed measure that would develop the guidelines to protect priority resources would not be completed and adopted until the intermediate-term timeframe. The General Plan policy calling for these guidelines has no timeline associated with it. In addition, the implementation measures are overly general in defining the sensitive resources that need to be protected. The impact remains ***potentially significant.***

Mitigation Measures

3.4-A.1 The County shall protect special status plant species. To realize this standard, the time for implementation of Implementation Measures OC2.1b and OC2.2a will be revised from “intermediate” to “short-term.”

Impact Significance After Mitigation

The change to the implementation measures would ensure the necessary protection for special status species and would reduce this impact to a ***less than significant*** level. No additional mitigation is required at a program level of analysis. The County must implement these implementation measures prior to the approval of large-scale projects in order to ensure that the project-level impacts are actually mitigated.

Special Status Species of Wildlife

Impact 3.4-B **Land uses and development consistent with the Draft 2007 UVAP could result in the injury to or death of special status species of wildlife and/or destruction of habitat required by those species.**

It is possible that new development could eliminate habitat required by special status species of wildlife, thereby reducing the population of those animals. The types of animals likely to be affected include a number of bird and bat species. Nesting habitat of birds would mainly be affected by the removal of trees or dense chaparral such as occurs on some ridges on the east and west sides of the plan area. Development of woodlands, range lands, and/or agricultural areas would remove foraging habitat required by special status raptors and other birds, and bats. The CNDDB reports three special status species in the plan area. There is an osprey(s) reported in the very north end of the plan area where no development is proposed. There are reports of foothill yellow-legged frog and northwestern pond turtle, which are both California Species of Special Concern. Both species generally live in or adjacent to water. Effects to these species would be expected to mostly be indirect since development of streams is not allowed. Impacts would mainly be from potential impacts to water quality. Other species listed on Table 3.4-1 could use the plan area for foraging.

Development which results in the loss of nesting or roosting sites, of habitat required for the species' survival, or in damage to aquatic habitat used by frogs and other special status aquatic species would be a potentially significant impact.

Special status species of salmon and steelhead would be adversely affected by additional gravel mining of the Russian River, sedimentation, and runoff pollution. These impacts were previously assessed in Impact 3.3-G. The impacts can all be reduced to a less than significant level except for water quality impacts. The populations of salmonids could also be affected by increased withdrawals of water from the river. However, the State has mandated minimum flows for the river to guard against this potential impact. The County will abide by any changes made in Decision 1610 regarding releases from Lake Mendocino as recommended in the Biological Opinion issued by the National Marine Fisheries Service. Also, see Impact 3.4-C below for a discussion of impacts to the riparian corridor.

In addition to policies and implementation measures previously described in Impact 3.3-G the Draft 2007 UVAP contains other policies and measures that address this potential impact. ***Policy OC2.1*** contains measures to catalogue the natural resources of the plan area, and develop and adopt comprehensive design review guidelines to protect priority natural resource areas, and ***Policy OC2.2*** requires new development to maintain important open space. Measures under ***Policies OC2.1*** and ***OC2.2*** build on this by prioritizing areas to be preserved, and allowing transfer of development rights to protect sensitive areas. The policy also includes a measure to acquire or require dedication of easements for wildlife preserves (this is on an intermediate-term timeframe). However, the draft plan does not contain policies that specifically address preserving special status wildlife species.

The County General Plan provides protection for Special Status Species of wildlife, as was described previously in Impact 3.4-A. The policies and measures of the Draft 2007 UVAP and the existing General Plan do not adequately reduce the impact to all special status species and the habitat they need. The impact remains ***potentially significant.***

Mitigation Measures

Mitigation Measures 3.3-G.1 and 3.4-A.1 apply to this impact.

Impact Significance After Mitigation

The addition of the recommended mitigation measures would ensure the necessary protection for terrestrial special status species and would reduce this impact to those species to a ***less than significant*** level. However, the water quality impacts remain significant, so the impact to special status aquatic species remains ***significant and unavoidable.***

Sensitive Biological Habitat

Impact 3.4-C **Land uses and development consistent with the Draft 2007 UVAP could adversely affect the aquatic habitat of the Russian River and its tributaries thereby adversely affecting fish and aquatic wildlife. It could also adversely affect the riparian habitat along the streams as well as other sensitive habitat types in the area.**

The fishery of the Russian River and its tributaries have been severely damaged by past land use activities. Past logging, grazing, agricultural, gravel mining, and urban development, along with the construction of Coyote Dam, have resulted in a watershed that supports a fraction of the salmonids or other special status species of fish, frogs, shrimp, and turtles that it once did. As was described earlier in this section, a variety of local, regional, State, and Federal agencies are developing plans and implementing projects to attempt to address and reverse this decline. However, despite these planning efforts, MCWA staff believes that the fisheries are not being maintained and are in a continued decline.[53]

Currently, riparian habitat makes up a very small percentage of the habitat within the plan area. However, this habitat is exceptionally rich and provides a home for many species of plants and animals, including many special status species (for example, yellow-breasted chat and yellow warbler). The riparian habitat also provides shading for the stream, which maintains the temperature levels required by aquatic species. Insects living in the vegetation provide food sources. Fruits and nuts provide food sources for terrestrial wildlife. Trees and shrubs provide roosting and cover habitat for a wide variety of birds and terrestrial wildlife that forage in nearby grasslands, croplands, and residential areas. The riparian habitat is arguably the most important terrestrial habitat in the plan area.

[53] Roland Sanford, review of early version of this section.

Much of the riparian habitat of the plan area has been removed by past agricultural activities and development of residential and other urban uses. Any additional removal of riparian habitat caused by new development that could occur under the Draft 2007 UVAP would be a potentially significant impact.

New development allowed under the Draft 2007 UVAP could aggravate the historic land use impacts. As explained in earlier impact discussions in the Geology and Hydrology sections of this EIR, new construction and land uses can adversely affect water quality by increasing the amount of sediment and other pollutants delivered to the streams. Control of sediment and reducing stream temperatures by increasing riparian vegetation are likely the most important tasks facing the County and other agencies wishing to enhance the fishery habitat of the Russian River system. In addition, new development could remove riparian vegetation along the streams which would result in the loss of food sources and raise stream temperatures, both of which adversely affect fish, yellow-legged frogs, northwestern pond turtle, and other aquatic life.

Improper design and operation of municipal wastewater treatment and disposal systems and private sewage systems (i.e., leachfields) can adversely affect water quality and fish. Improper releases of water from Coyote Dam can adversely affect salmonid spawning and rearing. Excessive mining of aggregate or mining at the wrong location can adversely affect stream habitat and the fishery. These are all potentially significant impacts not only to special status species of fish and aquatic wildlife but to all aquatic life.

The Draft 2007 UVAP contains a number of policies and implementation measures that address this impact. Policies and measures that address the potential impacts of erosion, chemical pollution, and aggregate mining were addressed in previous impact discussions in the Geology and Hydrology sections. The Draft 2007 UVAP Open Space and Conservation Section also contains policies and measures directed specifically at this impact. ***Policy OC1.3*** calls for the County to enhance the Russian River fishery by coordinating with State and Federal agencies to implement existing strategies for the protection and recovery of special status species of fish. Implementation measures under ***Policy OC1.2*** include programs to maintain the riverbed elevation (reducing further degradation of the riverbed) and riverbanks. These programs, as implemented, would benefit the habitat used by the fishery.

Policy OC1.1 calls for the County to protect the river corridor and riparian habitat. This policy includes measures to establish appropriate stream setbacks and require those setbacks for new development. This measure, once implemented, would protect the sensitive riparian vegetation, which is important for the fishery and other aquatic wildlife.

Implementation Measure OC1.1a would define the river planning corridor and the extent of the surrounding riparian area within which proposed development will trigger design review. It would establish performance standard requirements and river design guidelines. ***Implementation Measure OC1.1c*** would establish a riparian system management plan and design guidelines. The guidelines would include:

- Assessment of river conditions (in reach-by-reach segments);
- Identification of critical areas for preservation (and limited or prohibited development) and priority segments for restoration;
- Strategies for restoration, maintenance and preservation;
- Opportunities to cultivate native plant species that are culturally significant to local Native American Tribes;
- Potential projects and locations for public access and recreational greenways; and
- Design guidelines for projects proposed within the defined river corridor planning area.

Other implementation measures under this policy require that the guidelines described above be incorporated into the County code; that design review be required for projects within the river planning corridor; and that performance standards be developed to guide development within the corridor. The performance standards would protect the river and tributaries from erosion, sedimentation and degradation of water quality, water carrying capacity and native vegetation and wildlife habitat. All these measures would be accomplished immediately or within the short-term timeframe. A final measure under this policy would identify potential funding sources, public and private, to implement river restoration and preservation goals and potential projects outlined in the restoration and preservation plan. This measure would not occur until the intermediate-term timeframe.

The County General Plan contains several policies aimed at protecting streams and riparian habitat. *General Plan Policy RM-1* states the County will protect stream corridors and riparian habitat. *General Plan Policy RM-80* states that vegetation removal should be reviewed when involving five (5) or more acres, assessing the following impacts:

- Grading and landform modifications including effects on site stability, soil erosion and hydrology.
- Effects on the natural vegetative cover and ecology in the project area.
- Degradation of sensitive resources, habitat and fisheries resources.
- Compatibility with surrounding uses.
- Visual impacts from public vantage points.
- Cumulative and growth-inducing impacts.

General Plan Policy RM-89 would conserve and enhance watercourses to protect habitat, fisheries, soils, and water quality. *General Plan Policy RM-90* would conserve and enhance streamside (riparian) vegetation through development design and standards.

These policies and implementation measures, once implemented, would improve the water quality entering the Russian River and provide protection for the river and the riparian zone along that river that do not currently exist. As noted in the discussion of Impact 3.3-G, the draft plan does not contain adequate mitigation for water quality. In addition, these policies and measures address only the Russian River and not the other streams in the plan area (though ***Implementation Measure OC1.1b*** does say the stream setbacks shall be determined and used for watercourses, which implies that the

measure applies to more than simply the Russian River). The impact to streams and riparian habitat remains ***potentially significant.***

The other major sensitive habitat type in the plan area is serpentine soils and rock outcrops. This habitat is mainly restricted to the hills on the west and east sides of the plan area. Little development potential occurs in these areas. However, it is possible that development of rural residential homes or improvements might occur in a serpentine area that contained sensitive plant populations.

As discussed under Impact 3.4-A, ***Policy OC2.1*** would inventory for sensitive habitat such as serpentine sites and develop and adopt comprehensive design review guidelines to protect priority natural resource areas. However, the impact to this and other sensitive habitat types potentially present in the plan area remain ***potentially significant.***

Mitigation Measures

Mitigation Measures 3.3-G.1 and 3.4-A.1 apply to this impact. In addition, the following mitigation is required.

3.4-C.1 The County shall protect riparian corridors and habitat. To realize this standard, Implementation Measures OC1.1a and OC1.1b will be revised and Implementation Measure OC1.1h will be added as follows:

OC1.1a River Corridor Planning Area
Define the river planning corridor and extent of surrounding riparian areas within which proposed development will trigger design review, performance standard requirements and use of river design guidelines. Classify "Riparian Corridors" designated in the Open Space and Conservation Section as follows:

(1) "Russian River Riparian Corridor" is the corridor adjacent to the main stem of the Russian River, excluding lands located within the urban land use categories or within the jurisdiction of a city. The corridor is 200 feet from the top of the higher bank on each side of the stream as determined by the County Department of Planning and Building Services.

(2) "Other Riparian Corridors" are the corridors within other land use categories along the Russian River and the designated corridors along other rivers and streams. The corridor will be 50 feet from the top of the higher bank on each side of the stream as determined by the County Department of Planning and Building Services.

(3) Establish a River Corridor Combining Zoning District. Rezone all lands within the River Corridor areas to this combining district.

OC1.1b Stream Setbacks
Determine appropriate development setback distances from ~~watercourses~~ all perennial and intermittent streams, as shown on USGS topographic maps as

of January 2011 (utilizing current ecological and scientific data) and specify setback requirements in the zoning code.

OC1.1h River Corridor Uses

Develop and adopt regulations establishing standards applicable to River Corridors. Until the regulations and the final Stream Setbacks are adopted, require that land use and development comply with the following principles. Allow or consider allowing the following uses within any River Corridor area:

- Streamside maintenance, fire fuel management, and restoration.
- Livestock grazing.
- Agricultural cultivation, but not within 100 feet of top of bank for the Russian River and 25 feet for Other Riparian Corridors.
- Public projects, including water-dependent public recreational facilities.
- Timber operations conducted in accordance with an approved timber harvest plan.
- Mining operations conducted in accordance with the County Surface Mining regulations.
- Road, street, and utility crossings
- Streamside maintenance, fire fuel management, and restoration.
- Permitted summer dams.
- Equipment turnaround and access roads associated with agricultural cultivation, provided that the affected area is the minimum necessary for these turnaround and access roads and that a minimum 25' vegetative filter strip is provided and maintained between the affected area and the top of the bank.
- Vegetation removal as part of an integrated pest management program administered by the Agricultural Commissioner.

Prohibit, except as otherwise listed above, grading, vegetation removal, agricultural cultivation, structures, roads, utility lines and parking lots within any streamside conservation area. Consider an exception to this prohibition if:

- It makes a lot unbuildable and if vegetation removal is minimized, or
- The use involves only the maintenance, restoration, or minor expansion of an existing structure or other existing use, or
- It can be clearly demonstrated through photographs or other information that the affected area has no substantial value for riparian functions, or
- A conservation plan is approved that provides for the appropriate protection of the biotic resources, water quality, flood management, bank stability, groundwater recharge, and other applicable riparian functions. [*Timeframe: ongoing for guiding principles until regulations are adopted in Short-term. Responsibility: Department of Planning and Building Services*]

Impact Significance After Mitigation

The policies and measures of the Draft 2007 UVAP (as amended by EIR-recommended additions), General Plan policies, CEQA review requirements, and the County's participation in other existing programs aimed at improving habitat values of the Russian River and protecting other sensitive habitat types reduce this impact at a program level to a ***less than significant level***. Future project applications that would affect the river would be assessed per these policies and implementation measures.

Wetlands

Impact 3.4-D Land uses and development consistent with the Draft 2007 UVAP could result in the loss of or damage to wetlands.

Future development could result in filling or dewatering of vernal pools, marshes, wet meadows, or other wetlands. This type of habitat is considered a sensitive habitat due to its increasing rarity in California and because it supports a unique assemblage of plants and, often, animals, many of which are special status species. This type of habitat has largely been displaced by past agricultural and urban development of the valley floor, where most of this type of habitat was located. However, pockets of wetland habitat remain, and new development can further reduce that habitat. For example, the Institute of International Philosophy and Ethics project on the Buddhist property in Talmage will result in the loss of 1.25 acres of jurisdictional wetlands. The applicant was required by the Army Corp to create 1.25 acres of new wetlands on the site as mitigation.[54] The site for this development is a remnant piece of valley bottomland that had not been developed because it was part of the old State Mental Hospital. Surrounding lands around the Buddhist property, which likely once supported similar wetlands, have all been converted to vineyards. Similar remnant pockets likely occur throughout much of the lower lying parts of the plan area. Isolated wetlands on flatter areas in the ridges are also possible. During its review of the earlier Draft EIR, the California Department of Fish and Game recommended strong protection for remaining wetlands in the plan area. Filling or otherwise destroying the hydrologic regime required by these wetlands would be a ***potentially significant impact***.

The Draft 2007 UVAP does not contain specific policies or implementation measures that mention protection for wetlands. However, ***Policies OC2.1 a***nd ***OC2.2*** that were described in Impact 3.4-A provide protection for important natural resources, which would include wetlands, while policies and measures described under Impact 3.4-C provide protection for riparian and aquatic habitat. The County General Plan includes *Policy RM-29* that states all public and private discretionary projects shall avoid impacts to wetlands if feasible. If avoidance is not feasible, projects shall achieve no net loss of wetlands, consistent with state and federal regulations. *Policy RM-28* establishes a 2:1 replacement for any wetlands displaced.

[54] *International Institute of Philosophy and Ethics Draft EIR*, op. cit.

The policies of the Draft 2007 UVAP, the County General Plan policy, and the protection wetlands are given through CEQA review, and review by the Army Corps and CDFG would provide protection for remaining wetlands. At a program level, the impact would be reduced to a ***less than significant*** level. Project applications on sites where wetlands occur would need to be assessed for consistency with these policies to ensure that there is no net loss of wetlands.

Oak Woodlands

Impact 3.4-E **Land uses and development consistent with the Draft 2007 UVAP within the plan area will result in the loss of woodland plant communities.**

Some of the development allowed under the Draft 2007 UVAP would occur on lands currently supporting oak woodlands and other native forest communities. There are approximately 19,000 acres within the plan area that are classified as oak woodland. Many of these areas are in the hills bordering the plan area and are classified as Rangeland or Remote Residential. The County has calculated that development under the Draft 2007 UVAP could result in as many as 380 additional residences in these 19,000 acres. (as compared to 306 additional residences under the Existing General Plan (and Alternative C) and Land Use Alternative B while Land Use Alternative A would also allow 380 residences). With the exception of the East Ukiah Hills discussion area, most of this development potential is outside the main development areas, and is scattered throughout the plan area.

The potential conversion of areas supporting oaks to vineyards is as significant as conversion from residential development. This conversion has become commonplace due to the fact that traditional vineyard sites have already been planted and hillside benches are desirable planting locations for certain grape varieties.

This development could result in the removal of native oaks and other native trees and shrubs. It could result in the conversion of oak woodlands to residential or agricultural use. This is a significant impact as regards the trees themselves as well as the habitat these woodlands provide for other native plants and for wildlife.

State PRC Code Section 21083.4 requires preservation of oak woodlands or specific mitigations in the case oak woodlands would be removed. The mitigation can include 1) conservation of oaks on the site; 2) replanting oaks (can be used for a maximum of 50% of the required mitigation); 3) contribution to the Oak Woodlands Conservation Fund; and/or 4) other mitigations developed by the county. The Draft 2007 UVAP specifically addresses the impacts to oak woodlands in ***Policy OC2.3***, which states that the County will preserve and restore oak woodland and hillside habitats. ***Implementation Measure OC2.3a*** calls for development of an oak woodland habitat inventory and preservation plan. This plan would identify remaining woodlands that contain valley oaks, interior live oaks and black oaks throughout the plan area. It would create a GIS database to record critical information about the resources. It would designate critical resource areas for preservation and priority restoration projects based on woodlands that are most significantly intact and those that offer the highest potential for successful restoration.

The recommendations in this plan would be adopted as part of the County code. However, this plan would not be prepared until the intermediate-term timeframe. ***Implementation Measure OC2.3c*** would establish performance standards for new development. The County would develop criteria to evaluate development proposals and develop performance standards as part of the zoning code to specify:

- appropriate set-back distances;
- tree/woodland protection practices during construction;
- maximum allowed grading in the vicinity of specimen/heritage trees and woodlands; and
- monitoring programs, and potential mitigations.

Criteria and performance standards would be based on current environmental science pertaining to maintaining healthy woodland communities. While this measure would help protect trees within development zones, it would not address the impact of converting oak woodlands to other uses.

The County General Plan contains *Policy RM-24* that states the County will protect its natural landscapes, including restricting conversion and fragmentation of oak woodlands. *General Plan Policy RM-85* states that the County will conserve and replant oak woodlands and stands of native oaks in community areas and developments, and protect oak woodlands in other areas through clustering and limitations on density. *General Plan Policy RM-28* establishes mitigation standards for oak woodlands, including:

1) Preserve, to the maximum extent possible, oak trees and other vegetation that occur near the heads of drainages or depressions to maintain diversity of vegetation type and wildlife habitat as part of agricultural projects.

2) Comply with the Oak Woodlands Preservation Act (PRC Section 21083.4) regarding oak woodland preservation to conserve the integrity and diversity of oak woodlands, and retain, to the maximum extent feasible, existing oak woodland and chaparral communities and other significant vegetation as part of residential, commercial, and industrial approvals.

3) Provide appropriate replacement of lost oak woodlands or preservation at a 2:1 ratio for habitat loss.

DFG in reviewing the earlier EIR expressed their concern about the loss of oak woodlands in the plan area with corresponding adverse effects on wildlife. They recommended creating habitat preserves, and the restoration or enhancement of damaged habitat.

A major problem with the potential development of the area supporting oak woodlands is that with the exception of the East Ukiah Hills site where 65 residences could be built, most of the potential development would be development of existing legal lots so that the County would not have any discretionary authority to approve or deny that development (i.e., constructing a residence on a legal lot does not require discretionary approval nor,

usually, CEQA review). In addition, the County has no existing authority to regulate agricultural uses and conversions.

Another significant problem experienced in other counties with oak woodlands is that property owners are removing oak trees and then subsequently submitting development applications after the oak woodland conversion has already occurred.

The Impact of potential oak woodland conversion remains ***potentially significant.***

Mitigation Measures

Mitigation Measure 3.1-B.1 also applies to this impact. It gives priority to projects that do not convert substantial acreage of oak woodlands.

3.4-E.1 The County shall require that new development minimize the removal of true oaks (*Quercus* sp.) to the maximum extent feasible. To realize this standard, Implementation Measure OC2.3a will be revised and Implementation Measure OC2.3e will be added as follows:

OC2.3a Oak Woodland Habitat Inventory and ~~Preservation~~ Conservation Plan
Using the map of contiguous oak woodland (defined as a site where oaks provide at least 10% canopy cover), develop a preservation plan to bring focus to conservation efforts. Use the GIS database to record critical information about the resources. Assess current protection of these woodlands.

Designate critical resource areas for ~~preservation~~ conservation and priority restoration projects based on woodlands that are most significantly intact and those that offer the highest potential for successful restoration. Work with the U.C. Extension Office, the Department of Fish and Game, and the Inland Ukiah Valley Land Trust to develop this program. Identify unique "heritage" specimen trees for special protection.

OC2.3e Oak Preservation and Mitigation
Require the identification, conservation and protection of native true oaks in the design of discretionary projects. To the maximum extent practicable (through clustering development or avoiding development in areas containing oaks), minimize the removal of oaks and other native trees and fragmentation of woodlands, require any trees removed to be replaced, preferably on the site, and provide permanent protection of other existing woodlands where replacement planting does not provide adequate mitigation. Replacement planting will be done at a ratio of at least 3:1, and planted trees will be maintained for at least 5 years with trees not surviving being replaced and maintained for 5 years.

Where oak woodland conversion or fragmentation would occur, require the applicant to pay an in lieu fee equivalent to the conservation values of the site, which would require an appraisal of the site. These fees shall be used to fund the restoration projects listed in Implementation Measure OC2.3a.

[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]

Impact Significance After Mitigation

These policies and measures, plus the recommended additional measure, provide a strong policy framework for protecting plan area oak woodlands and other woodlands. The policies and measures would ensure County compliance with the requirements set forth in Public Resources Code 21083.4. The policies and measure reduce the impact to a ***less than significant*** level, and no additional mitigation is required at a program level.

Wildlife Movement and Nursery Site

Impact 3.4-F Land uses and development consistent with the Draft 2007 UVAP could interfere with wildlife movement and nursery sites.

In urban and agricultural areas, the most important wildlife movement routes are typically along streams. Streams not only provide unimpeded passage (i.e., lack of fences) but provide cover from predators, water, and food. Maintaining an adequate undeveloped buffer along streams is important for wildlife movement as well as for maintaining the other habitat values of riparian habitat. In the less developed hillside areas, wildlife typically have relatively free movement except where blocked by buildings or impassable types of fences. The Background Report does not identify any officially mapped migration routes (e.g., deer migration routes) in the plan area.

New development on the valley floor would have a significant impact if it removed riparian vegetation or blocked stream corridors with buildings or fences. New development in the hilly areas would have a significant impact if it blocked travel along streams or resulted in a substantial block of new development that divided important wildlands. In the latter case, major new rural residential subdivisions, such as what would be allowed on the property east of Redemeyer Road, could result in dense enough new development that deer and other wildlife would not pass through the site. However, this site is already bordered by similar rural residential development on the north and to the south of Vichy Springs Road. To the west is the valley floor with commercial agriculture. The site is not really between areas where wildlife would travel (other than forays into the valley floor). Most of the sites with substantial development potential are either on or adjacent to the valley floor. There is little development potential in the hillier areas. Thus, blocking wildlife travel corridors is not expected to be a major impact, other than the potential blockage of stream corridors.

On the valley bottom, the main nursery sites (i.e., sites where terrestrial wildlife bear and raise their young) would also be the riparian zone along streams. In the hills, all vegetation types other than commercial agriculture could be nursery sites for birds and other wildlife. Projects could displace active nests and dens of birds and animals. Domesticated animals, especially household pets, introduced by onsite and nearby development would continue to pose a continuing hazard to nursery sites. Projects that

cause special status species or birds subject to the Migratory Bird Treaty Act to abandon their nests or dens would be a potentially significant impact.

The Draft 2007 UVAP does not directly address wildlife travel corridors nor nursery sites. As described previously in Impact 3.4-B, the Draft 2007 UVAP, plus existing General Plan policies, provide adequate protection for special status species of wildlife, which would include protection of nests and nursery sites. Additional developments will lead to increased risk of predation from domestic pets. The increase cannot be quantified, but will occur. However, this risk is not considered significant given other protections afforded nursery sites. As previously described under Impact 3.4-D, the Draft 2007 UVAP plus existing General Plan policies provide adequate protection for riparian corridors, which should ensure they remain open for wildlife travel.

As described in previous impact discussions in this section, the Draft 2007 UVAP contains policies to identify and protect significant natural resources. Measures under ***Policy OC1.2*** will result in the protection of riparian corridors along the Russian River (and, with EIR recommendations, corridors along all major streams). This would be a significant benefit to wildlife travel as these riparian corridors are important travel routes.

Policy OC2.3 includes a number of implementation measures to inventory and protect oak woodland habitat. Preservation of this habitat would substantially reduce impacts to wildlife travel and nesting/denning. ***Policies OC2.2 and OC2.1*** includes measures to require the preservation of open space with ***Implementation Measure OC2.1d*** specifically stating that the County will identify areas of importance for acquisition or dedication as easements for wildlife preserves. However, the measures to identify and protect wildlife preserves and to develop the oak woodland preservation plan will both be carried out in intermediate-term time frames. The impact would remain ***potentially significant.***

Mitigation Measures

Mitigation Measures 3.4-A.1 and 3.4-C.1 apply to this impact.

Impact Significance After Mitigation

With the addition of the two mitigation measures, the Draft UVAP would provide sufficient protection of wildlife travel corridors and nest and den sites to reduce the impact to a ***less than significant*** level.

3.5 CULTURAL RESOURCES

A. Setting

1. Archaeological Resources

The plan area was originally inhabited by the Central Pomo people. These Native Americans made seasonal encampments in upland areas but were primarily people who lived near the Russian River and its tributaries. There are numerous archaeological sites within the plan area. Very few prehistoric or historic archaeological sites in the area have been subject to systematic scientific study. With so few cultural resources carefully studied, the prehistory of the area generally remains not well understood.

There is one Native American (Pomo) Rancheria and one Indian (Pomo) Reservation within the plan area. The Guidiville Rancheria is located north of Vichy Springs Road. The Pinoleville Indian Reservation located north of Ukiah contains about 100 acres of land supporting a population of 136 people. The County has also recognized the efforts of the Yokayo Tribe of Pomo Indians to gain Federal trust status on land within the southeast portion of the plan area.

This EIR does not attempt to map or quantify the many known cultural resource sites in the Valley. These sites are recorded at the Northwest Information Center of the California Historic Resources Information System (CHRIS).

2. Historic Resources

There are many buildings in the plan area that are potentially significant historical structures (many of the ranches and farms in the valley have been in existence for 100 years or more). However, the Background Report states there are no buildings in the plan area on the Federal National Register of Historic Places (the Palace Hotel in Ukiah is on this list). The only California Historical Landmark (State list) is the Vichy Springs Resort on Vichy Springs Road. Other historic resources (though not included on the Federal or State lists) are the old State mental hospital in Talmage (currently the home of the City of 10,000 Buddhas) and the former Finnish colony in Calpella.

3. Regulatory Framework

Federal Regulations

The National Historic Preservation Act of 1966 (NHPA) and its implementing regulations require that projects conducted by a Federal agency, on federally owned land, or involving Federal permits, grants or loans, to evaluate the effects of these projects on historic properties. These effects include eligibility or listing on the National Register of Historic Places, and afford the Office of Historic Preservation (OHP) an opportunity to comment on these actions.

The National Register of Historic Places lists districts, sites, buildings, structures, and objects 50 years of age or more that have significance in American history at the local,

State, or national level, and also meet various criteria. For any Federal project or project that has Federal funding, all prehistoric and historic properties located within the project area will be identified and evaluated under Section 106 of the National Historic Preservation Act (NHPA), following regulations issued by the Advisory Council on Historic Preservation (36 CFR 800). The NHPA directs Federal agencies to take into account the effects of proposed activities on historic properties. Historic properties are properties that are included in the National Register of Historic Places or that meet the criteria for the National Register. If it is determined that the project would affect historic properties, the lead agency must identify the appropriate State Historic Preservation Officer (SHPO) to consult with during the process.

The cultural resource evaluation described herein identifies all potential historic properties or other cultural resources within the area of potential effect (APE) and evaluates their eligibility for inclusion in the National Register of Historic Places. To be eligible for the National Register a property, structure or site must retain integrity and possess significance in American history, architecture, archeology, engineering, culture, and meet any of the following criteria:

a. Be associated with events that have made a significant contribution to the broad patterns of our history; or

b. Be associated with the lives of persons important in our past; or

c. Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possesses high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or

d. Have yielded, or may be likely to yield, information important in prehistory or history.

The Archaeological Resources Protection Act of 1979 recognized the importance to the Nation's heritage of archaeological resources on public and Indian lands, and provided stronger Federal laws aimed at preventing the loss and destruction of archaeological resources and sites resulting from development. Other acts offering similar protections include the Native American Graves Protection and Repatriation Act, American Indian Religious Freedom Act of 1978, and National Environmental Policy Act of 1979.

State Regulations

The California Register of Historical Resources (the California Register) and the California Environmental Quality Act (CEQA) provide the statutory basis for this study for the County-level review. The California Register legislation was signed into law in September 1992 and its implementing regulations became effective on January 1, 1998. Guidelines for the California Register have been incorporated into the October 26, 1998 revisions to CEQA. CEQA requires the lead agency to prepare an environmental impact report for a project determined to have a significant impact on the environment, including substantial adverse changes to historical resources. An historical resource is, by

definition, a resource determined eligible to the California Register by virtue of the resource meeting one or more of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; or
- Is associated with the lives of persons important in our past; or
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

If a resource is listed or eligible for listing in a local register of historic resources, or determined to be significant based on substantial evidence by the lead agency, that resource is also automatically included in the California Register.

Buildings, sites, structures, objects, and districts representative of California and United States history, architecture, archaeology, engineering, and culture convey significance when they also possess integrity of location, design, setting, materials, workmanship, feeling, and association. Integrity is the authenticity of a property's physical identity—the presence of characteristics that were present during the resource's period of significance. Enough of these characteristics must remain to convey the reasons for their significance.

Public Resources Code Section 5097 implements a number of Federal laws and specifies procedures in the event that human remains are discovered during any site disturbance activity. The disposition of Native American burials falls within the jurisdiction of the California Native American Heritage Commission. California Code of Regulations Section 15064.5(f) identifies the need to establish procedures in the event of discovery during construction of buried cultural resources on nonfederal land.

The State's Office of Historic Preservation (OHP) has primary responsibility for the administration of historic preservation programs in California through the *California's Comprehensive Statewide Historic Preservation Plan*, as well as other laws and regulations.

The California Native American Heritage Commission works to identify, catalogue, and protect places of special religious or social significance, graves, and cemeteries of Native Americans per the authority given the Commission in Public Resources Code 5097.9.

Senate Bill 18 requires that the County conduct formal consultation with all local tribes when developing a new specific or general plan. The County Department of Planning and Building Services contacted the ten Tribes in the County as required by SB18. Consultations were requested by a number of tribes as part of developing the Draft 2007 UVAP as well as the update to the County General Plan. Responses were received from two Tribes located within the UVAP area, and the County is in consultation with the Tribes to develop a confidential list of areas of cultural concern for them.

Mendocino County Regulations

The County has adopted an Archaeological Resources Ordinance which establishes the Archaeological Commission for the purpose of reviewing impacts to archaeological resources from discretionary projects. Projects with the potential for impacts are referred to the Northwest Information Center (NWIC) at Sonoma State University, which maintains records of historic and archaeological studies. The NWIC performs a records review and makes recommendations for further study, which may include an archaeological reconnaissance. The County Archaeological Commission considers the NWIC recommendations and conducts an archaeological review process, which may result in an investigation and establishing conditions on the project. The Commission ultimately forwards its recommendation to the decision making body.

With regard to historic resources, the County reviews discretionary projects for impacts on historic resources but has not adopted regulations beyond those in the State Historic Building Code. The City of Ukiah has adopted a historic preservation ordinance.

The County General Plan contains *Policies DE-111* to *DE-116* aimed at protecting cultural resources.

B. Potential Impacts and Mitigation Measures

1. Criteria Used For Determining Impact Significance

Land uses and development consistent with the Draft 2007 UVAP would have a significant impact if it:

- Cause a substantial adverse change in the significance of a historical resource as defined in *CEQA Guidelines* Section 15064.5.
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to *CEQA Guidelines* Section 15064.5.
- Directly or indirectly destroy a unique paleontological resource or site.
- Disturb any human remains, including those interred outside of formal cemeteries.

2. Project Impacts

This section will describe the potential cultural resources impacts resulting from buildout of the Draft 2007 UVAP as per the significance criteria listed above.

Historical and Archaeological Resources

Impact 3.5-A **Land uses and development consistent with the Draft 2007 UVAP has the potential to adversely affect areas of archaeological or historical importance.**

New development generally involves grading and disturbing the soil. Such activities can destroy archaeological and historical artifacts and remains. Native American village sites and campsites can be destroyed. It is possible that development could damage or destroy human remains. Infill, reuse, and redevelopment of already developed properties can result in the demolition or alteration of buildings and sites that may be historical resources or have cultural significance. New development can also damage or destroy historic buildings, remains, and artifacts. These would all be ***potentially significant impacts***.

In the SB18 consultations the County held with tribes, a list of common concerns ("common threads") was developed (and agreed to by the two Tribes from the plan area that responded), including:

- All Tribes expressed concerns about the location of sites being made public and want some assurances that site information will be protected.
- Many Tribes would like to protect access to gathering or ceremonial locations and would like County help in doing so.
- Several Tribes have purchased new lands for housing and other uses, and would like to negotiate with the County about re-zoning to allow use changes prior to the land being put in Trust status (or about long-term use of land without putting it in Trust).
- Respect for Tribal sovereignty is a primary issue for al the Tribes.
- Each Tribe expressed a desire to preserve the open lands because many of their materials for conducting cultural activities (i.e. making dance regalia, basket weaving, and medicines) are collected from these areas.
- Each Tribe indicated that they have cultural sites that they want protected.[55]

The Draft 2007 UVAP contains an entire section, the Historic and Archaeological Resources Section, devoted to protecting cultural resources. It contains policies to:

- Conduct an historic resources inventory to determine which buildings and sites in the Valley warrant preservation, adaptive reuse and/or special design treatment. Finalize a list of resources with classifications ranging in level of critical significance.

[55] Mendocino County Planning Team, 1/24/07.

- Nominate the most significant historic resources from the historic resources inventory to state or national preservation lists.

- Develop criteria, standards and guidelines for maintaining the character and quality of historically significant buildings and landscapes.

- Establish an historic preservation program, encompassing cultural, historic and architectural resources.

- Designate a clear process for review of proposed permanent changes to designated historic and cultural resources (including building envelope, exterior appearance, setting and landscapes). Proposed changes to significant structures or landscapes or projects proposed in designated areas or in relation to significant sites or buildings should trigger design review.

- Continue to utilize established mechanisms when reviewing of discretionary project proposals and potential impacts on historic resources through the Valley.

- Maintain programs for review, collection and archiving of public and private records as an aid to researching and documenting historical, architectural and archaeological resources.
- Allocate capital improvement funds in the County budget for maintenance and enhancement of publicly owned historic buildings.

- Assess possible community responsibility in contributing to the cost of preserving historic properties as community resources.

Implementation Measure OC1.1c would establish a riparian system management plan. One component of that plan is to include opportunities to cultivate native plant species that are culturally significant to local Native American Tribes. ***Policy OC1.1*** plus the mitigations recommended under Impacts 3.4-A and 3.4-C above will provide substantial protection to riparian corridors along streams, which was a major concern of the Tribes.

The County General Plan contains similar policy protection (see *Policies DE-111* to *DE-116*). As mentioned in the Setting section, the County has an Archaeological Commission which makes recommendations on projects potentially affecting archaeological resources. Where warranted the Commission requires site surveys and analyses.

These policies and implementation measures address the environmental aspects of the common concerns itemized above. The County would need to address the other concerns (access to gathering or ceremonial locations on private property; rezoning property; and Tribal sovereignty issues) when developing final policies and land use classifications for the UVAP and the County General Plan.

The policies in ***Section 10 (Historical and Archaeological Preservation)*** of the Draft 2007 UVAP establish a policy framework for identifying and protecting historic resources. This policy and attendant measures, along with existing overview of archaeological resources, provide a strong policy framework for protecting cultural

resources for discretionary projects. However, a substantial amount of growth in the plan area would not require discretionary approvals (these are ministerial projects, such as requests for building permits or agricultural grading). This development and actions could damage or destroy cultural resources. There is no mitigation for the impact from nondiscretionary projects, and the impact would remain ***significant and unavoidable.***

Paleontological Resources

Impact 3.5-B **Land uses and development consistent with the Draft 2007 UVAP has the potential to adversely affect areas containing significant paleontological resources.**

Paleontological resources have been found in Mendocino County, though recorded resources were found mainly in the coastal part of the county. Nevertheless, it is possible that future land development could destroy significant paleontological resources, and this is a potentially significant impact. County *General Plan Policy DE-116* requires assessment and mitigation for paleontological resources on discretionary projects. However, as was the case for the previous impact, there is no mitigation for the impact from nondiscretionary projects, and the impact would remain ***significant and unavoidable.***

3.6 CIRCULATION AND TRANSPORTATION

A. Setting

The principal means of transporting people and goods throughout the plan area is by motor vehicle. Highway 101 (U.S. 101) is the principal roadway, running north-south the length of the plan area. State Street, starting at Highway 253 and running north to Calpella, is the only other major north-south route. A variety of east-west arterials and local roads provide access throughout the plan area. This section begins with a discussion of the classification of roadways and is followed by a description of the area's major roadways.

1. Functional Classification of Roadways

Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of traffic service that they are intended to provide. There are three highway functional classifications – arterial, collector, and local roads and two categories – urban and rural. All streets and highways are grouped into one of these classes, depending on the character of the traffic (i.e., local or long distance) and the degree of land access that they allow. The Federal Highway Administration [FHWA) identifies functional classification as a key item in transportation data. Streets and highways are grouped into classes according to the service they provide. The following section discusses the roadway classification systems as defined in the Draft 2007 UVAP Transportation and Circulation Section.

Arterials generally consist of a road network connecting regions, towns, and other major sources of traffic to serve commercial, economic development and employment centers. This network is intended to move people and goods into, through and out of the valley and generally be continuous from the point of entry into the Valley to the point of exit. The following sub-classes fall under this category of road system:

Principal Arterials. U.S. 101 is the only Principal Arterial in the plan area, as defined and shown in County of Mendocino General Plan.

Minor Arterials. These roadways carry heavy traffic volumes over long distances. Area roadways in this category are defined and shown in the County of Mendocino General Plan.

Collectors are similar in nature to arterials, with the exception that predominant travel distances are shorter. Collector roadways generally originate and terminate at arterials, other collectors, or neighborhood entrances and have the primary purpose of moving the traffic between arterials and residential neighborhoods, or commercial/employment areas. These are again sub-divided into major and minor collectors.

Local Roads are facilities consisting of rural and urban residential roads not otherwise classified, primarily serving travel over relatively short distances and

providing access to adjacent lands. A road is defined as a local road when it is not classified by the County of Mendocino General Plan as any of the above classifications.

It should be noted that the UVAP Transportation and Circulation Section does not have cross-sections or construction standards for the roadway facilities discussed above.

The roadway classification system contained in the *County of Mendocino Road Standards* (still in the draft form) is generally consistent with the UVAP's road classification system. Also, these *Road Standards* specify the cross-section and construction standards for the roadway facilities discussed above. Upon approval by the Board of Supervisors, the *County of Mendocino Road Standards* road classification and construction standards (cross-section) will be incorporated into the revised Mendocino County General Plan Circulation Section.

2. Existing Roadway Setting

The County road system consists of Principal Arterials, Minor Arterials, Urban Collectors, Rural Major Collectors, Rural Minor Collectors, and the Local Road System, as defined above. Study area roads in each category are listed below:

Principal Arterial

- US 101

Minor Arterials

- State Route (SR) 253
- SR 20
- County Road (CR) 104 North State Street
- CR 104A South State Street
- County Road (CR) 201 Old River Road
- CR 209 South Dora Street
- CR 252 Oak Knoll Road
- CR 252A Oak Court Road

Urban Collectors

- SR 222 Talmage Road
- CR 104 North State Street
- CR 200 Sanford Ranch Road
- CR 201 Old River Road
- CR 203 Mill Creek Road
- CR 204 Knob Hill Road
- CR 204A Watson Ranch Road
- CR 210 Fircrest Drive
- CR 212 Low Gap Road
- CR 215 Vichy Springs Road
- CR 215A Redemeyer Road
- CR 222 Lovers Lane
- CR 223 Orr Springs Road
- CR 227 East Side Calpella Road
- CR 227B Lake Mendocino Drive

- CR 229B Moore Street
- CR 250A KUKI Lane
- 250B Feed Lot Lane
- CR 250C Bush Street
- CR 251 Despina Drive

Rural Major Collectors

- CR 104 North State Street
- CR 201 Old River Road
- CR 215A Redemeyer Road
- CR 223 Orr Springs Road

Rural Minor Collectors

- CR 203 Mill Creek Road
- CR 215 Vichy Springs Road

Local Road System

- Other rural and urban roads not otherwise classified

3. UVAP Travel Model

The City of Ukiah and MCOG developed a travel demand forecasting (TDF) model to support long-range transportation planning efforts for the Ukiah Valley Area Plan (UVAP). The UVAP model was created in the TransCAD software by the traffic consulting firm OmniMeans, and was validated to year 2003 conditions. The model was updated by Fehr & Peers, Transportation Consultants, in 2008.[56]

The TDF model was used to develop this section of the EIR and will be used to generate traffic volume forecasts and other travel demand data for various other planning and engineering studies in and around the City of Ukiah. The model produces traffic forecasts for average weekday daily, AM and PM peak hour conditions. Although there are seasonal variations in traffic in the plan area due to agricultural activities and tourism, the model was calibrated and validated for what is conventionally termed a "typical workday," which is defined as a Tuesday, Wednesday, or Thursday during a week with no holidays when local schools are in session.[57]

4. Level of Service

The operating conditions experienced by motorists are described as the Levels of Service. The Level of Service (LOS) quantifies the subjective measure of traffic tolerance by ranking traffic operation based on traffic volumes and roadway capacity (i.e., the ratio of the traffic volume on a street as compared to the maximum capacity of that street). Ranked from A to F, Level of Service A generally represents free flow conditions and Level of Service E represents full capacity. Level of Service F operating conditions are generally perceived as intolerable. Both road segment and intersection Levels of Service are important in determining whether a road network under study is

[56] *Ukiah Valley Area Transportation Impact Fee Nexus Study,* Fehr & Peers and Economic & Planning Systems, September 2008; available at: *www.mendocinocog.org/pdf/UkiahNexusStudy9-15-08.pdf*

[57] The methods of calibrating and validating the model are described in *Ukiah Valley Area Transportation Impact Fee Nexus Study*.

capable of handling the additional traffic generated by a proposed project. Table 3.6-1 provides general descriptions for each LOS category.

LOS is based on the number of lanes, average daily traffic, terrain, average speed, road surface and geometrics, among other factors. However, this categorization should be used as a guideline only because road safety, maintenance, and other local conditions may also be important.

Table 3.6-1
Level of Service Traffic Criteria

LOS	Generalized Description	Volume to Capacity Ratios
A	Free flow, low volume at high speeds.	0.0 to 0.59
B	Stable flow with some restrictions on speed.	0.6 to 0.69
C	Speed and maneuverability more closely controlled and restricted.	0.7 to 0.79
D	Unstable flow.	0.8 to 0.89
E	Volume at or near capacity.	0.9 to 0.99
F	Forced flow above capacity.	Above 1.0

5. Existing Traffic Volumes

Table 3.6-2 (below) describes the volume, capacity, and the LOS during the PM peak traffic hour for the 45 roadway segments that the County identified as important roadways serving the plan area population. The Peak PM Volume and the LOS were obtained from the modeling that was done. As the table shows, all roadway segments currently operate at acceptable Levels of Service. The only roadway segment that operates below LOS B is Lake Mendocino Drive between Highway 101 and North State Street.

6. Planned Projects or Improvements

Based on the TDF modeling described in Section 3 (above) the Mendocino Council of Governments (MCOG) had the *Ukiah Valley Area Transportation Impact Fee Nexus Study* prepared. This study identifies what roadway and intersection improvements would be needed to serve maximum projected development and maintain acceptable Levels of Service under the plan area and City buildout. Based on this study, the County and the City would need to approve an ordinance that would identify the final fees, what projects would be funded, and the priority of those projects.

MCOG funded a 2005 study that identified what improvements were needed to accommodate growth for Highway 101 interchanges in the plan area (no more current report has been published). The report identifies short-term projects needed in the next five years as well as longer term projects.

The plan area also encompasses the following additional planned projects or improvements:

Perkins Street and North State Street Interchanges

Caltrans has prepared draft plans (PSRs) for two interchanges in the area: at Perkins Street and at North State Street.

The Perkins Street project would include: 1) ramp signalization for the northbound and southbound ramps and synchronization with the signal at Perkins Street and Orchard Avenue; 2) modifications of turn lanes on Orchard Avenue; 3) and minor modifications of turn radii. The City of Ukiah has plans to change turn lanes on Perkins Street in this area to add a right-turn pocket for westbound traffic onto Orchard Avenue and to change signalization to allow eastbound traffic to turn or proceed straight-ahead without interference from westbound traffic.[58]

The North State Street interchange project would include several channelization changes to minimize conflicting traffic movements, but would not include any new signalization. These improvements are intended to address existing traffic congestion problems, and not increased congestion that might result from new development along North State Street or elsewhere in the plan area.

Brush Street Triangle "Road Improvement and Land Use Agreement"

On September 14, 2004, the County and City of Ukiah adopted an Agreement which requires certain actions as part of the City's commitment to fund the recently completed bridge across Orr Creek and to extend Orchard Avenue to Brush Street. New development projects within the Brush Street Triangle and other areas that were included in a MCOG-funded traffic study area, will be required to pay their fair share of a series of intersection improvements which would be necessitated by such projects. An AB 1600 (“nexus") study was prepared to show the costs of such improvements. Neither the City nor the County will approve new development in that study area unless the circulation improvements needed for that project are funded.

Redemeyer Road Extension

A report on alternate methods of extending Redemeyer Road to the west side of the Russian River was prepared for the County Department of Transportation.[59] This report (the *Feasibility Study for the Redemeyer Road Extension Project*) assessed five alternate routes and recommend two of these routes for additional study:

- Alignment AC, which would extend Redemeyer Road to the west starting 0.12 miles south of Hulda Drive and connecting to N. State Street at the location of the intersection of N. State Street and the Highway 101 access ramps; and

- Alignment D1, which would extend Redemeyer Road to the west. The extension would start at Deerwood Drive, traverse the north side of the Masonite property, and intersect N. State Street at Orr Springs Road.

[58] Phil Dow, personal communication, 7/24/08.
[59] *Feasibility Study for the Redemeyer Road Extension Project*, Drake Haglan & Associates, June 2009; see: *www.drakehaglan.com/redemeyer/new/RedemeyerRoadExtensionFeasibilityStudy9_3_09.pdf.*

Table 3.6-2
Existing Conditions: Roadway Levels-of-Service

No.	Roadway Segment	Capacity Configuration	No. of Lanes	Peak PM Capacity	Peak PM Volume	Level of Service
1	Bush St. – Ukiah City Limits to Feed Lot Ln.	Urban Minor Collector	2	1000	82	A
2	Despina Dr. – Ukiah City Limits to Lovers Ln.	Urban Minor Collector	2	1000	81	A
3	East Side Calpella Rd. – Area Plan Northern Bndry to Moore Ave.	Urban Major Collector	2	1200	87	A
4	East Side Calpella Rd. – Moore Ave. to Marina Dr.	Urban Minor Collector	2	1200	145	A
5	East Side Calpella Rd. – Antoni Ln. to Lake Mendocino Dr.	Urban Minor Collector	2	1200	67	A
6	Old River Rd. – Area Plan Southern Boundary to Howell Creek Rd.	Urban Major Collector	2	1200	66	A
7	Old River Rd. – Howell Creek Rd. to Talmage Rd.	Urban Major Collector	2	1200	88	A
8	Jefferson Ln. – South Dora St. to South State St.	Urban Local	2	1000	200	A
9	Hensley Creek Rd. – CR 225A to North State St.	Local Road	2	1200	437	A
10	Knob Hill Rd. – Watson Rd. to Sanford Ranch Rd.	Urban Minor Collector	2	1000	103	A
11	Lake Mendocino Dr. – North State St. to East Side Calpella Rd.	Urban Minor Collector	2	1400	479	A
12	Lovers Ln. – Despina Dr. to State St.	Urban Minor Collector	2	1200	4	A
13	Marina Dr. – East Side Calpella Rd. to SR 20	Local Road	2	1000	11	A
14	Mill Creek Rd. – Old River Rd. to Area Plan Eastern Bndry.	Varies	2	1000	18	A
15	Moore Ave. State St. to East Side Calpella Rd.	Urban Major Collector	2	1200	145	A
16	Moore Ave. – Highway 101 to State St.	Urban Major Collector	2	1200	278	A
17	North State St. – Highway 101 to Orr Springs Rd.	Varies	2 s.bound 1 n.bound	1900	1290	B
18	North State St. – Hensley Creek Rd. to Lake Mendocino Dr.	Urban Major Collector	2	1900	631	A
18a	North State St./Lake Mendocino Dr. (concurrent segment)	Urban Major Collector	2	1900	899	A
19	North State St. – Lake Mendocino Dr. to. Parducci Rd.	Urban Major Collector	2	1900	506	A
20	North State St. – Central Ave. to Moore Ave.	Urban Major Collector	2	1900	154	A
21	Oak Knoll Rd. – Western Boundary to Dora St.	Local Road	2	1000	234	A
22	Orr Springs Rd. – Area Plan Western Bndry to North State St.	Urban Minor Collector	2	1200	347	A
23	Redemeyer Rd. – Vichy Springs Rd. to El Dorado Rd.	Urban Minor Collector	2	1400	255	A
24	Sanford Ranch Rd. – Talmage Rd. to Knob Hill Rd.	Urban Minor Collector	2	1000	265	A
25	South Dora St. – Jefferson Ln. to Oak Court Road	Minor Arterial	2	1400	236	A
26	South Dora St. – Ukiah City Limits to Jefferson Ln.	Minor Arterial	2	1400	413	A
27	South State St. – Ukiah City Limits to Jefferson Ln.	Minor Arterial	2	3800	525	A
28	South State St. – Jefferson Ln. to SR 253	Minor Arterial	2	3800	347	A
29	SR 20 – US 101 to East Side Calpella Rd.	Minor Arterial	2	4200	997	A
30	SR 222 – Ukiah City Limits to East Side Rd.	Major Collector	2	1900	636	A
31	SR 253 – S. State St to Area Plan Western Bndry.	Minor Arterial	2	1400	300	A
32	Vichy Springs Rd. – Redemeyer Rd. to Area Plan Eastern Bndry.	Varies	2	1400	53	A
33	Vichy Springs Rd. – Ukiah City Limits to Watson Rd.	Urban Major Collector	2	1400	466	A
34	Vichy Springs Rd. – Watson Rd. to Redemeyer Rd.	Urban Minor Collector	2	1400	306	A
35	Watson Rd. – Knob Hill Rd. to Vichy Springs Rd.	Urban Minor Collector	2	1000	182	A

Table 3.6-2 (continued)
Existing Conditions: Roadway Levels-of-Service

No	Roadway Segment	Capacity Configuration	No. of Lanes	Peak PM Capacity	Peak PM Volume	Level of Service
36	Lake Mendocino Dr. – Highway 101 to North State St.	Urban Minor Collector	2	1400	1007	C
37	US 101 – Area Plan S. Bndry to Burke Hill Dr.	Principal Arterial	4	6800	1231	A
38	US 101 – Fracchia Ln. to State St.	Principal Arterial	4	6800	1409	A
39	US 101 – State St. to Talmage Rd.	Principal Arterial	4	6800	1616	A
40	US 101 – Talmage Rd. to E. Gobbi St.	Principal Arterial	4	6800	2276	A
41	US 101 – E. Gobbi St. to Perkins Rd.	Principal Arterial	4	6800	2511	A
42	US 101 – Perkins Rd. to N. State St.	Principal Arterial	4	6800	2844	A
43	US 101 – N. State St. to Lake Mendocino Dr.	Principal Arterial	4	6800	2940	A
44	US 101 – Lake Mendocino Dr. to Moore Ave.	Principal Arterial	4	6800	2725	A
45	US 101 – Moore Ave to SR 20	Principal Arterial	4	6800	2190	A

Source: Mendocino County Department of Planning and Building Services and Fehr & Peers

Both alignments would traverse the 100-year floodplain and require a new bridge across the river. There would be numerous site constraints and impacts that would need to be addressed if the County decides to pursue a project at either location. An EIR and NEPA document would be required, as noted in the Feasibility Study.

7. Bicycle Facilities

Bikeways are categorized by design type:

- Class I facilities are called "bike paths." These facilities provide completely separated right-of-way for exclusive use of bicycles and pedestrians with minimum cross flow of motorist traffic. According to the *Mendocino County Regional Bikeway Plan,* Class I bike paths are expensive to construct and maintain. There may also be some safety issues, as parts of the County have visual obstructions posing security concerns.

- Class II facilities are called "bike lanes." These facilities are designated areas for the exclusive or semi-exclusive use of bicycle traffic. Pavement striping and posted signs generally identify these lanes. Adjacent vehicle parking and cross flow by pedestrians and motorists are permitted.

- Class III facilities are called "bike routes." These facilities are street areas shared with pedestrian and motorists. Bike route rights of way are designated by signs or pavement markings.

The topography and street layout of the plan area is conducive to bicycle travel. The greatest concentration of bicycle lanes in Mendocino County is within the City of Ukiah, and are generally Class II or III. The *Mendocino County Regional Bikeway Plan*[60] contains plans for a coordinated bikeway system in the Valley. The City of Ukiah has adopted a *Bicycle and Pedestrian Master Plan* which calls for the *Rail Trail,* a bicycle and pedestrian path within the North Coast Rail Authority right-of-way, that would be within the City limits. Extension of this bikeway beyond the City to the north could provide an important link to Mendocino College and Lake Mendocino Drive.

Recent County bikeway projects include the Lake Mendocino Drive project and Phase I of the North State Street bikeway project. Other bikeways located within the plan area include:

- Hensley Creek Road
- Lake Mendocino Drive
- Vichy Springs Road
- North State Street (Highway 101 to Lake Mendocino Drive)

The City of Ukiah has also constructed bikeways along the following streets:

[60] Dow & Associates, 2006. The plan variously referred to as the General Bikeway Plan or Master Bicycle Plan is the same plan referred to in the Regional Transportation Plan and County General Plan.

- Low Gap Road
- Grove Avenue
- Bush Street
- Gobbi Street
- Dora Street
- Despina Drive

According to the *Mendocino County Regional Bikeway Plan,* short-range bikeway improvement projects in the plan area include:

- West Road from School Way to Road M
- Lake Mendocino Drive to its terminus
- Vichy Springs Road (City limits to Russian River Bridge)

These projects would generally be Class II facilities, with the exception of a portion of Vichy Springs Road, which would be Class III.

According to the Background Report the County Department of Transportation has also indicated that other priority proposed bikeway improvement projects in the plan area include:

- Dora Street (Oak Court to Ukiah City limits)
- Vichy Springs (Ukiah City limits to Redemeyer Road)
- Despina Drive (Ukiah City limits to Lovers Lane)
- North State Street (Ukiah City limits to end)
- Bush Street (Ukiah City limits to Lovers Lane)

8. Pedestrian Facilities

Pedestrian facilities in the plan area are mainly limited to sidewalks. Much of the plan area, including developed portions, lacks existing sidewalks which means that pedestrians must walk along the side of the road. There are currently no adopted plans for making any improvements to these facilities.

9. Public Transit

The Mendocino Transit Authority (MTA) is a joint powers agency formed by Mendocino County, Fort Bragg, Point Arena, Willits, and Ukiah to provide public transportation services to citizens in Mendocino County. MTA operates demand-responsive services as well as ten fixed routes serving various parts of the plan area, which covers 2,500 square miles.

Fixed route service is available along several of the major highway corridors. Demand-responsive service is available in the Willits, Ft. Bragg and Ukiah areas. The MTA has consistently made strong efforts to coordinate with private transportation in Mendocino County. Through this arrangement, service is provided between the North Coast and inland areas. Greyhound provides interregional bus service. MTA also provides

services to individuals with special needs, such as the elderly, those with disabilities, and others who cannot drive.

The Regional Transportation Plan (RTP) calls for short-range projects (within 1-10 years) including maintenance of existing service, development of transit centers north of Ukiah and in Willits, and the development of transit bus yards in Fort Bragg, Point Arena and Gualala. New bus routes include a Ukiah to Mendocino College route offering evening service. Long-range projects (within 10-20 years) include a central Ukiah transit center, transit connection between Mendocino and Lake Counties, and commuter and inter-city service between Willits, Ukiah and Santa Rosa. Providing improved intermodal connections to serve the elderly or disabled is an additional objective.

10. Rail

The Northwestern Pacific Railroad traverses the plan area. The North Coast Rail Authority (NCRA) was formed by California Legislature in 1989 to ensure the continuation of railroad service in northwestern California. The Northwestern Pacific Railroad (NWPRR) extends from the Arcata/Eureka area in Humboldt County to the San Rafael area in Marin County. The railroad was heavily damaged in storms over a number of years and has not been in operation since 1998. The NCRA is responsible for implementing passenger rail service north of the Sonoma County line. The Sonoma/Marin Area Rail Transportation Authority (SMART) is responsible for providing passenger rail service in Sonoma and Marin Counties.

Although rail service does not currently exist on the NWPRR in Mendocino County, a contract between NCRA and the California Redwood Coast Company (CRC) has been negotiated to operate service between Healdsburg and Willits.

The existing train depot in Ukiah, on the south side of East Perkins Street, includes a small passenger ticketing building, platforms, siding, and a truck ramp. Depending on freight and passenger demand, the facility could be expanded to accommodate truck-to-rail freight transfer and bus-to-rail transfer. Other locations for truck-to-rail facilities exist along the alignment. No current plans for expansion are under consideration.

11. Aviation

The Ukiah Municipal Airport is the largest and busiest airport in the County. The City controls land use on the Airport property and in the immediate area within the City limits through the City General Plan and the *Ukiah Municipal Airport Master Plan* emphasizing Airport operations as adopted by the City's Airport Commission. Land use in the City and surrounding County, important to Airport safety and viability as well as community safety and compatibility, is controlled by the Mendocino County Airport Land Use Commission through the *Mendocino County Comprehensive Land Use Plan* (CLUP).

The airport has an adopted Master Plan,[61] which calls for a number of improvements. Runway lengthening is not among the proposed improvements. A Negative Declaration

[61] Ukiah Municipal Airport Master Plan Report, Shutt Moen Associates, 1996.

was prepared for this Plan prior to adoption, and it found that no additional mitigation measures were required beyond those included in the Plan. s

12. Regulatory Framework

The transportation system involves the interconnection of many components and modes that are geographically dispersed and provided by different governmental entities. A few of the major players are addressed below; others are noted in the preceding sections. The Americans with Disabilities Act requires that public and private transportation providers use vehicles that are readily accessible and usable to individuals with disabilities.

Caltrans

The California Department of Transportation (Caltrans) is the primary State agency responsible for transportation issues. One of its duties is the construction and maintenance of the State highway system. Caltrans has established standards for roadway traffic flow, and it has developed procedures to determine if intersections require improvements. For projects that may physically affect facilities under its administration, Caltrans requires encroachment permits before any construction work may be undertaken. For projects that would not physically affect facilities, but may influence traffic flow and Level of Service at such facilities, Caltrans may recommend measures to mitigate the traffic impacts.

County of Mendocino

The County Department of Transportation Division (DOT) is responsible for capital facility planning and for maintaining more than 1,000 miles of County-maintained roads and related facilities, as well as the Little River and Round Valley airports. DOT reviews discretionary land development applications for compliance with local and State access regulations (private roads, driveways and County maintained roads). In addition, DOT administers encroachment permits for work performed within County rights of way, such as underground utility work; driveways and road approaches; permits street closures; and also issues transportation permits for extralegal loads traveling on County roads.

The Department of Planning and Building Services oversees and administers local planning requirements. The Circulation Element of the County General Plan mandated by the California Government Code must be consistent with all other elements of the General Plan (see Section 2.0 Land Use). All development such as specific plans, subdivisions, and use permits must be consistent with the Circulation Element and implementing regulations, including County zoning and land division codes, bikeway and parking plans, and the Comprehensive Airport Land Use Plan (CLUP). The County Airport Land Use Commission oversees airport operations and development near airports via this CLUP.

Mendocino Council of Governments (MCOG)

MCOG is a joint powers agency established in 1972. It serves as the Regional Transportation Planning Agency (RTPA) for the plan area. The MCOG Board consists of representatives of the County Board of Supervisors (two members), a County elected official, and one council member from the four incorporated cities in the County. It is responsible for preparing the Regional Transportation Plan (RTP) for the County. The projects included in the RTP were proposed by these five jurisdictions as well as other agencies responsible for transportation in the County, including Caltrans, the Mendocino Transit Authority, North Coast Railroad Authority, California Western Railroad, Noyo Harbor District, and the Anderson Valley Community Services District.

The current 2005 RTP provides an assessment of the current modes of transportation in the County and identifies potential new travel options. It predicts future needs for travel and the movement of goods. The RTP includes a list of specific actions and improvements to facilitate travel and accessibility. These specific actions include major highway and local road construction projects, highway and street maintenance projects, bridge construction and repair, improvements to and expansion of airports, rehabilitation of rail lines, construction of bike lanes and bikeways, construction of mass transit transfer centers, improvements to harbors, and a variety of other transportation-related projects. As of October 2010, MCOG was completing the 2010 RTP, which will likely be adopted in early 2011.

In order to be eligible for Federal and State funding, transportation projects must be included in the RTP. As such, agencies and jurisdictions responsible for transportation elements in the County have submitted lists of possible projects that might be funded and constructed over the next twenty years. The 2005 RTP includes several long-term projects in the plan area, including widening North State Street from Milepost 0.55 to Milepost 2.3 and replacing bridges over Masonite Road and Ackerman Creek (both of these projects have recently been completed), and the extension of Redemeyer Road across the Russian River. As mentioned earlier, MCOG has funded an AB 1600 study for the plan area.

B. Potential Impacts and Mitigation Measures

1. Criteria Used For Determining Impact Significance

Land use and development consistent with the Draft 2007 UVAP would have a significant impact if it:

- Conflicts with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

- Conflicts with an applicable congestion management program, including, but not limited to Level of Service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

- Substantially increases hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

- Conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

- Results in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

2. Project Impacts

This section will describe the potential traffic impacts resulting from buildout of the Draft 2007 UVAP as per the significance criteria listed above. New development would not be expected to cause change in air traffic patterns for the Ukiah Airport.

Increased Traffic Congestion

Impact 3.6-A **Traffic generated by land uses and development consistent with the Draft 2007 UVAP will cause sections of County and City roads and certain intersections to operate at an unacceptable Level of Service.**

As shown in Table 3.6-3, increased traffic from buildout under the Draft 2007 UVAP will result in impacts to county and city roads.

Traffic operations on North State Street between Highway 101 and Orr Springs Road would degrade from the existing LOS B to LOS F by 2030. The short section of North State Street (that is also Lake Mendocino Drive) would operate at LOS D in 2030 as compared to the current LOS B. Airport Park Boulevard, Brush Street, Clay Street, Gobbi Street, Low Gap Road, and Perkins Street in the City of Ukiah would also operate at levels of service that are unacceptable to the City.

Buildout would also cause several intersections in both the County and the City to operate at an unacceptable Level of Service. In particular, certain intersections along South State Street and North State Street, the Orchard Avenue Extension, and various streets within the City of Ukiah, including intersections on Airport Park Boulevard, Brush Street, Dora Street, Gobbi Street, Low Gap Road, North State Street, Orchard Avenue, Perkins Street, South State Street, Talmage Road, and Highway 101 ramps are expected to operate at levels below LOS D. Intersections operating at worse than LOS

D (or LOS C for rural and residential roads, though these roads are less likely to experience traffic congestion) cause long delays for drivers. The above congestion would result in a ***potentially significant impact.***

Table 3.6-3 shows the result of the traffic modeling for County roadways in the year 2030 with no planned road extensions or other traffic improvements in place. Table 3.6-4 shows the Level of Service in 2030 with the following roadway extensions and improvements that are listed as future projects under ***Policy CT1.2*** in place:

- Extend Orchard Avenue from its current northern terminus to Lake Mendocino Drive. This would provide a major new north-south route accessing the Brush Street Triangle area and the North State Street area.

- Extend Redemeyer Road across the Russian River via one of the routes described in Section 6 above.

- Extend Hensley Creek Road and Orr Springs Road to the new Orchard Avenue Extension.

- Extend Orr Springs Road to Lovers Lane.

- Extend Oak Knoll Road to Stipp Lane or Highway 253.

- Widen North State Street from Highway 101 to Lake Mendocino Drive to be 4 lanes if necessary after the aforementioned Orchard Street Extension project is complete or programmed. The County Department of Transportation believes it would be preferable to provide adequate area-wide traffic capacity with an alternate north-south route before widening North State Street to 4 lanes.

- Widen West Lake Mendocino Drive between Highway 101 and North State Street to be 4 lanes. The widening of North State Street from Highway 101 to Milepost 2.3 into a two-lane dedicated center turn lane is complete, pursuant to the Regional Transportation Plan.

From a traffic congestion perspective, several of the extensions listed above would not be necessary to reduce a significant traffic congestion impact. These include the Redemeyer Road Extension and the extension of Oak Knoll Road to Stipp Lane or Highway 253. The elimination of these two extensions would not substantially affect PM peak hour volumes on North State Street, South State Street, or Dora Street. However, these extensions would provide alternate access routes that would be useful in the case of emergencies or evacuations. They would also relieve some traffic on State Street. Elimination of the Orchard Street Extension project would certainly necessitate widening of North State Street from Highway 101 to Lake Mendocino Drive. The widening of North State Street to four lanes would increase capacity but likely result in the elimination of the continuous center lane; this could result in more aggressive driving. Again, the Department of Transportation believes it is more desirable to spread the traffic flow to the additional north-south routes.

The Orr Springs Road extensions would be needed only if new development were approved in the Lovers Lane area. The Hensley Creek Road extension would relieve traffic congestion on North State Street and provide an alternate access route, but it would not be required to reduce a significant traffic congestion impact.

The AB 1600 nexus study prepared for MCOG identifies what roadway and intersection improvements are needed within the County and City to meet projected buildout. Many of these improvements would be needed only if specific projects are developed, while others are dependent on overall growth reaching a certain threshold. Some measures, such as the road extensions listed previously under this Impact, would be advantageous from an areawide circulation perspective, but are not absolutely required to make roadways or intersections operate at an acceptable Level of Service. The nexus study includes Table 3.6-5 that describes the projects that could be funded by developer fees if the County and City adopt such fees.

The Draft 2007 UVAP contains numerous policies and implementation measures to address circulation inadequacies.

Policies CT1.1 through ***CT1.3*** include implementation measures to:

- Encourage new development along roads that are suitable to handle high traffic volumes. The high intensity development corridors identified are approximately the same as the plan discussion areas.
- Extend the roadways listed previously.
- Work with Caltrans to improve Highway 101 interchanges and develop a hook ramp in the Brush Street Triangle.

All these preceding measures would increase the capacity of the existing circulation system.

Policy CT1.1 would develop an integrated transportation corridor that would encompass Highway 101, major thoroughfares, rail, air and public transportation to proactively manage travel demand by identifying underutilized capacity in the corridor and shift travel demand accordingly.

Policy CT3.1 includes a measure that the County will work with Mendocino Council of Governments to monitor traffic on roads that currently have Level of Service C or D, and incorporate findings into regional transportation plans and updates.

Policy CT3.2 states that the County will prioritize development applications that rely on appropriately classified existing roads with available capacity, over proposals that would require new transportation facilities and infrastructure. It states that major discretionary projects applications should include generalized traffic and circulation information, and that the County may require a traffic study prepared by a licensed professional, which may include an evaluation of project and cumulative average daily traffic; impacts on Level of Service, safety and the area-wide transportation system; consistency with General Plan policies and adopted Caltrans and City of Ukiah transportation planning documents if applicable; and projected mitigations.

The policy goes on to establish the following approval conditions per traffic conditions:

- The County would only approve projects if they include adequate mitigation to maintain defined Level of Service standards.
- Development affecting roads (excluding local roads) with Level of Service E or F should not be approved unless mechanisms or offsets to prevent further degradation are secured or in place.
- Rights-of-way must be adequate to serve the project and accommodate multiple transportation modes consistent with General Plan policies and applicable plans and standards adopted by the County.
- The road system must be adequate to serve the project consistent with the General Plan policies and applicable plans and standards adopted by the County.
- Projects impacting State or City transportation systems or rights-of-way should be consistent with adopted Caltrans or City transportation planning documents as applicable.
- The County would require development impact fees, development agreements and other secured funding sources as necessary to fund transportation improvements to maintain an acceptable Level of Service on County roads and for all other transportation modes.
- Mitigate trips generated by new development using travel demand management strategies, such as: free transit passes; mixed use development with concentrated employment centers and residential communities; and efficient walking and bicycle connections.

Policy CT1.2 coordinates County road improvement planning and budgeting with the priorities and policies established in the General Plan. The potential for traffic management measures or improvement projects on roads that exceed or are within 10% of exceeding the Level of Service thresholds will be included in the evaluation of potential projects.

These policies would ensure that the County will require traffic studies for major new development and not approve such development unless there is adequate roadway capacity. The roadway and intersection improvements needed to serve this growth potential has been identified. To achieve this, ***Policy CT3.2*** explicitly contains an implementation measure (***Implementation Measure CT3.2d***) to require development impact fees, development agreements or other secured funding sources where necessary to fund transportation improvements to maintain an acceptable Level of Service on County roads and for all other transportation modes. The nexus study needed to formalize the collection of development fees has been completed, and there is a planning framework in place to adopt a set fee for new development.

The above UVAP policies are in addition to, and consistent with, numerous policies contained in the County General Plan. These policies (*Policies DE-117* to *DE-151*) are aimed at ensuring that new land uses can be served with an adequate circulation system.

The following policies are of particular note:

- *General Plan Policy DE-120* states that projects to increase density or intensity should not be granted if there are basic infrastructure deficiencies, unless a program is in place for timely resolution of the deficiency.

- *General Plan Policy DE-121* states that new discretionary development will be required to demonstrate that basic infrastructure is available and the provider has adequate capacity to serve the project.

- *General Plan Policy DE-131* states that development impact fees, assessments, or other secured financing sources may be required to fund needed transportation improvements. This policy specifically states that the AB 1600 study done for the plan area shall be used to develop and implement transportation impact fees for the plan area.

- *General Plan Policy DE-137* states that the County will develop a roadway system that facilitates orderly development and serves the needs of existing and future development.

- *General Plan Policy DE-141* states that the County encourages development using existing roads with available capacity prior to locating development in areas that require new transportation facilities.

- *General Plan Policy DE-148* states that land divisions and other discretionary projects shall not be approved until access and road improvements adequate for the intended uses, density or intensity are identified and constructed or funding mechanisms are in place.

With the improvements identified in Table 3.6-5 in place, the study roadway sections and intersections would operate at acceptable levels of service. At a plan level, the impact would be reduced to a ***less than significant*** level. Many to most of these improvements may not occur until sufficient new development occurs either in the North State, Lovers Lane, Brush Street Triangle and/or South Ukiah Valley areas to warrant and to finance the improvements. It is possible that future projects could be approved prior to the roadway extensions and/or widening being financed or constructed. Therefore, future projects would need to be assessed regarding traffic impacts to the street system that is present at that time (or planned and financed improvements to that system).

No additional mitigation is required at a plan level. Individual discretionary projects will be assessed per the CEQA process for conformance with these policies and measures. However, the County should be aware that even though the policies and measures ensure adequate intersection functioning, there will be an overall increase in traffic volumes and congestion at intersections. This is an inevitable effect of increasing the population of an area.

Table 3.6-3
Projected Impacts to County Roads in 2030 Without Mitigation

No	Roadway Segment	Capacity Configuration	No. of Lanes	Peak PM Capacity	Peak PM Volume	Level of Service
1	Bush St. – Ukiah City Limits to Feed Lot Ln.	Urban Minor Collector	2	1000	340	A
2	Despina Dr. – Ukiah City Limits to Lovers Ln.	Urban Minor Collector	2	1000	727	C
3	East Side Calpella Rd. – Area Plan Northern Bndry to Moore Ave.	Urban Major Collector	2	1200	146	A
4	East Side Calpella Rd. – Moore Ave. to Marina Dr.	Urban Minor Collector	2	1200	142	A
5	East Side Calpella Rd. – Antoni Ln. to Lake Mendocino Dr.	Urban Minor Collector	2	1200	148	A
6	East Side Rd. – Area Plan Southern Boundary to Howell Creek Rd.	Urban Major Collector	2	1200	87	A
7	East Side Rd. – Howell Creek Rd. to Talmage Rd.	Urban Major Collector	2	1200	114	A
8	Jefferson Ln. – South Dora St. to South State St.	Urban Local	2	1000	251	A
9	Hensley Creek Rd. – CR 225A to North State St.	Local Road	2	1200	445	A
10	Knob Hill Rd. – Watson Rd. to Sanford Ranch Rd.	Urban Minor Collector	2	1000	133	A
11	Lake Mendocino Dr. – North State St. to East Side Calpella Rd.	Urban Minor Collector	2	1400	952	B
12	Lovers Ln. – Despina Dr. to State St.	Urban Minor Collector	2	1200	243	A
13	Marina Dr. – East Side Calpella Rd. to SR 20	Local Road	2	1000	13	A
14	Mill Creek Rd. – East Side Rd. to Area Plan Eastern Bndry.	Varies	2	1000	18	A
15	Moore Ave. – State St. to East Side Calpella Rd.	Urban Major Collector	2	1200	249	A
16	Moore Ave. – US 101 to State St.	Urban Major Collector	2	1200	535	A
17	**North State St. – Highway 101 to Orr Springs Rd.**	**Urban Major Collector**	2 s.bound 1 n.bound	**1900**	**2367**	**F**
18	North State St. – Hensley Creek Rd. to W. Lake Mendocino Dr.	Urban Major Collector	2	1900	1150	B
18a	**North State/Lake Mendocino Dr. (concurrent segment)**	**Urban Major Collector**	**2**	**1900**	**1545**	**D**
19	North State St. – Lake Mendocino Dr. to. Parducci Rd.	Urban Major Collector	2	1900	815	A
20	North State St. – Central Ave. to Moore Ave.	Urban Major Collector	2	1900	311	A
21	Oak Knoll Rd. – Western Boundary to Dora St.	Local Road	2	1000	253	A
22	Orr Springs Rd. – Area Plan Western Bndry to North State St.	Urban Minor Collector	2	1200	492	A
23	Redemeyer Rd. – Vichy Springs Rd. to El Dorado Rd.	Urban Minor Collector	2	1400	410	A

Table 3.6-3 (continued)
Projected Impacts to County Roads in 2030 Without Mitigation

No	Roadway Segment	Capacity Configuration	No. of Lanes	Peak PM Capacity	Peak PM Volume	Level of Service
24	Sanford Ranch Rd. – Talmage Rd. to Knob Hill Rd.	Urban Minor Collector	2	1000	327	A
25	South Dora St. – Jefferson Ln. to Oak Court Road	Minor Arterial	2	1400	256	A
26	South Dora St. – Ukiah City Limits to Jefferson Ln.	Minor Arterial	2	1400	467	A
27	South State St. – Ukiah City Limits to Jefferson Ln.	Minor Arterial	2	3800	838	A
28	South State St. – Jefferson Ln. to SR 253	Minor Arterial	2	3800	681	A
29	SR 20 – US 101 to East Side Calpella Rd.	Minor Arterial	2	4200	1147	A
30	SR 222 – Ukiah City Limits to East Side Rd.	Major Collector	2	1900	756	A
31	SR 253 – S. State St to Area Plan Western Bndry.	Minor Arterial	2	4200	369	A
32	Vichy Springs Rd. – Redemeyer Rd. to Area Plan Eastern Bndry.	Varies	2	1400	109	A
33	Vichy Springs Rd. – Ukiah City Limits to Watson Rd.	Urban Major Collector	2	1400	755	A
34	Vichy Springs Rd. – Watson Rd. to Redemeyer Rd.	Urban Minor Collector	2	1400	514	A
35	Watson Rd. – Knob Hill Rd. to Vichy Springs Rd.	Principal Arterial	2	1000	215	A
36	Lake Mendocino Dr. – US 101 to North State St.	Principal Arterial	2	1400	1302	E
37	US 101 – Area Plan S. Bndry to Burke Hill Dr.	Principal Arterial	4	6800	1536	A
38	US 101 – Fracchia Ln. to State St.	Principal Arterial	4	6800	1742	A
39	US 101 – State St. to Talmage Rd.	Principal Arterial	4	6800	2410	A
40	US 101 – Talmage Rd. to E. Gobbi St.	Principal Arterial	4	6800	3310	A
41	US 101 – E. Gobbi St. to Perkins Rd.	Principal Arterial	4	6800	3644	*A*
42	US 101 – Perkins Rd. to N. State St.	Principal Arterial	4	6800	4030	*A*
43	US 101 – N. State St. to Lake Mendocino Dr.	Principal Arterial	4	6800	4082	*B*
44	US 101 – Lake Mendocino Dr. to Moore Ave.	Principal Arterial	4	6800	3558	*A*
45	US 101 – Moore Ave to SR 20	Principal Arterial	4	6800	2678	A

Table 3.6-4
Projected Impacts to County Roads in 2030 With Mitigation

No	Roadway Segment	Capacity Configuration	No. of Lanes	Peak PM Capacity	Peak PM Volume	Level of Service
1	Bush St. – Ukiah City Limits to Feed Lot Ln.	Urban Minor Collector	2	1000	253	A
2	Despina Dr. – Ukiah City Limits to Lovers Ln.	Urban Minor Collector	2	1000	339	A
3	East Side Calpella Rd. – Area Plan Northern Bndry to Moore Ave.	Urban Major Collector	2	1200	132	A
4	East Side Calpella Rd. – Moore Ave. to Marina Dr.	Urban Minor Collector	2	1200	122	A
5	East Side Calpella Rd. – Antoni Ln. to Lake Mendocino Dr.	Urban Minor Collector	2	1200	105	A
6	East Side Rd. – Area Plan S. Boundary to Howell Creek Rd.	Urban Major Collector	2	1200	87	A
7	East Side Rd. – Howell Creek Rd. to Talmage Rd.	Urban Major Collector	2	1200	114	A
8	Jefferson Ln. – South Dora St. to South State St.	Urban Local	2	1000	231	A
9	Hensley Creek Rd. – CR 225A to North State St.	Local Road	2	1200	445	A
10	Knob Hill Rd. – Watson Rd. to Sanford Ranch Rd.	Urban Minor Collector	2	1000	142	A
11	Lake Mendocino Dr. – North State St. to East Side Calpella Rd.	Urban Minor Collector	2	1400	1054	C
12	Lovers Ln. – Despina Dr. to State St.	Urban Minor Collector	2	1200	236	A
13	Marina Dr. – East Side Calpella Rd. to SR 20	Local Road	2	1000	12	A
14	Mill Creek Rd. – East Side Rd. to Area Plan Eastern Bndry.	Varies	2	1000	18	A
15	Moore Ave-. State St. to East Side Calpella Rd.	Urban Major Collector	2	1200	219	A
16	Moore Ave. – US 101 to State St.	Urban Major Collector	2	1200	471	A
17	North State St. – Highway 101 to Orr Springs Rd.	Urban Major Collector	4	3800	2290	B
18	North State St. – Hensley Creek Rd. to W. Lake Mendocino Dr.	Urban Major Collector	4	3800	1241	A
18a	North State/Lake Mendocino Dr. (concurrent segment)	Urban Major Collector	4	3800	1634	A
19	North State St. – Lake Mendocino Dr. to. Parducci Rd.	Urban Major Collector	4	3800	860	A
20	North State St. – Central Ave. to Moore Ave.	Urban Major Collector	2	1900	288	A
21	Oak Knoll Rd. – Western Boundary to Dora St.	Local Road	2	1000	253	A
22	Orr Springs Rd. – Area Plan Western Bndry to North State St.	Urban Minor Collector	2	1200	784	B
23	Redemeyer Rd. – Vichy Springs Rd. to El Dorado Rd.	Urban Minor Collector	2	1400	240	A

Table 3.6-4 (continued)
Projected Impacts to County Roads in 2030 With Mitigation

No	Roadway Segment	Capacity Configuration	No. of Lanes	Peak PM Capacity	Peak PM Volume	Level of Service
24	Sanford Ranch Rd. – Talmage Rd. to Knob Hill Rd.	Urban Minor Collector	2	1000	316	A
25	South Dora St. – Jefferson Ln. to Oak Court Road	Minor Arterial	2	1400	334	A
26	South Dora St. – Ukiah City Limits to Jefferson Ln.	Minor Arterial	2	1400	476	A
27	South State St. – Ukiah City Limits to Jefferson Ln.	Minor Arterial	2	3800	797	A
28	South State St. – Jefferson Ln. to SR 253	Minor Arterial	2	3800	616	A
29	SR 20 – US 101 to East Side Calpella Rd.	Minor Arterial	2	4200	1165	A
30	SR 222 – Ukiah City Limits to East Side Rd.	Major Collector	2	1900	739	A
31	SR 253 – S. State St to Area Plan Western Bndry.	Minor Arterial	2	1400	333	A
32	Vichy Springs Rd. – Redemeyer Rd. to Area Plan Eastern Bndry.	Varies	2	1400	109	A
33	Vichy Springs Rd. – Ukiah City Limits to Watson Rd.	Urban Major Collector	2	1400	581	A
34	Vichy Springs Rd. – Watson Rd. to Redemeyer Rd.	Urban Minor Collector	2	1400	333	A
35	Watson Rd. – Knob Hill Rd. to Vichy Springs Rd.	Principal Arterial	2	1000	230	A
36	Lake Mendocino Dr. – US 101 to North State St.	Principal Arterial	4	3800	1215	A
37	US 101 – Area Plan S. Bndry to Burke Hill Dr.	Principal Arterial	4	6800	1535	A
38	US 101 – Fracchia Ln. to State St.	Principal Arterial	4	6800	1742	A
39	US 101 – State St. to Talmage Rd.	Principal Arterial	4	6800	2391	A
40	US 101 – Talmage Rd. to E. Gobbi St.	Principal Arterial	4	6800	3352	A
41	US 101 – E. Gobbi St. to Perkins Rd.	Principal Arterial	4	6800	3601	*A*
42	US 101 – Perkins Rd. to N. State St.	Principal Arterial	4	6800	3778	*A*
43	US 101 – N. State St. to Lake Mendocino Dr.	Principal Arterial	4	6800	3821	*A*
44	US 101 Lake Mendocino Dr. to Moore Ave.	Principal Arterial	4	6800	3549	*A*
45	US 101 – Moore Ave to SR 20	Principal Arterial	4	6800	2763	A
46	Proposed South Dora Extension – Dora St. to Stipp Ln.	Urban Collector	2	1000/1200	94	A
47	Proposed Orchard Extension – Brush St to Ford Rd.	Urban Collector	2	1200	106	A
48	Proposed Despina Extension – Lovers Ln to Orr Springs Rd.	Urban Collector	2	1000	611	B
49	Proposed Redemeyer Rd. Extension – existing to Lk. Mendo. Dr.	Urban Collector	2	1400	195	A
50	Proposed Orchard Extension – Ford Rd to Kunstler Ranch Rd	Urban Collector	2	1200	123	A

Table 3.6-5
AB 1600-Recommended Roadway Improvements

Airport Park Boulevard	Extend Airport Park Boulevard to Plant Road or US-101 SB ramps.	$6,192,000
	Install signal interconnect cable between Talmage Road and the S. Terminus of Airport Park Boulevard.	$23,263
	Install traffic signal and re-stripe to provide EB and WB left turn lanes at Talmage Road & the Commerce Drive Airport Park Boulevard/Commerce Drive Intersection.	$195,406
Brush Street	Install US-101 SB ramp at Brush Street, if viable and coordinated with improvements and/or limitations at the Perkins Street/US 101 interchange.	$2,600,000
	Add WB left turn lane and coordinate signal at N. State Street/Brush Street; OR widen east leg and add new phasing at N. State Street/Brush Street-Low Gap Road; OR install signal at Low Gap Road/Brush Street; OR add WB right turn lane at N. State Street/Low Gap Road-Brush Street.	S68,857
	Widen Brush Street and Ford Road.	$3,700,000
Clay Street	Extend both Clay Street and Hospital Drive: Hospital from Perkins Street to Clay Street AND Clay Street to Peach Street/Leslie Street intersection.	$1,836,000
Dora Street	Signalize and re-stripe the Gobbi Street Street/Dora Street intersection to provide separate NB right turn lane.	$195,406
	Install a traffic signal and re-stripe the Dora Street/Clay Street intersection to provide separate NB and SB left turn lanes.	$195,406
	Install signal and re-stripe the Dora Street/Mill Street intersection to provide separate SB left turn lane.	$195,406
	Install a traffic signal and re-stripe the Dora Street/ Washington Avenue intersection to provide separate NB, SB, EB, and WB left turn lanes.	$232,627
	Install signal interconnect cable on Dora Street from the N. Terminus to the S. City Limit.	$69,788
	Extend South Dora Street between Oak Knoll Drive and Stipp Lane.	$2,700,000
	Install a signal and signal coordination at the Dora Street/W. Perkins Street intersection.	$186,101
Gobbi Street	Install traffic signal and signal coordination; OR install a traffic signal at the Gobbi Street Street/Waugh Lane Intersection.	$186,101
	Add separate SB and WB right turn lanes, and modify and coordinate existing traffic signal at the S. State Street/Gobbi Street Intersection.	$151,672
	Install signal interconnect cable and widen Gobbi Street to Major Arterial standards between Dora Street and S. State Street.	$1,820,070
	Install signal interconnect cable on Gobbi Street from S. State Street to the City Limit intersection.	$100,495
	Install a signal and signal coordination at the Gobbi Street/Oak Street intersection.	$186,101
Hensley Creek Road	Extend Hensley Creek Rd to the new Orchard Ave extension	$4,200,000
Low Gap Road	Widen Low Gap Road between N. State Street and the City Limit to conform to City Standards for a collector street.	$286,596

Table 3.6-5 (continued)
AB 1600-Recommended Roadway Improvements

North State Street	Install a signal and signal coordination at the Low Gap Road/Bush Street intersection.	$186,101
	Install a signal and signal coordination at the Low Gap Road/Despina Drive intersection.	$186,101
	Install a signal and signal coordination at the N. State Street/Norton Street Intersection.	$9,305
	Coordinate the existing traffic signal at the N. State Street/Scott Street Intersection.	$9,305
	Coordinate the existing traffic signal at the N. State Street/Standley Street Intersection.	$9,305
	Coordinate the existing traffic signal at the N. State Street/Perkins Street Intersection.	$9,305
	Widen N State Street to four lanes between US 101 and Lake Mendocino Drive.	$3,300,000
	Install a signal and signal coordination at the N. State Street/Ford Street Intersection OR add a SB left-turn lane.	$186,101
	Install a signal interconnect cable along N. State Street from the City Limit to the Brush Street Intersection.	$153,533
	Install a signal interconnect cable along N. State Street from Brush Street to the Perkins Street Intersection.	$83,746
	Add a WB right-turn lane at the N. State Street/Ford Road Intersection.	$1,100,000
Orchard Avenue	Extend Orchard Avenue to Hensley Creek Road and to Lake Mendocino Drive.	$18,000,000
	Provide two-way left-turn lane striping OR install a traffic signal at the Orchard Avenue/Ford Street intersection.	$186,101
	Provide two-way left-turn lane striping OR install a traffic signal at the Orchard Avenue/Clara Avenue	$186,101
	Intersection improvements at Orchard Avenue and Brush St.	$597,402
	Install a signal interconnect cable along Orchard Avenue between N. City Limit and E. Perkins Street.	$58,622
	Extend Orchard Avenue south to Talmage Road.	$1,161,000
Orr Springs Road	Extend Orr Springs Rd to the new Orchard Ave extension.	$2,800,000
	Connection between Orr Springs Road and Lovers Lane (possibly via Despina Drive).	$1,900,000
Perkins Street	General lane improvements; OR lane restriping, signal phasing modification and coordination of existing the signal; OR expansion & signalization of the E. Perkins Street/Orchard Avenue intersection.	$65,135
	Install traffic signal; OR install signal, coordinate, and re-stripe to provide separate SB, EB and WB left-turn lanes at the E. Perkins Street Street/Main Street intersection.	$195,406
	Widen E. Perkins Street to Major Arterial standards and install a signal interconnect cable from N. State Street to the City Limit.	$1,460,895

Table 3.6-5 (continued)
AB 1600-Recommended Roadway Improvements

Redemeyer Road	General improvements for Redemeyer Road.	$12,300,000
	Extend Redemeyer Road over the Russian River to North State Street or Lake Mendocino Drive.	$16,900,000
South State Street	Install traffic signal and re-stripe the road to provide separate NB and SB left turn lanes at the S. State Street/Clay Street Intersection.	$195,406
	Coordinate the existing traffic signal at S. State Street/Mill Street Intersection.	$9,305
Talmage Road	Install a traffic signal at the Talmage Road/Waugh Lane Intersection.	$186,101
	Construct an additional WB left turn lane and add EB right turn lanes at the Talmage Road/Airport Park Boulevard Intersection.	$95,842
US 101 Interchanges	General improvements to the Perkins Street/US 101 Interchange.	$3,992,893
	General improvements to the North State Street/US 101 Interchange.	$3,843,026
	General improvements to the Gobbi Street/US 101 Interchange.	$2,671,336
	US-101 Lake Mendocino Drive interchange improvements – increase ramp acceleration lengths	$1,553,170
	General improvements to the Talmage Road/US 101 Interchange.	$10,292,186
Various Bicycle Projects	Bicycle Facilities for Hensley Creek Road, Lake Mendocino Drive, and Vichy Springs Road.	$400,000
	Bicycle Facilities for N. State Street.	$990,000
	Rail Trail Class I Facility between Ford Road and Norgard Lane along railroad tracks.	$3,120,000
Various City Streets	New N/S street between and parallel with Main St and NWP Railroad.	$2,724,000
	New E/W street along S side of hospital and easterly continuation, between Hospital Dr and Orchard Ave.	$504,000
	Extend Leslie Street N from Perkins St to new E/W street along S side of hospital.	$1,908,000
	New E/W street between and parallel with Perkins St and Clay St.	$1,224,000
	New E/W street along S side of Sun House.	$888,000
	New E/W street N of and parallel with Smith St.	$810,000
Total	**Total For Draft 2007 UVAP**	***$127,672,602***
	Total For No Project, Alternative A, B, and C [1]	***$100,772,602***

[1] Excludes projects 7, 10A, 10B, and 111

Traffic Safety Hazards

Impact 3.6-B **Traffic generated by land uses and development consistent with the Draft 2007 UVAP would increase the risk of accidents involving motorists, bicyclists, and pedestrians.**

Increases in the traffic volume along plan area streets can alter the existing character of neighborhoods and affect traffic safety in those neighborhoods. Streets most likely to experience substantial traffic increases are arterials and collectors that already experience relatively high traffic volumes. However, in some cases new traffic could use existing local roads. This could occur where traffic congestion on the more major roads becomes so congested that drivers seek alternative routes around the congested area. Construction of the road extensions described in Impact 3.6-A could also result in substantial traffic increases on certain roads, as described below:

- Extension of Redemeyer Road across the Russian River could result in traffic increases along both Redemeyer Road and North State Street. This extension could relieve traffic that currently uses Vichy Springs Road to access Perkins Street and the currently congested intersections of East Perkins Street with the Highway 101 ramps. However, the additional traffic on Redemeyer Road could affect traffic safety along that road, particularly at its north end.

- Extension of Orchard Avenue to as far north as Lake Mendocino Drive would not pass through any residential neighborhoods (i.e., there may be a few older residences in this area, but no large residential developments). Depending on the route, extension of Orchard Avenue north of Hensley Creek to Lake Mendocino Drive could pass by existing mobile home parks or residences.

- Extension of Oak Knoll Road to Stipp Lane or Highway 263 would result in traffic safety impacts to the existing portion of Oak Knoll Road. The extension would serve projected development between Oak Knoll Road and Highway 253, and the road would become an urban collector street. However, the existing section of Oak Knoll Road does not meet urban collector street standards. The lack of, at a minimum, four-foot shoulders and 11-foot-wide lanes to meet minimum County General Plan roadway classification standards as an urban collector roadway would be considered a safety concern. As this new road would serve as a collector street at area buildout, it should be constructed to meet County standards for such a collector.

It should be noted that a portion of the Oak Knoll Road extension was proposed as part of the Garden's Gate Subdivision project. During deliberations on that project in 2009, the County Board of Supervisors opted not to require construction of this connector across the Garden's Gate site due to traffic safety and congestion concerns of the neighborhood to the north of the site (in the Oak Knoll Road and surrounding area).

An increased population in the plan area will increase the number of vehicle trips as well as increase the number of people walking and bicycling. There will be an increased risk

of accidents, particularly accidents involving motor vehicles with other motor vehicles, bicyclists or pedestrians.

The Draft 2007 UVAP contains policies directed at the traffic safety issue. ***Policy CT2.1*** includes provisions for safe pedestrian walkways. ***Policy CT3.2*** calls for development of safe bicycle routes. The County General Plan also includes policies addressing traffic safety (*Policies DE-128, DE-138, DE-152,* and *DE-153*).

Finally, should the Northern Pacific Railroad (NPRR) initiate freight and/or passenger service within the Ukiah Valley, an increased risk of conflict between vehicles, pedestrians, bicycles and trains will be created. As the population of the area increases, so will the number of vehicles, pedestrians and bicycles crossing the railroad tracks and potentially intruding onto NPRR Right-of-Way.

UVAP policies and General Plan policies will reduce the safety impact of new traffic and/or new roadways. In particular, *General Plan Policy DE-128* states that the circulation system will be required to accommodate the safety and mobility of all users. These policies will reduce the impact to a ***less than significant*** level. In addition, Mitigation Measure 3.1-B.1 applies to this impact. It gives priority to infill projects near public transit.

Alternative Transportation

Impact 3.6-C **Traffic generated by land uses and development consistent with the Draft 2007 UVAP could conflict with adopted policies, plans, or programs supporting alternative transportation.**

The increased population will increase the demand for public transit, as well as for pedestrian and bicycling facilities. The increased demand will also increase the use of the Ukiah Municipal Airport. The State estimates that the number of flights at the airport will increase on average of 1.5% per year.[62] If the railroad is reopened for use, there would be an increased demand on the railroad.

Two adopted plans supporting alternative transportation within the planning area. The Draft 2007 UVAP will not conflict with the 2006 *Mendocino County Regional Bikeway Plan,* which will provide needed bicycle and pedestrian facilities.

The airport has an adopted Master Plan and CLUP which identifies the airport improvements needed to serve the State-projected growth in use of that airport. The Draft 2007 UVAP will not conflict with this Master Plan.

The Draft 2007 UVAP Circulation and Transportation Section also contains the following policies and measures that address this impact:

[62] *2001 Mendocino County Regional Transportation Plan Draft EIR,* Leonard Charles and Associates, 2002.

- ***Policy LU1.4*** encourages development along the high intensity development corridors, which are the same areas best served by pedestrian, bicycle, and mass transit modes of transportation.

- ***Policy CT1.4*** encourages reopening and use of the railroad. This policy also states that the County will not approve new development that hampers or precludes future rail service.

- ***Policy CT2.1*** includes measures to include appropriate pedestrian facilities in new development.

- ***Policy CT2.2*** includes construction of bike routes and lanes in accordance with the Regional Bikeway Plan (though this has an intermediate-term timeframe).

- ***Policy CT2.3*** states that the County will maximize public transportation use by encouraging bicycle accessible mass transit, adequate bus shelters and benches in new development, and encouraging new bus routes as underserved areas develop.

- ***Policy CT3.1*** states that the County will coordinate with MCOG to develop a computer-based intermodal travel model (i.e., connectivity of different modes of travel). These policies are all consistent with County General Plan policies aimed at providing a safe and useful bicycle and pedestrian walkway systems (*Policies DE-152* to *DE-159*), public transit *(Policies DE-160* to *DE-162*); rail system (*Policies DE-163* and *DE-164*); and airports (*Policies DE-165* to *DE-167*).

- ***Policy CT3.2*** includes measures to mitigate traffic by developing travel demand strategies that incorporate free transit passes, mixed use development with concentrated employment centers and residential communities, and efficient walking and bicycle connections.

These policies and implementation measures provide a framework for extending and expanding alternative travel modes. The plan's recommendation to concentrate new development mainly near the City of Ukiah and along the State Street corridor and to encourage infill also promotes alternate transit and reduced use of private motor vehicles.

The Draft 2007 UVAP ***Policy LU4.1*** contains a measure to develop a Growth Management Plan that will prioritize where development should occur, but it does not specify the grounds for prioritization. The Draft 2007 UVAP contains policies and measures to develop and maintain the rail corridor, and it would not conflict with any existing plans to reopen and use the railroad. However, should the Northern Pacific Railroad (NPRR) initiate freight and/or passenger service within the Ukiah Valley, an increased risk of conflict between vehicles, pedestrians, bicycles and trains will be created.

Consequently, the impact remains ***potentially significant*** because of potential constraints on rail service and the need to clarify the priorities for new growth in the Growth Management Plan.

Mitigation Measures

Mitigation Measure 3.1-B.1, discussed previously, also applies. It gives priority to projects that maximize access to and provision of alternate transportation modes.

3.6-C.1 Future land use approvals shall not cause conflicts with rail service, the following additional measures shall be added to Policy CT1.4:

Measure CT1.4e Acoustic Studies
Applications for residential development within 500 feet of the railroad tracks shall require an acoustic study to show how noise levels at residences can be reduced to a level consistent with the Exterior Noise Limit Standards included in Appendix C of the Zoning Ordinance. *[Timeframe: Ongoing. Responsibility: Planning and Building Services]*

Measure CT1.4f Notification of Rail Activity
New residential development approved within 1,000 feet of the railroad will include a disclaimer that the owner and any occupant is aware of and agrees to accept any inconvenience, discomfort or disturbance associated with train traffic (including but not limited to noise, vibration, railroad crossing safety, dust, and potential risk of spills and releases of a wide variety of materials). This disclaimer will be filed with the deed for each property. *[Timeframe: Ongoing. Responsibility: Planning and Building Services]*

Impact Significance After Mitigation

The Draft 2007 UVAP provides a solid foundation for encouraging alternative modes of transportation. The plan would not conflict with any other transportation planning policies or guidelines. The additional measures ensure that new development does not preclude future railroad use and gives priority to projects that encourage the use of alternative transportation modes. The impact is reduced to a ***less than significant*** level, and no additional mitigation is required at the general plan level of analysis. The County will need to implement these policies when reviewing new development applications.

3.7 AIR QUALITY

A. Setting

1. Climate and Air Quality Background

The Ukiah Valley is located in the south-central portion of Mendocino County. The valley lies within the coastal mountain range, approximately 30 miles east of the Pacific Ocean, at about 630 feet in elevation. For regulatory purposes, the area is located within the North Coast Air Basin, which includes Del Norte, Humboldt, Trinity, Mendocino, and northern Sonoma Counties. Air quality in Ukiah is regulated by the Mendocino County Air Quality Management District (MCAQMD).

The climate is characterized by warm dry summers and cool damp winters. During summer, high temperatures of 90 to 100 degrees Fahrenheit (F) are common, while nighttime temperatures range in the 50s and 60s. High temperatures in the 50s and 60s are common during wintertime. Freezing or near-freezing temperatures are common on clear late fall and winter nights. Rainfall occurs mostly during the winter, with an average of 38 inches. December and January are typically the wettest months with an average of 7 to 8 inches falling during each of these months. Winds are primarily from the northwest, especially during the summer. Winds can, however, flow from the south under certain synoptic weather conditions, such as when Pacific low pressure systems affect Northern California, and during warm weather spells where low-level cooler marine air penetrates into the area through the Russian River Valley. For the most part, winds are light in the Ukiah Valley, with calm wind conditions present up to 50% of the time. Most calm wind conditions occur during late fall and early winter.

The valley frequently experiences temperature inversions where warm air aloft traps cold air near the surface. Two types of temperature inversions affect the region: elevated inversions caused by marine air penetration and/or subsidence (sinking air caused by strong high pressures systems) and ground-based inversions where nighttime cold air sinks into the valley below from surrounding ridges. Inversions limit vertical mixing creating a very stable layer of air near the earth's surface. During late fall and winter, ground-based inversions (which restrict vertical mixing the most) are usually present on clear cold nights. In the morning, these ground-based inversions may be weakened and eventually eliminated by solar heating, however extreme inversions may last several days or weeks. These stagnant periods allow locally produced air emissions to sometimes build up to unhealthy levels.

2. State and Federal Regulatory Background

Air quality is regulated by the U.S. Environmental Protection Agency (EPA), California Air Resources Board (CARB), and MCAQMD. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent than EPA's. Air quality regulations provide the standards by which air quality is determined and institute controls on air pollution sources to improve air quality. The

Federal Clean Air Act established the national ambient air quality standards (NAAQS) and delegated the enforcement of air pollution control regulations to the states. In California, the CARB develops and enforces air regulations but delegates the responsibility of stationary emission source regulation to local air pollution control agencies. In the project area, the MCAQMD is responsible for air pollution source regulation. Mobile sources of air pollutant emissions are regulated on a statewide basis by the CARB. The air pollutants of concern and the roles of the agencies primarily responsible for managing the air quality within the project area and relevant air quality regulations are further discussed below.

Federal Air Quality Regulations

Federal Clean Air Act

The Federal Clean Air Act (Federal Act) was established in an effort to assure that acceptable levels of air quality are maintained in all areas of the United States. Air quality is characterized by the presence of pollutants that fall into two basic categories: criteria air pollutants and toxic or hazardous air contaminants. Criteria air pollutants refer to a group of pollutants for which the regulatory agencies have adopted ambient air quality standards and pollution management and control strategies. Toxic or hazardous air contaminants refer to a category of air pollutants that have potential adverse health effects but do not have associated ambient air quality standards. These pollutants are called hazardous air pollutants (HAPs) in Federal law and toxic air pollutants (TACs) in California law.

Criteria Air Pollutants

The Federal Act requires the EPA to establish ambient air quality standards for air pollutants that cause or contribute to air pollution and that may reasonably be anticipated to endanger public health. Pollutants with air quality standards are called criteria pollutants. National ambient air quality standards (NAAQS or national standards) have been established for seven pollutants: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), particulate matter, which includes both respirable particulate matter, PM_{10} (particulate matter 10 microns or less in diameter) and fine particulate matter, $PM_{2.5}$ (particulate matter 2.5 microns or less in diameter), sulfur dioxide (SO_2), and lead (Pb). There can be two standards for each criteria pollutant – primary and secondary. The primary NAAQS establish the acceptable ambient concentration of each criteria pollutant in order to protect public health with an adequate margin of safety. The secondary NAAQS are the ambient concentration levels requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of that pollutant in the ambient air. Often the secondary standard is the same as the primary standard.

Air quality is described by the concentration of various pollutants in the atmosphere. Units of concentration are generally expressed in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$). The significance of a pollutant concentration is determined by comparing it to an appropriate ambient air quality standard. Depending on the pollutant and its associated effects, the standards may be short-term, from one to 24 hours, or an annual average. In general, short-term standards represent the maximum acceptable

concentrations that may be reached but not exceeded more than once per year. Annual standards are maximum acceptable concentrations that may be reached but not exceeded. Table 3.7-1 lists the primary and secondary NAAQS, along with the California Ambient Air Quality Standards (CAAQS or State standards). Potential health effects and primary sources of criteria pollutants are described below.

Nitrogen Dioxide. Nitrogen dioxide is a reddish-brown gas that is a by-product of combustion processes. During combustion processes at high temperatures, nitrogen from the atmosphere and the fuels being burned combines with oxygen to form various oxides of nitrogen. Nitric oxide (NO) and nitrogen dioxide (NO_2) are the most significant air pollutants generally referred to as NO_x. Nitric oxide is a colorless and odorless gas that quickly converts to NO_2 and is easily measured in the atmosphere. Nitrogen dioxide also contributes to ground-level ozone formation. Adverse health effects associated with exposure to high levels of nitrogen dioxide include the risk of acute and chronic respiratory illness.

Ozone*.* Ground-level ozone (ozone) is the principal component of smog. It is not directly emitted into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving volatile organic compounds (VOCs) and nitrogen oxides (NO_x) in the presence of sunlight. VOCs and NO_x are known as precursor compounds for ozone. Ozone levels are highest during late spring through early summer when precursor emissions are high and meteorological conditions are favorable for the complex photochemical reactions to occur. Ozone is a regional air pollutant since it is not emitted directly by sources, but is formed downwind of sources of VOCs and NO_x emissions. Adverse health effects of ground-level ozone include respiratory impairment and eye irritation.

Carbon Monoxide*.* Carbon monoxide (CO) is a non-reactive pollutant that is colorless and odorless, and is toxic in high concentrations. It is formed by the incomplete combustion of fuels. The largest source of CO emissions is motor vehicles. Wood stoves and fireplaces also contribute to high levels of CO, particularly in the wintertime. Unlike ozone and NO_2, CO is directly emitted to the atmosphere without additional chemical conversion. The highest CO concentrations generally occur during the nighttime and early mornings in late fall and winter. CO levels are strongly influenced by meteorological factors such as wind speed and atmospheric stability. High CO concentrations can develop during periods of light winds combined with ground-level temperature inversions, typical of wintertime conditions during the evening through early morning hours. Adverse health effects of carbon monoxide include the impairment of oxygen transport in the bloodstream, increase of carboxyhemoglobin, aggravation of cardiovascular disease, impairment of central nervous system function, and fatigue, headache, confusion, dizziness. Exposure to carbon monoxide can be fatal in the case of very high concentrations.

Particulate Matter*.* Respirable particulate matter, PM_{10}, and fine particulate matter, $PM_{2.5}$, consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled and cause adverse health effects. PM_{10} and $PM_{2.5}$ are a health concern, particularly at levels above the Federal and State ambient air quality standards.

$PM_{2.5}$ (including diesel exhaust particles) is thought to have greater effects on health. Because these particles are minute, they are able to penetrate to the deepest parts of the lungs. Scientific studies have suggested links between fine particulate matter and numerous health problems including asthma, bronchitis, acute and chronic respiratory symptoms such as shortness of breath and painful breathing. Children are more susceptible to the health risks of $PM_{2.5}$ because their immune and respiratory systems are still developing. Very small particles of certain substances (e.g., sulfates and nitrates) can also cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health.

Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, fireplaces, wood stoves, and atmospheric photochemical reactions. Some sources of particulate matter, such as mining and demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. In addition to health effects, particulates also can damage materials and reduce visibility. Dust comprised of large particles (diameter greater than 10 microns) settles out rapidly and is more easily filtered by human breathing passages. This dust is of concern more as a soiling nuisance rather than a health hazard.

In 1983, CARB replaced the standard for "suspended particulate matter" with a standard for suspended PM_{10} or "respirable particulate matter." This standard was set at 50 $\mu g/m^3$ for a 24-hour average and 30 $\mu g/m^3$ for an annual average. CARB revised the annual PM_{10} standard in 2002, pursuant to the Children's Environmental Health Protection Act. The revised PM_{10} standard is 20 $\mu g/m^3$ for an annual average. $PM_{2.5}$ standards were first promulgated by the EPA in 1997 and were recently revised to lower the 24-hour $PM_{2.5}$ standard to 35 $\mu g/m^3$ for 24-hour exposures and revoked the annual PM_{10} standard due to lack of scientific evidence correlating long-term exposures of ambient PM_{10} with health effects. CARB has adopted an annual average $PM_{2.5}$ standard. which is set at 12 $\mu g/m^3$, which is more stringent than the Federal standard of 15 $\mu g/m^3$.

Sulfur Dioxide. Sulfur dioxide is a colorless gas with a strong odor and potential to damage materials. It is produced by the combustion of sulfur containing fuels such as oil and coal. Refineries, chemical plants, and pulp mills are the primary industrial sources of sulfur dioxide emissions. Sulfur dioxide concentrations in Mendocino County are well below the ambient standards. Adverse health effects associated with exposure to high levels of sulfur dioxide include aggravation of chronic obstruction lung disease and increased risk of acute and chronic respiratory illness.

Lead. Lead occurs in the atmosphere as particulate matter. It was primarily emitted by gasoline-powered motor vehicles; however, the use of lead in fuel has been virtually eliminated. As a result of lead being eliminated from fuels, levels throughout the U.S. have dropped dramatically in the past 20 years. Dust from old lead paints represent very localized lead problems. Lead concentrations measured at ambient monitoring stations in California are well below the ambient standards.

Table 3.7-1
California and National Ambient Air Quality Standards (as of November 2009)

Pollutant	Averaging Time	California [a] Standards	National Standards [b]	
			Primary [cod]	Secondary [due]
Ozone (O_3)	8-hour	0.07 ppm (137µg/m^3)	0.075 ppm (147µg/m^3)	Same as primary standard
	1-hour	0.09 ppm (180 µg/m^3)	—	—
Carbon Monoxide (CO)	8-hour	9.0 ppm (10,000 µg/m^3)	9 ppm (10,000 µg/m^3)	—
	1-hour	20 ppm (23,000 µg/m^3)	35 ppm (40,000 µg/m^3)	—
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as primary standard
	1-hour	0.18 ppm (339 µg/m^3)	—	—
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	—	0.030 ppm (80 µg/m^3)	—
	24-hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	—
	3-hour	—	—	0.5 ppm (1,300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	—	—
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	—	—
	24-hour	50 µg/m^3	150 µg/m^3	Same as primary standard
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	15 µg/m^3	Same as primary standard
	24-hour	—	35 µg/m^3	Same as primary standard
Lead	Calendar quarter	—	1.5 µg/m^3	Same as primary standard
	30-day average	1.5 µg/m^3	—	—

Notes: (a) California standards for ozone, carbon monoxide, sulfur dioxide (1 and 24), nitrogen dioxide, and suspended particulate matter- PM_{10} $PM_{2.5}$, are values that are not to be exceeded. All others are not to be equaled or exceeded.
(b) Standards (other than for ozone, particulate matter and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year.
(c) Concentrations are expressed first in units in which they were promulgated. Equivalent units given in parenthesis.
(d) Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
(e) Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
(f) µg/m^3 + micrograms per cubic meter; ppm = parts per million.

Federal Requirements

If an area does not meet the NAAQS over a set period of time, the EPA designates the area as a "nonattainment" area for that particular pollutant and sets deadlines for bringing the area into compliance with the standards. These deadlines vary by pollutant, the current level of air pollution in the air basin, and the ability of each region to meet the deadline. The EPA requires states that have areas that are not in compliance with the national standards to prepare and submit air quality plans showing how and when the standards will be met. These plans are referred to as State Implementation Plans (SIPs). Areas with monitored air pollutant concentrations lower than ambient air quality standards are designated as attainment areas on a pollutant-by-pollutant basis. Areas are designated as unclassified when data are insufficient to have a basis for determining the area's attainment status. From a regulatory standpoint, unclassified areas are treated the same as an attainment area. Table 3.7-2 shows the attainment status of the project area with respect to the National and State air quality standards. Mendocino County is in attainment or unclassified with respect to the national and State air quality standards for all criteria pollutants except for PM_{10}, which is classified as nonattainment with respect to the State standards.

Table 3.7-2
Attainment Status of Mendocino County

Pollutant	Federal	State
Ozone (O_3) – 1 hour	-	Attainment
Ozone (O_3) – 8 hour	Unclassified/Attainment	Attainment
Carbon Monoxide (CO)	Unclassified/Attainment	Unclassified
Nitrogen Dioxide (NO_2)	Unclassified/Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Respirable Particulates (PM_{10})	Unclassified	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Unclassified/Attainment	Unclassified/Attainment

Stationary Source Control Measures

The Federal Act authorizes the EPA to adopt regulations specifying pollutant levels that may be emitted from newly constructed stationary sources. These regulations, called New Source Performance Standards (NSPS), are implemented for different categories of stationary emission sources. The Federal Act also requires stationary sources that emit or may emit large quantities of pollutants (called "major sources") to obtain a Federally enforceable permit to operate, called a Title V permit or a Part 70 permit, which is implemented and enforced by the local air agency, in this case the MCAQMD.

Mobile Source Control Measures – Diesel Engines

In addition to setting emission standards for stationary sources, the EPA also sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in

construction, agricultural, industrial, and mining (such as bulldozers and loaders). The EPA also sets nationwide fuel standards. California also has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the Federal standards.

In the past several years the EPA has established a number of emission standards for on-road and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of particulate matter (PM_{10} and $PM_{2.5}$) and since the EPA has identified diesel particulate matter as a probable carcinogen. Emissions from on-road heavy-duty truck and bus engines are estimated to currently account for about 30% of the NO_x emissions and 25% of the PM emissions from mobile sources. Non-road diesel engine emissions were estimated to be about 40% of the total mobile source $PM_{2.5}$ inventory and 25% of the NO_x inventory in 1996. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce PM and NO_x emissions by from diesel engines by 90 to 95%.[63]

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed in on-road vehicles from 500 ppm to 15 ppm. The ultra low sulfur highway fuel is currently required for all diesel sold in California. All of the above Federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

Hazardous Air Pollutants

The Federal Act also regulates the emission of hazardous air pollutants. HAPs are air pollutants known to be, or reasonably anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, or cause reproductive dysfunction, or are acutely or chronically toxic. Section 112 of the Federal Act (42 U.S.C. § 7412) contains a list of specific substances that are HAPs. These requirements for HAPs generally apply to major sources of HAPs and/or to specific source categories.

State Air Quality Regulations

California Clean Air Act

Air pollution in California is regulated under the provisions of the California Clean Air Act (State Act). These statutes provide the basis for implementing the Federal Act. CARB, which is part of the California Environmental Protection Agency, is responsible for establishing and reviewing the State standards, compiling the California SIP, securing approval of that plan from the EPA, and identifying toxic air contaminants. CARB also regulates mobile emission sources in California, such as construction equipment, trucks, and automobiles. The State Act divides implementation responsibility between CARB and

[63] This emission inventory is currently being revised by MCAQMD; Chris Brown, personal communication, 12/21/10.

local or regional agencies called air quality management districts or air pollution control districts.

The air districts are primarily responsible for implementing and enforcing Federal and State regulations for stationary sources at industrial and commercial facilities within their jurisdictions and for preparing the regional air quality plans that are required under the Federal Act and State Act. These regional air quality plans prepared by districts throughout the State are compiled by CARB to form the California SIP. The local air districts also have the responsibility and authority to adopt emission reduction programs for indirect and area-wide emission sources.

CARB oversees air district regulation of stationary sources and is the agency primarily responsible for controlling air pollution from mobile sources in California. Regulations have been adopted at both EPA and CARB levels that set specific emission standards for vehicles. As older vehicles are retired and replaced with newer, cleaner vehicles (called "fleet turnover"), it is expected that the air quality will improve. Consistent with this notion, most air quality planning documents project reduced vehicle emissions in the future.

Local councils of governments, county transportation agencies, cities and counties, and various nongovernmental organizations also join in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs. The MCAQMD is the regional agency with jurisdiction over Mendocino County. The MCAQMD is responsible for bringing and/or maintaining air quality within Federal and State air quality standards. This includes the responsibility to monitor ambient air pollutant levels and to develop and implement attainment strategies to ensure that future emissions will be within Federal and State standards.

Criteria Air Pollutants

The California Act outlines a program for areas in the State to attain the CAAQS by the earliest practical date. The California Clean Air Act set more stringent air quality standards, as shown in Table 3.7-1, for the pollutants covered by the Federal standards. Additionally, California has adopted ambient air quality standards for vinyl chloride, hydrogen sulfide, sulfates, and visibility-reducing particulates.

In a manner similar to the Federal requirements, the California Act requires designation of attainment and nonattainment areas with respect to CAAQS. The California Act also requires that local and regional air districts prepare a Clean Air Plan (CAP) if the State air quality standards for CO, SO_2, NO_2, or ozone are violated in their district. These CAPs include information on existing air quality in the region, an inventory of current and forecasted future emissions, emission reductions required to meet the standards, and the control measures required to achieve the emission reduction. CAPs must show satisfactory progress in attaining the State air quality standards. The California Clean Air Act requires that the State air quality standards be met as expeditiously as practicable but unlike the Federal Clean Air Act, does not set precise attainment date deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards. MCAQMD has prepared a Particulate

Matter Attainment Plan that lists PM_{10} control measures it considers cost-effective and developed a schedule for implementation of the plan.

Toxic Air Contaminants

Toxic Air Contaminants (TAC) are a large group of compounds known to cause short-term (acute) and/or long-term (chronic or carcinogenic) adverse human health effects. TACs are considered separately from criteria pollutants in the regulatory process. Unlike criteria pollutants, there are no ambient air quality standards for TACs. Instead, TAC emissions are generally evaluated based on the degree of health risk that could result from exposure to these pollutants.

TAC sources include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), some agricultural activities, and mobile sources. In general, mobile sources, particularly those with diesel engines, contribute more significantly to health risks than stationary sources. In comparison to other air toxics CARB has identified and controlled, diesel particulate matter emissions are responsible for about 70% of the total ambient air toxics risk. In addition to these general risks, diesel particulate matter can also present elevated localized or near-source exposures. Regulation of TACs from mobile sources has traditionally been implemented through use of engine emission standards for on-road motor vehicles and through specifications for gasoline and diesel fuel sold in California. However, as discussed below, due to the significant contribution to health risks in the State from particulates in diesel exhaust, the CARB has implemented a diesel exhaust control program.

CARB Diesel Exhaust Control Program

In 1998, CARB formally identified particulate matter emitted from diesel-fueled engines (diesel particulate matter [DPM]) as a TAC. To address the issue of diesel emissions in the State, CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (CARB, 2000a) and the *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines* (CARB, 2000b). The Diesel Risk Reduction Plan was adopted by the CARB in September 2000. In addition to requiring more stringent emission standards for new on-road and non-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90%, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. The projected emission benefits associated with full implementation of this plan, including existing and new Federal measures, are reductions in diesel particulate matter associated cancer risks by 75% in 2010 and 85% by 2020.[64] The measures in the plan will substantially reduce localized risks associated with activities that expose nearby individuals to diesel particulate matter emissions.

[64] The implementation schedule for the on and off road diesel engine regulations by CARB was recently revised – it is unclear what effects this will have on the risk reduction timeline; Chris Brown, personal communication, 12/21/10.

Asbestos Toxic Air Control Measure

In 2002, CARB adopted two Asbestos Airborne Toxic Control Measures for construction, grading, quarrying and surface mining operations. New emission control measures, such as dust suppressants, will apply to activities such as road construction and road maintenance, construction, grading, and quarrying and surface mining operations in areas with naturally-occurring asbestos/serpentine rock. Geologic mapping indicates the potential existence of asbestos/serpentine rock within portions of the Ukiah Valley.

Air Quality and Land Use

Plans should include buffer zones to separate sensitive receptors from sources of air toxic contaminants and odors. In 2005, CARB released the final version of the *Air Quality and Land Use Handbook*, which is intended to encourage local land use agencies to consider the risks from air pollution prior to making decisions that approve the siting of new sensitive receptors (e.g., schools, homes or daycare centers) near sources of air pollution. Unlike industrial or stationary sources of air pollution, siting of new sensitive receptors does not require air quality permits, but could create air quality problems. The primary purpose of the handbook is to highlight the potential health impacts associated with proximity to common air pollution sources, so that those issues are considered in the planning process. CARB makes recommendations regarding the siting of new sensitive land uses near freeways, truck distribution centers, dry cleaners, gasoline dispensing stations, and other air pollution sources. These "advisory" recommendations, summarized in Table 3.7-3, are based primarily on modeling information and are not reflective entirely of conditions in Ukiah Valley. Siting of new sensitive land uses within these recommendation distances may be possible, but only after site-specific studies are conducted to identify the actual health risks. CARB acknowledges that land use agencies have to balance other siting considerations such as housing and transportation needs, economic development priorities and other quality of life issues.

Table 3.7-3
CARB-Recommended Setback Distances for Common Sources of TACs

Source Type	Recommended Buffer Distance
Freeways and busy arterial roadways	500 feet
Distribution Centers with 100 or more daily truck trips or 40 daily truck trips that use refrigeration units	1,000 feet
Gasoline stations	50 feet for typical gas stations. Up to 300 feet for large gas stations.

Source: Air Quality and Land Use Handbook: A Community Health Perspective, California Environmental Protection Agency and California Air Resource Board, April 2005.

Local Air Quality Regulations

Mendocino County Air Quality Management District (MCAQMD)

The MCAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized. MCAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized. The MCAQMD does have rules as Part of Regulation 1 that affects normal activities:

> *Rule 400(a) Public Nuisance* – This is a general requirement that is applicable to odors, as well as other air contaminants. Specifically, the rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or that cause or have an natural tendency to cause injury or damage to business or property.
>
> *Rule 410 Visible Emissions* – This applies to any source at the facility and limits visible emissions to no more than 20% opacity for more than a 3-minute period in any one hour.
>
> *Rule 420 Particulate Matter* – This rule imposes particulate matter emission rate limitations and is applicable to combustion and non-combustion sources. Combustion sources do not include mobile sources. The proposed project will have both combustion and non-combustion sources that will be subject to these requirements.
>
> *Rule 430 Fugitive Dust Emissions* – Handling, transporting, or open storage of materials in such a manner that allows or may allow unnecessary amounts of particulate matter to become airborne is not permitted. Additionally, Reasonable precautions are required to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions:
>
> - Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust.
> - Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials.
> - The screening of all open-outdoor sandblasting or similar operations.
> - The use of water or chemicals for control of dust in the demolition of existing buildings or structures.

Additionally, during all construction operations, the grading of roads, or the clearing of land the following control measures are required:

- All visibly dry disturbed soil road surfaces shall be watered to minimize fugitive dust emissions.
- All unpaved surfaces, unless otherwise treated with suitable chemicals or oils, shall have a posted speed limit of 10 miles per hour**.**
- Earth or other material that has been transported by trucking or earth moving equipment, erosion by water, or other means onto paved streets shall be promptly removed.
- Asphalt, oil, water or suitable chemicals shall be applied on materials stockpiles, and other surfaces that can give rise to
- All earthmoving activities shall cease when sustained winds exceed 15 miles per hour.
- The operator shall take reasonable precautions to prevent the entry of unauthorized vehicles onto the site during non-work hours.
- The operator shall keep a daily log of activities to control fugitive dust.

Projects disturbing one acre of soil or creating one mile or more of new unpaved road are required to have Permits under District Regulations.

Rule 490 New Source Performance Standards – This rule requires new or modifications to existing sources to comply with the rules, standards, criteria, and requirements of 40 CFR Part 60 (New Source Performance Standards).

Regulation 4, Particulate Emissions Reduction Measure for Wood Burning Appliances – In 2005, the MCAQMD adopted the Particulate Matter Attainment Plan. The first recommended control measure was wood burning appliance regulation. Regulation 4, adopted in 2006, regulates emissions from wood burning devices. Only EPA-certified devices, or pellet stoves, can be installed in single or two family dwellings in areas that are not part of a major subdivision. Multifamily (3 or more attached units), Commercial or Public buildings cannot install new wood burning devices except to replace an existing device.

In addition, there are other MCAQMD rules and regulations, not detailed here, which primarily apply to stationary source projects.

3. Existing Air Quality Conditions

In the 1960s and 1970s, open field burning, lumber mill teepee burners, and other sources of pollutants created poor air quality in the Ukiah area. Modern pollution potential in the area is relatively low due to controls on these sources, closure of many of the lumber mills and processing facilities, improvements in motor vehicles and fuels, and increased enforcement of District burn regulations by MCAQMD. Elevated levels of particulate matter (PM10 and PM2.5) and ground-level ozone in the Ukiah area are still of concern to air quality officials. Air quality in the region is controlled by meteorological conditions and the rate of pollutant emissions. Meteorological conditions such as wind speed, atmospheric stability, and mixing height affect the atmosphere's ability to mix and disperse pollutants. Long-term variations in air quality typically result from changes in air

pollutant emissions while short-term variations result from changes in meteorological conditions.

During the wintertime, the combination of strong ground-based inversions combined with very light or calm winds lead to elevated levels of particulate matter and carbon monoxide. The wintertime emissions of these pollutants are caused mostly by wood smoke and open outdoor burning.

In summer, relatively weak inversions aloft combined with abundant sunlight, light winds, and warm temperatures lead to a buildup of ground-level ozone. Ground-level ozone, the principal component of smog, is not directly emitted into the atmosphere. It is formed by the reaction of reactive organic gases and nitrogen oxides (known as ozone precursor pollutants) in the presence of strong sunlight. Ozone levels are highest in Ukiah during late spring through early fall, when emissions of the precursor pollutants are highest, and meteorological conditions are favorable. Monitored ozone levels are slowly increasing, due in part to ozone moving into the County from elsewhere (e.g., the Bay Area and possibly more distant locations like China).[65] Summer PM levels can also be elevated because of dust generated by agricultural, construction, grading activities and wildfires.

Under the Federal Clean Air Act, Mendocino County has been designated attainment or unclassified for all national ambient air quality standards. Under the California Clean Air Act, the Air Basin is designated nonattainment for the California ambient air quality standard for particulate matter (PM10). Specifically, the Air Basin is designated nonattainment for two air quality standards, state PM10 annual average and state PM10 24-hour average (MCAQMD, 2008). However, the county has only experienced one day between 2004 and 2007 where state standards were exceeded.

The *Particulate Matter Attainment Plan* prepared by MCAQMD[66] describes the primary sources of PM2.5 and PM10 in the County as dust emitted from unpaved and paved roads, residential fuel combustion, wildfires, and construction and demolition. This study provides details on the reduction in monitored PM10 levels over the past two decades to 1999, and since then levels may have begun to increase. While individual vehicle emissions per mile have been greatly reduced in the last 20 years, overall vehicle emissions have increased because of the increasing average daily vehicle miles traveled. The District states that the average miles traveled per person per day has increased from 17 miles in 1981 to 28 miles per person per day in 2003 and is projected to increase to 34 miles per person per day in 2010.[67]

Air quality levels for ozone, carbon monoxide and nitrogen dioxide are measured in Ukiah on a continuous basis at a site on East Gobbi Street. PM2.5 levels are measured continuously at a site located at the County Library at the corner of Perkins and Main Streets. Maximum measured air pollutant concentrations are shown in Table 3.7-4. The air pollutant of primary concern in the plan area is ozone. In Ukiah, the California

[65] See *http://www.arb.ca.gov/research/seminars/husar/husar.htm.*
[66] *Particulate Matter Attainment Plan,* MCAQMD, January 2005.
[67] Letter from Chris Brown, MCAQMD to the Mendocino County Planning Commission presenting District comments on the County's Draft Housing Element, July 9, 2003.

ambient air quality standard for PM10 was exceeded on 12 days in 1999, but not exceeded in 2000 or 2001. It was exceeded again in 2002 for 6 days. It was not exceeded in 2003 or 2004.[68] Ground-level ozone is a concern since the highest measured levels have been close to, or at the State standard during 4 of the last 8 years. The District expects ozone levels to gradually increase partially due to transport of ozone from outside the County and from an increase in the population and vehicle miles traveled. Air quality in the area is well below State and national standards for carbon monoxide and nitrogen dioxide, and all other ambient air quality standards have been met for the last 10 years.[69]

Existing Emissions in Mendocino

The CARB estimated annual average daily air emissions in 2008 for Mendocino County are presented in Table 3.7-5. This table shows both the man-made (anthropogenic) emissions as well as the natural (nonanthropogenic) emissions for the county. Mobile sources are clearly one of the largest contributors to anthropogenic (man made) VOCs, CO, NO_x, and SO_X emissions, while their contribution to particulate matter emissions is much smaller. For VOC emissions in the county, the natural emission sources are clearly the largest contributors.

Sensitive Receptors

Sensitive receptors are locations where an identifiable subset of the general population (children, asthmatics, the elderly, and the acutely or chronically ill) that is at greater risk than the general population to the effects of air pollutants are likely to be exposed. These locations include residential areas, schools, retirement homes, convalescent homes, hospitals, and medical clinics.

4. Naturally Occurring Asbestos

The California Air Resources Board has adopted an Airborne Toxic Control Measure (ATCM) for *Naturally Occurring Asbestos (NOA) and Construction, Grading, Quarrying, and Surface Mining Applications*. MCAQMD has adopted policies to require a geologist to review projects in areas where the District determines the native rock may contain asbestos. If the geologist determines that NOA is present at levels above regulatory concern, then the District requires a variety of mitigation measures to ensure resident and worker safety. Targeted development includes construction sites and unpaved roads, which typically require continued use of dust suppressants. There is the possibility of NOA in many parts of the plan area.[70] MCAQMD has existing policies to identify and, where warranted, minimize public exposure to NOA.

[68] Based on preliminary MCAQMD data.
[69] Chris Brown, MCAQMD, personal communication, 2/1/07.
[70] See MCAQMD web site at: *www.co.mendocino.ca.us/aqmd/pages/NOA.htm.*

Table 3.7-4
Maximum Measured Short-Term and Annual Average
Air Pollutant Concentrations at Ukiah Monitoring Stations

Pollutant & Location	Averaging Period	Air Quality Standard National	Air Quality Standard State	2006	2007	2008*
Respirable Particulate Matter (PM10)						
	24-Hour (μg/m^3)	150	50	36	26	222
	Annual (μg/m^3)	-	20	15.6	12.2	19.3
	Annual (μg/m^3)	15	12	6.8	4.7	
Fine Particulate Matter (PM2.5)						
	24-Hour (μg/m^3)	35	-	21.0	16.4	31.6
	Annual (μg/m^3)	15	12	6.8	4.7	7.8
Ozone (O_3)						
	1-Hour (ppm)	-	0.09	0.081	0.080	0.09
	8-Hour (ppm)	0.075	0.07	0.069	0.067	.072
Carbon Monoxide (CO)						
	1-Hour (ppm)	35	20	2.2	2.1	4.5
	8-Hour (ppm)	9	9	1.5	1.7	3.38
Nitrogen Dioxide (NO_2						
	1-Hour (ppm)	-	0.18	0.039	0.036	.11
	Annual (ppm)	0.53	0.03	0.008	0.007	.007

Notes: 2008 data are the most recent published data available
ppm = parts per million
μg/m^3 = micrograms per cubic meter

Table 3.7-5
2008 Estimated Annual Average Emissions (Tons/Day) For Mendocino County

Source Type/Category	TOG	CO	NO_x	SO_X	PM_{10}	$PM_{2.5}$
Stationary Sources						
Fuel Combustion	0.1	0.2	0.5	0.4	0.1	0.1
Waste Disposal	5.3	-	-	-	-	-
Cleaning and Surface Coating	0.6	-	-	-	-	-
Petroleum Production and Marketing	0.4	-	-	-	-	-
Industrial Processes	0.2	-	-	-	0.3	0.1
Subtotal	**6.7**	**0.2**	**0.5**	**0.4**	**0.4**	**0.2**
Area wide Sources						
Solvent Evaporation	2.2	-	-	-	-	-
Miscellaneous Processes	10.3	20.2	0.5	0.2	19.8	4.6
Subtotal	**12.5**	**20.2**	**0.5**	**0.2**	**19.8**	**4.6**
Mobile Sources						
On-Road Motor Vehicles	4.0	33.6	8.8	0.0	0.3	0.3
Other Mobile Sources	3.5	15.6	14.4	5.6	1.2	1.1
Subtotal	**7.5**	**49.2**	**23.2**	**5.6**	**1.5**	**1.4**
County Total	**26.6**	**69.6**	**24.2**	**6.2**	**21.6**	**6.2**

Source: California Air Resources Board – *2009 California Almanac Emission Projection Data*.

5. Regional Air Quality Planning

Air quality planning in the region occurs at the Federal, State, regional, and local levels. At the Federal level the EPA issues regulations through the authority granted by the Clean Air Act. The EPA's regulations and programs are designed to require states to attain and maintain compliance with the Federal standards. The EPA also has programs that prevent significant deterioration of air quality and that identify and regulate toxic air pollutants. The EPA requires states that are not in compliance with the Federal standards to prepare and submit air quality plans showing how the standards will be met. If the states cannot show how the standards will be met, then they must show progress toward meeting the standards. These plans are referred to as State Implementation Plans (SIP). As a Federal attainment area, the State Implementation Plan requirement for Mendocino County is the Prevention of Significant Deterioration, or

PSD. The District is not required to develop a Federal attainment plan, but must ensure that local air quality does not deteriorate significantly.

In California, the Air Resources Board (ARB) coordinates and oversees both State and Federal air quality control programs. The Board's primary functions include establishing and updating the California ambient air quality standards, monitoring existing air quality, controlling emissions from mobile sources, and developing the State Implementation Plan. The SIP is the State's overall air quality control strategy for both mobile and stationary sources. In March 2005, the District adopted a *Particulate Matter Attainment Plan* which includes recommended control measures for particulate matter (though the proposed controls would not be required unless subsequently adopted by the MCAQMD Board, following a separate regulatory proceeding and public hearings). The Plan recommends that woodstoves not be the primary heating source in a residence and that new residences should not be allowed to have two woodstoves.

The Mendocino County Air Quality Management District (MCAQMD) regulates stationary sources by applying Federal, State, and local regulations. MCAQMD also develops local air quality control strategies and suggests mitigations for land use projects. The challenge of attaining the State PM10 standard and continuing to meet other air quality standards is MCAQMD's focus.

The District also requires an Indirect Source Permit for projects that would emit substantial volumes of indirect pollutant emissions. This permit is generally not required for projects containing less than 100 dwelling units or a non-residential project that would generate a similar amount of traffic (a project that would generate pollutants exceeding the thresholds 180 pounds/day of ROG (reactive organic gases), 42 pounds/day of NOx, 690 pounds/day of CO, or 80 pounds/day of PM10). Air pollution modeling (using URBEMIS or another Air Resources Board-approved model) is required for projects exceeding 75 units or for major commercial and other project types to determine whether the project would remain below the thresholds established by District regulations. The applicant for a proposed project found to exceed the thresholds can voluntarily enter into a mitigation program with the District to reduce emissions. If such a voluntary agreement is not reached, then the District must issue the Indirect Source Permit. This permit would contain enforceable conditions similar to those listed above for the

voluntary agreement. The permit is monitored by the District for compliance and must be renewed annually.

In 2005, the District adopted a Particulate Matter Attainment Plan. In December 2006, the District amended its regulations to require that all non-agricultural grading of one acre or larger are subject to permitting and are required to implement control measures.

In December 2006, the District's Board also approved a new regulation on woodburning appliances. This regulation, which becomes effective on May 5, 2007, prohibits open fireplaces in any new development or as part of any renovation and in any type of woodburning appliance in any new subdivision building, and allows approved types of woodburning appliances only in single-family or dwellings with two units.[71]

If the District were to exceed the State standard for ozone, then, under the California Clean Air Act, the District would be required to prepare a Clean Air Plan. Such a plan would demonstrate how the region would attain the State ozone standard through controls on stationary and mobile sources (i.e. scrubbers, modified equipment, annual vehicle inspection); smog check would be required. However, if the District could prove that exceedances were caused by transport of ozone into the District from the south, then Northern Sonoma County APCD and/or the Bay Area AQMD could be required to adopt and enforce more stringent rules.

6. Diesel Exhaust Control Program

Current ARB and EPA regulations apply emission standards to heavy-duty diesel truck and bus engines. These standards reflect the provisions of the Statement of Principles signed in 1995 by the EPA, CARB, and the manufacturers of heavy-duty diesel engines. The goal was to reduce NO_x emissions from highway heavy-duty engines to levels approximately 2.0 g/bhp·hr beginning in 2004.[72]

In August of 1998, the CARB formally identified particulate matter emitted from diesel-fueled engines (diesel particulate matter [DPM]) as a TAC. Diesel engines emit TACs in both gaseous and particulate forms. Diesel particulate matter is of particular concern since it can be distributed over large regions, thus leading to widespread public exposure. The particles emitted by diesel engines are coated with chemicals, many of which have been identified by EPA as HAPs, and by CARB as TACs. Diesel engines emit particulate matter at a rate about 20 times greater than comparable gasoline engines. Because by weight the vast majority of diesel exhaust particles are very small (92% – 94% of their combined mass consists of particles less than 2.5 micrometers in diameter), the particles are inhaled into the lung. Like other particles of this size, a portion will eventually become trapped within the lung. While the gaseous portion of diesel exhaust also contains TACs, CARB's August 1998 action was specific to diesel particulate emissions, which, according to supporting CARB studies, represent 50% –

[71] Regulation 4.1 – *Particulate Emissions Reduction Measure for Wood Burning Appliances*. This new regulation also includes prohibitions on certain other types of burning.
[72] Further information on current regulations which apply to heavy-duty trucks, can be found at: *www.dieselnet.com/standards/us/hd.html.*

90% of the mutagenicity of diesel exhaust (CARB, 1998). Mutagenicity is one indication of the cancer-causing potential of a chemical.

To address the issue of diesel emissions in the State, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (CARB, 2000a) and the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines (CARB, 2000b). The Diesel Risk Reduction Plan was adopted by the CARB in September 2000. In addition to requiring more stringent emission standards for new on-road and non-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90%, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. The projected emission benefits associated with full implementation of this plan, including existing and new Federal measures, are reductions in cancer risks associated with DPM by 75% in 2010 and 85% by 2020. The measures in the plan will substantially reduce localized risks associated with activities that expose nearby individuals to diesel particulate matter emissions.[73]

Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the Federal on-road and non-road diesel engine emission standards for new engines in 2004 and 2007 previously discussed, as well as adoption of new regulations for low sulfur fuel in California. The California diesel fuel regulations are similar to the Federal regulations in that they require the maximum sulfur content to be 15 ppm, but they also require reductions in the aromatic content. Reductions in aromatic content reduce emissions of several toxic substances other than diesel particulate matter, including benzene and polynuclear aromatic hydrocarbons (PAHs). The California low sulfur diesel fuel are required for use in both on-road and non-road engines in California in 2006.

B. Potential Impacts and Mitigations

1. Criteria Used to Determine Impact Significance

Land uses and development consistent with the Draft 2007 UVAP would have a significant impact if it:

- Conflicts with or obstructs implementation of the applicable air quality plan. The MCAQMD threshold is whether the plan is consistent with the District's Air Quality Plan control measures and that the project vehicle miles traveled (VMT) or vehicle trip increase is less than or equal to the project population increase.

- Violates any ambient air quality standard or contributes substantially to an existing or projected air quality violation.

- Results in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable Federal or state ambient air

[73] This assessment of benefits is currently being revised; Chris Brown, personal communication, 12/21/10.

quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

- Exposes sensitive receptors to substantial pollutant concentrations.
- Creates objectionable odors affecting a substantial number of people.

2. Project Impacts

The pollutants of most concern for the proposed project are particulate matter (PM_{10} and $PM_{2.5}$) and ozone (including ozone precursor pollutants, VOCs and NOx). For the purpose of this assessment, emissions of CO, NOx, VOCs, PM_{10} and $PM_{2.5}$ were evaluated and the potential impacts on ambient levels of CO were assessed. The impacts on ambient PM_{10}, $PM_{2.5}$ and ozone levels due to implementation of a region-wide plan cannot be assessed with existing air quality dispersion models. Therefore, the District's emission-based thresholds are applied for activities generating these emissions. The impacts on all other criteria air pollutants identified under the NAAQS or CAAQS are anticipated to be minor since background concentrations are well below ambient air quality standards.

MCAQMD is attainment or unclassified for all air pollutants except PM_{10}. As previously described, the District has prepared a PM_{10} Attainment Plan. This plan includes proposed rules or fees aimed at reducing PM_{10} emissions. Implementation of the UVAP would not affect implementation of this plan.

Increased Pollutant Emissions

Impact 3.7-A **Land uses and development consistent with the Draft 2007 UVAP and buildout of the City of Ukiah would increase traffic volumes and could generate harmful emissions of air pollutants that could result in exposure of people to substantial pollution, violate air quality standards, and/or conflict or obstruct MCAQMD's air quality plan.**

The construction of about 5,430 new dwelling units in the plan area, 594 units in the City of Ukiah, and non-residential development in the plan area and city would generate new trips on plan area and City of Ukiah streets. These additional vehicle trips will result in the emission of gaseous air pollutants and particulates.

Mobile Sources

Primary mobile sources affected by implementation of the Ukiah Valley Area Plan would be on-road mobile sources or automobiles and trucks. Emissions from these mobile sources in the Ukiah Valley were estimated based on traffic forecasts and emission factors developed by CARB. Fehr & Peers (the traffic engineers who prepared the traffic model used in preparing this EIR) provided traffic forecasts in vehicle miles traveled

(VMT) for baseline and each future project alternative. These VMT projections were combined with CARB emission factors to predict daily emissions in tons per day (tpd).

Emission factors in grams per mile were developed using the latest version of the EMFAC2007 model. Mendocino County default assumptions were used for the year 2007 (baseline) and 2030 (future). The BURDEN Area-Specific Planning Inventory output (a part of the EMFAC2007 model) was generated for Mendocino County. The BURDEN output provides daily emission rates for each air pollutant from each vehicle type (broken down by technology type) and each process (e.g., running exhaust, trip end, tire wear, etc.). The BURDEN output also provides countywide VMT and fuel use statistics that are tied directly into the air pollutant emission predictions. As a result, a composite emission rate by VMT can be generated that represents the countywide vehicle fleet. To obtain the emission rate for a certain air pollutant, the daily emissions for that air pollutant was divided by total daily vehicle miles traveled in the county.

PM_{10} and $PM_{2.5}$ emissions from on-road mobile sources are generated by four primary processes: exhaust, tire wear, brake wear, and re-entrained dust. All except re-entrained dust are predicted by EMFAC2007. Re-entrained dust associated with vehicle travel was calculated using the County Inventory developed by CARB[74]. The total emissions reported under "area sources" for paved roads were assumed to make up the re-entrained roadway dust emissions. The emission rates were developed by dividing the countywide on-road dust emissions by the VMT projected for the County using EMFAC2007.

These emission rates were then applied to the VMT projections for UVAP that were developed by Fehr & Peers. These emissions are shown in Table 3.7-6, expressed in tons per day.

Table 3.7-6
Daily Air Pollutant Mobile Source Emissions for Plan Area

Scenario	Daily VMT	Emissions (tons per day)				
		ROG	NOx	CO	PM_{10}	$PM_{2.5}$
Base Year (2007)	654,100	0.90	2.04	7.31	0.58	0.13
2030 Existing General Plan Alternative & Alternative C	791,900	0.24	0.39	1.39	0.60	0.11
2030 Alternative A	843,700	0.25	0.41	1.48	0.64	0.11
2030 Alternative B	815,700	0.24	0.40	1.43	0.62	0.11
2030 Draft 2007 UVAP	877,800	0.26	0.43	1.54	0.67	0.12

Area Sources

Area sources affected by the plan mostly include consumption of natural gas, use of consumer products (ROG emissions) and use of landscape equipment. These

[74] CARB. 2007. Almanac Emission Projection Data.

emissions can be predicted using the URBEMIS2007 model. The size of potential development in terms of number of residences and square feet of commercial, office and industrial uses was input to the model for each scenario. The URBEMIS2007 model does not predict emissions associated with electricity generation or stationary sources that could be placed on these land uses. Table 3.7-7 reports emissions from area sources associated with the UVAP.

The burning of natural gas for space and water heating generates much of the area source emissions reported in Table 3.7-6. URBEMIS2007 uses default natural gas consumption rates for various land uses and combines those with emission factors.

Not included in the modeling was wood smoke from residential wood burning. Residential burning of wood can be a significant source of PM_{10} and $PM_{2.5}$ emissions during late fall and winter days when dispersion conditions in the Ukiah Valley are poor. Most typical days would not have substantial wood smoke emissions. The MCAQMD adopted Regulation 4, Particulate Emissions Reduction Measure for Wood Burning Appliances in 2005. This measure would greatly reduce emissions from wood smoke associated with new development. Therefore, wood smoke emissions associated with UVAP were not considered.

Table 3.7-7
Daily Emissions from Area Sources for Plan Area

	URBEMIS2007 Area-Source Emissions (tons/day)				
Scenario	**ROG**	**NOX**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Base Year (2007)	0.46	0.10	0.26	0.00	0.00
2030 Existing General Plan Alternative & Alternative C	0.56	0.13	0.31	0.00	0.00
2030 Alternative A	0.63	0.14	0.33	0.00	0.00
2030 Alternative B	0.59	0.13	0.32	0.00	0.00
2030 Draft 2007 UVAP	0.68	0.15	0.35	0.00	0.00

Stationary Sources

Future commercial or industrial sources may include stationary sources of air pollution that cannot be identified at this time. Common sources would be diesel generators or natural gas boilers. These sources, if large enough would be subject to MCAQMD permit requirements. Normally sources that are permitted by MCAQMD or are exempt, because they emit low quantities of air pollution, are not expected to have an adverse impact on sensitive receptors.

Total Emissions

The combination of mobile source and area source emissions are reported in Table 3.7-8. Except for PM_{10}, emissions of air pollutants are expected to decrease in the future. The decreases are due to improvements in motor vehicle emissions. Improvements to emissions in area sources were not included, although significant emissions are not

expected for this category when compared to mobile sources. ROG emissions, which are currently dominated by mobile sources, would decrease by about 40% under the Existing General Plan scenario. Future ROG emissions would be mostly comprised of area source emissions such as consumer products from residential uses. NOx emissions are expected to decrease by about 75% under the Existing General Plan scenario. Most NOx emissions would come from mobile sources. $PM_{2.5}$ emissions would decrease slightly, but PM_{10} emissions would increase by about 3%. While combustion PM_{10} and $PM_{2.5}$ emission rates would decrease, the amount of re-entrained particulate matter from travel on roadways is expected to increase at the same rate as VMT.

Table 3.7-8
Daily Air Pollutant Emissions for Ukiah Valley

Scenario	Emissions in pounds per day and (tons per day)				
	ROG	**NOx**	**CO**	**PM_{10}**	**$PM_{2.5}$**
Base Year (2007)	2,700 (1.36)	4,280 (2.14)	15,140 (7.57)	1,160 (0.58)	260 (0.13)
2030 Existing General Plan Alternative & Alternative C	1,600 (0.80)	1,040 (0.52)	3,400 (1.70)	1,200 (0.60)	220 (0.11)
2030 Alternative A	1,760 (0.88)	1,100 (0.55)	3,620 (1.81)	1,280 (0.64)	220 (0.11)
2030 Alternative B	1,660 (0.83)	1,060 (0.53)	3,500 (1.75)	1,240 (0.62)	220 (0.11)
2030 Draft 2007 UVAP	1,880 (0.94)	1,160 (0.58)	3,780 (1.89)	1,340 (0.67)	240 (0.12)

PM_{10} and $PM_{2.5}$ Emissions

Although exceedances of the PM_{10} or $PM_{2.5}$ standards have not occurred over the past five years in Ukiah, the Mendocino County as a whole is considered non-attainment for the State PM_{10} standard. Emissions of PM_{10}, which are mostly affected by re-entrained roadway dust, are expected to increase by 180 pounds per day with buildout under the Draft 2007 UVAP. However, new development will be required to be consistent with particulate control guidelines that have been adopted by MCAQMD. As such, the plan would be consistent with the District's Air Quality Plan.

Ozone Precursor Emissions

In 2030, the Draft 2007 UVAP alternative would have ROG emissions that are 0.14 tons per day (tpd) or about 280 pounds per day greater than buildout under the Existing General Plan. This level would be about 1,100 pounds per day less than existing ROG emissions. The future Draft 2007 UVAP scenario emissions would be about 3,000 pounds per day less than existing NOx emissions. Currently, the NAAQS and CAAQS for ozone in Ukiah and the rest of Mendocino County are met. Growth under any of the UVAP scenarios are not expected to contribute to new violations of the standards for ozone since overall emissions will be substantially lower than current emissions.

The vehicle-mile traveled forecasts prepared by Fehr & Peers do not take into account the reductions in vehicle use that could occur under the UVAP, as described above. In addition, PM_{10} emissions could be reduced further through programs that encourage paving or stabilization of unpaved roads or parking areas. It is estimated that the policies and implementation measures included in the UVAP could reduce emissions associated with increased VMT and area sources by 5%.

Ukiah Valley Area Plan Policies

The Draft 2007 UVAP contains a number of policies and measures aimed at reducing the emission of pollutants, including the following. ***Policy EA1.3*** describes how the County proposes to maintain and improve air quality. ***Implementation Measure EA1.3a*** requires revising the zoning code to require measures to reduce particulates from road and site construction, grading and demolition to the maximum extent feasible; requiring new access roads and parking areas to be covered with pavement or other appropriate material to reduce or eliminate air quality impacts when warranted; encouraging the use of landscaped buffers between agricultural operations and watercourses; and working with the Mendocino Air Quality Management District to develop a program to reduce particulate emissions from County-maintained roads. ***Implementation Measure EA1.3b*** requires that new development have primary clean heat sources, and recommends methods to replace older, polluting woodburning heat systems. ***Implementation Measure EA1.3d*** states that the County will develop a comprehensive strategy to mitigate traffic and air quality impacts from new development using alternatives to the automobile, such as incentives to increase public transit ridership or construction of bus stops at convenient locations. This will be done in the first three years after plan adoption.

The land use plan focuses development near the City of Ukiah and encourages mixed use development in most of these areas. ***Policy LU1.4*** encourages growth in the High Intensity Development Corridors. This proposed land use pattern plus the proposed coordinated transportation system for this urbanized corridor encourages the use of alternative modes of transportation and reduces the distance between residences and shopping, schools, and services. The plan, as compared to a plan that allowed the same level of development but spread that development over a larger area, reduces the use of private vehicles, with consequent reductions in emissions of pollutants.

The Open Space and Conservation section of the plan includes policies and implementation measures that would reduce air pollutant emissions. For example, ***Policy OC1.2*** would require new access roads and parking areas to be covered with pavement or other appropriate material to reduce or eliminate air quality impacts, while working with the MCAQMD to develop a program to reduce particulate emissions from County-maintained roads. The *Clean Heat Sources* Implementation Measure would support MCAQMD efforts to develop incentive programs to encourage voluntary replacement of older, highly polluting wood stoves and fireplaces in existing homes with EPA-certified clean burning appliances.

The Circulation and Transportation section of the plan would reduce air pollutant emissions from motor vehicle use. ***Policy CT1.2*** to maintain acceptable level of service

conditions on existing roadways would provide alternatives to road widening that would improve traffic flow. For example, signalized intersections could be replaced with roundabouts to reduce stop and go traffic. ***Policy CT1.4*** would promote reuse of the rail line for movement of goods and possibly commuters that would reduce truck traffic in the county and possibly automobile traffic. ***Policy CT2.1*** would integrate pedestrian circulation into new developments or where roadway improvements are made. ***Policy CT2.2*** would promote the creation of new bike lanes and bike paths in accordance with other local and regional plans, and promote the use of bicycles as a viable and attractive alternative to the automobile. ***Policy CT2.3*** would maximize public transportation use by making the service easy to use. Under this policy, the compatibility of transit with bicycle use would be increased.

The County General Plan contains policies regarding protection of air quality. For example, *General Plan Policy DE-135* states the County will evaluate and work to reduce the air quality impacts of all proposed transportation projects. *General Plan Policy RM-35* states the County shall work to maintain 'attainment status' for state and federal air quality standards which are currently met, and toward attainment for currently exceeded standards. *General Plan Policy RM-39* states the County shall encourage the use of heating devices that reduce particulate emissions. *General Plan Policy RM-42* directs new development to community areas and limit development of rural resource lands.

Impact Conclusion

Although NOx emissions from buildout under the Draft 2007 UVAP would be about 1,160 pounds, this increase is considered less than significant. NOx emissions under the future UVAP scenarios would be well below existing emissions. Since the ozone levels are not exceeded currently in the Ukiah Valley and emissions will decrease by about 70%, future exceedances of the ozone standard with the UVAP in place are unlikely.

PM_{10} emissions, which are made up of re-entrained roadway dust, exhaust, tire wear, and brake wear, would increase in the future. These emissions are more closely tied to VMT, because of the non-exhaust components of the emissions. The PM_{10} emissions under the Draft 2007 UVAP would be greater than 180 pounds per day. The differences between the EGP Alternative (and Alternative C) and Alternative A or Alternative B would be less than 80 pounds per day. However, as stated previously, future development allowed by the plan would be subject to the District's particulate control regulations that are part of its Air Quality Plan. In addition, the recommended actions listed under ***Policy EA1.3*** will reduce particulate emissions in the future.

While the plan would not result in exceedances of ozone standards and is consistent with the District's Clean Air Plan, it would increase the vehicle miles traveled (VMT) more than the population increase that could occur under the Existing General Plan. This appears to meet the District's criterion of a significant impact regarding plans. As such, the plan would have a ***significant and unavoidable air quality impact***.

Carbon Monoxide Concentrations

Impact 3.7-B **Traffic increases associated with the UVAP would affect local air quality in terms of carbon monoxide concentrations.**

Carbon monoxide, or CO, is an air pollutant that has localized impacts. Levels are usually highest at congested intersections with high levels of air pollution. Carbon monoxide levels are currently well below all health based standards in Ukiah. The highest measured 8-hour average CO concentration in Ukiah was 1.8 ppm, while the ambient air quality standards are 9.0 ppm. This is the result of improved emissions control systems on vehicles and use of oxygenated fuels. As shown in Table 3.7-8, emissions of CO from traffic, the primary source in the valley, are expected to decrease by over 77% by 2030 under the Existing General Plan alternative. The decrease with the Draft 2007 UVAP would be 75%. The differences in CO emissions between the different project scenarios would be insignificant. Furthermore, emissions in the future under any plan scenario would be well below current levels, and therefore, the valley would continue to have low CO levels. The impact to local air quality would be considered ***less than significant***.

Odors and Toxic Air Contaminants

Impact 3.7-C **Land use maps associated with the UVAP do not propose new sources of odors or toxic air contaminants. However, they show sensitive land uses near sources of odors and toxic air contaminants.**

In order to avoid significant impacts associated with exposure to odors and/or toxic air contaminants, buffer zones should be established around existing and proposed land uses that would emit these air pollutants. Without appropriate buffers, land use conflicts could occur between sources of odors or air pollutant emissions and sensitive receptors, such as residences.

The primary source of air pollution in the plan area is Highway 101 traffic. Traffic volumes vary considerably through the valley, and therefore, so do the emissions of air pollutants. Trucks, buses and some smaller vehicles using freeways emit diesel particulate matter (DPM), which is a known toxic air contaminant. The only roadway in the plan area that would have the potential to cause a significant health risk for sensitive land uses is Highway 101. Other roadways do not have high enough truck volumes to cause a significant health risk for residents of new housing. Under the UVAP, new housing or other sensitive land uses may be located close enough to the freeway to result in unhealthy exposures to DPM.

A screening analysis of future DPM exposure and associated health effects was conducted. The health impacts associated with the DPM exhaust are expressed in terms of increased risk of contracting cancer by individuals who reside for extended periods near the sources, such as freeways. This analysis involved the development of DPM emissions for traffic on Highway 101 using the EMFAC2007 emission factor model

with defaults for Mendocino County. The EMFAC2007 results were then adjusted to the traffic mix on Highway 101 reported by Caltrans. Emission factors and hourly traffic were input to the "Ca13qher" dispersion model. The model uses representative worst-case screening meteorological conditions that include a low wind speed of 1 meter per second, a worst-case wind angle search, and a stability class of E. The hourly traffic volume was assumed to be 10% of the average daily volume. The hourly concentration was converted to an annual concentration using a conversion factor of 0.08. Modeled concentrations were calculated for various distances from the edge of the freeway. The maximum individual cancer risks were computed using the cancer risk calculation methods and inhalation dose factors recommended by the California Office Of Environmental Health Hazard Assessment. The present and future cancer risk posed by traffic on freeways in Ukiah is expressed in terms of distance from the edge of the travel lanes with the highest traffic volumes. As one moves north or south outside of Ukiah, the traffic volume decreases along with the health risk. It should be noted, as discussed previously, that emission rates of DPM from traffic are predicted to decrease substantially in the future.

An analysis of existing DPM exposures indicates that significant health risks could occur at distances of up to 300 feet from Highway 101. The actual distance would probably be less since the analysis employed screening meteorological conditions that usually result in higher concentrations. In addition, this analysis examined portions of Highway 101 where traffic levels are highest. U.S. EPA and the California Air Resources Board (CARB) have required cleaner engine technologies and diesel fuel reformulation that are and will be reducing the DPM emissions from these vehicles. The effect of these lower emission rates reduces the area near freeways where significant DPM exposures would occur. By 2030, the area of significant risk is expected to only extend out to 50 feet from Highway 101 in Ukiah. For sensitive receptors, such as residential uses, a significant impact is considered a ten in one million chance of contracting cancer where the receptor is exposed to the source almost 24 hours per day for 70 years. Table 3.7-9 shows the distances where significant exposures to DPM could occur under UVAP existing and buildout conditions.

Table 3.7-9
Summary of Maximum Modeled
Cancer Risks (per million) due to U.S. 101 Traffic

Year of Analysis	Cancer Risk at Receptor Distance from Freeway Edge (per million persons)								
	50 ft	100 ft	150 ft	200 ft	250 ft	300 ft	350 ft	400 ft	450 ft
2007 (Baseline)	**51**	**30**	**21**	**16**	**13**	**10**	8	7	5
2015	**25**	**15**	**10**	8	6	5	4	3	2
2030 (Buildout)	**10**	6	4	3	3	2	2	1	1

Note: MCAQMD cancer risk significance threshold is an increased cancer risk of 10 in one million

Other common sources of air toxic emissions that could affect new development of sensitive receptors are dry cleaning facilities and fueling stations. CARB recommends setback distances of 300 feet for these types of facilities. However, the setback could be considerably less depending on the size or throughput of these facilities. Many dry cleaners have the cleaning conducted at off-site facilities. There are also other cleaning

techniques that do not involve solvents. The siting of new sensitive receptors within 300 feet of dry cleaners that use solvents or vehicle fueling stations should be considered significant, unless more detailed site analysis shows that these facilities would pose a less than significant health risk.

CARB recommends setbacks for facilities that generate 100 or more truck trips per day. The lumber manufacturing facilities in the plan area may have the potential to generate 100 or more truck trips per day. In addition, these facilities operate off-road diesel-powered equipment that an additional source of TACs. Sensitive receptors that are located within 1,000 feet of these facilities could be potentially exposed to unhealthy levels of TACs.

Buildout of the UVAP, where sensitive receptors are located within 150 feet of Highway 101, within 1,000 feet of industrial sites with 100 or more truck trips per day, or 300 feet from dry cleaning facilities that use perchloroethylene could result in unhealthy exposures to TACs. This would be a ***potentially significant impact***.

The Draft 2007 UVAP does not contain policies that directly address toxic air contaminants or odors. ***Policy HS1.5*** in the Health and Safety section states that new residential development will be prohibited in hazardous development areas and that the zoning ordinance will be revised to include such prohibitions.

Mitigation Measures

3.7-C.1 The County shall not expose future residents to hazardous air contamination or substantial odors. To accomplish this standard, the following measure shall be added to Policy EA1.3:

> **EA1.3e Separate Air Pollutant Emission or Odor Sources and Sensitive Land Uses**
> Do not allow land uses that emit toxic air contaminants and/or odors near residential uses or other sensitive receptors. Do not allow residential and other sensitive land uses in the vicinity of air pollution sources (which may include freeways, manufacturing, agricultural, hazardous materials storage, painting shops, landfills, food processing, wastewater treatment, and other similar uses). Require that project applications involving sensitive receptors proposed near Highway 101, truck access roadways, truck distribution centers, or chemical dry cleaning operations include an analysis of the potential health risks and mitigation measures to reduce these risks.

Impact Significance After Mitigation

With the addition of the recommended measure, future residential development should not be exposed to significant toxic air contamination or odors. The impact is reduced to a ***less than significant*** level.

Asbestos Exposure

Impact 3.7-D Construction of future projects and use of unpaved roads may expose people to harmful levels of asbestos.

There are areas of Naturally Occurring Asbestos (NOA) in the plan area, particularly near Lake Mendocino and Vichy Springs. Exposure to this NOA during construction or use could be harmful to the health of the people doing the work or living nearby. However, as explained in the Setting, MCAQMD already requires a review of sites where NOA is possible and mitigation measures to control the asbestos when harmful levels of NOA are present. Continued compliance with MCAQMD requirements concerning NOA would be expected to reduce this impact to a less than significant level. The County will continue to submit project applications to MCAQMD for review, which should ensure that MCAQMD can require geologic examinations of projects on sites where NOA may be present. The impact is reduced to a ***less than significant*** level by continuing the MCAQMD oversight of projects at locations where NOA is present.

3.8 NOISE

The noise assessment in this EIR was prepared with the assistance of the firm of Illingworth & Rodkin, Inc., consulting acoustic engineers.

The potential noise impacts resulting from an area plan are typically associated with the circulation and land use elements. Increases in traffic can result in substantial increases in noise at sensitive receptors in the community. Proposed changes in land use patterns can expose people to unacceptable levels of noise. Because the Draft 2007 UVAP does not include a Noise Section, these issues are assessed against the existing policies in the Noise Element of the 2009 General Plan.

A. Setting

1. Background Information on Noise

Noise Units

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its *loudness*. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. *A decibel (dB)* is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of ten decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, and so on. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10-decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 3.8-1.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level or dBA.* This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This

energy-equivalent sound/noise descriptor is called L_{eq}. The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus one dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night (because excessive noise interferes with the ability to sleep), 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level, CNEL*, is a measure of the cumulative noise exposure in a community, with a five dB penalty added to evening (7:00 pm – 10:00 pm) and a ten dB addition to nocturnal (10:00 pm – 7:00 am) noise levels. The *Day-Night Average Sound Level,* L_{dn}*,* is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the day-time period.

Effects of Noise

Hearing Loss. While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise, but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard which is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Sleep and Speech Interference. The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noise of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA L_{dn}. Typically, the highest steady traffic noise level experienced during the daytime is about equal to the L_{dn} (i.e., the day-night average), and nighttime levels are 10 dBA lower. The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation (i.e., mitigation) is 12-17 dBA with open windows. With closed windows in good condition, the noise attenuation factor is around 20 dB for an older structure and 25 dB for a newer dwelling. Sleep and speech interference is therefore possible when exterior noise levels are about 57-62 dBA L_{dn} with open windows and 65-70 dBA L_{dn} if the windows are closed. Levels of 55-60 dBA are common along collector streets and secondary arterials, while 65-70 dBA is a typical value for a primary/major arterial.

Table 3.8-1
Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 pm to 10:00 pm and after addition of 10 decibels to sound levels in the night between 10:00 pm and 7:00 am.
Day/Night Noise Level, L_{dn}	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Illingworth & Rodkin, Inc.

Levels of 75-80 dBA are normal noise levels at the first row of development outside a freeway right-of-way. In order to achieve an acceptable interior noise environment, bedrooms facing secondary roadways need to be able to have their windows closed, and those facing major roadways and freeways typically need specially designed glass windows.

Annoyance. Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that the causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. When measuring the percentage of the population highly annoyed, the threshold for ground vehicle noise is about 55 dBA L_{dn}. At an L_{dn} of about 60 dBA, approximately 2% of the population is highly annoyed. When the L_{dn} increases to 70 dBA, the percentage of the population highly annoyed increases to about 12% of the population. There is, therefore, a noise increase of about 1% per dBA between an L_{dn} of 60-70 dBA. Between an L_{dn} of 70-80 dBA, each decibel increase increases by about 2% the percentage of the population highly annoyed. People appear to respond more adversely to aircraft noise. When the L_{dn} is 60 dBA, approximately 10% of the population is believed to be highly annoyed. Each decibel increase to 70 dBA adds about 2 percentage points to the number of people highly annoyed. Above 70 dBA, each decibel increase results in about a 3% increase in the percentage of the population highly annoyed.

2. Existing Noise Environment

Traffic-Generated Noise

Existing noise levels in the plan area vary widely. Undeveloped range lands around the edges of the valley are typically quiet. Agricultural areas are also quite quiet except when heavy machinery is operating. As would be expected, urban areas experience more noise. Noise tends to become a nuisance near major highways and streets or near large industrial facilities. Table 3.8-2 below shows existing and predicted future noise levels along the roadways that were assessed in the previous Traffic section. This is not to say that there is not also noise on other County roads in the plan area, but the table describes noise along major roadways where people living near the roadways are most likely to be adversely affected by traffic-generated noise.

Traffic noise levels were calculated with LeqV2 Release 1.203, Caltrans' version of the Federal Highway Administration's Stamina/Optima Traffic Noise Model. Traffic volume inputs into the traffic noise model were taken from the traffic projections provided by Fehr and Peers Transportation Consultants[75]. Travel speeds and traffic mix information along area roadways was provided during our previous analysis in 2004, and this

[75] Fehr and Peers Transportation Consultants, 2008.

information was assumed to be applicable to existing conditions[76]. Highway traffic mix information was based on the average of traffic counts reported by Caltrans[77]. The results of the modeling efforts are summarized in Table 3.8-2.

Calculated L_{dn} values are "worst-case" estimates because they do not take acoustical shielding from existing buildings or terrain into account. Noise levels were calculated at a reference distance of 100 feet from the centerline of each roadway. The 70 dBA L_{dn}, 65 dBA L_{dn}, and 60 dBA L_{dn} noise contour distances are shown in the attached table for each of the five traffic scenarios; Existing, the Existing General Plan, the Draft 2007 UVAP in 2030, Alternative A in 2030, and Alternative B in 2030. Noise contours located within 50 feet from the roadway centerline are not included in the table as these locations are generally within the roadway right-of-way.

Railroad-Generated Noise

The Northwestern Pacific Railroad line which extends the length of the plan area has not been used for several years. It is unknown if and when the line may be reopened for use. When the line is in use, people residing near the line are exposed to train-generated noise, though the line would not be expected to be heavily used even if it were to reopen.

Fixed Industrial Noise

The Background Report described existing noise from the following facilities within the plan area:

Agwood Mill and Lumber – 650 Hollowtree Road (North of Ukiah) Operations at the Agwood Mill and Lumber facility consist of the production of various lumber products. According to Ms. Kim Huffman of the company, operations at this facility typically occur from 6:00 a.m. to 2:30 p.m. during the summer and 7:00 a.m. to 3:30 p.m. otherwise, 5 days per week. The most significant noise-producing equipment at this facility consists of saws, forklifts, blowers, and other lumber manufacturing related equipment. The plant generates approximately 15 truck trips on a typical day.

Noise level measurements conducted at 100 feet from the entrance of the facility indicate that plant-generated noise levels vary, but are highest in the immediate vicinity of the milling equipment. The estimated location of the plant 50 dB average (Leq) noise contour is approximately 350 feet from the operating equipment. The operator was unaware of any noise complaints associated with the operation of this facility. There are currently no specific plans for expansion of this facility.

[76] Phone conversation with Kamesh Vedula, Omni Means, Ltd, January 25, 2005.
[77] California Department of Transportation (Caltrans), *2003 Annual Average Daily Truck Traffic on the California State Highway System*, November 2004.

Table 3.8-2
Modeled Noise Levels and Roadway Contours

No.	Roadway – Segment	Roadway Classification	Traffic Scenario	ADT Traffic Volumes	Ldn at 100 feet from Centerline (dBA)	70 dBA Ldn	65 dBA Ldn	60 dBA Ldn
1	Bush St. – Ukiah City Limits to Feed Lot Lane	Minor Collector	Existing	1202	51	*	*	*
			EGP/Alt C in 2030	1301	52	*	*	*
			Draft UVAP in 2030	3408	56	*	*	50
			Alt A in 2030	3679	56	*	*	60
			Alt B in 2030	2948	55	*	*	50
2	Despina Dr. – Ukiah City Limits to Lovers Ln.	Minor Collector	Existing	78	39	*	*	*
			EGP/Alt C in 2030	203	44	*	*	*
			Draft UVAP in 2030	5201	58	*	*	70
			Alt A in 2030	723	49	*	*	*
			Alt B in 2030	683	49	*	*	*
3	East Side Calpella Rd. – Area Plan Northern Bndry to Moore Ave.	Major Collector	Existing	1373	53	*	*	*
			EGP/Alt C in 2030	2353	55	*	*	50
			Draft UVAP in 2030	2737	56	*	*	60
			Alt A in 2030	2474	56	*	*	50
			Alt B in 2030	2371	56	*	*	50
4	East Side Calpella Rd. – Moore Ave to Lake Mendocino Dr	Minor Collector	Existing	971	52	*	*	*
			EGP/Alt C in 2030	1482	54	*	*	*
			Draft UVAP in 2030	1672	54	*	*	*
			Alt A in 2030	1517	54	*	*	*
			Alt B in 2030	1509	54	*	*	*
5	East Side Rd – Area Plan Southern Bndry to Howell Creek Rd.	Major Collector	Existing	201	45	*	*	*
			EGP/Alt C in 2030	196	45	*	*	*
			Draft UVAP in 2030	202	45	*	*	*
			Alt A in 2030	199	45	*	*	*
			Alt B in 2030	199	45	*	*	*
6	East Side Rd. – Howell Creek Rd. to Knob Hill Rd.	Major Collector	Existing	1232	53	*	*	*
			EGP/Alt C in 2030	1603	54	*	*	*

Table 3.8-2 (continued)
Modeled Noise Levels and Roadway Contours

No.	Roadway – Segment	Roadway Classification	Traffic Scenario	ADT Traffic Volumes	Ldn at 100 feet from Centerline (dBA)	70 dBA Ldn	65 dBA Ldn	60 dBA Ldn
			Draft UVAP in 2030	1602	54	*	*	*
			Alt A in 2030	1593	54	*	*	*
			Alt B in 2030	1589	54	*	*	*
7	Fircrest Dr. – South Dora St. to South State St.	Minor Collector	Existing	265	46	*	*	*
			EGP/Alt C in 2030	280	46	*	*	*
			Draft UVAP in 2030	399	48	*	*	*
			Alt A in 2030	363	47	*	*	*
			Alt B in 2030	388	48	*	*	*
8	Hensley Creek Rd. – CR 225A to North State St.	Local Connector	Existing	5991	56	*	*	60
			EGP/Alt C in 2030	7033	57	*	*	60
			Draft UVAP in 2030	6092	56	*	*	60
			Alt A in 2030	7151	57	*	*	60
			Alt B in 2030	7131	57	*	*	60
9	Knob Hill Rd. – Watson Rd. to Sanford Ranch Rd.	Minor Collector	Existing	472	49	*	*	*
			EGP/Alt C in 2030	5	--	*	*	*
			Draft UVAP in 2030	5	--	*	*	*
			Alt A in 2030	5	--	*	*	*
			Alt B in 2030	5	--	*	*	*
10	Lake Mendocino Dr. – North State St. to East Side Calpella Rd.	Minor Collector	Existing	3811	58	*	*	70
			EGP/Alt C in 2030	7596	61	*	50	110
			Draft UVAP in 2030	7674	61	*	50	110
			Alt A in 2030	8049	61	*	50	120
			Alt B in 2030	7597	61	*	50	110
11	Lovers Ln. – Area Plan Western Bndry to Despina Dr.	Minor Collector	Existing	49	39	*	*	*
			EGP/Alt C in 2030	82	41	*	*	*
			Draft UVAP in 2030	1305	53	*	*	*
			Alt A in 2030	1297	53	*	*	*
			Alt B in 2030	1295	53	*	*	*
12	Marina Dr. – East Side Calpella	Local	Existing	151	42	*	*	*

Table 3.8-2 (continued)
Modeled Noise Levels and Roadway Contours

No.	Roadway – Segment	Roadway Classification	Traffic Scenario	ADT Traffic Volumes	Ldn at 100 feet from Centerline (dBA)	70 dBA Ldn	65 dBA Ldn	60 dBA Ldn
	Rd. to SR 20	Connector						
			EGP/Alt C in 2030	196	43	*	*	*
			Draft UVAP in 2030	236	44	*	*	*
			Alt A in 2030	197	44	*	*	*
			Alt B in 2030	198	44	*	*	*
13	Mill Creek Rd. – East Side Rd. to Area Plan Eastern Bndry.	Minor Collector	Existing	259	46	*	*	*
			EGP/Alt C in 2030	258	46	*	*	*
			Draft UVAP in 2030	261	46	*	*	*
			Alt A in 2030	257	46	*	*	*
			Alt B in 2030	259	46	*	*	*
14	Moore Ave. – US 101 to East Side Calpella Rd.	Major Collector	Existing	3458	57	*	*	70
			EGP/Alt C in 2030	5278	59	*	*	90
			Draft UVAP in 2030	5935	60	*	*	90
			Alt A in 2030	5501	59	*	*	90
			Alt B in 2030	5402	59	*	*	90
15	North State Street – Orr Springs Road to West Lake Road	Major Collector	Existing	10569	61	*	50	110
			EGP/Alt C in 2030	16177	63	*	70	150
			Draft UVAP in 2030	19090	63	*	80	170
			Alt A in 2030	17172	63	*	70	150
			Alt B in 2030	15905	62	*	70	150
16	North State St. – West Lake Road to Moore Ave	Major Collector	Existing	3799	57	*	*	60
			EGP/Alt C in 2030	6181	59	*	*	90
			Draft UVAP in 2030	7001	60	*	*	90
			Alt A in 2030	6580	59	*	*	90
			Alt B in 2030	6219	59	*	*	90

Table 3.8-2 (continued)
Modeled Noise Levels and Roadway Contours

18	Oak Knoll Rd. – Oak Court Rd. to South State St.	Local Connector	Existing	372	46	*	*	*
			EGP/Alt C in 2030	438	47	*	*	*
			Draft UVAP in 2030	345	46	*	*	*
			Alt A in 2030	293	45	*	*	*
			Alt B in 2030	334	46	*	*	*
19	Orr Springs Rd. – Area Plan Western Boundary to North State St.	Minor Collector	Existing	4794	59	*	*	80
			EGP/Alt C in 2030	6415	60	*	50	100
			Draft UVAP in 2030	6793	60	*	50	100
			Alt A in 2030	6594	60	*	50	100
			Alt B in 2030	6555	60	*	50	100
21	Redemeyer Rd. – Vichy Springs Rd. to El Dorado Rd.	Minor Collector	Existing	3784	58	*	*	70
			EGP/Alt C in 2030	3184	57	*	*	60
			Draft UVAP in 2030	3872	58	*	*	70
			Alt A in 2030	3602	57	*	*	70
			Alt B in 2030	3237	57	*	*	60
22	Sanford Ranch Rd. – Talmage Rd. to Knob Hill Rd.	Minor Collector	Existing	504	49	*	*	*
			EGP/Alt C in 2030	755	51	*	*	*
			Draft UVAP in 2030	698	50	*	*	*
			Alt A in 2030	740	51	*	*	*
			Alt B in 2030	805	51	*	*	*
23	South Dora St. – Fircrest Dr. to Oak Court Road	Minor Collector	Existing	570	49	*	*	*
			EGP/Alt C in 2030	1323	53	*	*	*
			Draft UVAP in 2030	1877	55	*	*	*
			Alt A in 2030	1796	54	*	*	*
			Alt B in 2030	1784	54	*	*	*
24	South Dora St. – Ukiah City Limits to Fircrest Dr.	Minor Collector	Existing	3026	57	*	*	60
			EGP/Alt C in 2030	2926	57	*	*	60
			Draft UVAP in 2030	4207	58	*	*	70
			Alt A in 2030	3912	58	*	*	70
			Alt B in 2030	3452	57	*	*	70

Table 3.8-2 (continued)
Modeled Noise Levels and Roadway Contours

25	South State St. – Ukiah City Limits to SR 253	Major Collector	Existing	7265	60	*	50	110
			EGP/Alt C in 2030	10836	62	*	70	140
			Draft UVAP in 2030	10834	62	*	70	140
			Alt A in 2030	10796	62	*	70	140
			Alt B in 2030	10940	62	*	70	140
26	SR 20 – US 101 to East Side Calpella Rd.	Arterial	Existing	13587	69	80	170	370
			EGP/Alt C in 2030	14158	69	80	180	380
			Draft UVAP in 2030	14599	69	80	180	390
			Alt A in 2030	14458	69	80	180	390
			Alt B in 2030	14366	69	80	180	390
27	SR 222 – Ukiah City Limits to East Side Rd.	Major Collector	Existing	8558	60	*	50	110
			EGP/Alt C in 2030	9596	61	*	50	110
			Draft UVAP in 2030	9760	61	*	50	120
			Alt A in 2030	9735	61	*	50	110
			Alt B in 2030	9624	61	*	50	110
28	SR 20 – East Side Calpella Rd. to Area Plan Eastern Boundary	Connector	Existing	7794	61	*	50	110
			EGP/Alt C in 2030	8148	61	*	50	120
			Draft UVAP in 2030	8315	61	*	50	120
			Alt A in 2030	8236	61	*	50	120
			Alt B in 2030	8207	61	*	50	120
29	Vichy Springs Rd. – Redemeyer Rd. to Area Plan Eastern Bndry.	Local Connector	Existing	787	50	*	*	*
			EGP/Alt C in 2030	1604	53	*	*	*
			Draft UVAP in 2030	1616	53	*	*	*
			Alt A in 2030	1610	53	*	*	*
			Alt B in 2030	1609	53	*	*	*
30	Vichy Springs Rd. – Ukiah City Limits to Watson Rd.	Major Collector	Existing	6687	60	*	50	100
			EGP/Alt C in 2030	7350	61	*	50	110
			Draft UVAP in 2030	7985	61	*	50	110
			Alt A in 2030	7713	61	*	50	110
			Alt B in 2030	7402	61	*	50	110

Table 3.8-2 (continued)
Modeled Noise Levels and Roadway Contours

31	Vichy Springs Rd. – Watson Rd. to Redemeyer Rd.	Minor Collector	Existing	4537	58	*	*	80
			EGP/Alt C in 2030	4537	58	*	*	80
			Draft UVAP in 2030	5275	59	*	*	90
			Alt A in 2030	4966	59	*	*	80
			Alt B in 2030	4616	59	*	*	80
32	Watson Rd. – Knob Hill Rd. to Vichy Springs Rd.	Minor Collector	Existing	2614	56	*	*	50
			EGP/Alt C in 2030	3473	57	*	*	70
			Draft UVAP in 2030	3539	57	*	*	70
			Alt A in 2030	3447	57	*	*	70
			Alt B in 2030	3442	57	*	*	70
33	West Lake Rd. – US 101 to North State St.	Minor Collector	Existing	11532	62	*	70	150
			EGP/Alt C in 2030	10895	62	*	70	140
			Draft UVAP in 2030	12517	63	*	70	150
			Alt A in 2030	11666	63	*	70	150
			Alt B in 2030	11262	62	*	70	140
34	US 101 – Area Plan Southern Boundary to Burke Hill Dr.	Freeway	Existing	12288	70	100	210	450
			EGP/Alt C in 2030	13888	70	110	230	490
			Draft UVAP in 2030	14010	70	110	230	490
			Alt A in 2030	13948	70	110	230	490
			Alt B in 2030	13936	70	110	230	490
35	US 101 – Burke Hill Dr to Fracchia Ln.	Freeway	Existing	13420	70	100	220	480
			EGP/Alt C in 2030	15252	71	110	240	520
			Draft UVAP in 2030	15518	71	110	240	530
			Alt A in 2030	15410	71	110	240	520
			Alt B in 2030	15358	71	110	240	520
36	US 101 – Fracchia Ln. to State St.	Freeway	Existing	14180	70	110	230	500
			EGP/Alt C in 2030	16116	71	120	250	540
			Draft UVAP in 2030	16486	71	120	250	550
			Alt A in 2030	16364	71	120	250	540
			Alt B in 2030	16242	71	120	250	540

Table 3.8-2 (continued)
Modeled Noise Levels and Roadway Contours

37	US 101 – State St. to Talmage Rd.	Freeway	Existing	16949	71	120	260	560
			EGP/Alt C in 2030	22414	72	140	310	670
			Draft UVAP in 2030	24983	73	160	340	720
			Alt A in 2030	24878	73	160	330	720
			Alt B in 2030	23703	73	150	320	700
38	US 101 – Talmage Rd. to E. Gobbi St.	Freeway	Existing	26001	73	160	340	740
			EGP/Alt C in 2030	32051	74	180	400	850
			Draft UVAP in 2030	35284	74	200	420	910
			Alt A in 2030	35225	74	200	420	910
			Alt B in 2030	33596	74	190	410	880
39	US 101 – E. Gobbi St. to Vichy Springs Rd.	Freeway	Existing	29178	74	170	370	800
			EGP/Alt C in 2030	35947	74	200	430	920
			Draft UVAP in 2030	40182	75	210	460	990
			Alt A in 2030	39613	75	210	460	980
			Alt B in 2030	37305	75	200	440	940
40	US 101 – Vichy Springs Rd. to N. State St.	Freeway	Existing	33549	74	190	410	880
			EGP/Alt C in 2030	38831	75	210	450	970
			Draft UVAP in 2030	43049	75	220	480	1040
			Alt A in 2030	41988	75	220	470	1020
			Alt B in 2030	39497	75	210	460	980
41	US 101 – N. State St. to West Lake Rd	Freeway	Existing	34978	74	190	420	900
			EGP/Alt C in 2030	38573	75	210	450	960
			Draft UVAP in 2030	42964	75	220	480	1040
			Alt A in 2030	41531	75	220	470	1010
			Alt B in 2030	40095	75	210	460	990
42	US 101 – West Lake Rd to Moore Ave.	Freeway	Existing	31962	74	180	400	850
			EGP/Alt C in 2030	36958	75	200	440	940
			Draft UVAP in 2030	39643	75	210	460	980
			Alt A in 2030	38753	75	210	450	970
			Alt B in 2030	37826	75	210	440	950

Table 3.8-2 (continued)
Modeled Noise Levels and Roadway Contours

43	US 101 – Moore Ave to SR 20	Freeway	Existing	29111	74	170	370	800
			EGP/Alt C in 2030	31819	74	180	390	850
			Draft UVAP in 2030	33487	74	190	410	880
			Alt A in 2030	33185	74	190	410	870
			Alt B in 2030	32520	74	190	400	860
44	US 101 – SR 20 to West Rd	Freeway	Existing	20346	72	140	290	630
			EGP/Alt C in 2030	22840	72	150	320	680
			Draft UVAP in 2030	23740	73	150	320	700
			Alt A in 2030	23616	73	150	320	700
			Alt B in 2030	23345	73	150	320	690
45	US 101 – N/O West Rd	Freeway	Existing	15231	71	110	240	520
			EGP/Alt C in 2030	16995	71	120	260	560
			Draft UVAP in 2030	17243	71	120	260	560
			Alt A in 2030	17121	71	120	260	560
			Alt B in 2030	17083	71	120	260	560

*Granite Construction Talmage Portland Concrete Cement Plant – 900 Talmage Road (Talmage)*Operations at the Granite Construction Talmage Portland Concrete Cement Plant facility consist of the production of ready mix and aggregate products. According to Bob Abbott of Granite Construction, operations at this facility typically occur from 7:00 a.m. to 5:00 p.m., 6 days per week. The most significant noise-producing equipment at this facility consists of the ready mix plant, the material processing plant, and an equipment shop. The plant typically generates approximately 140 truck trips per day.

Due to traffic noise from Talmage Road, no noise measurements of the facility could be conducted. Based on the types of equipment used at this facility, the location of the plant 50 dB average (Leq) noise contour was estimated to be approximately 2,000-3,000 feet from the operating equipment. The operator was unaware of any noise complaints associated with the operation of this facility since limiting working hours to the daytime. The plant currently has no specific plans for expansion.

Mendocino Forest Products – 6375 North State Street (Calpella) Operations at the Mendocino Forest Products facility consist of the distribution of various lumber products. According to Mr. Dan Vaughan of Mendocino Forest Products, operations at this facility typically occur from 7:00 a.m. to 5:00 p.m., 5 days per week. The most significant noise-producing equipment at this facility consists of the forklifts and trucks. The plant generates approximately 1,000 truck trips per month.

Because the majority of noise at this facility can be attributed to off-site truck traffic, no noise measurements of onsite facility operations were conducted. The operator was unaware of any noise complaints associated with the operation of this facility, and the facility currently has no plans for expansion.

General Service Commercial and Light Industrial Uses

Noise sources associated with service commercial or light industrial uses such as automotive and truck repair facilities, tire installation centers, car washes, loading docks, corporation yards, building materials yards, or concrete ready-mix facilities are found at various locations within Mendocino County. The noise emissions of these types of uses are dependant on many factors, and are therefore difficult to quantify precisely. Nonetheless, noise generated by these uses contributes to the ambient noise environment in the immediate vicinity of these uses, and should be considered when new noise-sensitive uses are proposed nearby, or similar uses are proposed in existing residential areas or near noise-sensitive uses.

Recreation and Community Facilities

Recreational, park, and school playing fields are spread throughout the County. Noise generated by these uses depends on the age and number of people utilizing the respective facility at a given time, and the time of day and types of activities they are engaged in.

School playing field activities tend to generate more noise than those of neighborhood parks, as the intensity of school playground usage tends to be much higher. At a distance of 100 feet from an elementary school playground being used by 100 students, average and maximum noise levels of 60 and 75 dB, respectively, can be expected. At

organized events such as high-school football games with large crowds and public address systems, the noise generation is often significantly higher. As with service commercial uses, the noise generation of parks and school playing fields is variable.

Other Fixed or Industrial Noise Sources within the Plan Area

As stated previously, it is not practical to identify each individual source of noise within the plan area. Although several of the more prominent facilities are described above, other facilities generate noise levels which could be of concern should noise-sensitive development be proposed in close proximity to such facilities. Examples of such facilities and noise sources are as follows:

- Paving companies
- Agricultural operations – frost protection, cultivation/harvest, processing plants
- Solid waste transfer station, wrecking yards, and salvage yards
- Surface mining operations
- Windmills and other energy facilities
- Bus and truck terminals; truck stops, truck or heavy equipment repair
- Redwood Empire Fairgrounds and regional parks
- Entertainment events

Ukiah Municipal Airport

Aircraft using the Ukiah Municipal Airport generate noise. The *Mendocino County Comprehensive Land Use Plan* (CLUP) governs land use around the airport to ensure that the land use is compatible with airplane-generated noise and other airport-related impacts and hazards.

3. Regulatory Framework

The 2009 General Plan Noise Element includes policies to regulate noise. Because the Draft 2007 UVAP does not contain a Noise Element, the policies of the County General Plan will regulate new development in the plan area.

Agricultural Nuisances Disclosure

In cases where noise-sensitive developments are proposed within agriculturally designated land (areas of the County specifically classified and zoned as Agricultural, Range Land, Forestland, or Timberland Preserve), or within 300 feet of such lands, a disclosure statement Mendocino County Code Chapter 10a.13 requires an "Agricultural Nuisances and Consumer Disclosure" be applied to real estate sale, purchase, transfer, or lease documents and prior to issuance of a building permits for residential occupancy warning future residents of the potential for nuisance due to noise and other factors.

Mendocino County Airport Comprehensive Land Use Plan

The Mendocino County Airport Comprehensive Land Use Plan contains compatibility criteria with respect to noise. Specifically, Policy 3.1.3 states that the maximum Community Noise Equivalent Level (CNEL) considered normally acceptable for residential land uses in the vicinity of the airports covered by the CLUP is 60 dBA. The

noise standards applicable to other land uses are contained in the CLUP, incorporated herein by reference. Compatibility tables and maps set forth land use compatibility criteria for Zones A-D. For the Ukiah Municipal Airport, multi-family uses may be allowed in Zone B-2, and are generally compatible in Zones C and D. Single-family are generally compatible in Zones C and D. The City of Ukiah Airport Master Plan contains updated noise contours to 2015.

Other Regulations

Construction standards in the Uniform Building Code regulate interior noise. The County has not enacted a community noise control program or ordinance as suggested its General Plan. A noise control ordinance applies locally crafted standards to locally defined uses, activities, and structures. It may include exterior and interior standards.

B. Impacts and Mitigations

1. Criteria Used to Determine Impact Significance

Land uses and development consistent with the Draft 2007 UVAP would have a significant impact if they:

- Expose people to or generates noise levels in excess of standards established in the Land Use Compatibility of the Mendocino County General Plan Noise Element or other adopted plans such as the Mendocino County Airport Comprehensive Land Use Plan. A significant noise impact would be identified if noise levels at exterior residential use areas would exceed 65 dBA L_{dn} or if interior levels would exceed 45 dBA L_{dn}.

- Cause a substantial permanent increase in ambient noise levels in the project vicinity above the noise levels existing without the project.

- Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

- Expose people to or generates excessive groundborne vibration or ground-borne noise levels.

2. Project Impacts

This section will describe the potential noise related impacts resulting from buildout of the Draft 2007 UVAP as per the significance criteria listed above:

Exposure to Excessive Noise

Impact 3.8-A New land uses proposed as a part of the Draft 2007 UVAP could be located in areas with excessive noise.

New housing and other sensitive uses could be allowed and constructed along roadways that have noise levels that exceed the Land Use Compatibility of the County General Plan Noise Element. New residential construction could also be constructed in areas where existing industrial facilities generate excessive noise. This is particularly true for the portions of the North State Street, Calpella, Brush Street Triangle, Lovers Lane, and Masonite areas where a range of residential and non-residential land use are allowed, and specific use areas are not designated in the Draft 2007 UVAP. Such classifications allow various uses to abut one another which can result in noise problems at residential locations, and these noise problems can result in restricting industrial and commercial uses.

Residential uses are also allowed within areas adversely affected by airplane noise from the Ukiah Municipal Airport. The CLUP discourages residential development in the B2 zone. Where residential use is found to be the best land use for a particular parcel, the CLUP recommends high-density multi-family use. The Draft 2007 UVAP designates some of the B2 zone as Mixed Use, which allows both multi-family and single-family development.

New housing located adjacent to commercial agriculture can be exposed to loud periodic noise events. New housing or other noise-sensitive land uses allowed in areas where noise levels exceed the compatibility guidelines would be a potentially significant impact.

The Draft 2007 UVAP does not contain a Noise Element, so the policies of the County General Plan and other adopted plans apply. The General Plan Noise policies include *Policy DE-98* that protects residential areas from excessive noise by requiring that new development not create unacceptable noise, and by requiring that new residential development not be placed where there is unacceptable noise; acoustic analysis and noise reduction is required for projects causing a noise increase. *Policy DE-100* provides maximum allowed exterior noise levels as shown in Table 3-J below. *Policies DE-101 and DE-102* provide guidelines for what levels of noise are generally compatible with what land uses. See Table 3-K which is part of *Policy DE-101*. *Policy DE-105* states that a 5 dB (in CNEL or L_{dn}) shall normally be considered a significant increase in noise. Other Noise Element policies address such issues as preferred noise mitigation, noise barriers, and other ancillary issues.

Table 3-J Exterior Noise Level Standards
(Levels not to be exceeded more than 30 minutes in any hour)

Land Use Type	Time Period	Maximum Noise Level (dBA)
Single-Family Homes and Duplexes	10 p.m. to 7 a.m.	50
	7 a.m. to 10 p.m.	60
Multiple Residential 3 or More Units Per Building (Triplex +)	10 p.m. to 7 a.m.	55
	7 a.m. to 10 p.m.	60

Table 3-K Noise Compatibility Guidelines
(Expressed as a 24-hour day-night average or Ldn)

Land Use	Completely Compatible	Tentatively Compatible	Normally Incompatible	Completely Incompatible
Residential	Less than 55 dBA	55-60 dBA	60-75 dBA	Greater than 75 dBA
Commercial	Less than 65 dBA	65-75 dBA	75-80 dBA	Greater than 80 dBA
Industrial	Less than 70 dBA	70-80 dBA	80-85 dBA	Greater than 85 dBA

Together these policies and associated tables provide a framework for limiting new residential or other noise-sensitive uses near major roadways, the airport, and fixed noise sources unless adequate noise-reduction is provided to meet compatibility guidelines.

The Airport CLUP states that new single-family residential development is compatible in areas within the CLUP that have noise levels of 55 dBA CNEL or less. Multi-family development is compatible in areas experiencing 60 dBA CNEL. The Draft 2007 UVAP includes Policy LU2.1 that states that the County will only allow development that conforms to the height, use and intensity specified in the land use compatibility table and corresponding diagram.

The policies and tables of the General Plan provide sufficient policy guidance to allow the County to restrict new discretionary noise-sensitive land uses in noisy areas. The CLUP provides policy direction for new development near the airport. Requiring consistency with Noise Element and CLUP policies and guidelines would reduce the impact to a ***less than significant*** level at the program level of analysis. This is the same as the conclusion that the EIR for the new County General Plan had for this impact.

Noise Increases from Additional Traffic

Impact 3.8-B **Traffic resulting from new development within the plan area would increase noise levels at sensitive receptors in the area.**

New traffic generated by area buildout traveling on plan area roadways will increase noise along those roadways. Noise modeling was conducted for this EIR to determine the increased noise that would be generated at buildout. As shown on Table 3.8-2 presented earlier in this chapter, the increased traffic along most study roadways would not substantially increase average noise levels. Four roadway sections would have average increases of 4 decibels or greater: 1) Lovers Lane (4 decibels); 2) Bush Street from the City Limits to Feed Lot Lane (5 decibels); 3) S. Dora Street from Fircrest Drive to Oak Court (6 decibels); and 4) Despina Drive from the City Limits to Lovers Lane (19 decibels). The noise increase for Lovers Lane and Despina Drive would be due to buildout of the Lovers Lane area, while the noise on S. Dora Street would come mainly from extension of that corridor to Stipp Lane of Highway 253. It is expected that noise

increases over 3 decibels would also occur along some City streets such as S. Dora Street.

As previously noted, the modeling is based on flat terrain with no intervening structures. Where there are intervening structures, vegetation, or topography between the roadway and homes or other sensitive receptors, the noise would be reduced.

Proposed road extensions included in the Circulation and Transportation Section of the Draft 2007 UVAP could result in increased noise for existing neighborhoods along those extensions as well as along existing streets that access the extensions (see Impact 3.6-A for a discussion of those extensions). Potentially significant noise impacts could occur along the Orchard Avenue extension north of the proposed Hensley Creek Road extension; Brush Street and the residential neighborhood to the south of Orr Creek; Oak Knoll Road and South Dora Street; Redemeyer Road, and Lake Mendocino Drive.

The General Plan Noise policies protect existing residential uses from unacceptable noise. Noise studies are required for new development. Projects causing a 5 dB (Ldn) noise increase are defined as having a significant impact. Using this criterion, buildout-generated traffic would have a significant impact on the sections of S. Dora Street, Lovers Lane, Bush Street, and Despina Lane listed above. The most significant noise increases would be associated with potential development of the Lovers Lane area. Any large development in that area would need to have a noise analysis conducted per *General Plan Policy DE-98* and *General Plan Policy DE-99*. That study would need to identify noise reduction methods needed to reduce the noise increase on area roadway to 5 dB (Ldn) or less. If this is not feasible (and it would be very difficult to reduce the noise increase on Despina Lane to an acceptable level), then the County could opt to reduce the amount of development to a level where the traffic noise increase is not significant.

Compliance with General Plan policies and their accompanying action items, as well as County Code Title 20, Division I, Appendix C, would reduce potential noise impacts by requiring the incorporation of necessary noise-reduction measures in the design and operation of proposed development projects, sufficient to achieve applicable noise standards. Implementation of these policies and actions would help to reduce impacts associated with future growth. Noise-reduction measures typically implemented to reduce traffic noise include increased insulation, setbacks, and construction of sound barriers. Some measures, such as construction of sound barriers, may have secondary impacts related to aesthetics and safety. *General Plan Policy DE-109* would reduce these secondary impacts by requiring attractive design of any new noise barriers. The feasibility of these measures would be determined on a project-by-project basis.

The analysis conducted here does not assess noise impacts on most residential streets in the plan area. Future development applications for discretionary projects will need to be assessed as part of the CEQA review process to determine impacts of those projects on local streets. The analysis also does not assess possible noise impacts to residential neighborhoods that might be affected by future road extensions included in the Draft 2007 UVAP. Currently, the route and type of project remain unknown, so the noise impacts would need to be assessed at the time a roadway plan and project are developed. This projects would need to undergo CEQA review, which would include an

assessment of noise impacts on existing neighborhoods and development of design mitigations to address any potentially significant impacts.

There is adequate policy language in the existing General Plan to protect existing residents and other noise-sensitive land uses from excessive traffic-generated noise. The impact is reduced to a ***less than significant*** level. This is the same as the conclusion that the EIR for the new County General Plan had for this impact.

Noise Increase From New Stationary Sources

Impact 3.8-C **New development can generate new noise that adversely affects residential neighborhoods and other sensitive receptors.**

Development of new industrial facilities could generate substantial amounts of noise. If these facilities were located near residences or other noise-sensitive land uses, they could result in potentially significant impacts to those receptors. This impact would be most likely to occur in the North State Street and Masonite areas where industrial development is allowed near residential development and in mixed use classifications where light industrial use is allowed.

The General Plan policies (*Policies SE-98* through *SE-109*) and associated tables described in previous impacts and the Exterior Noise Limits established in the Zoning Ordinance provide sufficient policy guidance to allow the County to restrict new development so that it does not cause substantial noise impacts to residences or other noise-sensitive land uses. Requiring consistency with Noise Element policies and guidelines and the Zoning Ordinance would reduce the impact to a ***less than significant*** level at the program level of analysis. Each subsequent development application will need to be reviewed to ensure compliance with these guidelines. This is the same as the conclusion that the EIR for the new County General Plan had for this impact.

Temporary and Periodic Noise

Impact 3.8-D **Constructing new development could cause significant increases in intense, single-event noise.**

The construction of new homes and businesses necessarily would generate construction-related noise. Individual equipment noise levels typically range from approximately 74 to 89 dBA at 50 feet. Typical operating cycles may involve 2 minutes of full power, followed by 3 or 4 minutes at lower settings. Depending on the activities performed and equipment usage requirements, combined average-hourly noise levels at construction sites typically range from approximately 65 to 89 dBA Leq at 50 feet. Typically, construction noise is considered a short-term impact and is not considered significant. However, there are cases where the type of construction equipment used, the proximity to sensitive receptors, and/or the length of the construction period can result in significant noise impacts. This is a ***potentially significant impact.***

The Exterior Noise Limits established in the General Plan and the Zoning Ordinance set limits on short-term noise. However, these standards do not currently apply to construction projects, unless the County requires conformance with them when approving a discretionary permit.

Mitigation Measures

3.8-D.1 The County will amend its Zoning Code noise standards to include standards to address and mitigate the temporary impacts of construction noise and ground vibration. Such standards will include restriction of construction hours to daytime periods and requirements to utilize construction noise reduction measures (e.g., use of temporary sound barriers, setbacks, equipment noise control devices, and ground vibration control measures).

Impact Significance After Mitigation

Large development projects where construction noise will endure for months or years will need to be assessed for construction noise during the CEQA review process to ensure that any sensitive receptors in the area are not significantly affected by the construction. The recommended mitigation will provide additional policy guidance regarding construction noise impacts, and would reduce the impact to a ***less than significant*** level. This is the same mitigation recommended in the EIR for the new General Plan, which reached the same conclusion regarding impact significance.

<u>Groundborne Noise and Vibration</u>

Impact 3.8-E New projects could cause significant increases in groundborne noise and vibrations.

New development, particularly industrial development, may include industrial processes that substantially increase groundborne noise and vibrations. The railroad, if reopened for use, would cause some groundborne noise and vibration. However, it is speculative whether the railroad will be reopened for use. A substantial increase in groundborne noise or vibration could be a potentially significant impact.

New development generating groundborne vibrations would generally require a Use Permit or Development Review if located in an Industrial zoning district, thereby providing the County with the ability to limit such development to ensure that it does not significantly affect surrounding uses. The impact would be reduced to a ***less than significant*** level, and no further mitigation is required.

3.9 AESTHETICS

A. Setting

1. Introduction

The plan area comprises most of the Ukiah Valley. The valley is surrounded by rugged hills vegetated with various chaparral and oak woodland plant communities. The valley floor supports many vineyards and some pear orchards. Within the valley are a number of older, developed neighborhoods and communities with the City of Ukiah being the urban center of the valley. While in some cases residences and other buildings in these older communities are not particularly scenic, there are many examples of quite attractive homes and businesses. In addition, there are many unique features including the City of 10,000 Buddhas at the site of the old State mental hospital in Talmage and the historic Vichy Springs Resort on Vichy Springs Road.

Views throughout the plan area are framed by the almost entirely undeveloped ridges that surround the valley. A view of one or more of the ridges is possible from most viewpoints in the plan area. Particularly from higher elevation viewpoints and several of the gateways to the valley, one gets a clear picture of the plan area as a distinct valley surrounded by distinct and wooded ridges.

2. Gateways

"Gateway" is a term used to describe the entry points to the Ukiah Valley or its major urban communities. The main plan area gateways listed in the Draft 2007 UVAP include Highways 20, 101, and 253, along with secondary entrances including Low Gap Road, Old River Road (formerly East Side Road), and Orr Springs Road. Within the valley, the entrances to the City of Ukiah are from Highway 101, Talmage Road (Highway 222), East Perkins Street/Vichy Springs Road, and State Street. The following summarizes the existing views from the gateways and along Highway 101, which is also designated by the Draft 2007 UVAP as a local scenic corridor.

Highway 101 Southern Gateway

Entering the plan area at Burke's Hill traveling north on Highway 101, one has views of oak and grass covered hillsides to both the east and west. To the southwest, one sees the higher ridge that borders the west side of the valley. This gateway contains panoramic open space views with no views of any development. Proceeding towards the valley bottom, one can see vineyards to the west with some accompanying farm buildings. At Burke Hill Drive, there is a panoramic view of the whole valley with surrounding hillsides. The views from here are of open space, with only a few small buildings visible. There are vineyards to the east, and distant panoramic views of ridges to the west and east. At Cox-Schrader Road, one can see some residential development in the foothills to the west at the south end of Ukiah, but views continue to be dominated by undeveloped land with bordering ridges.

Approaching the south end of Ukiah, to the east one can see the pear processing facility, roadside landscaping trees, a wood processing facility, and a lumber storage yard as

one passes Plant Road. To the west are mainly open views with some small vineyards and a few homes on the lower slopes of the western hills. As one approaches the Plant Road Overcrossing, one sees the Redwood Health Club building to the west. One can see a few residences on the hills farther to the west, but views are mainly of undeveloped hillsides to the west. At the South Ukiah Overcrossing, there are vineyards and pear orchards to the east. To the west is a small vineyard and then the Mendocino Brewing Company building, then a small pear orchard, then the south end of Airport Industrial Park with some views of airplane hangers at the Ukiah Airport to the west and then the commercial development on Redwood Business Park to Talmage Road. To the east are pear orchards until almost the Talmage Road offramps where there is a car lot.

Highway 101 Northern Gateway

The northern gateway is near the Highway 20 intersection with Highway 101. However, the visual gateway to the valley is immediately south of the Ridgewood Summit. Coming down the grade from Ridgewood Summit, one can see well-forested hills and ridges in all directions with valleys below. As one approaches the plan area, one can see the ridges on both sides of the valley and a major ridge at the south end of the valley. One can see virtually no development. There is a little commercial development adjacent to the east side of the freeway from about Uva Drive to the West Road exit with open views of the hills to the west. Farther south, there is a small amount of rural residential development to the west. Past the West Road overpass, one sees the ridges to the south, east, and west; there is also a lighted sign for a casino. There is open space with views of large oaks. Approaching Calpella can see large, old mill buildings off to the east with the high wooded ridge farther to the east. A mile from the Highway 20 offramp, the land is forested on both sides of the highway, and one cannot see beyond these trees. Then there is a winery to the east, then vineyards on both sides with a view of one or two homes to the west. As one approaches Highway 20, there are a few houses to the west and a barn and open land to the east. One can look ahead down the valley and see the ridges on both sides of the valley. One can see a few buildings in Calpella to the east, but they are mainly hidden in the trees. This gateway is well vegetated with an occasional view of buildings, but they are not prominent. The prominent views are the wooded hillsides and large ridges to the south, east, and west.

3. Other Major Public Vantage Points

Scenic corridors are routes with a high visual attractiveness which should be protected. Gateways are important because they provide a resident or visitor's "first impression" of the Valley and its urban communities.

Highway 101

Past the gateway at Highway 20, described above, there are residences to the west mixed with vineyards and a ridge behind (to the west). To the east is a low heavily wooded ridge west of Lake Mendocino and behind that the higher ridge on the east side of the valley. South of Central Avenue are vineyards on benches with undeveloped land above and behind to the west. From here, one can see the high ridges to the east and south, and lower portion of the ridge to west. There is some scattered rural residential and agricultural development, but views are primarily open space views in all directions. Then there is a large, but not very visible, mobile home park to the east, with the lower

wooded ridge west of Lake Mendocino behind it. Farther south, one travels through a roadway cut and looks down the valley to the high ridge west of Ukiah. There are mobile homes and residential development to the east.

South of the Pomo Overcrossing, there is industrial development and storage to the east and vineyards and large trees forming windbreaks to the west. There is occasionally a view of buildings to the west. The east side becomes dominated by the blend of warehouses, light industrial, storage, and commercial development associated with North State Street development. South of the Lake Mendocino Drive Overcrossing, there are a few scattered houses to the west with a small subdivision at the offramp. On the east side is a large automobile ownership. Then there are vineyards and open fields to Hensley Creek, then a large vineyard, and then the commercial/industrial development at Pinoleville. Past Pinoleville are the vineyards on the Lovers Lane area, then residential and commercial development to the North State Street Overcrossing. The east side continues to be a mix of commercial/industrial development ending at the site of the old Masonite plant.

South of North State Street is commercial development and the fairgrounds on the west, followed by a pear orchard and open field in the Brush Creek Triangle area. From here one can see the mainly undeveloped hillsides to the west of Ukiah. Other than the development right along Highway 101, the developed portion of Ukiah is not particularly visible to the west. The dominant visual resource is the western hillside. To the east, south of the Masonite site, are pear orchards to near Perkins Street. South of the Brush Street Triangle are large commercial sites on the west side to Perkins Street. South of Perkins Street is well landscaped residential to the east and commercial and apartments to the west to Gobbi Street. Then, there are open vineyards to the east with a PG&E substation beyond. To the west there is heavy landscaping. The high ridges are visible in both directions. As one approaches Talmage Road, one has long distance views of ridges to the south, east, and west.

To summarize, while there are views of development along this northern portion of Highway 101, other than the commercial/industrial zone on the east side between the freeway and North State Street, the views of development tend to be scattered, screened by landscaping and natural vegetation, and dominated by views of undeveloped wooded ridges in all directions.

Talmage Road (Highway 222)

Starting at the intersection of Old River Road (East Side Road) and Talmage Road, there is a blend of older commercial development, storage facilities, and residential development to about Sanford Ranch Road. Straight-ahead to the west is the high undeveloped ridge west of Ukiah. Past Sanford Ranch Road, the views open up to vineyards to the south and rural residential to the north and then pear orchards on both sides of the road, extending almost to the Russian River. Then there is an aggregate supply storage facility on the north side and vineyards to the south, followed by views of the tall trees along the Russian River as one crosses the river. Across the river are panoramic views of the western hills. Though the ridge is mainly undeveloped, one can see the new residences being constructed in one or two locations high on the ridge above Ukiah. There are orchards on both sides until Babcock Lane, and then there is a used car lot, commercial development, and motel development as one approaches

Highway 101. As one crosses the overcrossing, the views are dominated by the high ridge west of Ukiah.

South State Street

Entering Ukiah from the south from Highway 253, there is a dominant view of the western ridge until one approaches just south of Plant Road where more urban views begin to dominate. The immediate roadside views are of a blend of commercial businesses, storages, a new school, mobile homes, old motels (some converted to multi-family residential use), and residences. However, one still sees the western ridge with a few homes at lower elevations. The view of the western ridge continues to the Ukiah Airport. Then one can see the new development on the ridge above Ukiah, but mainly the ridge provides an open, undeveloped view. From these locations, one can see the surrounding ridges to the east and north. Though this gateway is not nearly as scenic as most gateways in the valley, the dominance of the western ridge as well as long distance views of the eastern ridge, provide substantial visual relief.

Highway 253

The gateway into the plan area is in a secondary valley with tree covered hillsides on either side. To the northeast is a high undeveloped ridge. There are occasional driveways off the highway, but the homes are not visible. At Robinson Creek Road, there is an undeveloped ridge in front of the viewer with one or two houses visible at a distance. Across Robinson Creek, there are open fields with a few scattered houses. There are scenic views of hills to the north, and open space to the south with a ridge behind it. Further east, there is scattered rural residential development, but the principal views are of undeveloped hills on both sides. At Wood Glen Lane, there is a vineyard to the south, and then there are large trees on both sides of the road. Further east are a few homes to the south and one to left, but the dominant view is open hillsides with no development. Then there is scattered development; then a hillside to the north and a large vineyard to the south. Then there is a panoramic view of the eastern ridge as one approaches Ukiah. There is an orchard to the south before Stipp Lane. Then there is an agricultural building and equipment on the north and vineyards to the south. Finally, there are houses on the south just before South State Street. At the intersection with South State Street, one has a panoramic view across the valley to the undeveloped eastern ridge.

Vichy Springs Road/Perkins Street

Starting at the intersection of Vichy Springs Road and Watson Road, one crosses the Russian River with its adjacent riparian habitat. One looks straight-ahead to roadside trees with the undeveloped western ridge above the trees in the background. From here one cannot see any development. To the south and north are pear orchards. One travels west with the western ridge the dominant view. It is possible to see the new development on the upper portion of the ridge above Ukiah. As one nears Ukiah, there are some homes, apartments, and a market to the south and orchards on the north. Near Highway 101 is residential development to the south, but one is still looking forward toward the ridge west of Ukiah. Coming over the highway overcrossing, one sees commercial and other development in Ukiah with the undeveloped western ridge as a backdrop to the City.

Low Gap Road

Starting at its western gateway, the road is located in the Orrs Creek valley with undeveloped heavily wooded hillsides on both sides, and the Orrs Creek channel below the road to the south. The road passes Low Gap Regional County Park to the south. As one drops toward the valley floor, one gets a distant view of the ridge on the east side of the valley. The farther east one travels, the more prominent the eastern ridge becomes. One sees very little development entering the valley on this road until one nears Ukiah High School.

North State Street

Starting at Highway 101 traveling north, there is a mix of commercial, industrial, warehousing, restaurants, car lots, mobile home parks, and some small vineyards along this street to Hensley Creek Road. North of Hensley Creek Road, there is more commercial development with Mendocino Redwoods to the east. There is some undeveloped land to the east, and the traveler has views of the ridge on the east side of the valley. At Lake Mendocino Drive, there is some residential development to the east then more restaurants, car repair shops, gas stations some homes, warehousing, used goods stores, old motels, commercial outlets, and light industrial until Parducci Road. North of that road is more warehousing, a propane facility, self storage, light industrial buildings, and mobile home parks. Past York Creek is storage, warehousing, some open country to east, an aggregate storage, vehicle storage, and equipment sales facilities at Pomo Lane.

Further north, there are houses on both sides of the road scattered in the woods. One can look across to hills to the east and west. Further north, the road parallels Highway 101, and there is a large mobile home park. One can look west across the highway to see a low ridge in the midground with the higher ridge bordering the valley in the distance. There is residential development to the east and west. Then, there is an open area to the east with homes to the west to Adams Street. Further north, it is open to the east looking onto the Russian River floodplain with large oaks and a hill to the east. Past this non-developed stretch, there is a small vineyard and few homes to the west, and it is open to the east. Then, there are mobile homes and warehouses on the east, an apartment complex on the west, and then the road enters downtown Calpella with storage and commercial buildings and homes on both sides to Hopkins Street.

Highway 20

Starting at the Potter Valley Road intersection, one travels west, down the canyon of the East Fork of the Russian River with open hills vegetated with mixed evergreen woodland on both sides. There are no long distance views from here because one is in a canyon. This entrance is a classic example of California foothills. Past the north turnoff to Lake Mendocino, one still cannot see any homes. Then one can see the lake to the south with one or two residences in the trees on the ridge immediately west of the lake. The higher western ridge is in the background. From the turnoff to the lake, one can look south down the lake, with ridges in the background. There is virtually no development visible. Past Road A, there are trees on both sides; one can look west and see the high ridge to west. As one travels down the hill, one can see Highway 101 about a mile distant. The road is bordered by trees throughout this stretch. At Redwood Valley

Road, one can see the ridge to the north and west with lower wooded ridges in the midground. In a few locations, one can see a house roof peeking through the trees, but the views are dominated by undeveloped woodlands. Past the railroad overpass, it is still forested until one sees the industrial mill site to the south right before intersecting Highway 101.

Other Vantage Points

The preceding summaries describe views from major arterials and gateways. Obviously, there are hundreds or thousands of other vantage points, along public streets and from private residences, that cannot be cataloged in a Program EIR. Many of these vantage points have views or agricultural uses or undeveloped land. Vantage points within the rural communities of Calpella, Talmage, and The Forks and along the State Street corridor may include views of more development, though often even in these locations there are views of vineyards or undeveloped land. In many to most locations, one has long distance views of the undeveloped ridges bordering the valley.

B. Impacts and Mitigations

1. Criteria Used to Determine Impact Significance

Land uses and development consistent with the Draft 2007 UVAP would have a significant impact if they:

- Have a substantial adverse effect on a scenic vista.
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.
- Substantially degrade the existing visual character or quality of the plan area and its surroundings.
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

2. Impacts

There is no State scenic highway in the plan area. However, the impact discussions below do include analysis of impacts to views from Highway 101.

<u>Effects on Scenic Vistas</u>

Impact 3.9-A **Future development consistent with the Draft 2007 UVAP could adversely affect scenic views along Highway 101, along other major public thoroughfares, and at gateways to the plan area.**

Unless carefully sited, designed, and constructed, new residential, commercial, and industrial development can replace views of vineyards, orchards, and open hillsides with views of typical urban or suburban sprawl. Residents of California are quite familiar with this change in views which accompanies urbanization. A drive south of the plan area through the developed corridor along Highway 101 in Sonoma County and some portions of the plan area provides one nearby example of how views of orchards, vineyards, and open fields were replaced with shopping centers, highway commercial and industrial development, and often unimaginative residential developments.

To many people, the loss of open space views of undeveloped ridges, forests, and agricultural areas is arguably the most significant change associated with growth. While there are certainly locations in the plan area where these views have already been lost or significantly compromised, most of the plan area still retains substantial open space views. From most vantage points, one can see views of the high undeveloped ridges that border the valley. The recent development of one large home within the City of Ukiah at upper elevations of the ridge immediately west of Ukiah is a good example of how even low density residential development can substantially affect the views of these ridges. The Draft 2007 UVAP does not change land use designations for properties at upper elevations on the ridges surrounding the valley. These areas are generally classified as Range Land (160-acre minimum parcel size) or Remote Residential (40-acre minimum parcel size). Though these designations ensure that there will not be substantial development of the ridges, even a small number of new houses can substantially alter views of these ridges. Lights at such houses can substantially alter nighttime views of the ridges. Because houses could be constructed on the properties without the need for discretionary approval by the County, development of these properties, even at a low density, could significantly affect views from many vantage points in the plan area.

The Draft 2007 UVAP does allow some additional development potential on lower elevations of the ridges or on secondary ridges. For example, Suburban Residential and Rural Residential (5-acre minimum parcel size) are allowed along lower elevation slopes west of South State Street; Rural Residential (1-acre minimum lot size with a Planned Development combining classification) is allowed east of Redemeyer Road to the north of Vichy Springs Road; and some Rural Residential-Planned Development (10- acre minimum parcel size) would be allowed at lower elevations west of Highway 101 and north of York Creek. Unless carefully sited, new houses and other improvements on these properties could adversely affect views of hillside areas. Because the Draft 2007 UVAP places a PD combining classification on these sites, which will allow the County to require clustering to avoid visual impacts (among other impacts), the lower elevation development area most likely to adversely affect views would be the western slopes immediately south of the City of Ukiah.

Most new development will be focused in the North State Street corridor, the Lovers Lane area, the Brush Street Triangle, and the South State Street area. Little new development is projected in the Talmage Rural Community. Some development may occur in the Calpella Rural Community, though such development may be constrained by water capacity deficiencies. The Forks area already contains a substantial amount of development with a mix of commercial, industrial, and residential uses along North State Street, several large mobile home parks, and areas of small lot residential development. This area contains several large undeveloped parcels, several of which are in orchard or

vineyard. Development of vacant lands in this area, particularly the undeveloped lands southeast of Lake Mendocino Drive, would replace views of open space with new residential and/or non-residential development. New development or redevelopment along North State Street needs to be carefully designed to enhance views along this major north-south arterial.

Implementation of the Redevelopment Plan provides an opportunity to visually enhance the three project areas. As the Rural Communities, North State Complex, the Brush Street Triangle, and other portions of the plan area develop, infill or redevelop, vegetation and tree canopies will be replaced with buildings, urban streetscapes, parking lots, and a continued increase in artificial light with localized and cumulative valley-wide effects.

The North State area has a similar mix of mainly commercial and industrial uses along North State Street. It includes relatively extensive areas that are in vineyard or orchard or are otherwise undeveloped. Much of the southeast quadrant of this area (between the railroad and the Russian River and south of Ackerman Creek) is agricultural or is the former Masonite site. Development of vacant lands in this community, particularly of the undeveloped lands in the southeast quadrant, would displace views of open space with new residential and/or non-residential development. The former Masonite structures have recently been demolished and removed. New development or redevelopment along North State Street (particularly the former Masonite site) needs to be carefully designed to enhance views along this arterial. Reuse of the site of the demolished Masonite facility provides an opportunity to enhance the appearance of this site.

The Lovers Lane area provides views of vineyards and open space bordered by wooded hills to the west. These open space views would be replaced by views of housing and other urban development. However, public views of this area are relatively limited, and it is mainly visible from Highway 101, Lovers Lane, and Orr Springs Road immediately adjacent to the area.

The Brush Street Triangle is mainly undeveloped, with the exception of self-storage warehouses along the west-central part of the area. The remainder of the area is mainly fallow ground. Development of this area will replace views of open space with new urban development. This development will extend the developed east edge of Ukiah to the highway. A Program EIR prepared for the City of Ukiah's construction of the new bridge across Orrs Creek and extension of Orchard Avenue to Brush Street (this bridge has been constructed and Brush Street has been repaved) recommended a coordinated open space plan for this area that would include open space along the Highway 101 frontage.[78]

The South State Street area provides views of urban residential development along portions of the west side of the road with larger lot development on the slopes to the west. There are vineyards towards the south end of this street and along Highway 253 plus there are sparsely developed or undeveloped portions of the ridge to the west. As described previously, it is important that hillside development be carefully sited and designed to minimize impacts to the important ridgeline scenic resources. New

[78] *Orr Creek Bridge and Orchard Avenue Extension Project Draft EIR*, Leonard Charles and Associates, 2002.

development will displace vineyards and other open space near the street. This new development will extend the southern developed urban corridor to Highway 253.

New development in the Calpella community could result in the loss of large oaks and other trees and open space near the river. There are also several parcels in this community that are in agricultural use. New development would displace open space views along North State Street, East Side Calpella Road, and other local roads. Development or redevelopment needs to be carefully sited and designed to enhance the central business section of Calpella in order to foster the identify of a rural community.

New development will occur in other portions of the plan area not specifically addressed above. In all these locations, new development will displace views of existing open space and may be considered an adverse change by members of the public using nearby roads or residents of existing homes that have views of this open space.

As regards to visual impacts at the major gateways to the plan area, other than the above described impacts that could result from new development on the ridgelines, the impacts should be less than significant. The predominant land use classifications at the gateways are Range Lands or Remote Residential.

By mainly concentrating new development in those areas that have historically experienced at least rural residential/suburban levels of development, the Draft 2007 UVAP protects much of the hillside land and agricultural areas from extensive development. In addition, the Draft 2007 UVAP contains many policies and measures aimed at protecting aesthetic resources.

Policy CD1.1 requires the County to prepare and implement design and landscaping guidelines (in part, drawing upon those used by the City of Ukiah). The policy sets standards for new parking lots that would minimize their visual effects. ***Policy CD2.1*** includes providing incentives or redevelopment powers to encourage property owners at area gateways to enhance the appearance of their property, and calls for limiting building intensities between the various communities in the plan area in order to maintain visual separation and community identity. The policy also establishes guidelines for new signs to avoid visual impacts from those signs. Adoption and implementation of such guidelines would substantially improve the County's ability to preserve important views and ensure that new development does not significantly affect scenic views. However, until such guidelines are adopted, new development could adversely affect views.

Policy CD1.2 provides three measures for encouraging attractive development and maintaining the small-town character of the area. These measures include promoting pedestrian-friendly street frontages in new development; requiring articulated buildings; and requiring varied design elements. This policy provides a general approach the County will take in reviewing new development. The actual guidelines would be included in the new guidelines that would be adopted per ***Policies CD1.1*** and ***CD2.1.***

Policy CD2.1 states that the County will avoid noise walls whenever feasible and require design review when such walls are the only feasible noise mitigation. ***Policy CD2.3*** requires utility lines being placed underground and screening of communication towers and other above-ground utilities.

Policies in other elements of the plan would preserve various aesthetic resources thereby reducing this impact. ***Policy OC1.2*** establishes a river corridor planning area where design review would be required. It also includes the requirements for stream setbacks and a riparian system management plan. This policy would protect visual resources within the riparian corridors. ***Policy OC2.1.*** contains measures to preserve the area's natural resources. ***Policy OC2.2*** requires the zoning code to include requirements for preserving, restoring, and maintaining open space in new discretionary development projects, and recommends incentives for clustering; allowing the transfer of development rights;. ***Policy OC2.3*** contains measures to protect oak woodlands. This is an important policy since the 19,000 acres of oak woodlands in the plan area are one of the most significant visual resources of the valley. This policy also requires new development standards for hillside development. Development would be encouraged to locate and design improvements to minimize impacts on views from lower elevations. However, the time frame for developing the Oak Woodland Preservation Plan is "intermediate," which means that development occurring over the next 5+ years would not be guided by that plan. Also, until hillside development standards are adopted, new hillside development could adversely affect views.

The Draft 2007 UVAP land use plan preserves most farmlands in the valley. The plan area includes about 9,068 acres currently classified as Agriculture. Under the Draft 2007 UVAP, there would be 8,872 acres with an Agriculture designation. The principal loss of views of agricultural lands would be the Lovers Lane area. ***Policies OC3.1*** and ***OC3.2*** contain measures to preserve the remaining agricultural lands in agriculture.

The Parks, Recreation and Community Facilities Section contains policies to increase the number of parks in the area. The parks would provide new aesthetic resources and/or preserve existing views of open land.

The Land Use Section contains policies that emphasize smart growth principles such as ***Policy LU1.1*** that promotes a compact urban form and infill development. ***Policy LU4.1*** includes provision for a growth management plan. If adopted, this plan would ensure that new development was spread over time, reducing the immediate visual impact. It would also prioritize where development would occur, protecting sensitive areas.

The County General Plan contains policies (*Policies DE-78* to *DE-83* and *DE-85* to *DE-91*) aimed at protecting aesthetic resources. The policies include requiring: 1) compatibility of new development with the desired architectural character of the existing established neighborhood; 2) viewshed preservation in a highly scenic environment, adjacent to or atop a ridgeline or hill, or a similar setting; 3) reduction of excessive artificial light and off-site lighting impacts; 4) promotion of attractive building design; 5) and visual review of projects involving removal of 5 or more acres of vegetation. *General Plan Policy DE-78* included an Action Item to consider developing community design guidelines. The policies in the Draft 2007 UVAP are consistent with and more specific than those in the current General Plan.

In general, the Draft 2007 UVAP would protect the most sensitive aesthetic resources (hillsides, oak woodlands, riparian corridor, and most agricultural lands) while focusing development on lands adjacent to the north and south ends of Ukiah. The policies also provide a framework for guiding the future development so that it provides views of pleasing new building and landscaping. There will be some loss of open space views,

but the loss would not constitute a significant percentage of important open space views. However, these protections are premised on the County adopting various guidelines and standards as part of the zoning ordinance. New development occurring before these guidelines and programs are adopted could adversely impact important scenic resources if not carefully planned.

Mitigation Measures

Mitigation Measure 3.1-B.1, described previously, applies to this impact. This mitigation measure prioritizes projects that do not adversely affect views from major roads and at plan area gateways as part of the Growth Management Plan.

3.9-A.1 To ensure that development of visually sensitive areas adjacent to Highway 101 is developed in a coordinated fashion to maximize open space and minimize visual impacts, add the following implementation measure:

> **LU1.2f Specific Plans**
> Prior to any new discretionary project approvals in the Brush Street Triangle (except for the existing application for an affordable housing project), a specific plan shall be prepared for the Brush Street Triangle to coordinate areawide circulation and infrastructure, preserve open space, provide recreational facilities, and maximize ultimate development potential.
>
> Prior to any new discretionary project approvals in the Lovers Lane area, a specific plan shall be prepared for the Lovers Lane area to coordinate areawide circulation and infrastructure, preserve open space, provide recreational facilities, and maximize ultimate development potential.
>
> *[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]*

When preparing the UVAP design review guidelines called for in ***Policy CD1.1*** it is recommended that the County consider adopting the City of Ukiah's *Landscaping and Streetscape Design Guidelines* as well as its Draft *Revised Hillside Development Regulations* (not yet adopted). The County should also consider design guidelines set forth in the Smart Growth Network's (International City/County Management Association) *Getting to Smart Growth, 100 Policies for Implementation* and *Getting to Smart Growth II, 100 More Policies for Implementation*. These two documents provide specific examples of how to realize the following basic principles of the "smart growth" planning approach: mix land uses within any one area; take advantage of compact building design; create walkable communities; create a range of housing opportunities and choices within a given area; foster distinctive, attractive neighborhoods and communities with a strong sense of place; preserve open space, farmland, and critical environmental areas; strengthen and direct new development towards existing communities; and provide a variety of transportation choices.

Impact Significance After Mitigation

With the recommended mitigation, the UVAP would provide a solid planning framework for preserving important open space views. However, the loss of open space views is

inevitable when allowing the development of thousands of new residential units and possibly over four million square feet of new non-residential development. In addition, new development could be approved prior to the County adopting and using the proposed design review guidelines, and this development could adversely affect views. This loss of open space views would remain a ***significant and unavoidable impact***. There is no way to reduce this impact to a level that is less than significant unless the development potential were significantly reduced and focused in already developed portions of the plan area. Reducing density and intensity of development is a project alternative and is assessed in Section 4.4 of this EIR.

Inconsistency with Visual Character and Quality of the Area

Impact 3.9-B **Future development, unless carefully sited and designed, may be inconsistent with the scale and character of existing development in the surrounding area. This future development could result in views that are aesthetically offensive.**

As described above in the discussion of Impact 3.9-A, new development might not fit the scale and character of existing neighborhoods. In some areas, open space and rural residential land uses will be displaced by new suburban levels of residential development and new non-residential development. These changes will be most visible in the Lovers Lane area, the Brush Street Triangle, the North State Street, and South State Street corridors, and, likely to a lesser degree, in the Calpella community. As these and other portions of the plan area develop, infill, or redevelop, vegetation and tree canopies will be replaced with buildings, urban streetscapes and parking lots, and a continued increase in artificial light, with localized and cumulative valley-wide effects. Views from major highways of urban development such as backyards of residential development, rear views of commercial and industrial sites, and parking lots are often unattractive. Site design and development orientation, retention of vegetation, extensive landscaping, and attractive screening or visual buffers to create attractive views from major highways need to be emphasized, as does focused and screened lighting.

While these areas that the County has identified as potential development locations will experience the most changes to local aesthetics, some changes will be seen throughout most of the plan area as it becomes a more developed place over the next 20+ years. While the overall visual changes accompanying this planned growth cannot be avoided, the County can require that new development requiring discretionary approval incorporate as much open space as possible, enhanced landscaping, and appropriate design so that it does not significantly impair views in the area. However, unless design guidelines are adopted and implemented, large portions of the plan area could look like much of the urban sprawl that typifies much of the development in counties to the south. This would be a potentially significant impact.

The policies and measures described under Impact 3.9-A also apply to this impact. ***Policy CD1.2*** aims to preserve and enhance the small town character and residential integrity of residential neighborhoods and streets. This policy includes measures to mitigate the impacts of traffic on residential neighborhoods and to adopt design review guidelines to preserve and enhance the character of existing neighborhoods. The

General Plan also contains policies requiring visual compatibility of new development with the existing visual character.

The Draft 2007 UVAP and the County General Plan calls for adoption of design review guidelines in the short-term planning period. Once adopted these guidelines, together with the other policies in the Community Design Section, provide a planning framework that will allow the County to assess and condition new development so that important aesthetic resources, scale and character of existing neighborhoods is protected, as well as to provide attractive new neighborhoods/communities. The policies also provide specific guidance for projects that often have significant aesthetic impacts, namely, parking lots, signs, noise barriers, and communication towers. However, it is important that these design review guidelines be prepared and adopted prior to the development of large and small-scale projects that will individually and cumulatively have an adverse effect.

The Draft 2007 UVAP calls for adoption of design review guidelines. These guidelines, once adopted, together with other policies included in the Community Design Section provide a planning framework that will allow the County to assess and condition new development so that it preserves important aesthetic resources and guides new development to fit the scale and character of existing neighborhoods as well as provide potentially attractive new neighborhoods/communities. The policies also provide specific guidance for projects that often have significant aesthetic impacts, namely, parking lots, signs, noise barriers, and communication towers. At a program level, the impact would be reduced to a less than significant level once the design guidelines are adopted and used. However, until these guidelines are developed, new development would not be subject to design review. As such, the impact is ***significant and unavoidable*** until the County adopts the new guidelines.

In addition, the project may cause urban decay, and this would result in deteriorated or abandoned buildings and, possibly, run-down areas. See the discussion of this significant and unavoidable impact in Impact 3.1-G.

New Lighting and Glare

Impacts 3.9-C **New development will create new glare and include new lights that will adversely affect nighttime views.**

Outdoor lighting used in both the public and private sectors contributes to adverse visual effects on the nighttime sky. Excessive night time lighting resulting from implementation of the Draft UVAP could result in light trespass, light pollution, and glare.

Light trespass is unwanted light from a neighboring property or roadway. The most common form of light trespass is spill light, illuminating objects beyond the property boundaries. Light trespass may be more obtrusive during the late night hours. Light trespass would continue to be an issue as sources of outdoor lighting have and may continue to be more intense than in the past. Additionally, disputes related to light trespass are difficult to resolve due to the need for light during nighttime activities, particularly for safety and security. Light trespass can be both a nuisance and a health and safety risk if it adversely affects visibility for tasks like driving.

Light pollution has a broader and more cumulative impact than light trespass to plan area residents. Excessive nighttime lighting could result in sky glow, the haze of light that surrounds highly populated areas and reduces the ability to see the stars. This would be of particular concern near observatories (e.g., the Robert Fergusson Observatory) and could change the appearance of the night time sky for future generations.

Excessive lighting could also have an adverse impact on wildlife. Increased night lighting from development may disrupt important behaviors and physiological processes of animals. Insects, amphibians, and birds are highly sensitive. Lights at night are especially disruptive to wetland birds and land animals, which use light reflected off of water to orient them. Migratory songbirds are also vulnerable, and are killed in large numbers when night-lit buildings attract them off their course. Some animals cannot forage or find mates because they cannot hide from their predators. Owls, foxes, and other predators who hunt by sight may thrive where night lights are strong.

Implementation of the Draft 2007 UVAP could also result in glare. Glare is light of such brightness that it continually draws the eye toward the lamp image an /or prevents the viewer from adequately viewing the intended target. Glare commonly occurs when a spot in the field of view is significantly brighter in contrast to the rest of the field of view, such as when a direct lamp image is visible, or when the difference in light levels between adjacent areas is significant enough to cause the eyes to take several minutes to adapt to the change.

In 2001 the California State Legislature passed a bill requiring the California Energy Commission to adopt energy efficiency standards for outdoor lighting in both the public sector and the private sector. The Commission is now in the process of developing and adopting lighting standards for all outdoor lighting applications, including all non-conditioned areas that are not already subject to existing California standards. The Commission adopted changes to the Title 24, parts 1 and 6, Building Energy Efficiency Standards on November 5, 2003. These Standards became effective on October 1, 2005. Included in the changes to the Standards are requirements for outdoor lighting. The Commission anticipates that the new standards will improve the quality of outdoor lighting and may reduce the impacts of light trespass, glare, and light pollution.

The Draft 2007 UVAP contains ***Policy CD2.2*** that states the County's intention to adopt and enforce design guidelines to reduce excessive artificial light. This is consistent with *General Plan Policy DE-89*, which recommends reducing artificial light and off-site light impacts and *General Plan Policy RM-134* that recommends new lighting guidelines to reduce night trespass. In adopting design guidelines, the County would coordinate with the Ukiah Dark Sky Initiative to identify recommendations for lighting standards. The Ukiah Dark Sky Initiative recommends developing standards that comply with the International Dark-Sky Association Model. The original model recommended by this association is being revised, and the new Model Lighting Ordinance is not yet available to the public.

This policy could lead to substantial reduction in light pollution. However, it is unknown at this time whether the standards, when adopted, would provide adequate reduction in light pollution. In addition, even if substantive reductions in new lighting were required, the cumulative effect of adding thousands on new residences, new nonresidential

development, new streets, etc. could be substantial. Finally, new development that occurs prior to adoption of these lighting standards would have an adverse effect on the nighttime environment.

Mitigation Measures

3.9-C.1 The nighttime visual environment shall be protected by adding the following implementation measure to Policy CD2.2:

> **CD2.2b Interim Design Guidelines**
> Until the design guidelines and landscape guidelines are adopted, the County will conduct design review of proposed discretionary projects. Outdoor lighting for new projects will not be allowed to cause light trespass and will limit light pollution to the degree feasible. The County will use as interim guidelines the *Simple Guidelines for Outdoor Lighting Regulations*[79] developed by the International Dark-Sky Association. *[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]*

Impact Significance After Mitigation

This policy, including the recommended additional implementation measure, could lead to a substantial reduction in light pollution from new development. However, it is unknown at this time whether the standards, when adopted, would provide an adequate reduction in light pollution or whether adequate light reduction would occur under the proposed interim guidelines. In addition, even if a substantive reduction in new lighting was required, the cumulative effect of adding thousands of new residences, new nonresidential development, new streets, etc. could be substantial. The impact on the nighttime visual environment would remain a ***significant and unavoidable impact*** on visual resources.

[79] See: *www.darksky.org/programs/simple-guidelines-for-lighting-ordinances.php.*

3.10 PUBLIC SERVICES AND INFRASTRUCTURE

A. Schools

1. Setting

Public education in the plan area is offered by the Ukiah Unified School District (UUSD), which provides schools for Kindergarten through grade 12 students. The UUSD operates six kindergarten through sixth grade schools (Frank Zeek, Grace Hudson, Hopland, Nokomis, Oak Manor, and Yokayo), one Kindergarten through second grade school (Calpella), one third through fifth grade school (Redwood Valley), two sixth through eighth grade middle schools (Eagle Peak and Pomolita), one ninth through twelfth grade high school (Ukiah High School), and one ninth through twelfth grade continuation high school (South Valley).

Effective with the 2010-2011 school year, Hopland School and Redwood Valley School will be closed. The grade configuration at Calpella will change to kindergarten through fourth grade and Eagle Peak will change to fifth through eighth grade.

In addition, there are four charter schools in the plan area: Redwood Academy (grades 7-12), River Oak Charter (grades K-8), Accelerated Achievement (grades 4-12), and Tree of Life (grades K-8). These charter schools are located at other facilities and arrangements for Facilities fees are specified in the agreement between the two agencies.

In addition, secondary education is provided by Mendocino College. This community college is located on 127 acres on Hensley Creek Road west of Highway 101. It has about 5,100 students. The voters passed Measure W on November 7, 2006. Bond revenues have been used to rehabilitate facilities and provide space for additional facilities to accommodate an increased student population.

Existing School Enrollment and Capacity

As shown in Table 3.10-1, total capacity of UUSD schools (not including charter schools) is 7,674 students and total enrollment as of October 2009 was 5,664, excluding 4 NPS students.[80] In addition, there were 615 students of various grades in charter schools, for a total of 6,279 students attending UUSD facilities. Excess of capacity by type of school is reflected in Table 3.10-1 below. Also within the plan area, there are a number of private schools providing education.

[80] NPS, or Non-public students, are students whom, due to extenuating circumstances, cannot physically attend public school; however their education is funded by the District, as per Ukiah Unified School District Administration, 4/10/08.

Table 3.10-1
Existing Ukiah Unified School District Non-Charter School Enrollment and Capacity
(Number of Students)

Type of School	Capacity	October 2009 Enrollment	Excess Capacity Over Enrollment
Elementary School	3,433	2,817	616
Middle School	1,938	1,008	930
High School	2,303	1,839	484
Total:	**7,674**	**5,664**	**2,010**

Source: Ukiah Unified School District, CBEDS Data, October 2008

The District has experienced declining enrollment at least since 1998. The October 1999 enrollment was 6,923 students, and the October 2008 population was 5,741 students, compared to the current population is 5,664 students. In part this reduction may be due to families having fewer children; new families who have moved to the area having fewer children than the families they replaced; and the expansion of charter schools.

School Construction and Renovation

In 1997, voters approved a school bond issue (Measure H) for $20 million. The UUSD has sold all of the approved bonds. The bond revenue has been used for modernizing existing schools, adding new classroom equipment, and constructing the new Grace Hudson Elementary School. In 2005, voters approved Measure U that allowed the District to sell bonds for the renovation of Ukiah High School. The District is currently renovating the high school. The Ukiah High School Modernization project is being implemented in several phases. Phase 1 that included the vocational and independent studies facilities was completed in 2008. Phase 2 that included modernizing all classrooms was completed in February 2010. Phase 3 was begun in 2009 and is about 50% complete. IT includes the cafeteria/student services and library buildings. When the renovation is completed, the high school will have a capacity for about 2,200 students.

School Impact Fees

In accordance with State law, the UUSD levies one-time school impact mitigation fees of $2.24 per square foot of new residential development, $0.36 per square foot of new commercial and industrial development, and $0.09 per square foot of new storage unit construction.

2. Criteria Used to Determine Impact Significance

Land uses and development consistent with the Draft 2007 UVAP would have a significant impact if it would:

- Increase the need for additional schools such that new or physically altered facilities are needed, the construction of which could cause significant environmental impacts.

3. Impacts

Impacts from New School Construction

Impact 3.10-A **New development resulting from buildout of the plan area would generate sufficient students to require the construction of new schools. The construction of those schools could have significant impacts on the environment.**

With buildout under the UVAP, the residential population of the plan area could increase by 13,250 residents by 2030, or 5,430 new households. This is the worst case buildout projection. As mentioned in the introduction to Chapter 3.0, projected growth based on current State projections of County population growth would result in about 2,772 new households or 7,127 new residents by 2030. The UUSD's recent Developer Fee Justification Study estimates that each housing unit generates 0.22 elementary school students, 0.08 middle school students, and 0.13 high school students, for a total of 0.43 students per unit. Based on these rates, the 5,430 new housing units that could be developed at buildout would generate 2,335 new UUSD students (1,195 students in grades K-6; 434 in grades 7-8; and 706 in grades 9-12). The State's projected development for 2030 (i.e., 2,772 new residential units) would generate 610 elementary school students, 222 middle school students, and 360 high school students.

This new development would also generate developer fee income for the UUSD. Based on the current fee of $2.24 per square foot of residential development and assuming an average of 1,750 square feet for new residences, the 5,430 new units would generate approximately $21 million over the next 20 years. The projected growth of 2,772 new units would generate approximately $10.9 million. In addition, the approximately 7 million square feet of new non-residential development possible under the UVAP would generate approximately $2,500,000 in developer fee income at buildout, based on the current fee of $0.36 per square foot of commercial and industrial development.

The actual effect on UUSD facilities would depend on future enrollment and capacity conditions, as well as the pace of new development in the plan area. As of October 2009, the elementary schools in the Ukiah area were near capacity (using the District goal of maintaining a maximum of 400 students per elementary school). However, there is space on several of these elementary school campuses for adding portable classrooms. In addition, the three outlying schools (Calpella, Hopland, and Redwood Valley) have unused capacity. UUSD has capacity remaining in all but one of the elementary schools and all middle and high schools. District schools currently have capacity to house an additional 2,010 students. However, much of the excess capacity is in the two 7-8 grade middle schools. The future total population at buildout would exceed elementary school capacity by 579 students (assuming that Hopland and Redwood Valley Schools are reopened once enrollment increases) and the high school capacity by 222 students. There would remain extra capacity for an additional 502 students at the middle schools. If growth proceeds as projected by the State, then there would be adequate space for new students in existing schools.

As part of the current Ukiah High School renovation, the District is installing 10 modular units that will be used to house students while existing classrooms are being renovated. In about five years when the renovation project is completed, these 10 modular

classrooms will be available to house the mathematics program. Thus, there will be a de facto increase in the capacity of that school. At a rate of 25 students per classrooms, these 10 classrooms would increase the high school's capacity by about 250 students. There would still be more high school students generated by buildout than the school could adequately house. In addition, the school would be the largest high school north of the Golden Gate Bridge.

The excess number of students could be housed by adding portable or modular classrooms to existing schools (the most recent Developer Fee Justification Study made available by the District states that 22 classrooms could be added to existing elementary schools).[81] About 40 new portables would be needed to house the additional elementary school students. However, adding portable classrooms to existing campuses can adversely affect the quality of education by causing overuse of shared facilities such as playgrounds, libraries, food service, gymnasiums, etc. There is also the potential need for additional buses. Other options could include changing the middle schools to grades 6-8 and/or constructing a new high school (to meet buildout growth) and a new elementary school(s) (to meet buildout growth). It is possible that if growth occurs at the slower rate projected by the State that new schools would not be required by 2030 (assuming that 10 modular classrooms can be added to existing elementary schools).

What the future enrollment will actually be is further complicated by what happens with charter schools (as well as private schools). It is possible that existing charter schools would cease operations, potentially adding an additional 615 students to District schools. Alternatively, additional charter schools might be approved or existing charter schools might expand their enrollment, thereby reducing future enrollment pressure on the District's other schools.

The District's Developer Fee Justification Study describes the alternative of constructing an additional elementary school and possibly a small high school to serve long-term development. The study estimates that the cost of adding a classroom to an existing school is about $4,470 per student (or about $1,922 per household). The developer mitigation fee is adequate to cover this cost. The cost of constructing a new elementary school is $33,841 per student and $34,231 per student for a new high school.[82] The existing developer mitigation fee is insufficient to cover those costs.

If at some point in the next 20 years the District determines that a new school (rather than adding portables to existing schools) is needed to provide the desired level of education to its students, then it would have inadequate resources from existing available funds and future developer fees. Existing funds and future fees would provide approximately 85% of the cost of a new elementary school.[83] Additional funding would possibly come from State matching funds or future bond sales.

If portables are added to existing schools rather than building a new school(s), there is a potential effect on these schools from potential overcrowding of the campuses and overcrowding of shared educational and other school facilities. However, the courts have held that increased classroom enrollment resulting in school overcrowding is

[81] Government Financial Services, 2005, p. 8.
[82] Ibid.
[83] Ibid, p. 9.

considered a "social" rather than a physical "environmental" impact and is not, in itself, a significant environmental impact requiring mitigation under CEQA (Goleta Union School District vs. Regents of University of California [2d Distr. 1995]). In addition, State Government Code sections established in 1998 (Sections 65995 to 65998) have pre-empted and limited the ability of cities and counties to exercise their police power to mitigate school impacts. Increased school enrollment may only lead to an environmental impact if the increased enrollment will ultimately require physical changes in the environment. A city or county may not impose development requirements regarding school facilities in a manner inconsistent with State statutes on the subject. The duty of a lead agency to mitigate school impacts beyond the State-mandated school impact fees arises only where there is a physical impact involved beyond the mere addition of students to a school.[84]

In the case of the UVAP development, which would occur over 20+ years, it is not possible to identify UUSD facilities expansion needs in specific terms of facility size, staffing, equipment, and locations. There are no firm plans for these facilities, and therefore assessment of any environmental impacts associated with construction of new or physically altered facilities would be ***speculative***. In addition, the Draft 2007 UVAP contains policies and implementation measures to substantially reduce the impacts of new development, and it is expected that school siting and construction would be done in an environmentally responsible fashion. ***Policy LU3.1*** states that new development will be assessed to ensure compatibility with schools. ***Policy LU3.2*** states that the County will work with UUSD to provide adequate facilities and identify potential future school sites that are compatible with adjacent uses, transportation, and land use plans. ***Implementation Measure LU4.1a*** recommends establishing a growth management plan for the plan area. It will identify an annual growth rate for new housing units and commercial services. ***Implementation Measure 4.2a*** states that new development would not be approved unless there are adequate facilities and services to serve that development without degrading the existing Level of Service standards.

The County General Plan also contains policies to ensure that new development can be served by the school district and other service providers. *General Plan Policy DE-120* states that projects to increase density or intensity should not be granted if there are basic infrastructure deficiencies, unless a program is in place for timely resolution of the deficiency. *General Plan Policy DE-121* states that new discretionary development will be required to demonstrate that basic infrastructure is available and the provider has adequate capacity to serve the project. *General Plan Policy DE-236* encourages districts to select new school sites that are compatible with plans, infrastructure, and neighborhood character; accessible; not impacted by excessive traffic, noise, or hazards; avoids conflicts with agricultural, forestry, or industrial uses; and facilitates public recreation.

To conclude, if the area were built out by 2030, a new elementary school and possibly a small high school would be needed to house the projected new students. If growth occurred more slowly as projected by the State (or as possibly controlled by a growth management plan), then new schools would not be needed until after 2030. Construction of these possible new schools could have significant effects on the environment. This is a ***potentially significant impact.***

[84] *Mendocino County Redevelopment Project Draft EIR*, January 2003.

Mitigation Measures

No mitigation is available at this time as the potential site of a new school is unknown.

Impact Significance After Mitigation

It is currently speculative whether a new school(s) would be required to serve plan area buildout. Existing developer fees are sufficient to add portable classrooms to existing schools to provide educational housing for future students. However, it is possible that under full buildout a new school(s) would be needed. The impacts of constructing the school(s) may include: erosion impacts; hazardous geologic conditions: development within a floodplain; increased runoff and flooding; loss of significant biological populations or habitat; traffic impacts: noise; impacts; visual impacts; global climate change impacts; loss of agricultural land or soils; land use conflicts; and other currently unknown impacts. Thought speculative, a new school(s) may be needed to house buildout development, and construction would have potentially significant impacts. Therefore, the impact is considered a ***significant and unavoidable impact.***

The County should be aware that in approving the Draft 2007 UVAP, the growth allowed under that plan plus new growth in the City of Ukiah may result in long-term overcrowding at certain District schools with potentially adverse effects on the education offered to some District students. It is possible that such overcrowding would adversely affect the quality of education provided students, contrary to existing General Plan policy stating that new projects should be approved only if adequate public services can be provided. The County will need to continue to review project applications to determine consistency with UVAP and General Plan policies and to work with the School District to provide suitable sites for planned new schools. It is expected that it would be large residential projects that could cause schools to become overcrowded. To the degree allowed by State law, mitigation can be required of such discretionary projects and/or projects can be scaled back to a level where education is not adversely affected. These are not environmental issues or impacts and are mentioned here simply to provide a full discussion of issues of concern to the County.

B. Law Enforcement

1. Setting

The plan area is mainly served by the Mendocino County Sheriff's Office. The California Highway Patrol provides traffic-related enforcement actions and prevention, and the City of Ukiah Police Department serves the adjoining area that is within the City limits. Other agencies which routinely provide law enforcement services include the California Department of Justice, Department of Fish & Game, and several federal agencies. The Hopland Band of Pomo Indians and the Coyote Valley Reservation also have tribal police departments.

Mendocino County Sheriff's Office

The plan area is located within the Central patrol sector, a zone designated by the Sheriff's Office that covers the unincorporated Ukiah Valley and includes Redwood Valley, Potter Valley, Anderson Valley, Hopland, and Talmage.

Staffing

The Central patrol sector is staffed by 16 deputies, 4 sergeants, and 1 lieutenant with minimal support staff. Two of the deputies are designated as Anderson Valley "residents." Two deputies and one sergeant are generally available 20 hours a day for patrol functions.[85] The 9-1-1 Dispatch Center operates 24 hours per day, with normal staffing of 2 dispatchers on duty.

The Sheriff's Office is understaffed. Census data for the communities within the Central patrol sector identify a total population of approximately 43,000, with 27,700 living in unincorporated areas and the remaining 15,500 living in the City of Ukiah. The current staffing ratio for the unincorporated areas of the Central patrol sector is approximately one officer for every 1,750 residents; for the area as a whole, the ratio is one officer for every 2,693 residents. The generally accepted ratio for police service is one officer for every 1,000 residents. Countywide, the Sheriff's Office has one patrol deputy for every 2,360 residents, as compared to one deputy per 994 residents in 1984. The countywide ratio is a more accurate reflection of the problem, since the Sheriff's Office exercises jurisdiction throughout the county, including within the incorporated cities. Sheriff's Office staff indicate that the office's staffing levels have remained unchanged for the past 20 years.[86]

Calls for Service

In 2009, the Sheriff's Office received 46,335 calls for service. Of these calls, 21,728 came from within the Central Patrol Sector.[87]

Response Times

Response times will vary depending on the call location, number of calls for service, and Sheriff's Office priorities for responding to different types of calls. The Central Patrol sector station is located at 951 Low Gap Road in Ukiah. Assuming that an on-duty deputy is at the Central sector station and available to respond, response times within the plan area would be no more than 20 minutes. Response times under other circumstances would be significantly longer. Most of a patrol deputy's time is spent away from the station.[88]

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[85] Undersheriff Gary Hudson, Mendocino County Sheriff's Office, e-mail communication, 2/21/08.
[86] Hudson.
[87] Thurston, *op. cit.*
[88] Thurston, 10/25/04 and 1/28/05; Hudson, 11/12/04.

City of Ukiah Police Department

The City of Ukiah Police Department handles calls for service within the Ukiah City limits, including traffic accidents on City streets and other types of calls that could increase as development in the plan area causes more activity in the City of Ukiah. While the City and County do not have an official mutual aid agreement, when a call for service is received in the Ukiah area, whoever is nearest the scene of the call responds. Because the sheriff's deputy on patrol may be responding to a call for service outside the Ukiah area, the Police Department often responds to calls that are outside the City limits. The Ukiah Police Department also routinely works outside the City limits when conducting follow-up investigative assignments for criminal behavior that occurs within the City of Ukiah.

Staffing

The Ukiah Police Department operates out of the Civic Center at 300 Seminary Avenue and has an authorized staff of 26 sworn officers, 15 of whom are assigned specifically for patrol operations. The department has a minimum staffing of at least one sergeant and two officers on patrol at any one time and has developed a scaled staffing approach to adjust staffing during peak service periods. The department serves a population of about 15,500 residents, although the daily service population, which includes people coming to Ukiah for work, shopping, or other purposes, rises to about 37,000 people.

Calls for Service/Arrests

The department's patrol staff handles approximately 27,000 calls for service each year, or 74.3 calls for service per day (see Table 3.10-2). With this level of demand for service, police officers are currently committed to calls over 80% of their work time. Industry work and staffing standards recommend that a typical patrol officer be committed no more than 60% of the time, which allows 40% of the time to be available for proactive preventative and community service-type functions.

During 2009, 55% of the crimes committed within the City limits were committed by people who live outside the City of Ukiah, but most were from within the greater Ukiah region.[89]

Table 3.10-2
City of Ukiah Police Department Calls for Service, Crime Reports, and Arrests

	2000	2006	2007	2008	2009	Percent Change, 2000-2007
Annual Calls for Service	20,747	26,902	27,937	28,646	27,123	+35%
Daily Calls for Service	56.0	73.7	76.5	78.4	74.3	+37%
Crime Reports	3,674	4,327	4,475	4,512	4,190	+18%
Arrests	1,747	2,917	2,866	2,026	1,927	+40%

SOURCE: City of Ukiah Police Department

[89] Chris Dewey, Chief of Police, City of Ukiah Police Department, e-mail communication, 2/8/08.

Police Department Facilities

At the 2007 authorized staffing size of 32 sworn officers, the Police Department was having difficulty providing adequate locker room and office space at the police department facility to accommodate all staff members. Since reducing the staff size in response to budget decreases, enough space is currently available within the department to accommodate all personnel. As the department work load continues to increase, and additional staff is required, additional facilities may be needed.

California Highway Patrol

Outside the Ukiah City limits, responsibility for investigating, enforcing, and preventing traffic-related injuries and fatalities rests with the California Highway Patrol (CHP). The CHP's Ukiah office provides these services to the entire geographical Mendocino County region.

2. Criteria Used to Determine Impact Significance

Buildout under the Ukiah Valley Area Plan would have a significant impact if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could case significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection.

- Result in substantial adverse physical impacts associated with blight caused by inadequate police staffing and response.

- Have substantial adverse impacts on human beings.

3. Impacts

<u>Demand for Additional Criminal Justice Facilities</u>

Impact 3.10-B **New development in the plan area would increase the demand for police response by the Mendocino County Sheriff's Office and by the Ukiah Police Department.**

With development under the UVAP, the residential population of the plan area could increase by up to 13,250 new residents and add 7 million square feet of new non-residential development by 2030. This is the worst-case buildout projection. Projected growth based on current State projections of County population growth would result in about 7,127 new residents by 2030, while projected non-residential development would be about 3 million square feet.

This new development would substantially increase the demand for police response. The Sheriff's Office and the Ukiah Police Department are currently understaffed, and the increased population generated by the project would be difficult to serve without decreasing the ability of these two agencies to serve the existing population. Unless the

Sheriff's Office and Police Department staffing ratios are maintained, there could be a decrease in the level of service provided, and this could result in significant health and safety impacts. The new development would also increase the demand for California Highway Patrol services.

In addition, as discussed previously in Impact 3.1-G, urban decay that could result from the project would potentially increase calls for police services due to vagrancy, vandalism, breaking and entering, illegal occupancy, and other crimes typically associated with run-down commercial areas.

Increased Demand for Mendocino County Sheriff's Office Services

To serve the projected development, the Sheriff's Office estimates that it would require five additional deputies, one additional sergeant, and two additional dispatchers. These staffing increases would only maintain the current staffing ratio of one patrol deputy for every 2,693 residents. Meeting a ratio goal of one deputy for every 1,000 residents in the Central patrol sector alone would require the addition of 40 deputies, 8 sergeants, and 1 lieutenant. A more modest staffing increase to a ratio of one deputy for every 1,500 residents would require 21 deputies, 4 sergeants, and 1 lieutenant. Under each scenario it is assumed that dispatch staffing would remain at the current ratio of one dispatcher per 4,200 calls per year. Although there are a number of variables, the population increase of 13,250 would be expected to produce an additional 6,890 calls per year (0.52 call per person on average, countywide).[90]

The County does not currently levy a development fee specifically for law enforcement services. Therefore, under current circumstances, the cost of anticipated increases in the need for police services (including staffing, facilities, equipment, and training) would be paid for out of the County's General Fund.

Increased Demand for City of Ukiah Police Department Services

Even though the development would not occur within the City limits, the Ukiah Police Department estimates that an increase of about 13,250 residents in the plan area would increase the City's daytime population of workers, shoppers, students, and others from about 40,000 to 50,000 each day, and requests for police services in response to crime and other problems would continue to increase. However, this increase in the number of shoppers entering Ukiah might not be as substantial as the Police Department estimates if a new shopping center were constructed on the Masonite site (as this site is within the jurisdiction of the County and not the City).

As stated previously, the City Police Department also frequently responds to calls outside the City limits, partly due to the understaffing of the Sheriff's Office. As already noted, the department also works outside the City limits due to the large percentage of criminal arrests that occur within the City limits, involve non-City of Ukiah residents who live outside the City limits but within the larger Ukiah community, and require additional investigative resources. These arrests, which represent 56% of the crimes committed within the City limits, have already placed a significant burden on the department's ability

[90] Hudson.

to provide services and were a significant factor in the community's desire to increase sales taxes to provide additional police services.[91]

Because of the increasing trend of crime and other police-related services being required by non-residents, the department is concerned that additional development would exacerbate this situation, leading to further understaffing of the Police Department. The City of Ukiah does not currently levy a development fee specifically for law enforcement services. Therefore, under current circumstances, the cost of anticipated increases in the need for police services (including staffing, facilities, equipment, and training) would be paid for out of the City of Ukiah's General Fund.[92]

Environmental Impacts Due to Service Demand Increases

While additional staffing of the Sheriff's Office and Ukiah Police Department would be needed to adequately serve the expanded population, this effect on staffing is not an environmental impact (i.e., it would not cause a change in the physical environment).

The Ukiah Police Department states that increased crime, blight and urban decay linked with the increased population and potential criminal activity would lead to direct impacts on the physical environment of the community, considering the direct impact already demonstrated by those who reside outside of the City's jurisdiction. These potential decay and blight impacts would occur both within and outside the City limits. As stated in the discussion under Impact 3.1-G, commercial buildout could result in urban decay.

The Ukiah Police Department states that understaffing is much deeper problem than a longer response time for non-critical calls. Understaffing leads to having only the most serious of crimes investigated and having more crimes left unreported or not acted upon by the understaffed agency. In these circumstances, additional blight and criminal behavior have proven to increase as violators are allowed to continue their destructive behavior (Broken Window Theory).

While this is the stated position of the Ukiah Police Department, it is not the position of the County Sheriff's Office. The Sheriff's Office does state that the department is understaffed. However, the Sheriff's Office states that there is no evidence to conclude that projected development would result in physical blight. The Sheriff's Office points out that it has been understaffed for years and that new blight has not occurred within its jurisdiction. The Office states there is no evidence that new housing and new businesses would cause environmental blight. The Sheriff's Office further notes that additional development, especially commercial development within the unincorporated area, could substantially increase tax revenues to the County, which could allow the County to hire additional officers. Currently, most sales tax generated by plan area residents is generated at businesses within the City Limits and therefore accrues to the City.[93]

Both departments are mainly funded out of the County's (for the Sheriff's Office) or City's (for the Police Department) general funds. The increased tax revenues that would be

[91] Dewey.
[92] Dewey.
[93] Hudson, 3/11/08.

generated by the projected new development would provide additional funds to allow the hiring of additional staff needed to maintain adequate police protection. However, it is unknown whether General Fund revenues will be adequate to provide sufficient funds to maintain adequate police and sheriff protection. Understaffing would more likely mean that non-critical calls for service would not receive as rapid a response as is currently the case, though it is possible that understaffing could result in several calls for emergency response occurring at about the same time, which could result in inadequate response to a significant crime. Staffing of the Sheriff's Office is a policy issue for the Board of Supervisors that is annually addressed when preparing the County budget.

As described under Impact 3.1-G, new commercial development would result in a physical environmental impact (i.e., urban decay). The Draft 2007 UVAP contains many policies or implementation measures that specifically address police service. However, the Draft 2007 UVAP does contain ***Implementation Measure LU4.1a*** that recommends establishing a growth management plan for the plan area. Such a plan would phase and prioritize growth in areas where adequate services and infrastructure are available. ***Implementation Measure 4.2a*** states that new development would not be approved unless there are adequate services and infrastructure to serve that development. ***Implementation Measure HS1.4d*** states that the County will ensure that there are an adequate number of public safety workers and requires departments to update service plans to conform with projected development.

The County General Plan also contains policies to ensure that new development can be served by the police department and other service providers. *General Plan Policy DE-120* states that projects to increase density or intensity should not be granted if there are basic infrastructure deficiencies, unless a program is in place for timely resolution of the deficiency. *General Plan Policy DE-121* states that new discretionary development will be required to demonstrate that basic infrastructure is available and the provider has adequate capacity to serve the project. *General Plan Policy DE-229* calls for increasing compliance with regulations intended to protect public, community and environmental health and safety. Measures include working with law enforcement agencies to improve coordination during the land use and development process.

Given the potential for urban decay and understaffing of the Mendocino County Sheriff's Office and City Police Department, the County may wish to consider working with the City to establish a funding mechanism to provide additional fees for the Sheriff's Office, and possibly the Police Department, to offset the effects of additional growth.[94] Such a

[94] Chief Dewey of the Police Department has suggested that such a mechanism could be created through County adoption of a development impact fee for police services that would help fund both County and City police services that will be affected by future developments. The following options were suggested:

A. A tax-sharing agreement that provides additional funding for both the Sheriff's Office and the Police Department and would allow mutual aid-type services to cross jurisdictional boundaries and place less emphasis on these boundaries;
B. A plan that looks at annexation as a way to integrate police services and other essential services for the greater urban Ukiah area; or
C. A contractual plan that re-examines the current jurisdictional boundaries, much like the ongoing plan to integrate fire services in the urban Ukiah region., and that:
    a. Gives the Police Department responsibility for overall coordination of urban policing services in the greater urban Ukiah area (Redwood Health Club to Orr Springs Road); and
    b. Allows the Sheriff's Office more flexibility and ability to respond to remote locations within the Central patrol sector (Potter Valley, Redwood Valley, Hopland, Anderson Valley).

fee mechanism may be needed for future development projects to ensure consistency with the Draft UVAP policy that requires adequate public services be available when approving new development.

If the County agrees that auxiliary funding is warranted, it is recommended that the County adopt such an impact fee prior to large development projects being approved. An alternative to such a fee would be for the County to establish Mello-Roos Community Facilities Districts for areas where substantial new development is predicted (e.g., all or parts of the North State Complex). The special taxes that can be imposed on Mello-Roos Districts can be used not only to purchase capital equipment needed by the Sheriff's Office but also for funding new staff required to serve development in the district. A Mello-Roos District can be established by the County and must be approved by two-thirds of the voters within the district. However, if there are fewer than 12 registered voters within the proposed district, the vote may be passed by the current landowners. So, the property owners of a few large contiguous parcels slated for development could agree with the County that a Mello-Roos District is needed to provide adequate infrastructure and services required by this new development. The taxes are paid only by those property owners within the district, and not the public at large. It is a way for developers and the County to provide the necessary level of infrastructure and services with future residents and businesses paying their fair share of the required improvements. Mello-Roos taxes can be used to finance police protection, fire protection, ambulance and paramedic services, recreation program services, library services, the operation and maintenance of parks, parkways and open space, museums, cultural facilities, flood and storm protection as well as facilities with an estimated useful life of five years or longer including parks, recreation facilities, parkway facilities, open space facilities, elementary and secondary school sites and structures, libraries, child care facilities, and utilities. Services may be financed only to the extent needed to serve new growth within the district.

While Mello-Roos Community Faculties Districts are the most common way to raise revenues for public works projects and services, there are other alternatives open to the County, including:

- Special Assessment District, which is a more restrictive type of land-secured financing that can be used for public improvements that directly benefits those properties that are assessed;

- Redevelopment Project Area Funding, which is available for infrastructure improvements within redevelopment areas, using the tax increments generated for property value increases (though this form of financing is in jeopardy given the Governor’s January 2011 budget recommendations);

- Infrastructure Financing District, which allows the issue of tax increment financing for infrastructure;

- Integrated Financing District, which allows levying of contingent liens on undeveloped properties, so that these properties are required to pay a fee upon development in order to reimburse earlier developers who paid for public facilities that benefit other landowners;

- Marks-Roos District, which allows a public agency through a joint powers authority, to sell bonds and collect a pool of funds at tax-exempt interest rates to be utilized for infrastructure funding under one or more of the other financing mechanism listed here; and/or

- Certificates of Participation, which are long-term financing instruments set up with a lease or an installment sale's structure to eliminate the two-thirds voter election requirement under Proposition 13.

The County could consider establishing Mello-Roos Districts, or an alternate funding mechanism, for potential high-growth areas such as the Brush Street Triangle, Lover's Lane, the North State Street area, and the South State Street area. These districts are commonly used by fast-growing California communities as a way to provide facilities and services that the jurisdiction otherwise cannot afford to provide.

Other Concerns

Conversations with Sheriff's Office and Police Department staff indicate that there is a need to formalize the mutual aid response between the two agencies (although the Sheriff's Office maintains that the existing statewide mutual aid compact is generally sufficient)[95] and to improve the dispatch services.[96] Both of these issues should be resolved. These problems would not result in an environmental impact, so no mitigation is required for the Draft 2007 UVAP.

The Ukiah Police Department stated that many area residents drive through the North State Street/Highway 101 interchange to get to Ukiah. Another area of existing traffic congestion mentioned by Police Department is the Low Gap Road/Despina Drive area adjoining Ukiah High School, various County facilities, and residential neighborhoods. These areas, along with other collector streets both within the City of Ukiah and north of the city along the two-lane North State Street area, need to be closely examined to avoid traffic safety-related problems that would continue to develop as buildout occurs. Development north of the freeway along North State Street should be allowed only if improvements are made to the Highway 101/North State Street ramp. Any development of the Lover's Lane area would need to address traffic impacts to residential streets between North State Street and the Lover's Lane area. These actions would help to reduce impacts on traffic-related services provided by the California Highway Patrol.

[95] Police Chief Dewey commented as follows: "One possible solution is to re-examine the service areas for the Mendocino County Sheriff's Office and Ukiah Police Department. Operations are most effective when a coordinated effort is in place, and it may be appropriate for the County and City to consolidate policing services in the greater urban Ukiah Valley area (Redwood Health Club to Orr Springs). Having one agency responsible for the overall urban policing services would allow the Sheriff's Office deputies the ability to increase rural area response times and address rural county area services and accessing the remote areas of the county, and allow the Police Department to address the on-going crime, traffic and preventative aspects of urban policing. Currently the Fire Agencies, Sanitation Districts and the City Recreation Department are exploring solutions such as this to address the fragmented approach to services that exist within the Ukiah Valley urban areas."

[96] The City and County both currently have dispatch centers. Efforts are underway to improve both centers' ability to use each other's software and technology advancements and provide redundant mutual aid services when each is faced with a crisis. (Dewey)

A final concern is the need for new development to be designed and maintained to minimize the chance for criminal activity and maximize police response. Typically, police agencies review plans for large new developments to ensure that access, security lighting, and other factors are addressed in final plans.

Summary

Given the current understaffing of the Sheriff's Office, additional development that increases the calls for service could result in significant safety risks to residents, and it could result in insufficient response to crimes that could lead to physical blight of existing developed areas. This was identified as a significant and unavoidable impact in the EIR prepared for the new County General Plan. The additional development would also affect the Ukiah Police Department's ability to adequately respond to crimes, potentially resulting in safety risks and physical blight.

Implementation measures included under ***Policy HS1.4*** of the Draft 2007 UVAP state that additional development would not be approved unless there is an adequate number of public safety employees. At a plan level, this policy and others in the Draft 2007 UVAP and the General Plan would reduce this impact to a ***less than significant*** level***.*** However, there remains a concern that the County will continue to approve new development without increasing funding of the Sheriff's Office, and that absent some defined method of funding, the impact would remain potentially significant.

As was explained in the Introduction to Chapter 3, this EIR assumes that the County will implement the policies and implementation measures included in the Draft 2007 UVAP. As such, this EIR concludes that the policies and measures provide adequate guidance to ensure that there will be adequate police services available when the County approves new development. On this basis, the impact is ***less than significant***, and no further mitigation is required. However, the County may wish to consider the additional mitigation described below.

> The County will consider impacts upon police services when reviewing new discretionary projects. To accomplish this mitigation, the time line for ***Implementation Measure HS1.4d*** shall be revised to be "short-term" rather than "intermediate," and the following implementation measure should be added to the Draft 2007 UVAP:
>
> **HS1.4e Public Service Funding**
> Develop and implement a regional public safety funding mechanism to provide additional staffing for the Sheriff's Office and Police Department and require new development to pay its fair share as established in that funding plan. The timeline for this measure will be "short-term."

New Criminal Justice Facilities

Impact 3.10-C New development would increase the demand for a new criminal justice center.

The existing County jail is overcrowded and does not meet required standards. The County is currently considering options for developing a new Criminal Justice Center. Ideally, the center would hold the Sheriff's Office, the jail, the district attorney, and the courts. However, purchase and development of a site large enough to house all parts of the criminal justice system may not be feasible, and the various functions might be housed at different sites as is currently the case. The sites originally being considered included 1) a site on the southeast corner of the intersection of Main Street and Perkins Street in Ukiah, 2) a site on the east side of Highway 101 south of Gobbi Street, 3) a site on the south half of the old Masonite Plant, 4) a site immediately to the east of Site 3 on the east side of the railroad tracks, 5) a site on the northern part of the Brush Street Triangle, 6) a site west of South State Street north of Highway 253, 7) a site on the west side of Highway 101 north of Hensley Creek, and 8) a site on the east side of North State Street to the south of Lake Mendocino Drive. The sites for the jail and law enforcement portions of the project have been narrowed down to a site in the Brush Street Triangle. The site for the courts has not been decided and may be in downtown Ukiah or at the Brush Street Triangle site.

Without knowing where a new facility would be constructed, it is speculative whether the construction of this future building(s) would have significant environmental effects. However, it is possible that the impacts may include erosion impacts, hazardous geologic conditions, development within a floodplain, increased runoff and flooding, loss of significant biological populations or habitat, traffic impacts, noise impacts, visual impacts, global climate change impacts, loss of agricultural land or soils, land use conflicts, and other currently unknown impacts. It is speculative whether mitigation measures would be identified to reduce all impacts to a less than significant level. These impacts and mitigations will be identified in the required CEQA document if and when the County files an application to develop the facility. Finally, this new justice center is needed to meet existing criminal justice needs and is not required solely to serve future development. Nevertheless, it is possible that construction of the facility will have ***potentially significant impacts.***

Mitigation Measures

The Draft 2007 UVAP and the existing General Plan contain policies that state that new development would not be approved unless there are adequate infrastructure and services available. The Draft 2007 UVAP also contains policies and measures to reduce the environmental impacts resulting from development of new public buildings. It is possible that the CEQA document for any future criminal justice center will identify mitigations to reduce all impacts of that project to a less than significant level. No site-specific mitigations can be recommended at this time.

Impact Significance After Mitigation

The criminal justice center could have impacts that cannot be avoided (e.g., conversion of prime agricultural land or construction within the 100-year floodplain). This impact remains ***significant and unavoidable.***

C. Fire Protection and Emergency Medical Response

1. Setting

Fire protection in the Ukiah Valley is provided by four agencies. The City of Ukiah Fire Department provides fire protection within the City of Ukiah. The Ukiah Valley Fire District and Redwood Valley-Calpella Fire Department have primary responsibility for structural fires on all lands within their boundaries. The CAL FIRE (formerly the California Department of Forestry and Fire Protection) has primary responsibility for wildland fire suppression in the outlying areas of the valley called "state responsibility areas."[97] These four agencies have mutual aid agreements to assist each other in handling fire and other emergency calls.

Ukiah Valley Fire District

Fire protection in the project vicinity is provided by the Ukiah Valley Fire District (UVFD). Emergency services within the UVFD are provided by a combined career and volunteer staff who serve a rural area that comprises about 80 square miles and has a population of about 13,000 people.[98]

Fire Stations and Equipment

The UVFD currently maintains three fire stations. Its headquarters and South Station is located at 1500 South State Street. A second station (North Station) is operated under a cooperative agreement with CAL FIRE and is located at 2690 North State Street. In October of 2008, UVFD purchased a vacant automotive shop at 1301 Talmage Road and converted it to the Talmage Volunteer Fire Station (Talmage Station). This facility is funded by a newly implemented fire mitigation fee on new construction and by reserve funds dedicated to this project.

The UVFD's emergency fleet consists of eleven vehicles: three Type 1 (structural) fire engines, two Type 3 (wildland) fire pumpers, one multi-purpose squad vehicle, one wildland patrol vehicle, one incident support unit, one water tender and two utility vehicles.[99]

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[97] Local and state responsibility areas are designated by the State of California under purview of the State Fire Safe Standards in the Public Resources Code.
[98] Dan Grebil, Fire Chief, Ukiah Valley Fire District, e-mail communication, 1/26/10.
[99] *Ibid*.

Personnel

UVFD personnel consists of seven full-time career staff (one chief, one battalion chief, two captains, and three fire apparatus engineers), which allows two to three firefighters to be on duty 24 hours per day. There are also 30 volunteers (one battalion chief, six fire apparatus engineers, 20 firefighters, and three incident support personnel).

The UVFD career staff are responsible for the day-to-day operation of the UVFD, including such duties as administration, budget planning and tracking, public relations, equipment maintenance, fire prevention, and training. Fire prevention includes "pre-fire" planning, which includes updating maps of the roads within the UVFD as well as preplans (floor plans) of larger structures. The UVFD also provides input to the Mendocino County Department of Planning and Building in relation to checking new development for compliance with the 2007 California Fire Code (CFC) as amended and known as the "Fire Code of the Ukiah Valley Fire District".

UVFD Volunteers are alerted of emergency incidents by a radio pager and either respond directly to the scene or stop at a fire station to staff additional emergency vehicles. In 2009, Volunteers were alerted for 188 calls out of the 809 handled by UVFD. Emergency calls are dispatched via radio from CAL FIRE's Emergency Command Center located on US 101 at the top of the Ridgewood Grade.[100]

Emergency Medical and Hazardous Materials Services

UVFD staff are trained to provide emergency medical service, at the Basic Life Support (BLS) level and are the first responders to these types of calls. A private ambulance company, Ukiah Ambulance Service, provides Advanced Life Support (ALS) and transport to the hospital. Emergency Medical Dispatching (EMD) provides for at tiered emergency medical response, based on national standards, and pre-arrival instructions to the 9-1-1 caller.

The UVFD also supports the Redwood Empire Hazardous Incident Team in responding to calls involving hazardous materials spills. The team is a cooperative effort of County fire agencies and the Mendocino County Division of Environmental Health, which oversees the team.[101] (See ***Section 3.11, Hazards and Hazardous Materials***.)

Calls for Service and Response Times

The UVFD received 809 calls for service in 2009 down from 947 calls in 2008. Average response time to a fire or medical emergency in the UVAP area is approximately four minutes.[102]

The UVFD currently has an Insurance Services Office (ISO) rating of 4 (on a scale of 1 to 10) for the project area.[103] The lower the rating, the lower the fire insurance premiums in an area.

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[100] *Ibid*.
[101] *Ibid*.
[102] *Ibid*.
[103] *Ibid*.

Automatic and Mutual Aid Agreements

The UVFD can draw upon the emergency resources of other fire departments located in the area on the basis of automatic and mutual aid agreements. The UVFD is a participant in the statewide fire and rescue mutual aid system and can call upon statewide assistance if needed. UVFD has automatic aid agreements with the City of Ukiah Fire Department and the CAL FIRE.[104]

Financing

The UVFD is a special district under the auspices of an elected five-member board of directors. Financing is derived from a combination of property tax and special fire taxes. A special fire tax passed by voters on March 4, 1998 replaced 95% of the Benefit of Assessment that was nullified by the passage of Proposition 218. This special fire tax is assigned a variable unit value of $50 per "unit." For example, a single-family household within the UVFD is assigned two units of value for an annual tax of $100. In addition, in November 2003 voters approved a second special tax, known as the “Measure “B” Fund”, to replace the UVFD’s emergency fleet. This tax is assigned a variable unit value of $10 per “unit.”

The UVFD’s total revenues have decreased due to a loss of district property tax allocations related to the "Educational Revenue Augmentation Fund” (ERAF). This fund transferred billions of dollars of city, county, and special district property tax revenue to the State's schools. UVFD transfer in 1992/93 was $45,000 and continues to grow on the average of about three percent per year.

In 1993, the State’s voters approved Proposition 172. This proposition extended an already existing one-half cent sales tax and included a "maintenance of effort" requirement preventing the reduction of public safety program spending from prior years. To date, UVFD has not received any Proposition 172 money, therefore the intent of the proposition has not been fulfilled.

In October 2007, the County Board of Supervisors adopted Ordinance 4175, which allows fire protection districts to determine whether they have adequate facilities and equipment to serve new development. If not, the ordinance allows the District to adopt a fire mitigation fee. Adoption of such a fee requires an identification of needed capital facilities and completion of an AB 1600 study to determine the nexus for the fee. The district's board would then adopt the fee after a public review period. The County would collect the fee and place it in a fund for the use of the district.

On November 14, 2007, UVFD’s Board of Directors awarded a contract to PMC of Davis, CA. to conduct a development impact fee study. On June 11, 2008, the Board of Directors passed and adopted Resolution 2008-5, which adopted a Capital Fire Facilities and Equipment Plan and requested the Board of Supervisors to implement fire protection mitigation fees for the Ukiah Valley Fire District. Resolution 2008-5 included the necessary findings outlined in Chapter 5.36 of the Mendocino County Code.

[104] *Ibid.*

On July 22, 2008, the Board of Supervisors adopted Resolution 08-129, adopting and implementing fire protection mitigation fees for the Ukiah Valley Fire District in order to ensure the provision of the capital facilities and equipment necessary to maintain current levels of fire protection services that are required as the result of new development projects within the boundaries of the Ukiah Valley Fire District, pursuant to Mendocino County Code Chapter 5.36. A specified fee of 39 cents per square foot of a proposed structure on applicants for development projects was approved and became effective on September 22, 2008. An additional administrative fee of 4 cents per square foot is added to the specified fee.[105]

Review of New Development

The UVFD reviews all applications for new commercial construction, multi-unit housing, occupancy changes, or tenant changes that are within its service area and require a building permit. The UVFD reviews these applications for compliance with the 2007 California Fire Code known as the "Fire Code of the Ukiah Valley Fire District" (as amended), including provisions regarding access roads, portable fire extinguishers, fire extinguisher signage, premises identification, fire flow, fire sprinklers, and key box installation.[106]

Redwood Valley-Calpella Fire Department

The Redwood Valley-Calpella Fire Department (RVCFD) provides fire protection services to an area of about 60 square miles in the Calpella and Redwood Valley area. The fire station is located at 8481 East Road in Redwood Valley, north of Calpella.

The RVCFD includes one career fire chief, two career assistant fire chiefs, 25 volunteer firefighters/emergency medical technicians (18 First Responders and 7 Emergency Medical Technicians – EMTs). Equipment includes five fire engines, two 350-gallon patrol units, one water tender, one compressed air/incident command support unit, and one rescue unit with a defibrillator and basic life support equipment. (The private ambulance company, Ukiah Ambulance Service, provides Advanced Life Support (ALS) on scene and during transport to the hospital. The RVCFD responds to approximately 500 to 600 calls per year.

The RVCFD has mutual aid agreements with the Ukiah Valley Fire District, City of Ukiah Fire Department, CAL FIRE, and Potter Valley Community Service District. Response time to a fire in the UVAP area is approximately five minutes, and medical emergency response time is about five to seven minutes.

The RVCFD reviews new development permit applications within its service area for compliance with the 1998 Uniform Building Code, including provisions regarding fire department accessibility, fire alarm systems, automatic sprinkler systems, fire extinguishing equipment, occupancy classification, emergency exits, fire-resistive building construction, and combustible storage regulations.[107]

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[105] *Ibid*.
[106] *Ibid*.
[107] *Mendocino County Redevelopment Project Draft EIR*, January 2003; and Tom Hession, Chief, RVCFD, e-mail communication, 1/19/05.

The RVCFD also has the ability to determine whether it has adequate facilities and equipment to serve new development. If not, Ordinance 4175 allows RVCFD to adopt a fire mitigation fee as discussed above.

City of Ukiah Fire Department

While the UVFD, RVCFD, and CAL FIRE have primary responsibility for fire suppression in the UVAP area, the City of Ukiah Fire Department responds to emergencies in the unincorporated area on an automatic aid basis.

The department has one fire station at the Civic Center on Seminary Avenue. Staffing consists of 17 full-time career firefighters/paramedics and 30 volunteer positions with 20 firefighters on the active volunteer roster. The department maintains three Type 1 fire engines, two patrol units, one 75-foot aerial ladder (the only one in the Ukiah Valley), and a State Office of Emergency Services (OES) Type 2 engine. In August 1991, the department added ambulance service, which provides advanced life support and transport within the City limits.

The department serves a resident population of about 15,000 people and a daily population of about 37,000 people (residents plus shoppers, workers, etc.) Calls for assistance have gradually increased over the past 15 years. The department received 2.5 calls for assistance per day in 1989, 3.2 daily calls in 1991, 4.8 daily calls in 1993, 5.5 daily calls in 1997 and 1998, 6.4 daily calls in 2001, and 6.5 daily calls in 2003 and 2004. The number of daily calls declined slightly in 2005 and 2006 (to 6.2 and 6.1 calls, respectively), but increased to 6.4 calls in 2007. The total call volume for the department was approximately 2,350 calls in 2007, which increased to 2, 552 in 2009.[108]

CAL FIRE

CAL FIRE's Mendocino Unit has primary responsibility for wildland fire response and suppression in “State Responsibility Areas” (SRAs). CAL FIRE also provides structural fire protection services for areas outside the Ukiah Valley Fire District and the Redwood Valley-Calpella Fire Department during the declared fire season. The districts are assisted by air tankers maintained at Ukiah Regional Airport during the fire season. CAL FIRE responds to calls for service in the Ukiah area from its stations in Hopland, Ukiah, and/or CAL FIRE headquarters in Willits.[109]

Pre-Fire Management Initiative

CAL FIRE has initiated a State-wide pre-fire management initiative to reduce wildland fires and the costs of suppressing them. This initiative includes a systematic application of risk assessment, fire safety, fire prevention, and fire hazard reduction techniques. The goal of the initiative is to identify – for State, Federal, and local officials, and the public – those areas within the State Responsibility Areas that are high priorities in terms of assets at risk and have a high probability of large wildfires, with associated costs and losses. Identifying these will allow public and government decision-makers to focus on

[108] Chuck Yates, Fire Marshal, City of Ukiah Fire Department, personal communication, 2/2/10
[109] Ted Enberg, Division Chief of Operations, CAL FIRE, fax communication, 1/19/05, and personal communication, 1/20/05.

what can be done to develop wildfire protection zones and reduce costs and losses in these areas. The end product of this CAL FIRE initiative is the California Fire Plan, completed in 1995 and currently being revised. The Mendocino Unit Wildfire Management Plan uses the same processes that the State Fire Plan uses to develop a working plan.

Fire Hazard Severity Zone Mapping

In November 2007, CAL FIRE adopted a Fire Hazard Severity Zone map for Mendocino County. This fire mapping shows that the areas with the highest fire hazard ("very high fire hazard") are the hills west of Ukiah between the south end of the City and Orr Springs Road; and areas in the eastern hills. "High fire hazard" areas are all along the eastern foothills from the Valley bottom to the more severe areas at higher elevation, and a few area west of Highway 101. The remainder of the hilly portions of the plan area are classified as "high fire hazard" areas.[110]

Mendocino County Community Wildfire Protection Plan

In 2005, the CAL FIRE Mendocino Unit, in conjunction with the Mendocino County Fire Safe Council (see below), prepared the *Mendocino County Community Wildfire Protection Plan*, which identifies and prioritizes hazardous fuel reduction treatments, recommends the types and methods of treatment, and recommends measures to reduce the ignitability of structures in the area addressed by the plan. The Mendocino County Board of Supervisors indicated its approval of the plan in January 2006.[111]

The Wildfire Protection Plan includes maps showing areas of the western and eastern hills having high and very high fuel ranking (i.e., the area includes vegetation that is very flammable). The entire plan area has high frequency of severe fire weather. A map showing the history of large wildfires since 1922 in the County shows two large fires (1950 and 1959) in the western hills and five large fires in the eastern hills.[112]

The Wildfire Protection Plan describes past and future vegetation management actions to reduce fire hazard. These include the Ukiah West Side Vegetation Management Plan (VMP) that addressed the hills west of the City of Ukiah. This VMP included 1) seven miles of shaded fuelbreaks (completed in December 2003); fifteen miles of fire breaks (not completed); and mosaic helitorch prescribed burning of 1,500 acres (the burning was cancelled partly due to fears of fire escape). The VMP includes the 2009 development of a burn plan for the northern area of Cow Mountain. The VMP describes how the County includes many Wildland-Urban Interface/Intermix Communities. These include communities in the hilly areas of the plan area. As the VMP states homes in these areas are "…most definitely at risk, as they are exposed to dense fuels, steep slopes, and the potential for severe fire weather.[113]

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[110] *Mendocino County Fire Hazard Areas – Local Responsibility Areas – Federal Responsibility Areas*, adopted by CAL FIRE on 11/7/07.

[111] Minutes of January 10, 2006 Mendocino County Board of Supervisors meeting, available at http://209.85.173.104/search?q=cache:D1H4AxTJKm8J:webdev.co.mendocino.ca.us/bos/pdf/Minutes%252001-10-06.pdf+%22Mendocino+County+Community+Wildfire+Protection+Plan&hl=en&ct=clnk&cd=5&gl=us, viewed on 2/15/08.

[112] Ibid, p. 46.

[113] Ibid, p. 116.

Fire Safe Regulations

For counties with SRAs, the State Board of Forestry has adopted *Fire Safe Regulations* as a means of reducing pre-fire fuel loads and improving safety on the State's wildlands (California Code of Regulations, Title 14, Section 1270 et seq.; Public Resources Code, Section 4290 et seq.). The *Fire Safe Regulations* include the following general requirements:[114]

- Minimum road standards for emergency access and evacuation, including width, surface, and grade. Road widths shall provide for two nine-foot traffic lanes providing two-way traffic flow. One-way roads shall provide one ten-foot traffic lane. Grades shall not exceed 16%. Minimum turnaround turning radius is 40 feet from road centerline. Road lengths depend on zoning for the area.

- Standards for signs identifying streets, roads, and buildings.

- Minimum water supply reserves for emergency fire use. Water source facilities should have the capacity to support the required fire flow for a minimum duration of two hours, in addition to the maximum daily flow requirements for other consumptive uses. The minimum fire flow is 750 gallons per minute (gpm) in areas with population densities of two or fewer single-family residences per acre, and 1,000 gpm in areas where densities exceed two dwellings per acre.

- Fuel breaks (i.e., "defensible space") and/or vegetation modification for at least 100 feet around structures, roads and new development.

CAL FIRE may approve alternatives with the "same practical effect." Existing roads generally do not require upgrades unless a subdivision or other discretionary development permit is requested.

In SRA areas within Mendocino County, new development is required to abide by all requirements of Section 4290. CAL FIRE must sign off on new building permits that they meet these requirements.

Mendocino County Fire Safe Council

The Mendocino Fire Safe Council was formed in 2003. It is a coalition of individuals, businesses and public and private agencies who seek to reduce the risk of fire in the County. The Council's objectives include:

- Work to minimize losses to values at stake, which include but are not limited to human lives, homes, animals, and natural resources;
- Educate residents, agencies, and other stakeholders about the nature and impacts of wildfire, fire prevention strategies, and effective preparedness in the event that wildfire occurs;
- Secure and utilize funding to assist residents in education, outreach, community projects, and other activities that further the mission and objectives of the Council;

[114] *Mendocino County General Plan Update Background Report*, *op. cit.*

- Encourage road associations, homeowner groups, subdivisions, towns, and other community groups to create their own Fire Safe Councils; and
- Act as an advocate for the people of Mendocino County in the area of fire prevention.

Fire-Related Issues

Wildland Fires

Wildland fires can move quickly through the dry brush on the hillsides throughout the Ukiah Valley. Manzanita and scrub vegetation are highly flammable and burn quickly with extreme heat. The hilly areas on either side of the Ukiah Valley are very susceptible to wildland fires (see discussion of CAL FIRE's "Fire Hazard Severity Zone Mapping" above). Fires igniting in these hilly areas or fires that ignite outside the plan area and burn into these hills would not only burn residences located in the hills, but could travel down into more heavily populated areas along the base of the slopes, and even into Ukiah or other communities.

To minimize the impact of fire on residences and other structures, the County imposes the State *Fire Safe Regulations* noted above, which require minimum standards for access, length of dead-end roads, slope of roads, clearance of flammable vegetation around structures, water supply, and identification signs, although access standards when development is served by existing roads are not rigorously addressed. The County also enforces the Uniform Fire Code and Uniform Building Code. In addition, the Ukiah Valley Fire District (UVFD) has the ability to enact its own local ordinance or development requirements.

To address the wildland/urban interface hazard, CAL FIRE in cooperation with the City of Ukiah Fire Department and UVFD prepared a "West Side Vegetation Management Plan" (VMP), as discussed under "CAL FIRE" above. The VMP addresses the fire hazard west of the City of Ukiah. It calls for a variety of actions, including creating a shaded fuel break along the length of the VMP plan area, reopening old fire breaks, and conducting prescribed burns. The shaded fuel break was completed in December 2003. The fuel break is primarily on private land, however, and there is no funding mechanism to provide for its maintenance.

The City of Ukiah is considering new Hillside Development Regulations for the areas of high fire hazard in the hill area on the west side of the City. These new regulations would require substantive fire protection features for new development in the western hills portion of the City, such as fire suppression water storage, safe access routes, fire-resistant construction, and the creation of a 100-foot defensible space around residences. The City maintains use permit requirements for the developing areas in the City's western hills and has adopted the 2007 State Fire and Building Codes. The latter includes Chapter 7A, a new set of requirements for very high fire hazard severity zones in wildland areas.[115]

[115] Yates, 2/28/08.

Emergency Water Flow

To ensure that adequate emergency water flow is available, the Ukiah Valley Fire District recommends that residential development comply with the applicable State *Fire Safe Regulations*, and that non-residential development comply with State Fire Code Appendix IIIA, which establishes emergency water flow requirements based on construction type and square footage. To date, new developments have not had problems meeting these standard requirements.[116]

As noted above, the State *Fire Safe Regulations* (adopted by the State Board of Forestry for counties with State Responsibility Areas) require that water source facilities have the capacity to support the required fire flow for a minimum duration of two hours, in addition to the maximum daily flow requirements for other consumptive uses. The minimum fire flow is 750 gallons per minute (gpm) in areas with population densities of two or fewer single-family houses per acre, and 1,000 gpm in areas where densities exceed two houses per acre.[117]

2. Criteria Used to Determine Impact Significance

Buildout under the Ukiah Valley Area Plan would have a significant impact if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection.

- Expose people or structures to a significant risk of loss, injury, or death from wildland fires.

- Conflict with adopted environmental goals or policies regarding adequate emergency response plans or emergency evacuation plans.

3. Impacts

<u>Increased Demand for Fire Protection Service</u>

Impact 3.10-D **Development under the UVAP would increase the demands on the fire protection agencies serving the plan area, creating the need for the Ukiah Valley Fire District and possibly the Redwood Valley-Calpella Fire Protection District and the City of Ukiah Fire Department to acquire new facilities and equipment.**

Development under the UVAP could increase the residential population of the plan area by up to 13,250 new residents and add up to 7 million square feet of new non-residential development by 2030. This is the worst case buildout projection. Projected growth based on current State projections of County population growth would result in about

[116] Grebil, 1/10/05.
[117] *Mendocino County General Plan Update Background Report*, *op. cit.*

7,127 new residents by 2030, and projected non-residential development would be about 3 million square feet.

Of the buildout development, an estimated 856 new residents (or about 343 new housing units) and about 69,000 to 229,000 square feet of new commercial space would be in the Calpella area and under the jurisdiction of the Redwood Valley-Calpella Fire Department (RVCFD). The remaining approximately 12,394 new residents (5,087 new housing units) and up to almost 7 million square feet of new non-residential development would be elsewhere in the UVAP area and under the jurisdiction of the Ukiah Valley Fire District (UVFD).

Typically, one full-time firefighter is needed for each 1,000 people (or each 400 housing units). Buildout of the plan area would result in the need for an additional 12 firefighters for the UVFD (though only 6 to 7 new firefighters would be needed to serve projected development). In addition, the UVFD is already understaffed by about 7 full-time firefighters (8 firefighters are serving a population of about 15,000 people). If one assumes an average house price of $500,000, then each group of 400 new homes would generate about $60,000 in property taxes to the UVFD (the UVFD gets a little less than 3% of the property tax) and $48,000 from the two existing fire taxes; however, increased property tax revenues in County Redevelopment Areas go primarily to the Redevelopment Agency. A full-time firefighter currently costs about $60,000 per year. So, 400 single-family units should generate sufficient tax income to fund the required new firefighters' base salaries. However, some percentage of these units would be multi-family units, which would not generate this level of property tax or fire tax. New development would also need to pay for a proportionate share of administration, training, insurance, vehicles, equipment, new stations as needed, and other supporting UVFD expenses. It is uncertain whether property tax revenues plus existing fire taxes would be sufficient to provide for all these expenses.

The UVFD anticipates that it would need new facilities and equipment to serve this level of development. Currently, there are no development fees or other standard measures in place to assist the district in developing these new facilities and capital equipment.[118] However, the recent County adoption of Ordinance 4175 would allow UVFD to determine the need for additional revenues to provide service to new development. UVFD states that it is currently understaffed and does not have financial resources to purchase new equipment or facilities.[119] Without an additional funding mechanism, the UVFD has stated they would be unable to provide adequate fire and emergency medical response. This is a potentially significant impact. However, the recently adopted County Ordinance 4175 provides the UVFD with the means to adopt a fire mitigation fee that UVFD can use to mitigate this impact.

The Draft 2007 UVAP contains ***Implementation Measure LU4.1a***, which recommends establishing a growth management plan for the plan area. It will identify an annual growth rate for new housing units and commercial services. Such a plan would phase and prioritize growth in areas where adequate services and infrastructure are available. ***Implementation Measure LU4.2a*** states that new development would not be approved unless there are adequate services and infrastructure to serve that development.

[118] Grebil, 1/10/05.
[119] Ibid, 5/19.05

Implementation Measure HS1.4d states that the County will ensure that there are an adequate number of public safety workers and requires departments to update service plans to conform with projected development. ***Implementation Measure HS1.3a*** would establish valley-wide fire safety standards, which would reduce the risks of fires and facilitate fire department response. The previously mentioned policies in the County General Plan state that new development would not be approved unless there is adequate public services available (see the discussion under Impact 3.10-A).

The County General Plan also contains policies to ensure that new development can be served by the school district and other service providers. *General Plan Policy DE-120* states that projects to increase density or intensity should not be granted if there are basic infrastructure deficiencies, unless a program is in place for timely resolution of the deficiency. *General Plan Policy DE-121* states that new discretionary development will be required to demonstrate that basic infrastructure is available and the provider has adequate capacity to serve the project. *General Plan Policy DE-219* states the County will encourage fire protection districts to determine and report capabilities to adequately serve existing and potential development. G*eneral Plan Policy DE-220* states that developments shall be approved only if sufficient fire fighting resources, such as fire stations, equipment, personnel, hydrants and water supplies, will be available to serve all phases of development.

The RVCFD does not currently expect to need new or expanded facilities to serve the level of development anticipated in its service area. In addition, the lack of water in the Calpella area makes it unlikely that this projected development would occur any time in the near future. However, the RVCFD may eventually need a (staffed or unstaffed) satellite station in the Calpella area.[120] RVCFD also has the ability to do the needed studies to adopt a fire mitigation fee if it determines the need for such a fee. CAL FIRE does not expect to need new or expanded facilities, since most development allowed by the UVAP would not be within the State Responsibility Area.[121]

The City of Ukiah Fire Department provides fire response to the plan area under mutual aid agreements. The City Fire Department states that additional development in the area near the City would adversely affect the department due to lack of equipment and staffing in the UVFD. Additional mutual aid responses would significantly affect the department. The department is concerned that if new development occurs outside the City, the City Fire Department would be required to respond to more incidents outside the City without the City receiving tax revenues that would partially be used to increase staffing and provide new equipment for the fire department.[122] ***Implementation Measure LU7.1a*** calls for the County to finalize a tax-sharing agreement with the City to fund services in the County and City. Such an agreement would address some of the Fire Department's concerns. Additionally, as noted above, the UVFD now has the means to collect fees under Ordinance 4175, and the other UVAP policies require the County to only approve new development if adequate fire services are available. These measures would substantially reduce the effect on the City Fire Department.

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[120] Hession, 1/19/05.
[121] Enberg, 1/20/05.
[122] Yates, 2/11/08. Discussions are also underway for an emergency response "regionalization plan" that, once adopted by the participating agencies, could lead to the City Fire Department responding to more calls in the unincorporated areas east and west of the city limits. This response would also be at a cost to the City.

While future development would require hiring additional staff and purchase of additional equipment, it is not expected that it would require construction of a new fire station. Even if a new fire station were developed in the future, it is expected that it would be a relatively small facility built adjacent to major arterial (to facilitate access). Given the policies included in the Draft 2007 UVAP as well as locations suitable for a fire station, it is not expected that development of such a station would have significant impacts on the environment that could not be mitigated by standard mitigation measures.

To conclude, the Draft 2007 UVAP plus other County ordinances and policies provide a policy framework that would provide adequate staffing and equipment to serve projected and buildout populations and ensure that the County only approve new development if adequate fire protection services are available. It is speculative that a new fire station would be needed, and, even if one were required, it is expected that it could be constructed without having significant and unavoidable impacts on the environment. The impact would be reduced to a ***less than significant*** level, and no additional mitigation is required at the program level.

As discussed in Impact 3.1-G, the project could result in urban decay. The resulting deteriorated or abandoned buildings are more prone to ignitions and burning. This could result in additional calls for fire protection, however, it is not expected that this would cause a substantial increase in calls to fire suppression agencies.

Exposure to Wildland Fires

Impact 3.10-E **Future development could be placed in locations where people and structures would be exposed to potential wildland fires.**

As noted in the Setting section above, the hilly areas on either side of the Ukiah Valley are very susceptible to wildland fires. According to CAL FIRE, the hills on the west side of the plan area have a “very high” fire hazard, and the eastern hills are primarily rated “high” with pockets of “very high.” The *Mendocino County Community Wildfire Protection Plan* states that there are several areas of wildfire concern in the plan area, including Greenfield Ranch, Orr Springs Road, Oak Knoll and Fircrest Drives, and Robinson Creek Road, and the new homes in the hills north of Low Gap Park in the western hills; Redemeyer Road, Deerwood, El Dorado Estates, Vichy Springs, Rogina Heights, the City of 10,000 Buddhas, and Talmage in the eastern hills; and the heavily wooded area at the north end of Lake Mendocino. All of these areas have severe ingress and egress constraints.[123] The Wildfire Protection Plan states that the County "…is in great need of improved, comprehensive, fire safe planning in its many wildland areas, including adoption of a Fire Code commensurate with the County's wildfire risk."[124]

The Wildfire Protection Plan also recommends consistent and clear road signage and addresses to allow prompt emergency response. That plan includes a proposed Countywide Address and Road Signage Project, but no funding has been secured for that project. Finding homes in many rural areas is difficult in the daytime as well as at

[123] CAL FIRE, 2005, p. 25).
[124] Ibid, p. 122.

night. This project would encourage and fund durable signage with reflectorized letters and numbers at least 3 inches tall, easily visible from both directions, with arrows indicating clearly the location of each home.

The Draft 2007 UVAP contains several policies and implementation measures that address wildland fire hazard. ***Policy HS1.3*** calls for maintaining land use and building regulations that promote fire safety. ***Implementation Measure HS1.3a*** states that the County will work with the fire protection districts and the County Office of Emergency to assess fire safety standards for the plan area and prepare comprehensive standards if warranted. ***Implementation Measure HS1.4a*** calls for collaboration with the County Office of Emergency to incorporate plans for fire emergency response, while ***Implementation Measure HS1.4b*** would result in assemblage of a valley-wide emergency response team. ***Implementation Measure HS1.4c*** would encourage development of Neighborhood Emergency Services Teams[125] to assist neighborhoods in dealing with wildland fires and other emergencies.

The County General Plan also contains numerous policies to minimize the risk from wildland fires. *Policies DE-212 to DE-217* state that new development shall be denied where there is a substantial wildfire risk. Development in high fire hazard areas will need to be designed commensurate with the hazard. Fire Safe Guidelines will be required for new development in State Responsibility areas and the urban/wildland interface.

The UVAP anticipates relatively little development in high fire hazard areas. However, there is the proposed designation of the area north of Vichy Springs Road and east of Redemeyer Road as Suburban Residential that would allow 65 residences on this property. In addition, there is the potential for development of legal, vacant parcels in the hills on both the east and west sides of the valley. This development would occur in high fire hazard areas. Fires igniting in these hills, or traveling east from outside the valley, could travel down into more heavily populated areas, including areas where the UVAP would allow future development. This potential exposure to wildland fires represents a ***potentially significant impact***.

Mitigation Measures

Mitigation Measure 3.1-B.1 also applies to this impact. That mitigation recommends that priority in the Growth Management Plan be given to projects that are not located in "high" or "very high" fire hazard areas.

3.10-E.1 The County shall not allow new development in high fire hazard areas unless it can be shown that such development would not place people in danger. To realize this standard the following implementation measures shall be added to Policy HS1.3:

[125] The term "Neighborhood Emergency Services Teams" was created by the Mendocino Emergency Services Agency, which no longer exists. The equivalent term used in most of the United States is "Community Emergency Response Teams" (Yates, 2/11/08). The County therefore may wish to consider changing "Neighborhood Emergency Services Teams" to "Community Emergency Response Teams."

HS1.3b Fire Hazard Areas
Do not approve subdivision of existing parcels in areas designated by CAL FIRE as having "high" or "very high" fire hazard rating unless the responsible fire protection agency determines in writing that adequate access, evacuation routes, emergency response, and fireflow are available, and that the project complies with the most current State requirements for development in wildlands.

HS1.3 Wildfire Protection Plan
Implement the recommendations of the Wildfire Protection Plan when approving new development. Support the proposed signage and address project included in that plan and support maintenance of improvements constructed as part of the Westside Vegetation Management Plan.

3.10-E.2 Do not approve the proposed reclassification of the East Hills area (Area #30 on Figure 1-4 of this EIR).

Impact Significance After Mitigation

Complying with Draft 2007 UVAP (including the two new measures listed above) and Mendocino County General Plan provisions, along with continuing to update local standards to reflect current Fire and Building Codes and any amendment to the State *Fire Safe Regulations,* and complying with other requirements imposed by the County, would reduce the wildland fire impact. However, there are many vacant parcels in high fire hazard areas where the County cannot prohibit development of a residence on a legal parcel. Even if these residences are constructed consistent with State regulations, they would be at risk during a major wildfire. In addition, there is no funding source to develop the proposed Disaster Preparedness Plans. The impact cannot be avoided without eliminating the development potential in these high hazard areas. The impact remains ***significant and unavoidable***.

Interference with Emergency Response/Evacuation Plans

Impact 3.10-F Future development in the plan area could cause conflicts with emergency response and evacuation plans.

Additional development allowed by the UVAP could lead to traffic congestion and conflicts with emergency response during peak driving times, especially during the evening commute on specific roads leading into and out of the City of Ukiah. Some of these routes (e.g., Perkins Street, Orchard Avenue, Talmage Road) are single-lane roads. Even after Redemeyer Road is extended as proposed by the UVAP, it would still route traffic to these congested roads and into the City.[126] Other congested locations specifically mentioned by emergency service providers include Orr Springs Road and Low Gap Road/Brush Street and its intersection with State Street, where existing traffic congestion creates problems for emergency vehicles, especially when school is in

[126] Dewey, 1/3/05.

session and the North State Street/Highway 101 interchange area.[127] The area east of the Russian River from Lake Mendocino to Hopland is served by fire departments based west of the river, which could result in a loss of service during a flood or earthquake. The UVFD has adopted a goal to establish a new station in Talmage, which would partly address this concern; however, the UVFD is not actively working to achieve that goal at this time.[128] The effect of UVAP-related traffic congestion on emergency response and evacuation plans is considered a potentially significant impact.

The Draft 2007 UVAP recommends extension of Redemeyer Road and Orchard Avenue. These extensions would reduce congestion on existing roadways and, particularly in the case of Redemeyer Road, provide an alternative access and evacuation route. The Draft 2007 UVAP also recommends a hook ramp at Perkins Street via Orchard Avenue to provide access to Brush Street. Other east-west streets would be improved when the Brush Street Triangle is developed. In addition, the policies and measures listed for Impact 3.5-A apply, as they would act to ensure adequate levels of service and restrict new development unless those levels of service can be provided. While there will be increased traffic on area roadways, there is no evidence that these increased volumes would significantly impede emergency access or evacuation given the policies and measures of the Draft 2007 UVAP.

The Draft 2007 UVAP addresses this impact with ***Implementation Measure HS1.5a*** that requires revision of the zoning ordinance to prohibit new residential development in areas that have significant environmental hazards. ***Implementation Measure HS1.3a*** would establish valley-wide fire safety standards, which would reduce the risks of fires and facilitate fire department response. ***Implementation Measure HS1.4a*** calls for collaboration with the Mendocino Emergency Services Agency[129] to incorporate plans for fire emergency response while ***Implementation Measure HS1.4b*** would result in assemblage of a valley-wide emergency response team. ***Implementation Measure HS1.4c*** would encourage development of Neighborhood Emergency Services Teams[130] to assist neighborhoods in dealing with wildland fires and other emergencies. The County General Plan contains policies to ensure adequate emergency response and evacuation routes. *General Plan Policy DE-210* states that development shall not hinder the maintenance and use of routes and sites critical to evacuation, emergency operations and recovery. These measures, along with the work of the County Fire Safe Council and the fire departments and review of new wildland development by CAL FIRE, would substantially improve existing circulation problems and reduce development in areas where evacuation and emergency response could be hindered.

The circulation improvements proposed by the UVAP and these policies would reduce the impact. However, as noted in the previous impact, there are many vacant parcels in

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[127] Undersheriff Gary Hudson, Mendocino County Sheriff's Office, e-mail communication, 11/12/04; Norman Thurston, Administrative Services Manager II, Mendocino County Sheriff's Office, e-mail communication, 1/28/05; and Yates, 2/11/08.

[128] Grebil, 2/5/07.

[129] This agency no longer exists, so the program should be reworded to reference the County Office of Emergency Services.

[130] The term "Neighborhood Emergency Services Teams" was created by the Mendocino Emergency Services Agency, which no longer exists. The equivalent term used in most of the United States is "Community Emergency Response Teams" (Yates, 2/11/08). The County therefore may wish to consider changing "Neighborhood Emergency Services Teams" to "Community Emergency Response Teams."

high fire hazard areas where the County cannot prohibit development of a residence on a legal parcel. Evacuation from these areas and emergency response could be difficult or impossible. In addition, new development could be approved on the east side of the valley where residents could be cut off during a major flood. There is no fire or emergency medical station on this east side, and even if there were, it is not certain that personnel from such a station would be able to access the various neighborhoods in the eastern hills and east of the river.

This is an existing problem that would be exacerbated by allowing additional new development east of the Russian River and in the western hills. The proposed circulation improvements would substantially offset this impact. The potential northern extension of Redemeyer Road would provide a major benefit for emergency response and evacuation of the eastern hills area between Lake Mendocino and Vichy Springs Road. The extension of Orchard Avenue would provide a new north-south route through the Ukiah area. This would provide a major benefit for emergency response and evacuation. However, there is no funding for the Redemeyer Road extension. Extension of Orchard Avenue may be dependent on development proposed north of the existing northern terminus. Therefore, it is unknown if and when that extension would be constructed. The impact would be a ***potentially significant impact.***

Mitigation Measures.

Mitigation Measure 3.10-E.1 applies to this impact.

Impact Significance After Mitigation

The recommended mitigation would limit the County from approving new discretionary development in high fire hazard zones unless there is adequate access and evacuation. As noted for the previous impact, this would not necessarily apply to development where the County does not need to approve a discretionary permit, so the impact would remain significant and unavoidable. The infrequent large flood events could also strand people on the east side of the valley and lead to inadequate evacuation and emergency response, though this would be expected to occur very infrequently and be of relatively short duration. The impact remains ***significant and unavoidable.***

D. Emergency Medical Services

1. Setting

Mendocino County Emergency Medical Services (EMS) provides emergency medical care through a coordinated system of public and private agencies, facilities, EMS professionals and volunteers. Mendocino County, along with Napa and Sonoma Counties, comprise the Coastal Valleys EMS region. The Coastal Valleys EMS Agency (CVEMSA) administers the three-county region. The Agency has designed an EMS system that incorporates local fire departments and other public safety agencies, private ambulance companies, and hospitals into a dynamic emergency medical care delivery system.

The agency has adopted a 2006-2007 *Emergency Medical Services System Plan Update*, a *Multi-Casualty Incident (MCI) Plan*, a *Multi-Casualty Incident Medical Response Plan*, a *Transport Plan*, and a *Trauma Care System Plan* to address the various types of medical emergencies that might occur.

As described previously, the City of Ukiah Fire Department provides advanced life support and transport (ALS) within the City, and Ukiah Ambulance provides ALS in the plan area. Each backs the other up when needed. The Ukiah Valley Fire Protection District and Redwood Valley-Calpella Fire Protection District provide first response basic life support (BLS). The plan area currently meets State guidelines for medical response (one of the few rural areas that does meet these guidelines). The existing problem is providing service to the areas of Mendocino County outside the plan area. While response in the plan area has not been an issue, as resources are stretched, response within the plan area could be affected. Coastal Valleys EMS Agency (CVEMSA) is currently investigating options for additional funding of emergency medical response in Mendocino County.[131]

The County has adopted the *Mendocino Operational Area Emergency Operations Plan*.[132] The Mendocino County (OA) Emergency Operations Plan (EOP) identifies emergency planning, organization, policies, procedures, and response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies. This Emergency Plan accomplishes the following:

- Establishes the emergency management organization required to mitigate any significant emergency or disaster affecting the emergency operational area.

- Identifies the responsibilities, policies and procedures required to protect the health and safety of the population, public and private property, and the environmental effects of natural and technological emergencies and disasters.

- Establishes the operational concepts and procedures associated with field response to emergencies, County Emergency Operations Center (EOC) activities, and the recovery process.

The Plan is administered by the County Office of Emergency Services, which is directly overseen by the County Administrator.

2. Criteria Used to Determine Impact Significance

Buildout under the Ukiah Valley Area Plan would have a significant impact if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could case significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for emergency response.

[131] Sam Barnett, OES Coordinator, e-mail to Leonard Charles, 1/31/07.
[132] The Plan was adopted by the County in September 2006.

3. Impacts

Emergency Medical Response

Impact 3.10-G **Development under the Draft 2007 UVAP would increase the demands on emergency medical agencies serving the plan area, potentially creating the need for the Ukiah Valley Fire District, the Redwood Valley-Calpella Fire Protection District, Ukiah Fire Department, and Ukiah Ambulance Service to acquire new facilities and equipment.**

The increased population, increased industrial operations, and increased traffic will all result in additional medical emergencies. This will increase the calls for service to the first responders as well as the two entities that provide advanced life support and transport.

CVESMA staff reports that as it is currently configured, the County-wide EMS system is approaching the breaking point, though service within the City of Ukiah and the surrounding Ukiah Valley plan area is currently good. EMS response times meet the State EMS Authority standard, as does the ALS primary ambulance response. However, this level of service will be put at risk with even a small increase in the demand for service.[133]

In 2005 there were approximately 3,200 requests for emergency ambulance service in the City of Ukiah and the plan area. The City of Ukiah Fire Department responded to 1,500 calls within the City, and Ukiah Ambulance Service to 1,700 calls in the valley. Of these requests, approximately 2,400 were transported to hospitals. On average, three ALS ambulances provided coverage to the City and the surrounding area. With a projected increase in residential population within the plan area of nearly 13,250 people at full buildout by 2030, current staffing levels of first responder and ambulance personnel will quickly become inadequate. At least one additional, full-time ALS ambulance will be required within the plan area to maintain State EMS response standards. First responder levels must also increase substantially to maintain a status quo level of service.

Air ambulance (helicopter) services provide access to the most remote areas of the County as well as rapid transportation of acutely sick and injured patients to appropriate facilities in and out of County. Air ambulance services are provided by CALSTAR 4, based at Ukiah Airport, and REACH 6, based in Lake County. The current level of air ambulance service within the plan area and County should remain adequate even with the projected increase in population. However, the withdrawal of either of these valuable resources would greatly reduce system effectiveness everywhere in the County, including the plan area.

CVEMSA is currently working with the County Executive Officer and the Board of Supervisors in developing EMS system and funding options for insuring the continuation and growth of quality emergency medial response and pre-hospital care in Mendocino

[133] Barnett, 1/31/07.

County. Funding issues pose the most difficult obstacles to achieving stable EMS system solutions.

The Draft 2007 UVAP contains ***Implementation Measure LU4.1a*** recommends establishing a growth management plan for the plan area. Such a plan would phase and prioritize growth in areas where adequate services and infrastructure are available. ***Implementation Measure LU4.2a*** states that new development would not be approved unless there are adequate services and infrastructure to serve that development. ***Implementation Measure HS1.4d*** states that the County will ensure that there are an adequate number of public safety workers and requires departments to update service plans to conform with projected development. In addition, the County General Plan also contains policies to ensure that new development can be served by the school district and other service providers. *General Plan Policy DE-120* states that projects to increase density or intensity should not be granted if there are basic infrastructure deficiencies, unless a program is in place for timely resolution of the deficiency. *General Plan Policy DE-121* states that new discretionary development will be required to demonstrate that basic infrastructure is available and the provider has adequate capacity to serve the project. *General Plan Policy DE-221* states that the County will support viable emergency response and transport services such as emergency medical services.

Because, the EMS system is currently near the breaking point, any additional development would be a ***potentially significant impact.***

Mitigation Measures

The EIR and the UVAP cannot dictate how the Board of Supervisors funds various agencies and programs. Since funding is the main constraint for the EMS, there is no available mitigation.

Impact Significance After Mitigation

While the Draft 2007 UVAP does contain policies that state that new development would not be approved if there are inadequate services, some new development in the plan area would not require discretionary approval from the County (e.g., projects where only a building permit is needed). Absent additional funding of the EMS, new development would have a ***significant and unavoidable impact*** on the emergency medical system.

E. Water

The Mendocino County Water Agency has prepared a Water Supply Assessment for the Draft 2007 UVAP. This programmatic Water Supply Assessment (WSA), which has been prepared in accordance with legislation enacted pursuant to Senate Bill 610 (Water Code Sections 10910 through 10915), evaluates the available water supplies and the projected water demands associated with the future land use scenarios presented in the UVAP, and is intended to serve as a source document for the assessment of water impacts for this UVAP EIR. This Assessment is available for review at the offices of the County Department of Planning and Building services and on the County's website at - http://www.co.mendocino.ca.us/planning/UVAP.htm

The following summarizes detailed analyses contained in the WSA.

1. Setting

The plan area's water supply is derived from groundwater and surface water sources. The surface water supply is derived from runoff in the Russian River and adjacent Eel River drainages. Much of the available supply is stored in facilities that are owned and operated by either the Pacific Gas and Electric Company (PG&E) or the United States Army Corps of Engineers (USACE) for predominately non-water supply purposes. Although the plan area and surrounding region typically receive substantial precipitation, institutional constraints associated with the operation of existing storage facilities, and diversions from the Russian River in general, limit the availability of surface water supplies.

Russian River

The Russian River drainage encompasses 1,485 square miles in Mendocino and Sonoma counties, 503 square miles of which are located in Mendocino. The headwaters of the Russian River drainage are located south and southeast of Willits, where the West and East forks of the Russian River originate, respectively. The two forks converge approximately three miles north of Ukiah to form the Russian River main stem, which flows through the center of the Ukiah Valley.

Historically, the Mendocino County portion of the Russian River was dry or nearly dry in the summer and fall. The river often had substantial stream flow in the winter and spring. Water diversions from the Eel River to the Russian River drainage by the Potter Valley Project (PVP) converted the East Fork and to a lesser extent the Russian River main stem downstream of the East and West forks into perennial water courses, and increasingly reliable sources of water. The construction of Coyote Dam and Lake Mendocino in 1959 completed the transformation of the Russian River main stem into a perennial water course and allowed for extensive agricultural and urban development in Mendocino and Sonoma counties.

Today, the Russian River, in conjunction with the PVP and Lake Mendocino (described below), constitutes the principal surface water supply for the plan area and a significant source of groundwater recharge for the Ukiah Valley. The Russian River is now fully appropriated (i.e., meaning no additional water can be diverted from the river) from July through October and, with the exception of high winter stream flows, is also fully appropriated in the winter and spring (SWRCB, 1997).

Potter Valley Project

The 9.4 megawatt Potter Valley Hydroelectric Project – owned and operated by the Pacific Gas and Electric Company – consists of two water impoundments on the Upper Eel River - Scott Dam and Lake Pillsbury, and Cape Horn Dam and Van Arsdale Reservoir - and a diversion tunnel and powerhouse located on the East Fork of the Russian River. Water is stored in Lake Pillsbury, where it is subsequently released and flows approximately twelve miles downstream before being impounded at Van Arsdale

Reservoir, where a portion is re-diverted, by way of tunnel, into the powerhouse located at the headwaters of the East Fork, where it is ultimately discharged.

The operation of the PVP has been a source of controversy on the North Coast for many years and the subject of extensive and continuing litigation. In 2004, the Federal Energy Regulatory Commission (FERC) amended the hydroelectric license for the PVP pursuant to a Biological Opinion issued by the National Marine Fisheries Service. It now appears that implementation of the criteria that dictate PVP water diversions, as currently crafted and interpreted, reduces annual diversions to the Russian River by an average of 40 to 50%. The reduced PVP diversions have had a significant impact on the availability and reliability of the Lake Mendocino water supply.

Lake Mendocino

Lake Mendocino and Coyote Valley Dam – a federal facility constructed by the USACE in 1959 – are located on the East Fork of the Russian River, approximately one mile upstream from the confluence with the West Fork and approximately three miles north of Ukiah. Lake Mendocino provides water storage for flood control, municipal and industrial water supplies, recreation, and power generation, and is the principal water storage facility for the plan area's surface water supply.

The maximum storage capacity of Lake Mendocino is 122,000 acre-feet, a portion of which – 50,000 acre-feet – is reserved for flood control purposes during the months of November through at least February, and more typically through March. The balance of the storage capacity is potentially available for water supply storage. Beginning in October, any water remaining in the flood control pool (i.e., that portion of the reservoir storage capacity reserved for flood control purposes) is released so that maximum reservoir storage does not exceed 72,000 acre-feet on November 1. Between November and at least February reservoir releases are made pursuant to the USACE's water control manual, so as to maintain reservoir storage at 72,000 acre-feet and retain the balance of the reservoir storage capacity for the periodic capture and controlled release of flood waters (USACE, 1986). At the conclusion of the flood control season the reservoir is allowed to partially refill, assuming there is sufficient runoff to do so, and storage is increased, historically to a maximum capacity of approximately 91,000 acre-feet. However, a provision in the reservoir operations criteria, which was exercised for the first time in 2010, allows for the storage of up to 116,000 acre-feet for water supply purposes in the summer and fall.

Because Lake Mendocino is not allowed to substantially refill until the end of the rainy season, when local runoff in the East Fork is greatly diminished, much of the water entering the lake and contributing to the summer and fall water supply originates from the Eel River, by way of the PVP. Historically, PVP diversions accounted for approximately half of the total inflow to Lake Mendocino in wet years, slightly over half in normal years, and the majority of the total annual inflow in dry years. Accordingly, any reduction in PVP diversions, particularly in dry years, can significantly impact water storage in Lake Mendocino.

The operation of Lake Mendocino has also been the subject of a Biological Opinion, which was released by NMFS on September 24, 2008 (NMFS, 2008). This Opinion, as in the case of the Opinion for the PVP, analyzes the impact of project operations on

salmon and steelhead. The Opinion prepared by NMFS concluded that continued operation of Lake Mendocino, as proposed by the USACE and the Sonoma County Water Agency, could jeopardize the continued existence of Central California Coast (CCC) steelhead, CCC Coho salmon, and California Coastal Chinook salmon, and therefore prescribes a "Reasonable and Prudent Alternative" (RPA – in this case the Russian River RPA) that the USACE and Sonoma County Water Agency have begun to implement to replace historic reservoir operation protocols.

The Russian River RPA, the scope of which includes operations at Warm Springs Dam in Sonoma County and the management of the Russian River estuary at Jenner, generally prescribes a reduction in minimum instream flows downstream of Lake Mendocino, which in most years will result in the retention of approximately 20,000 additional acre-feet of water in Lake Mendocino between May and October – partially offsetting the storage lost due to the reduction of Eel River diversion from the PVP. However, a notable exception occurs during dry and extremely dry years. No change – no further reduction of minimum instream flows – is prescribed by the Russian River RPA for dry and extremely dry years. Consequently, in dry and extremely dry years, such as those that occurred in 1976 and 1977, and more recently in 2007 through 2009, Lake Mendocino storage will not benefit from implementation of the Russian River RPA and will continue to experience the full impact of the RPA for the PVP.

The WSA reports that available data suggest that the impact of the Potter Valley Project's RPA on Lake Mendocino storage will largely, but not completely, be offset through implementation of the revised minimum instream flow regime specified by the Russian River RPA. As previously noted, during normal years the implementation of the Russian River RPA will reduce minimum instream flow requirements downstream of Lake Mendocino by 60 cubic feet per second (cfs) in the summer and fall, resulting in a potential savings of 20,000 acre-feet. Conversely, based on recent PVP operations data, it appears that implementation of the RPA for the PVP, as currently crafted and interpreted, will reduce summer and fall inflow by an average of 30,000 acre-feet per year. During dry and critically dry years Lake Mendocino will continue to experience the full impact of the RPA for the PVP, and as a result, there will be a pronounced decrease in Lake Mendocino storage during dry and critically dry years, as was observed in the 2009 water year.

Water Rights

The appropriative water rights for Lake Mendocino were filed on January 28, 1949. This date is used to establish priority among appropriative water rights holders in the Russian River drainage – Pre-1949 versus Post-1949 rights. Collectively, the Pre-1949 appropriative water rights comprise approximately 8,000 acre-feet, much of which is obtained by direct diversion and subject to the availability of stream flows during the authorized diversion season – typically the summer and fall. Historically, in critically dry years there were times when no water was available for some if not all of the Pre-1949 appropriators because the water, even with the ongoing PVP diversions, was not physically present in the quantities needed to satisfy ongoing demands.

Although junior to the Pre-1949 rights, the water rights associated with Lake Mendocino allow for substantial storage – sufficient storage to accommodate water needs during critically dry periods. Accordingly, there are times when nearly all, if not all, of the water

in the Russian River is solely attributable to Lake Mendocino releases and the water rights associated with Lake Mendocino. It is this ability to provide water, even in times when little or no water is legally available to Pre-1949 water right holders, that makes Lake Mendocino an essential element of the region's supply during drought years.

Safe Yield

Pursuant to State Water Resources Control Board Water Right Decision 1030, the Lake Mendocino supply was apportioned as follows: 8,000 acre-feet for use in Mendocino County and 37,522 acre-feet for use in Sonoma County. The above quantities were allocated on the basis of the lake's water supply potential, as determined by a "safe yield analysis" conducted in the 1950s, when the Lake Mendocino project was first conceived. The safe yield analyses that were conducted at that time were based on the available streamflow records and prevailing PVP operations, and predate the 2004 Potter Valley FERC Decision and the 2008 Biological Opinion for the Russian River; they are not necessarily reflective of current flow requirements and new technology, such as improved streamflow monitoring, that can enhance the efficiency of reservoir operations.

A re-analysis of the Lake Mendocino Project's safe yield, which could potentially occur as a part of the forthcoming water right hearings associated with the re-opening of Water Right Decision 1610, could result in a somewhat different determination of the lake's water supply potential. It is possible that such a re-analysis would reveal the availability of additional supplemental supplies (see the subsequent discussion of the interaction of the river with the plan area groundwater aquifer), but more likely, due in part to implementation of the RPA for the Potter Valley Project, conclude that the current allocations can only occur with the acceptance of more frequent water supply deficiencies during dry and critically dry years.

Ukiah Valley Groundwater Basin

The 56-square-mile Ukiah Valley groundwater basin reportedly has a usable storage capacity of 90,000 acre-feet and is fully recharged each year, except in years when precipitation is less than approximately 60% of normal. The principal sources of recharge for the Ukiah Valley groundwater basin are precipitation and to a lesser extent surface water infiltration. Although relatively limited, the available groundwater elevation monitoring data indicate that groundwater elevations have remained stable since at least the 1960s, declining somewhat during periods of drought but then quickly recovering to pre-drought levels. According to the Department of Water Resources, this groundwater basin has a safe yield of about 10,000 acre-feet per year (AFY). See ***Section 3.3 (Hydrology and Water Quality)*** for additional discussion of groundwater resources.

Groundwater typically moves from the margins of the Ukiah Valley to the Russian River, then southerly, toward Sonoma County. The movement of groundwater in the vicinity of the Russian River is highly variable, both spatially and temporally. Groundwater elevation data for shallow wells near the Russian River indicate that there are locations and times when surface water from the Russian River infiltrates the adjacent aquifer and by legal definition, constitutes underflow that is subject to the jurisdiction of the State Water Resources Control Board (SWRCB). Within recent years the SWRCB has asserted that all of the groundwater in the Ukiah Valley, including groundwater associated with the deeply underlying Continental basin deposits, is underflow. While it

is clear from the available data that there are locations and times where underflow occurs, the available data are arguably insufficient to support the contention that virtually all groundwater in the Ukiah Valley is, by definition, underflow.

A regulatory determination that all groundwater in the Ukiah Valley is underflow could create considerable uncertainty, not only with regard to the region's groundwater supply, but the surface water supply as well. In such a scenario, individuals and entities that are currently extracting what they believe to be groundwater could be required to file for appropriative water rights, which would be junior to all existing appropriative water rights and given the SWRCB's previous determination that the Russian River drainage is fully appropriated in the summer and fall, would, even if they were granted, most likely prohibit the continuation of extractions in the summer and fall. Accordingly, the demand for surface water sources – to replace groundwater – would increase. In at least some instances the only economically viable source of water available to rural properties in the Ukiah Valley is groundwater and therefore, the deprivation of the groundwater supply could have significant economic consequences for the Ukiah Valley and the county as a whole.

Ukiah Valley Area Water Service Providers

Mendocino County Russian River Flood Control and Water Conservation Improvement District

The Mendocino County Russian River Flood Control and Water Conservation Improvement District (RRFCD) encompasses most but not all of the plan area (portions of Millview CWD and Willow CWD are not within the RRFCD boundaries). The RRFCD was formed to serve as the local sponsor for the development of Coyote Dam and Lake Mendocino, along with the Sonoma County Water Agency. Pursuant to water right permit 12947B, the RRFCD is authorized to divert 8,000 acre-feet per year for domestic, municipal, irrigation and recreational purposes within the RRFCD service area. This water is diverted and sold as raw water to public water systems, where it is subsequently treated for municipal use, and to private agricultural entities for irrigation and frost protection purposes. As of 2010, all but approximately 500 acre-feet of the 8,000 acre-foot supply has been contracted to public water systems and agricultural entities. The balance is considered surplus water and is currently sold to the Redwood Valley County Water District (Redwood Valley), where it is used for municipal and agricultural purposes. A summary of the RRFCD active water supply contracts is presented in Table 3-10-3. Table 3.10-4 summarizes the appropriative rights for the three providers, while Table 3.10-5 summarizes annual water production.

City of Ukiah

The City of Ukiah (Ukiah) is the largest public water service provider in the plan area, providing roughly half of the entire public water supply in the Ukiah Valley. The City provides water service to approximately 5,800 connections. Ukiah's raw water supply is obtained from groundwater, Russian River underflow, and a water supply contract with the RRFCD. Limited emergency water supplies are available via interties with Millview and Willow.

The City's existing water right allows for the direct diversion of up to 14,480 acre-feet per year, at a maximum diversion rate of 20 cfs, from January 1 through December 31 of each year. Pursuant to Water Right Decision 1030, a portion of Ukiah's water right – 2,027 acre-feet per year, at a maximum diversion rate of 2.8 cfs – is classified as a Pre-1949 water right that is senior to the Lake Mendocino water right. While the balance – 12,453 acre-feet per year, at a maximum diversion rate of 17.2 cfs – is characterized as a Post-1949 water right. In either case, there are times during extended dry and critically dry years when there is insufficient surface or underflow to lawfully exercise these rights. Accordingly, the City purchases 800 acre-feet per year from the RRFCD to augment groundwater sources and to ensure adequate supplies during extended dry periods.

Millview County Water District

The Millview County Water District (Millview) provides water service to approximately 1,300 residential connections and 210 commercial connections within a 8.5-square-mile service area, and wheels treated water to Calpella. The District is currently under a State-imposed moratorum on new water hookups. The District is located between Calpella and Ukiah. Millview's raw water supply consists of surface water diverted from the Russian River pursuant to water rights held by the district, and a water supply contract with the RRFCD. Limited emergency water supplies are available via an intertie with Ukiah.

Millview's water right portfolio currently consists of five appropriative water rights and, as discussed below, could include two additional water rights, pending the outcome of ongoing negotiations and litigation. The most significant of the five existing water rights allows for the direct diversion of up to 1,440 acre-feet per year between November 1 and July 1, at a maximum diversion rate of three cubic feet per second (cfs), and whenever stream flows in the Russian River equal or exceed 150 cfs at the point of diversion. The remaining four water rights allow for seasonal direct diversions that collectively provide up to 82 acre-feet per year.

Millview is currently in negotiations to purchase water rights held by Masonite for the company's former mill site, just north of Ukiah. If successful, these negotiations could increase Millview's water supply by approximately 4,000 acre-feet. However, the validity of the Masonite water right has been contested by multiple parties, and it is unclear what the outcome of the ongoing negotiations will be. Similarly, Millview is engaged in negotiations that could lead to the acquisition of a Pre-1914 water right of up to 1,400 acre-feet, but again, the validity of this right has been contested and is the subject of ongoing litigation. For the purposes of this WSA, both the Masonite water right purchase and the pre-1914 water right purchase are characterized as potential water sources that could become available at some point in the future.

All five of Millview's current appropriative water rights are junior to those of Lake Mendocino and the Pre-1949 water right holders, and, therefore, there can be times during extended dry or critically dry years when there is insufficient flow in the Russian River to lawfully exercise these rights. Accordingly, Millview purchases water – 1,520 acre-feet per year – from the RRFCD to ensure adequate supplies during extended dry periods. Millview has expressed a desire to obtain approximately 500 acre-feet of additional RRFCD water supplies. The acquisition of these additional supplies is

reportedly in progress and will be subject to CEQA. For the purposes of this EIR, the supplemental RRFCD water supply Millview is attempting to acquire is characterized as a potential water supply that could become available at some point in the future.

Willow County Water District

The Willow County Water District (Willow CWD) provides water service to approximately 990 residential and 60 commercial connections within a 4-square-mile service area located immediately south of Ukiah, within the southwest portion of the plan area. Willow CWD's raw water supply is obtained from the Russian River pursuant to water rights held by the district, and a water supply contract with the RRFCD. Limited emergency water supplies are available via an intertie with Ukiah.

The district's water right portfolio consist of an appropriative water right that allows for the direct diversion of up to 1,400 acre-feet per year between November 1 and July 1, at a maximum diversion rate of three cfs, whenever stream flows in the Russian River equal or exceed 150 cfs at the point of diversion; and a second appropriative water right that allows for the diversion of up to 728 acre-feet per year, at a maximum diversion rate of one cfs, from January 1 through December 31. Both appropriative water rights are junior to those of Lake Mendocino and the Pre-1949 water right holders and therefore, there can be times during extended dry and critically dry years when there is insufficient flow in the Russian River to lawfully exercise these rights. Accordingly, the district purchases 515 acre-feet per year from the RRFCD to ensure adequate supplies during extended dry periods.

Calpella County Water District

The Calpella County Water District (Calpella CWD), the smallest of the five public water service providers, is located within the northwest corner of the plan area and currently provides water to approximately 140 residential and 25 commercial connections in the community of Calpella and surrounding area. Calpella's water supply consists of groundwater from a single groundwater well with a rated capacity of 25 gallons per minute (40 acre-feet per year), and surface water – 51 acre-feet – purchased from the RRFCD and wheeled to Calpella by Millview. Limited emergency water supplies are available via an intertie with Redwood Valley. Calpella does not own or operate any water treatment facilities. Water treatment services for surface water are provided on a continuing basis by Millview.

Rogina Water Company

The Rogina Water Company (Rogina) is a private entity that provides water service to approximately 990 residential service connections within a 9-square-mile service area located approximately one-half mile east of Ukiah. Rogina's water supply consists of surface water – 400 acre-feet per year – purchased from the RRFCD, and four groundwater wells, at least some of which may be drawing from Russian River underflow as opposed to percolating groundwater.

Table 3.10-3
Summary of RRFCD Water Supply Agreements
(All Quantities in Acre-Feet)

	Annual Contract Amount
City of Ukiah	800
Willow CWD	515
Millview CWD	1,520
Calpella CWD	51
Rogina Water Company	192
Hopland CWD [(a)]	400
Sub Total:	**3,478**
Agricultural Users[(b)]	4,029
Grand Total	**7,507[(c)]**

(a) Not located in the plan area
(b) Includes agricultural users not in the plan area
(c) The difference between the allocated supply and the maximum quantity available (8,000 acre-feet) is considered surplus to the needs of the RRFCD water contractors and has historically been sold to the Redwood Valley County Water District.

Table 3.10-4
Summary of Appropriative Water Rights

Water Purveyor	Application	Permit	License	Source[a]	Priority Date	Permitted Maximum Diversion Rate, cfs[b]	Water Right Face Value, acre-feet	Period of Diversion	Purpose of Use
Ukiah	A015704	12952		RRUF	1/25/1654	20	14,480	1/1 - 12/31	Municipal
Willow CWD	A015721	9891	6793	RRUF	2/10/1954	1	724	1/1 - 12/31	Municipal
	A017232	13935		RRUF	8/10/1956	3	1,440	11/1 - 7/1	Municipal
Millview CWD	A003601	1711[c]	492	RR	8/20/1923	0.18	27	6/1 - 8/15	Agricultural
	A017587	13936[c]	Pending	RRUF	5/8//1957	3	1,440	11/1 - 7/1	Domestic and Municipal
	A022005B	15198	009821B	RR	12/17/1964	0.34	7	5/1 - 9/1	Irrigation
	A023817	16468	10896	RR	6/29/1971	0.04	5	3/15 - 5/15	Frost Protection
	A022306	15186	9481	RR	10/6/1965	0.22	43	5/1 - 10/15	Irrigation. Potential Conversion to Municipal

Notes:
(a) RR=Russian River
RRUF=Russian River Underflow
(b) cfs=cubic feet per second
(c) The State Water Resources Control Board has prohibited diversions under License 492 and Permit 13936 until the District's petitions for change have been reviewed and approved

Table 3.10-5
Total Annual Water Production in Acre-Feet [a,b]

Water Purveyor	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Calpella										
Production	34	33	30	36	35	33	33	___	___	___
Imported Water from Millview	68	71	80	79	84	81	87	___	___	___
Total System Demand	102	104	110	115	119	114	120	112	109	88
Millview										
Production	1,503	1,517	1,514	1,474	1,608	1,490	1,775	1,576	1,549	1,019
Water sold to other Water Purveyors	126	80	83	74	86	80	133	82	104	60
Total System Demand	1,377	1,437	1,431	1,400	1,522	1,410	1,642	1,494	1,445	959
Ukiah										
Production	4,224	4,069	4,163	3,872	4,130	3,756	3,831	3,743	3,713	3,064
Rogina										
Production	642	694	687	632	668	563	635	625	625	529
Willow										
Domestic Production	1,066	1,106	1,182	1,101	1,137	1,013	1,067	943	929	762
Agricultural Production	119	94	106	0	73	61	0	60	76	49
Total System Production	1,185	1,200	1,288	1,101	1,210	1,074	1,067	1,003	1,005	811
Total Production	7,530	7,504	7,679	7,120	7,649	6,917	7,295	6,977	6,897	5,451

(a) Source: California Department of Public Health (2007), Ukiah (2007), California Department of Water Resources Public Water System Statistics (20
2008, 2009)
(b) Includes water lost by leakage, pipeline flushing, or otherwise unaccounted for losses (UAF Water)

Assessment of Normal and Dry Year Surface Water Supplies

During normal hydrologic years there has historically been sufficient stream flows in the Russian River for the plan area public water service providers to fully exercise their respective surface water rights, or in the case of Ukiah, to the full extent necessary to meet ongoing demands. Collectively, the surface water rights of the five public water service providers constitute a maximum instantaneous diversion rate of approximately 28 cfs, the majority of which – 20 cfs – is attributable to Ukiah. Similarly, there has historically been sufficient storage in Lake Mendocino to satisfy all RRFCD contractual entitlements during normal years. Neither the availability of natural surface streamflows nor the ability of Lake Mendocino to provide the RRFCD's 8,000 acre-foot entitlement is expected to be significantly diminished in future normal hydrologic years.

During dry and particularly critically dry years the availability of natural surface stream flows is greatly reduced. As previously discussed, prior to the construction of Coyote Valley Dam and Lake Mendocino, portions of the Russian River typically went dry or nearly dry, in dry and critically dry years. In extremely dry years, such as 1976 and 1977, none of the Pre-1949 much less the Post-1949 water rights – including those held by the various plan area public water service providers – could be considered a reliable supply. Exactly which water rights would be un-exercisable, and for how long, would depend on the prevailing hydrologic conditions. In the absence of a water rights adjudication, in which the rights of each water holder are substantiated and monitored by a water master, a more precise determination of the available natural surface water supply in dry and critically dry years cannot be made. For the purposes of this WSA it is assumed that none of the surface water rights held by the various plan area public water service providers are legally exercisable during the months of July through October of drought periods.

The plan area public water service providers have typically anticipated the limited availability of natural surface stream flows during dry and critically dry years, and have either contracted with the RRFCD for water supplies that can augment if not replace natural surface water sources during extended dry periods, or else have developed groundwater sources that can be used in conjunction with natural surface water supplies.

During the summer and fall of dry and particularly critically dry years, Lake Mendocino is the only significant, reliable source of surface water in the plan area. Although the reservoir has generally been able to provide full contractual allocations – i.e., the RRFCD's entire 8,000 acre-foot allocation – in dry and critically dry years, it is important to note that the reservoir and more specifically the water supply allocations that were prescribed in Water Right Decision 1030 (SWRCB, 1961), were predicated on the assumption that water supply deficiencies would occur during critically dry years. Water Right Decision 1610 (SWRCB, 1986) includes provisions whereby the Sonoma County Water Agency must reduce diversions from Lake Mendocino, whenever lake storage is less than 30,000 acre-feet. In 2009, in response to unprecedentedly low storage levels, created in part by the reduction of Eel River diversions by the PVP, the SWRCB imposed a 50% mandatory rationing requirement on the Lake Mendocino water users in Mendocino County.

Until a reanalysis of the reservoir safe yield is conducted, an analysis that at a minimum accounts for the recently implemented RPAs for the PVP and the Russian River, it will remain unclear as to how frequently, and the extent to which, water supply deficiencies can be expected in future dry and critically dry years. For the purposes of this WSA and until more definitive information is available, it is assumed that Lake Mendocino water supply deficiencies of 25%, and in extreme cases 50%, will continue to occur in future dry and critically dry years.

2. Criteria Used to Determine Impact Significance

Buildout under the Ukiah Valley Area Plan would have a significant impact if it would:

- Would require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

- Would require new water entitlements and resources.

3. Impacts

Water Entitlement and Resources

Impact 3.10-H **New development will increase the demand for potable water. It is possible that local water purveyors may be unable to meet the demand. Development of new sources of water could have significant environmental effects.**

The WSA assessed the ability of each water provider to meet project demands from buildout of the Draft 2007 UVAP. This analysis was done for a normal, single dry, multiple dry, and critically dry year scenarios. The analyses also differentiated projected demand based on whether conservation required by recent State law is implemented. Senate Bill x7-7 (SB7-7) became law in 2009 and requires the State's retail urban water purveyors to reduce urban per capita water usage by 10% on or before December 31, 2015; and by 20% by December 31, 2020. Pursuant to SB7-7, retail urban water purveyors are defined as a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or supplies more than 3,000 acre-feet of potable water annually for municipal purposes. Currently, only Ukiah meets the State's criteria for retail urban water purveyors in the plan area. However, it is anticipated that by 2030 Millview will also meet the State's criteria and be subject to SB7-7. Although current law excludes Willow, Rogina and Calpella from the requirements of SB7-7 it is anticipated that at some point in the future the law will be amended to include all retail urban water purveyors, regardless of size.

Calpella CWD

The Calpella County Water District's current water supplies are barely sufficient to meet existing demands and clearly insufficient to satisfy the projected future demands associated with UVAP implementation. Based on the projected water demands and

assuming that in the future the District's groundwater supplies are classified as underflow, rather than percolating groundwater, it is estimated that an additional 200 to 250 acre-feet supply would be needed to satisfy the projected 2030 water demand.

Millview CWD

The Millview County Water District's current water supplies are sufficient to meet existing demands and the projected future water demands for normal, dry, critically dry and extended dry years, through 2020. Additional water supplies will be needed to satisfy projected water demands beyond 2020 – as much as 170 to 880 acre-feet would be needed.

City of Ukiah

The City of Ukiah's current water supplies are sufficient to meet the existing and projected future water demands for normal, critically dry and extended dry years, even in the event that the City's percolating groundwater supply were to be classified, for regulatory purposes, as underflow.

Rogina Water Company

The sufficiency of the Rogina Water Company's water supply, now and in the future, hinges on whether or not, for regulatory purposes, the Company's groundwater supply is considered underflow as opposed to percolating groundwater. Currently, Rogina asserts that at least some of the company's wells are drawing from percolating groundwater sources as opposed to underflow. In the absence of percolating groundwater, the only other water source currently available to Rogina is the company's 400 acre-foot water supply contract with RRFCD – an amount that is insufficient to satisfy existing, much less the projected future water demands. For the purposes of the WSA it was assumed that all of the Rogina groundwater wells are drawing from Russian River underflow and therefore, do not constitute a reliable source of water for future growth. Accordingly, based on the projected water demands and the current 400 acre-foot supply provided by RRFCD, it is estimated that an additional 480 acre-foot supply will be needed to satisfy the 2030 projected water demand.

Willow CWD

The Willow County Water District's current water supplies are sufficient to meet the existing and projected future water demands in normal, critically dry and extended dry years. The ability to meet future water demands in critically dry and extended dry years is heavily dependent on the expectation that sufficient streamflows – either surface streamflows or as underflow – will be available for diversion during all but the months of July through October, in critically dry and extended dry years.

Not in District

There is currently no allocated water supply to meet the projected future water demands – as much as 2,000 to 2,500 acre-feet – of the "Not in District" areas. Providing water to these areas is potentially problematic. Ideally, the Not in District areas would be annexed to the service areas of existing public water service providers. However, in

many cases the option of annexation may be precluded by technical, financial and/or policy constraints. Alternatively, Not in District areas could continue to rely on privately-owned and operated groundwater wells. However, as noted above, the availability of groundwater supplies is questionable given the State Water Resources Control Board's ongoing assertions that all groundwater in the Ukiah Valley is underflow.

Summary and Discussion

Based on the comparison of available supplies and projected demands presented in the WSA, current plan area water supplies are insufficient to fully serve projected demand. If buildout is to occur, it will require additional water supplies – as much as 850 to 1,610 acre-feet of additional water to augment the combined existing supplies of Calpella CWD, Millview CWD, and Rogina Water Company, and as much as 2,500 acre-feet to create a supply for the anticipated growth associated with the Not in District areas if the State determines that new wells are tapping Russian River water. Aggressive water conservation, pursuant to SB7-7, could reduce the need for new supplies by approximately 50%, but these measures will not by themselves eliminate the projected 2030 water supply shortfall.

Theoretically, the needed additional supply could be provided by Ukiah and Willow, both of which appear to possess water supplies that exceed their respective projected 2030 water demands. However, it is unknown whether these entities would agree to share excess water. The RRFCD currently sells water to Redwood Valley and Hopland. While this water could conceivably be used to augment the plan area water supply, doing so would be at the expense of Redwood Valley and Hopland, and would simply redistribute the plan area water supply shortage within a larger region of Mendocino County.

The Draft 2007 UVAP contains numerous polices and implementation measures that address water supply. The Draft 2007 UVAP does contain ***Implementation Measure LU4.1a*** that recommends establishing a growth management plan for the plan area. It will identify an annual growth rate for new housing units and commercial services. Such a plan would phase and prioritize growth in areas where adequate services and infrastructure are available. ***Implementation Measure 4.1a*** states that new development would not be approved unless there are adequate services and infrastructure to serve that development. ***Policy WM3.1*** recommends that the County minimize the need for new water sources by implementing water conservation measures. Implementation measures under ***Policy WM2.1*** state that the County will identify demand for buildout (this has now been done with completion of the WSA), and ***Policy WM1.1*** requires that the County identify possible new water sources.

The County General Plan also contains policies to ensure that new development can be served by the water providers. *Policy DE-120* states that projects to increase density or intensity should not be granted if there are basic infrastructure deficiencies, unless a program is in place for timely resolution of the deficiency. *Policy DE-121* states that new discretionary development will be required to demonstrate that basic infrastructure is available and the provider has adequate capacity to serve the project. *Policy DE-187* supports efficient and adequate public water and sewer services through combined service agencies, shared facilities, or other inter-agency agreements, including working aggressively with water and sewer service providers to overcome current and projected system and supply deficiencies necessary to serve planned community growth. *Policy*

DE-188 encourages water and sewer service providers to incorporate water conservation, reclamation, and reuse. *Policy DE-191* states that land use plans and development shall minimize impacts to the quality or quantity of drinking water supplies. *Policy RM-8* recommends water conservation. *Policy RM-11* identifies methods the County will use to expand water availability. *Policy RM-17* states that new development must be served by the available water supply.

Given these policies, the County will not permit new development beyond the capacity of water providers to serve new development. However, to fully serve projected buildout, it may be necessary to expand the water supply for certain providers. Development of these new water sources could have ***potentially significant impacts.***

Potential Additional Water Sources

Potential additional or new sources needed to make up the up to 1,610 acre-foot shortfall, along with the possible impacts that development and use of these resources would incur, are described below.

Aggressive Water Conservation and Water Recycling. To date, none of the water purveyors have instituted active water reclamation programs (some purveyors have basic programs stating that water shall not be wasted and use reductions that are required under drought conditions). Also, there is no current use of reclaimed wastewater. Both of these potential resources could provide substantial amounts of water that could be used to supply projected new development. As discussed further in the wastewater section below, the Ukiah Valley Sanitation District can start a water recycling program that could substantially reduce the demand on water purveyors. For example the Ukiah golf course uses over 10% of the daily summer water demand of the City. If aggressive water conservation were required and implemented, it would reduce the shortfall by about 50%.

Water conservation would not be expected to have significant environmental impacts. It is assumed that reuse of reclaimed water would be done consistent with all State laws and requirements that regulate such reuse. Therefore, significant impacts to human health or water quality are not expected. However, the specific impacts would need to be assessed in the CEQA document that would accompany a reuse plan.

Groundwater. A major source of potential additional water is the aforementioned plan area groundwater. The regulatory status of this groundwater remains unknown. If this water is accepted to be groundwater, then there is ample water to meet projected water demand at buildout. The State Department of Water Rights estimated that this aquifer has a safe yield of 10,000 acre feet per year. See the previous discussion under Impact 3.3-I for more information on this groundwater resource. If the State determines that all of this water is, in fact, Russian River underflow, then it appears that this water source was not considered at the time the State determined that water in the Russian River was fully appropriated (since when that decision was made, the State considered this aquifer as groundwater). A 2007 draft report on the Drinking Water Adequacy Assessment by the State Department of Health Services stated, “Additionally, if the assessment of the DWR in 1983 that the basin has a safe yield of 10,000 AFY is valid, it would appear that a determination by the SWRCB to consider all the groundwater to be underflow of the Russian River while also determining that the Russian River is fully appropriated,

severely restricts the utilization of this water resource for users in the Ukiah Valley. As such, it would be highly desirable to conduct a comprehensive groundwater basin evaluation to determine the safe yield of the basin independent of the Russian River."[134]

Continued use of groundwater wells and development of new wells would not be expected to have a significant impact on the groundwater aquifer, given the predicted safe yield. However, if future studies indicate substantial connectivity with Russian River surface flows, it is possible that increased groundwater use would reduce surface flows in the river, thereby adversely affecting salmonids and downstream water users.

Additional Water from Lake Mendocino. Capture of high winter stream flows represent a significant source of possible new water supplies for the plan area. As noted previously, the Russian River main stem and associated tributaries are already fully appropriated between July and October. However, significant water supplies can still be obtained during intense winter storm events, assuming sufficient water storage capacity is made available. In many instances the development of additional storage capacity is cost prohibitive. One of the more promising options is the raising and/or "reoperation" of Coyote Dam to increase Lake Mendocino water storage by as much as 77,000 acre-feet. The raising of Coyote Dam, assuming it is even financially and technically feasible, could take decades to complete.

"Reoperation" means that lake storage could be managed to increase the amount of water in the lake dedicated to water supply by keeping more water in storage for longer periods of time than is currently allowed by the Army Corps reservoir operating criteria (which release water to ensure adequate storage to prevent flooding. By changing the reservoir operating criteria, as much as an additional 5,000 acre-feet could be made available for use. This is an option that could be implemented relatively quickly and cheaply, and would address the projected 2030 plan area water supply shortage.

Raising Coyote Dam would have many potentially significant impacts, including flooding of existing infrastructure; loss of trees and other vegetation; loss of wildlife habitat; possible changes in water temperature in the river; changes in recreational resources; and construction noise and air quality impacts.

Assuming that the Army Corps would not change the operating criteria if doing so would cause substantial new flooding, reoperation would not be expected to have any significant impacts.

Additional Water Rights. As mentioned previously, Millview CWD is seeking to purchase two water rights totaling 5,400 AFY, plus it is seeking to purchase an additional 500 AFY of project water from RRFCD. Successful purchase of these additional sources would increase the chance that Millview CWD can serve projected 2030 buildout.

It is speculative what physical environmental impacts the use of water from these rights or project would have. It is understood that the points of diversion for the water rights currently exist, so the impacts of constructing diversion points would likely be minimal. Impacts to streamflow would also likely not be significant since if the State approves sale

[134] This 2007 Draft report was never finalized or published; however, it principal author, Bruce Burton, conveyed this same conclusion in personal communications with the EIR preparers

and use of these water rights, it would mean the State concluded that use would not affect salmonids. However, without additional information on how much additional water and from what source, the impacts remain speculative.

Off-stream Storage. Other storage options that have been or are currently being investigated include small off-stream storage facilities – on the order of 500 to 1,500 acre-feet – such as the proposed Mendocino College Reservoir, a 500 to 1,500 acre-foot storage facility located north of Ukiah and west of Millview and the proposed Calpella Reservoir, a 100 to 500 acre-foot storage facility located near Calpella and immediately east of the Russian River.

Constructing a new reservoir would be expected to have a range of significant impacts. Depending on the location and size of any new reservoir, resources that would likely be affected include: water quality from new soil erosion; changes to streamflows in streams and in the Russian River; loss of wetlands and oak woodlands; loss of riparian habitat; potential loss of habitat used by special status species; loss of native terrestrial habitat; loss of cultural resources; construction-related impacts on traffic, noise, and air quality; loss of open space views; loss of agricultural lands; and likely other impacts.

The secondary impacts from developing at least some of the potential additional water sources, though speculative at this time, would be considered ***potentially significant.***

Mitigation Measures

Because there are no plans to develop new water sources, the precise impacts remain unknown. As such, it is not feasible to recommended mitigation measures as part of the 2007 Draft UVAP. See Section 4.4 of this EIR that assesses project alternatives that reduce the demand for water. The plan contains numerous policies to protect environmental resources, and these polices will apply to any project to develop new water sources. Specific mitigation measures will be developed as part of the CEQA review of any future project application.

Though mitigation is not required as regards the adequacy of the water supply (since policies in the plan state that if there is insufficient water supply, new development will not be allowed), it is recommended that the County work with the Army Corps to see if it is feasible to revise the reservoir operating criteria to provide more water for the water supply. It is also recommended that the County, working with the five water providers and, possibly the State, seek funding to conduct a hydrogeologic study of the Ukiah Valley groundwater basis and its connectivity with the Russian River. If extensive connectivity is found, then this study should address whether there is additional unallocated water represented by the contributions from the basin.

Impact Significance After Mitigation

Periods of drought will continue to occur and may become more frequent and or prolonged with global climate change. As is the current case, water rationing will be required under these drought conditions. The WSA assessed the ability of the plan area water providers to be able to serve existing and future customers in the case of drought conditions. The result was that certain providers have insufficient supply and that new sources may need to be developed.

The secondary impacts that could result from developing new water sources needed to mitigate for the potential shortage of water remain unknown at this time. Nevertheless, it is expected that they could be ***potentially significant secondary significant and unavoidable impacts.*** The need for rationing is an inconvenience for area residents, but in and of itself is not an environmental impact. However, the County may wish to consider UVAP alternatives that reduce future demand in order to reduce the frequency and/or extent of future rationing. See ***Section 4.4 (Project Alternatives)*** for a discussion of such alternatives.

Construction of Water Infrastructure Impacts

Impact 3.10-l **The increased demand for potable water could require constructing new treatment, storage, or supply facilities, and construction of these facilities could have significant environmental effects.**

To meet the demand of new development, the various water providers will need to construct new water storage, treatment, and supply facilities. Within the plan area, new water lines would need to be extended. At least the following infrastructure improvements may be constructed:

- Millview CWD may possibly reactivate the Masonite Ranney collector; provide new wells; increase storage by about 2.5 MG; increase treatment capacity; and/or extend new water lines to currently unserved portions of its service area.

- Willow CWD needs to substantially increase storage. About 1.0+ MG would be needed to meet projected demand. Additional chlorination would be needed, and supply lines would need to be extended to unserved areas.

- If additional water becomes available, then Calpella CWD would need about another 0.2 MG storage and extension of water supply lines.

- With the construction of the two new planned storage tanks, Rogina Water Company will have adequate storage capacity. New transmission lines may be needed to serve currently unserved areas.

It is expected that all these facilities would be financed by new development and fees already collected by the water providers. It would be speculative to assess the possible environmental effects of constructing these facilities since the location of said facilities has not been proposed. In general, constructing water lines does not typically involve significant environmental effects so long as they avoid wetlands and other sensitive habitats. Water tanks do not take up much space and can typically be sited to minimally affect the environment except for possibly some impact to views. Treatment and chlorination would typically take place in existing treatment facilities. Development of new sources (i.e., Ranney collectors or wells) could have site-specific effects which would need to be examined as part of the CEQA review for those projects. It is not unknown whether these projects would have significant environmental effects that could not be adequately mitigated. The impacts of these projects remains ***potentially significant.***

Consistent with previous findings regarding the construction of future facilities, this EIR concludes that the Draft 2007 UVAP will require the development of new facilities. That construction may have significant, but currently unknown, environmental effects. At this time, it will be assumed that the construction of those facilities may have ***significant and unavoidable impacts.***

F. Wastewater

1. Setting

City of Ukiah and the Ukiah Valley Sanitation District

The City of Ukiah owns and operates a wastewater treatment and disposal facility that also serves the needs of the Ukiah Valley Sanitation District (UVSD). UVSD contracts with the City for operations and maintenance of the UVSD's collection system and treatment and disposal of wastewater. UVSD consists of a 5-member elected board and a District Manager.

Ukiah Valley Sanitation District Service Boundaries

The UVSD currently encompasses lands north and south of Ukiah extending south of Highway 253 to The Forks. It also includes the El Dorado Estates subdivision, the Vichy Springs subdivision, and Mendocino College. The UVSD's Master Service Plan filed with the Mendocino County Local Agency Formation Commission (LAFCo) identifies potential service and annexation areas (called the "extended service area"). The "extended service area" includes that area where future annexations could be allowed. Annexation to the District must be approved by the District's Board, LAFCo and the City of Ukiah City Council.

City of Ukiah Wastewater Treatment Facility

The City's wastewater treatment facility, which provides service to about 20,000 people in the City and the UVSD, is located just south of the Airport Industrial Park, east of Highway 101, and west of the Russian River. The facility has a process capacity of 3.01 million gallons per day (mgd) and a hydraulic capacity of 24.5 mgd.

In 2002, an engineering evaluation found the then existing plant's process capacity was 2.37 mgd, not 2.8 mgd as previously claimed from an improvement project completed in 1983.[135] The facility had reached or exceeded discharge limits relative to biochemical oxygen demand (BOD), nonfilterable residue (NFR), and total coliform bacteria for discharge to the evaporation/percolation ponds, and hydraulic capacity. The facility needed to be upgraded to replace old, outdated equipment; improve reliability and redundancy; and provide greater operational flexibility to provide sufficient process and hydraulic capacity to accommodate population growth from 2005 to 2025.[136]

[135] City of Ukiah Wastewater Treatment Plant Improvement Project Mitigated Negative Declaration, Scheidegger & Associates, 2004.
[136] Ann Burck, Deputy Director of Public Works – Water & Sewer Division

To remedy these problems, the City increased the process and hydraulic capacity to meet customer needs from 2005 until 2025. The Water Reclamation Facility (WARF) Improvement Project included: a new influent pumping station; two circular secondary clarifiers; an upgrade of the disinfection system; conversion of old secondary clarifiers to primary clarifiers; conversion of old primary clarifiers to a solids contact aeration basin; rehabilitation of the two digesters, backwash basins, and chlorine contact basins; and a new solids thickening facility.[137]

The Ukiah wastewater treatment plant is subjected to substantial infiltration and inflow (I/I) from the sewer collection system. Flow projections for 2025 were based on historic flows and projected population growth based on 120 years of U.S. Census Data for Ukiah and the unincorporated areas of the UVSD. For design purposes, it was assumed that I/I would remain constant resulting from rehabilitation of the sewer collection system. The assumption used was conservative, but reasonable, to ensure plant capacity was adequate for the 20-year design period. Collection system improvements for I/I correction may prove beneficial in reducing flows to the plant, extending the hydraulic capacity needs beyond 2025.[138]

Projections of loadings to the year 2025 were based on six years of data. There is some uncertainty in the actual loadings, as plant recycles affected all of the influent samples. Plant recycle loadings account for 7.7% of the BOD_5 loading and 21.4% of the NFR loading.

The improvements will add capacity that can serve an additional 2,400 ESSUs. 65% of this additional capacity is reserved for new development in the UVSD and 35% for new development in the City. As of June 2007, there were 1,092 ESSUs available from this expanded capacity for new development in the UVSD (and an additional 632 ESSUs available for additional development in the City of Ukiah). This increase in capacity was based on what was estimated to be the likely increase in District population over twenty years.

The ESSUs already put to use or claimed include 78 ESSUs for new residences in Vichy Springs Unit II, 18.6 ESSUs for the Pinnacle Homes project off Lake Mendocino Drive, 210 ESSUs for the recently approved Garden's Gate Subdivision project, 62 ESSUs for the RCHDC housing project at 500 Lake Mendocino Drive, and about 13 ESSUs for several small non-residential projects (mainly in the City).

The City received a new National Pollutant Discharge Elimination System (NPDES) permit (DID No. 1B84029OMEN) for the treatment facility in November 2006. This new permit requires the City to conduct a hydrogeologic study to determine the fate and transport of pollutants discharged by percolation from the evaporation/percolation ponds. The City's percolation ponds are unlined ponds that are intentionally scarified each year to promote percolation.

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[137] The plant upgrade produces tertiary treated wastewater that meets Title 22 requirements for unrestricted use, for landscaping, agricultural, and firefighting.

[138] It should be remembered the historic population growth was not linear (i.e. some predictable percentage every year), but annualized over 120 years and projected forward. Some years the growth will be more than assumed and some years the growth will be less than assumed. Therefore, some years more ESSUs will be needed and some years less ESSUs will be needed, but over the next 20 years an additional capacity of 2,400 ESSUs will be needed, based on assumptions made in 2005.

Historically, the North Coast Regional Water Quality Control Board (NCRWQCB) has adopted permits allowing seasonal and year-round discharges to percolation ponds located adjacent to or within stream channels. The discharges are typically regulated as discharges to land and are not held to the same standards as direct discharges to surface waters. These percolation ponds are typically sited in areas of permeable soils and/or gravels and are operated and maintained in order to promote percolation.

In recent years, NCRWQCB staff have identified evidence of pollutants reaching surface water percolation ponds at other treatment plants. The RWQCB and the United States Environmental Protection Agency (USEPA) consider the conveyance or discharge of pollutants to surface water via subsurface pathways (e.g., groundwater or seepage through the soil column) as discharges to waters of the U.S., subject to all Basin Plan requirements, NPDES permitting requirements pursuant to Section 301 of the Clean Water Act, as well as to all waste discharge requirements established by the RWQCB pursuant to Section 13263 of the California Water Code. If the hydrogeologic study demonstrates that wastewater pollutants reach the Russian River, the discharge to the percolation ponds would not be permitted during the dry season from May 15th through September 30th allowed under the existing NPDES permit.[139] Other methods of disposal, such as irrigation with recycled water, would need to be developed.

Connection Fees

The UVSD and City of Ukiah levy fees for connecting to the wastewater system. Currently, the fee for a two-bedroom house is approximately $11,000. The connection fee is used to pay for the additional capacity. Monthly sewer fees are used to pay for ongoing plant operation and maintenance costs. Absent new connections, needed future plant improvements may need to be financed by increasing monthly sewer fees.

Calpella County Water District

The Calpella County Water District (CCWD) serves the Calpella community and surrounding areas. The CCWD provides service to an estimated population of 500 with 103 sewer connections. The CCWD's wastewater treatment plant, located at the south end of Calpella, has a capacity of 120,000 gallons per day (gpd), with capacity to serve over 500 new residential hookups.[140]

Individual On-site Septic Systems

Homes and businesses outside sewered areas generally use individual onsite septic systems. Although the technology of onsite systems has improved in recent years, Mendocino County's Environmental Health Division believes that many older systems may be leaking into the groundwater system.

[139] North Coast Regional Water Quality Control Board Executive Officer's Summary Report, City of Ukiah, Mendocino County, NPDES Permit for Wastewater Treatment Facility, WDID No. 1B84029OMEN, August 29, 2006.
[140] Mendocino County General Plan Update Background Report, op. cit.

Water Conservation and New Sewage Treatment Technologies

Water conservation can help to meet future sewage treatment demands by decreasing the volume of effluent and extending facility capacity. (Sewage treatment plants are, in comparison, very expensive to expand.) Water conservation reduces the volume of water flowing into the plant and extends the life and capacity of the facility. New sewage treatment technologies can reduce impacts on the environment while allowing increasing capacity. Sewage disposal facilities that release treated water into artificially created wetlands can provide a public service to the community and enhance the environment.

2. Criteria Used to Determine Impact Significance

Buildout under the Ukiah Valley Area Plan would have a significant impact if it would:

- Would require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

- Exceed wastewater treatment requirements of the Regional Water Quality Control Board.

3. Impacts

<u>Exceedance of Wastewater Treatment Standards</u>

Impact 3.10-J **Future development under the UVAP would generate wastewater that could exceed the collection, treatment, and/or disposal capacities of wastewater facilities serving the plan area and cause exceedances of the wastewater treatment standards established by the Regional Water Quality Control Board.**

With buildout under the UVAP, the residential population of the plan area would increase by as many as 5,430 new dwelling units, or 13,250 residents by 2030. Buildout under the UVAP is also expected to produce a total of as much as 7 million square feet of new non-residential development by 2030. The State projects that development by 2030 would be 2,772 new residential units, or an increase of 7,127 people.

Of this buildout development, an estimated 300 new residences and as much as 228,855 square feet of new commercial space would be in the Calpella area and would be served by the Calpella County Water District (CCWD). Recent expansion of the CCWD's treatment and disposal facility increased its capacity from 40,000 gpd to 120,000 gpd. The facility has capacity to serve over 500 new residential hookups at 160 gpd per connection, 60% less than daily sewage volume than in Ukiah. Because the sewage volume per connection is so low, the CCWD facility has ample capacity to serve projected growth within the CCWD over the next 20+ years.

The UVSD has about 1,092 ESSUs remaining to serve new development in the UVSD (i.e., 1,092 ESSUs beyond the 382 ESSUs that have already been committed to projects

that have not been constructed yet). It is estimated that about 1,046 new residences would be constructed in areas outside the extended service area identified in UVSD's Master Service Plan and outside the Calpella CWD, and would be served by private sewer systems. These systems would need to comply with all County requirements for private septic systems, which should ensure that they do not pollute area streams or groundwater. The remaining approximately 4,084 possible new residential units could be built either within the existing UVSD boundaries or within its "extended service area." It is estimated that approximately 90% of the new units would be within the existing UVSD service zone and about 10% of the projected new units would be within the "extended service area."

Under the existing treatment and disposal facility expansion, there would be inadequate capacity to serve the projected growth within the UVSD (1,474 ESSUs available, including the ESSUs that have been committed for projects that have not been constructed).

If development occurred at the lower rate projected by the State, then approximately 2,100 new dwelling units would be built within the UVSD boundaries by 2030. There would also be inadequate capacity to serve this projected growth.

The State would prohibit hookups to the plant from new development that would generate wastewater that exceeds the capacity of the treatment and disposal facility. As such either this facility would need further expansion or a new facility(ies) would need to be developed; see the discussion below under Impact 3.10-J. The approximately 2,610 projected units plus non-residential development that cannot be served by existing municipal facilities (and since some of the existing capacity would be used by commercial/industrial development, it is likely there would be more than 2,610 units for which municipal wastewater services are not available) could be serviced by private on-site septic systems or small community systems (e.g., that provided a community leachfield disposal). In addition, if the population increases at the rate projected by the State, the 600+ residences that could not be served by the existing treatment and disposal facility might be constructed outside the UVSD.

It is impossible to determine whether adequate on-site or small community systems would be sufficient to serve the shortfall in municipal services, and it is not possible to project whether new municipal services or expanded existing services would be available. However, it is likely that there would be inadequate collection, treatment, and disposal capacity for the UVSD (at least in its extended service area). In addition, possible future State requirements to amend the disposal methods of the facility could further limit available capacity. If daily sewage volume per connection were equal to rates in the CCWD, the Ukiah wastewater treatment facility improvement project, which will increase process capacity by 640,000 gpd, would result in 4,000 additional ESSUs, rather than the more conservative 2,400 ESSUs currently projected.[141]

The Draft 2007 UVAP does contain ***Implementation Measure LU4.1a*** that recommends establishing a growth management plan for the plan area. It will identify an annual growth rate for new housing units and commercial services. Such a plan would phase and prioritize growth in areas where adequate services and infrastructure are available.

[141] Burck.

Implementation Measure LU4.2a states that new development would not be approved unless there are adequate services and infrastructure to serve that development.

The Draft 2007 UVAP includes ***Policy WM4.2*** that includes a measure stating that new sewerage facilities should be strictly confined to urban and suburban areas, and alternative sewage treatment systems, rather than sewers, should be used to solve existing water quality problems outside the urban and suburban areas. The policy also includes a measure that supports expansion of sewage treatment facility capacity.

As stated previously, the County General Plan also contains policies to ensure that new development can be served by the school district and other service providers. *General Plan Policy DE-120* states that projects to increase density or intensity should not be granted if there are basic infrastructure deficiencies, unless a program is in place for timely resolution of the deficiency. *General Plan Policy DE-121* states that new discretionary development will be required to demonstrate that basic infrastructure is available and the provider has adequate capacity to serve the project. *General Plan Policy DE-187* supports efficient and adequate public water and sewer services through combined service agencies, shared facilities, or other inter-agency agreements, including working aggressively with water and sewer service providers to overcome current and projected system and supply deficiencies necessary to serve planned community growth. *General Plan Policy DE-188* encourages water and sewer service providers to incorporate water conservation, reclamation, and reuse. *General Plan Policy DE-191* states that land use plans and development shall minimize impacts to the quality or quantity of drinking water supplies. In addition, the Housing Element includes *Policy 6.5* that encourages and supports public water and sewer service providers in maintaining and improving in a timely manner facilities necessary to serve existing and projected future residential uses. *Action 6.13* states that the County will assist the development of sites hampered by a lack of infrastructure by supporting funding applications by service agencies for water and wastewater treatment facility planning and engineering studies, improvements, and expansions that facilitate housing production or conservation, especially affordable or special needs housing.

LAFCo is required to conduct Sphere of Influence Updates and Service Reviews for all special districts and the City of Ukiah. These reviews are intended to show whether the agency providing service can, in fact, provide service(s) to the existing and projected population. LAFCo will use the data in this EIR and conduct its independent review of the capability of all service providers to provide adequate service to serve the projected new housing units and up to 7 million square feet of commercial/industrial development projected over the next 20+ years (as well as the additional development within the City of Ukiah).

Given the General Plan and UVAP-proposed policies and measures, new development would not be approved without adequate wastewater treatment and disposal. These policies and measures thereby reduce the chance of pollution and exceedance of wastewater treatment requirements of the Regional Water Quality Control Board from inadequate sewer facilities to a ***less than significant*** level.

A number of commentors on the original DEIR prepared for the original unadopted UVAP stated that the UVAP should limit new development within the UVSD to the number of sewer hookups available. This limit already exists, since new hookups cannot

be allowed if UVSD does not have additional capacity to serve that development. Though not required from a CEQA perspective, the County has the option of redesignating lands within the UVSD to allow a maximum of 1,474 ESSUs. A second option is to develop the proposed Growth Management Program to limit annual growth to the amount that can be supported by available wastewater treatment and disposal as well as other services and infrastructure.

Because new development can be approved only if there is an adequate wastewater system to serve that development, the UVAP would not result in exceedances of RWQCB treatment standards. No mitigation would be required. However, it is recognized that treatment and disposal capacity need to be increased to serve the development allowed under the Draft 2007 UVAP (and as called for in ***Policy WM4.2*** and the County's Housing Element). To clarify this intention (if the amount of new development allowed under the Draft 2007 UVAP is maintained when the plan is adopted), the County may wish to consider the measures listed below. While ***Policy WM4.2*** and *Housing Element Policy 6.5* provide for expanding wastewater facility capacity to meet projected growth demand for such service, the County should consider adding the following measures to clearly signal its intent to quickly address this potential infrastructure constraint.

> **WM4.2e Wastewater Planning**
> The County shall request that the UVSD initiate a planning process to identify the improvements needed to meet projected 20-year growth within the District. The study shall investigate expansion of the existing facility, construction of a satellite facility, pipeline replacement, wastewater reclamation and re-use, and any other method or approach to meet projected demand. *[Timeframe: Short-term. Responsibility: County Board of Supervisors]*
>
> **WM4.2f Recycled Water**
> Require recycled water lines be installed in new discretionary projects. [*Timeframe: Short-term. Responsibility: County Board of Supervisors]*

The County could consider establishing one or more Mello-Roos Districts, or an alternate funding mechanism (as described in the section on Police above). Mello-Roos taxes could be used to finance wastewater facility improvements or the construction of a satellite membrane bio-reactor MBR facility (see the discussion in the subsequent impact).

A number of commentors on the original Draft EIR stated that the EIR should identify the cost of adding new treatment facilities and determine the feasibility of constructing such facilities given that cost. CEQA does not require an EIR to determine the costs of mitigation measures. It would be speculative to estimate costs without knowing what improvements would be needed or proposed. Those costs would be determined by UVSD or whatever other entity proposed constructing a new facility. That entity would determine how the improvements would be financed and the feasibility of the financing mechanism. There is no evidence that constructing new facilities or recycling treated wastewater are not feasible methods of increasing wastewater treatment and disposal capacity. UVSD will need to determine whether the costs and financing of these improvements, if needed, are acceptable to its customers and developers, and this is a

policy issue, not an environmental constraint. If the improvements are not financed, then new development would not be allowed.

Impacts of Constructing New or Expanded Wastewater Facilities

Impact 3.10-K **Because future demand for wastewater services may exceed facility capacity, new or expanded facilities may need to be constructed. The construction of these facilities could have adverse environmental effects.**

The Draft 2007 UVAP does not explicitly identify any new wastewater facilities or facility expansions. However, such expansion would be needed in the future if the plan area is built out as allowed under the Draft 2007 UVAP. Discussion with the City's Director of Public Utilities indicates at least four possible options for providing the needed capacity to serve at least projected growth within the UVSD extended service area: 1) the existing facility can be further expanded to provide the needed capacity; 2) a new satellite facility could be constructed in the North State Complex/The Forks RC area; 3) a satellite "scalping" facility(ies) could be developed north of the City or, possibly, at locations where large residential development is proposed; and 4) development of a wastewater reclamation and recycling program.

The existing treatment components of the facility could be expanded in a relatively simple. The recent upgrading of the facility provides the means for adding additional treatment component that would increase the plant's capacity. Disposal of more treated wastewater would require obtaining additional land for construction of percolation ponds. More importantly, it is possible that the hydrogeologic study will show that the treated wastewater from these percolation ponds is entering the Russian River underflow. In that case, the RWQCB may require the City to develop alternate disposal methods, which may include reclaiming the wastewater for agricultural, industrial, landscaping, or residential reuse.

A satellite facility could be an independent treatment and disposal facility or work in tandem (i.e., master/slave) with the existing facility. In the latter case, the satellite plant(s) could be membrane bio-reactor (MBR) package plants. The MBR process consists of a suspended growth biological reactor integrated with an ultrafiltration membrane system to remove and treat a portion of the wastewater. Treated effluent from the MBR would meet Title 22 standards required for irrigation reuse. The remaining wastewater would then be piped to the main plant for treatment and disposal. These small MBR plants have a major advantage in that they do not require a permit for discharge (since the treated effluent would be used for irrigation or other uses and not discharged to a stream or other water source).[142]

The advantages of constructing a satellite facility include:

- If an MBR facility were constructed, reclaimed wastewater could be used near the plant site.

[142] Burck.

- An MBR plant could be financed by a large development with the reclaimed wastewater used at that development. The developer could be repaid for wastewater generated by other nearby development.

- If in the future the City must develop another method of disposal (i.e., if the RWQCB prohibits percolation disposal), the City and the UVSD may need or want to examine the use of reclaimed water for irrigating large properties. Having two or more plants would facilitate pumping the reclaimed wastewater to the end users.

- An MBR plant would not require an NPDES discharge permit from the Regional Water Quality Control Board.

- Given the uncertainty about the availability of water in the plan area, reuse of wastewater could substantially increase the water available in the area.

New plants, whether they are MBR or conventional plants, would require additional storage area for wastewater that is generated in the winter months and is not reused for other non-landscaping uses.

The UVSD has not conducted any detailed studies of MBR or other new plants nor of the use of reclaimed water. As part of the City's engineering design study for the wastewater treatment facility improvement project, a Technical Memorandum was prepared on the effluent storage requirements for possible reuse.[143] That study investigates a variety of future scenarios and estimates that to serve future development at a 4.0 mgd average flow, 386 to 537 million gallons of storage would be required to irrigate 600 to 2,400 acres. (The amount of storage correlates with the amount of plant capacity and annual rainfall.) The study identified 21 possible irrigation sites totaling 526 acres; these are all publicly owned lands. Substantial additional research and analysis would need to be done to determine the feasibility and costs of developing new facilities and reusing treated wastewater.

The City of Ukiah's Urban Water Management Plan states that there is substantial potential for using recycled water but postpones the discussion of how much water could be recycled and where to a subsequent Water Recycling Master Plan that the City will prepare.[144]

It is expected that new pipelines would need to be constructed, and capacity of existing lines upgraded in some areas. It is not expected that installing these lines which are mainly within road rights-of-way would have significant impacts.

Possible future expansion of the City's treatment and disposal facility or development of satellite facilities could adversely affect the environment. Potential impacts could include: potential damage to rare plant and animal populations and sensitive biological habitat; conversion of agricultural lands or soils; odor impacts; construction-related impacts; visual impacts land use conflicts with park neighbors; and other currently unknown impacts. These are ***potentially significant impacts.***

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[143] *Preliminary Evaluation of Effluent Storage Requirements and Recycled Water Use*, Technical Memo No. 20 for the Wastewater Treatment Plant Improvement Project Planning Phase Report.
[144] *City of Ukiah 2005 Urban Water Management Plan*, Brown and Caldwell, November 2007.

Mitigation Measures

Without knowing what, if any, new facilities would be proposed or the site for these future facilities, it is not possible at this time to provide mitigation measures to address potential impacts resulting from construction of the new facility(ies).

Impact Significance After Mitigation

Consistent with previous findings regarding the construction of future facilities, this EIR concludes that the Draft 2007 UVAP will require the development of new wastewater facilities. That construction may have significant environmental effects. At this time, it will be assumed that the construction of those facilities may have ***significant and unavoidable impacts.***

G. Solid Waste

1. Setting

The entire plan area is under the purview of the County of Mendocino and is served by a trash and recycling collection franchise contract between the County and Empire Waste Management (EWM). Properties within the Ukiah city limits receive trash and recyclable pick-up service from C&S Waste Solutions.

Transfer Station

Solid waste is taken to the Ukiah Valley Transfer Station at 3151 Taylor Drive in the unincorporated area southeast of Ukiah. This facility is permitted by Mendocino County and operated by C&S Waste Solutions under contract with the City of Ukiah. The facility handles both solid waste and recyclables. The transfer station is designed to receive 200 tons of waste per day, and currently receives an average of 120 to 130 tons per day. The station is permitted to receive up to 400 tons per day under a permit that is renewed every five years. C&S Waste Solutions has indicated that, although it would not be a desirable situation, the facility could handle 400 tons per day by changing its operations and processing methods.[145]

Landfill

Waste is transferred from the Ukiah Valley Transfer Station to the Potrero Hills Regional Landfill in Suisun, Solano County. Recyclables are taken for processing to C&S Waste Solutions processing facility on North State Street. The landfill, which is operated by Waste Connections Inc. has ample capacity to at least 2017. Given data provided by the landfill operators, no problems regarding the landfill's capacity or operation are foreseen, provided that applications for expansion are approved.[146]

[145] Rick Seanor, Deputy Director of Public Works, City of Ukiah, e-mail communication, 2/26/08.
[146] Mike Sweeney, General Manager, Mendocino Solid Waste Management Authority, e-mail communication, 2/1/10.

2. Criteria Used to Determine Impact Significance

Buildout under the Ukiah Valley Area Plan would have a significant impact if it would:

- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Not comply with Federal, State, and local statutes and regulations related to solid waste.

3. Impacts

Increase in Solid Waste Disposed at Transfer Station and Landfill and Compliance with Solid Waste Laws and Regulations

Impact 3.10-L Development in the plan area would generate solid waste that would need to be accommodated at the Ukiah Valley Transfer Station and the Potrero Hills Regional Landfill.

With buildout under the UVAP, the residential population of the plan area is expected to increase by 13,250 residents by 2030. Development under the UVAP is also expected to produce a total of about 7 million square feet of new non-residential development by 2030.

Assuming each household generates one 32-gallon can of waste per week and every 6.5 cans equates to one cubic yard of waste, the 5,430 housing units would generate approximately 835 cubic yards of waste each week. Since one cubic yard weighs about 345 pounds, this estimate would translate to about 144 tons of waste each week. This amount of waste would represent a 20-percent increase in the current average handled by the Ukiah Valley Transfer Station each day (120 to 130 tons). It is difficult to estimate the amount of waste that would be generated by the commercial and industrial development anticipated under the UVAP, since these uses can vary greatly.[147] However, it would appear that the transfer station has more than adequate capacity to handle the solid waste generated by projected new development since it is only operating at 65% of capacity and 33% of planned capacity.

The Potrero Hills Regional Landfill is expected to have ample capacity to accommodate solid waste from development in the plan area, and the transfer station has sufficient capacity to handle projected solid waste flows. The operator of this landfill was issued a permit in December 2006 that allows average disposal of 3,400 tons per day (4,330 tons per day on a peak day). The landfill has sufficient capacity to at least 2017 given its current configuration and permit. No violations of Federal, State, or local statutes or regulations related to solid waste are anticipated.

Though no mitigation is currently warranted, the Draft 2007 UVAP does contain policies to ensure that there will continue to be adequate solid waste collection and disposal. Draft 2007 UVAP contains ***Implementation Measure LU4.1a*** that recommends establishing a growth management plan for the plan area. It will identify an annual

[147] Paul Cayler, 1/11/05.

growth rate for new housing units and commercial services. Such a plan would phase and prioritize growth in areas where adequate services and infrastructure are available. ***Implementation Measure 4.2a*** states that new development would not be approved unless there are adequate services and infrastructure to serve that development.

The County General Plan also contains policies to ensure that new development can be served by the school district and other service providers. *General Plan Policy DE-120* states that projects to increase density or intensity should not be granted if there are basic infrastructure deficiencies, unless a program is in place for timely resolution of the deficiency. *General Plan Policy DE-121* states that new discretionary development will be required to demonstrate that basic infrastructure is available and the provider has adequate capacity to serve the project. The General Plan specifically addresses solid waste issues in *General Plan Policies DE-201* to *DE-204*. Specifically, *General Plan Policy DE-201* states that The County will maintain a comprehensive integrated waste management plan consistent with General Plan, environmental, and public health objectives.

The Source Reduction & Recycling Element jointly adopted by the County of Mendocino and cities of Ukiah, Fort Bragg, and Willits sets forth a strategy to minimize the volume of solid waste requiring land disposal. The Nondisposal Facility Element addresses the variety of new and expanded nondisposal facilities necessary to implement the Source Reduction & Recycling Element. These include transfer stations with extensive drop-off recycling to serve the high proportion of rural area self-haulers, composting facilities to process yard waste and wood waste, and recycling processing facilities to prepare recyclables for shipment to market. The multi-jurisdictional strategy also includes curbside, commercial, and drop-off recycling where waste generators (households, businesses, etc.) separate recyclables from trash. Franchised and permitted haulers continue to collect trash as well as take responsibility for the efficient handling of recyclables.[148]

Given sufficient capacity at the transfer station and landfill and legally required compliance with the recycling requirements set forth in AB 939, the additional solid waste generated by projected development would have a ***less than significant impact***, and no mitigation is required other than continued compliance with State law and proper operation of the transfer station per the conditions set forth in the County use permit.

H. Parks and Recreation

1. Setting

Existing Park and Recreational Facilities

Park and recreational facilities serving the Ukiah Valley include Federal recreation areas, County and City of Ukiah parks, recreational facilities at local public schools and Mendocino College, and the 12th District County Fairgrounds. A bicycle route system and limited hiking and equestrian trails also exist on public land in the valley.

[148] *Mendocino County General Plan Update Background Report*, *op. cit.*

Federal Recreation Areas

The Ukiah Valley contains two federal recreation areas:

- The 5,110-acre Lake Mendocino Recreation Area located in the northeastern part of the UVAP plan area. This recreation area offers a multi-purpose reservoir, day-use facilities, and overnight campground facilities operated by the U.S. Army Corps of Engineers.

- The 1,296-acre Cow Mountain Recreation Area located in the Mayacamas Mountains, adjoining the eastern boundary of the UVAP planning area. Mill Creek Road provides access from Ukiah to the recreation area. Cow Mountain offers hiking and horseback trails, hunting, camping, and off-highway vehicle use. The recreation area is managed by the U.S. Bureau of Land Management.

County Parks

The County of Mendocino manages two parks in the Ukiah Valley:

- The 60-acre Mill Creek County Park, located east of the UVAP plan area and adjoining the Cow Mountain Recreation Area. This park offers access to Mill Creek for swimming and fishing, hiking trails, picnic areas, and an equestrian trail.

- The 80-acre Low Gap Regional Park, located in the western part of the UVAP plan area. A portion of this park is located within the City of Ukiah. The park includes tennis courts, playgrounds, picnic areas, horseshoe pits, disc golf, an archery range, and hiking trails.

Mendocino College

Some of the recreational facilities at Mendocino College, located in the western part of the UVAP plan area, are available for public use. Public facilities include an all-weather track, six tennis courts, a disc golf course, and two outdoor volleyball courts (one sand and one grass). The college also has a gym that is used by organized basketball leagues.[149]

12th District County Fairgrounds

The 12th District County Fairgrounds is located on North State Street and contains 10 acres within the City of Ukiah and 40 acres outside the City limits. Recreational facilities include a golf driving range, horseshoe pits, car race track, and arena. Buildings at the fairgrounds also provide space for educational and social events.

City of Ukiah Recreational Facilities

The highest concentration of parks is in the City of Ukiah. The City contains 188 acres of parks and recreational areas, including the 87-acre, 18-hole Ukiah Municipal Golf Course; a portion of the 80-acre Low Gap Regional Park; the 16-acre Todd Grove Park,

[149] *Draft 2002 UVAP*, page 7-4

a community park containing the only public swimming pools in Ukiah; the 42-acre Riverside Park, which includes a BMX bicycle "moto-cross" track and Little League fields; baseball and football facilities at Giorno Park/Anton Stadiu m – a 12-acre facility; the 10.3-acre Outdoor Sports Complex in northeastern Ukiah; and several smaller parks (Alex R. Thomas Plaza on South State Street; the 0.2-acre Gardner Park on Oak Street; McGarvey Park, a 1-acre park on Dora Street; Nokomis Tennis Courts on Wabash Avenue; the 4-acre Oak Manor Park on Oak Manor Drive; the 2.5-acre Observatory Park on Observatory Street; the 0.25-acre Orchard Park on South Orchard Street; and the 4.7-acre Vinewood park on Elm Street. The City is collecting funds to develop the Ukiah Skate Park beside the Railroad Depot Park on East Perkins Street.

The Russian River

The Russian River provides recreational opportunities such as swimming, fishing, inner tubing, and picnicking. However, there are no public access points to the Russian River in the Ukiah Valley. Riverside Park is the only publicly owned site that has a plan for future access. Currently, however, this river access location is undeveloped and is not legally accessible.

Other Parks and Recreational Facilities

Parks and recreational facilities that are more distant from the plan area include:

- Mendocino National Forest in northeastern Mendocino County,

- State parks along the Pacific coast in the western part of the County, including Van Damme State Park, MacKerricher State Park, Manchester State Park, Point Cabrillo Light Station and Preserve, Jug Handle State Reserve, Caspar Headlands State Reserve, Greenwood State Beach, Admiral William Standley State Recreation Area, Caspar Headlands State Beach, Mendocino Headlands State Park, Navarro River Redwoods State Park, Russian Gulch State Park, Schooner Gulch State Beach, Westport-Union Landing State Beach, Sinkyone Wilderness State Park, and Jackson Demonstration State Forest.

- State parks located in inland areas, including Hendy Woods State Park, Montgomery Woods State Reserve, Mailliard Redwoods State Reserve, Mendocino Woodlands State Park, Smithe Redwoods State Reserve, and Standish-Hickey State Recreation Area.

- Mendocino County parks, including Bower Park northeast of Gualala, Faulkner Park in the Anderson Valley, Indian Creek Park southeast of Philo, McKee Parkway in Potter Valley, and Redwood Valley Lions Club Park in Redwood Valley.

In addition, other City parks, school facilities, fairgrounds, local recreational and park district lands offer recreation opportunities for County residents and visitors.[150.]

[150] *Mendocino County General Plan Update Background Report*, *op. cit.*

Planned Facilities

Given the lack of neighborhood parks, which are generally intended to serve the basic recreational needs of people living within a local neighborhood, residents of outlying areas such as Talmage, The Forks, Redwood Valley, and Calpella generally rely on the federal recreation areas and regional, City, and County parks. Local public and private school grounds tend to substitute for neighborhood parks in areas such as Calpella. The Draft 2002 UVAP (page 7-4) stated that "the low density and small scale of development typical of development outside the City and environs has generally not warranted that recreational facilities be incorporated into individual development projects in the unincorporated Valley. However, as populations in the outlying areas expand, so does the need for recreational facilities." The Draft 2002 UVAP (page 7-4) further stated that "several opportunities for the development of park facilities in the area exist. The Grace Hudson Elementary School site could serve or supplement neighborhood park needs. Park facilities in the Washington Avenue area could also be included in a Redevelopment Plan to be funded by the County Redevelopment Agency."

Furthering these objectives, the Ukiah Unified School District, in cooperation with the County and the City of Ukiah, has provided a portion of the approximately 14-acre Grace Hudson Elementary School on South State Street for use by the County (the 20,000-square-foot Ukiah Valley Cultural and Recreation Center). The center is a recreation facility for use by Ukiah Valley youth and their families and is expected to include a state-of-the-art gymnasium, a youth center with rooms for arts, crafts, music, computers, and classes; a professional kitchen; associated meeting rooms, office space, and counseling rooms; and outdoor play areas, including soccer fields.

The City of Ukiah has completed a Bicycle and Pedestrian Master Plan, including a plan for a "Rail Trail."

Mendocino County General Plan Standards

The Recreation Element of the Mendocino County General Plan establishes standards for three types of parks or recreation areas, as follows:

<u>Neighborhood Parks</u>: 2.0 acres/1,000 people
Neighborhood parks focus on serving children's recreation needs and where possible should be adjacent to schools. Neighborhood parks should be 2 to 5 acres in size and may include playgrounds, tot lots, turf play areas and picnic tables. New residential developments in community areas and large residential developments (50 or more homes) should have a neighborhood park within 0.5 miles of each residence.

<u>Community Parks</u>: 1.5 acres/1,000 people
Community parks provide a focal point and gathering place for all age groups of the larger community. Community parks are generally 10 to 50 acres in size, and may include multi-purpose fields, ball fields, hard court areas, playgrounds, swimming pools, tennis courts, skate board facilities, group picnic areas, and community centers.

<u>Regional Parks</u>: 1.5 acres/1,000 people
Regional parks incorporate natural resources such as lakes, creeks, rivers, and serve a region involving more than one community. Regional parks generally range in size from

30 to 10,000 acres with the preferred size being several hundred acres. Facilities may include multi-purpose fields, ball fields, group picnic areas, playgrounds, hard court areas, swimming pools, tennis courts, skate board facilities, amphitheatres, shooting sports facilities, concessionaire facilities, trails, nature interpretive centers, campgrounds, natural or historic points of interest and community multi-purpose centers.

Funding Sources

New development typically assists in funding new or expanded recreational facilities through park land dedications, payment of fees in lieu of dedication, or development impact fees. Under the Quimby Act, a formula is established for park land dedication or payment of in-lieu fees. The City of Ukiah has requirements for dedications and in-lieu fees, while the County does not.[151] However, the County General Plan includes a policy recommending the County require these fees (*Policy DE-178*).

2. Criteria Used to Determine Impact Significance

Buildout under the Ukiah Valley Area Plan would have a significant impact if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks.

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

3. Impacts

Increased Demand for Park Facilities Resulting In Deterioration of Existing Facilities or the Need for New Facilities

Impact 3.10-M **Future development under the UVAP would increase the plan area population, thereby increasing the demand for parks and recreational facilities. This increased demand could result in significant deterioration of existing facilities and the need for new or expanded facilities.**

With buildout under the UVAP, the residential population of the plan area would increase by 13,250 people by 2030 due to development of approximately 5,430 new housing units. The new residents would be likely to use existing parks and recreational facilities. This increased use would represent a potentially significant impact because it would create the potential for substantial deterioration of these facilities, as well as the need for

[151] *Draft 2002 UVAP*, page 7-5

new or expanded facilities. Per General Plan standards, about 20 acres of community parks, 26 acres of neighborhood parks, and 20 acres of regional parks would be needed to serve this population (plus additional parks that could be needed to serve the existing population).

The Draft 2007 UVAP designates about 21 acres of the plan area as "Parks and Recreation" (about 6.1 acres on the Brush Street Triangle and 14.9 acres south of Lake Mendocino Drive). This acreage does not meet County standards for parks.

The Parks, Recreation and Community Facilities Section of the Draft 2007 UVAP contains numerous policies and measures to address the recreational needs of future residents. Per ***Policy PR1.1***, the County will conduct a Valley-wide park and community facilities "needs assessment" and master plan that will identify funding sources and implementation strategies. One measure under this policy calls for expansion of Riverside Park in cooperation with the City and surrounding landowners. ***Policies PR2.1*** and ***PR2.2*** recommend a variety of park funding solutions, including collaboration with the City and the Ukiah Unified School District. ***Policy PR2.2*** requires park land dedications or in lieu fees to fund new development's fair share of regional recreational facilities. These three policies provide the framework for the County to fund and provide necessary recreational facilities.

Once the County adopts the park standard and/or in-lieu fees, the County can acquire needed park lands. For larger developments, the County can require that on-site parks be provided to meet the standard. The approval of impact fees would provide additional funding to develop community (or regional) parks. Park land dedication ordinances are common throughout California. Such an ordinance could be quickly drafted and adopted by the County. Until it is adopted, the County can tier off this EIR to demonstrate the need for park land, and require dedication or fees for new development when conducting CEQA review of that development.

Under ***Policy PR1.3*****,** the County will conduct a Valley-wide needs assessment of recreational programs and services that will identify funding sources and implementation strategies. ***Policies PR2.1*** and ***PR2.2*** identify methods of obtaining funding (e.g., grants, partnerships) to implement the recommended program improvements.

Policy PR1.2 calls for the County to develop a Trails Master Plan to identify existing and needed trail connections, focusing on developing or improving connections between existing trails and public lands; development of the Trail Plan would be guided by a County-designated Trail Committee. ***Policy PR1.2*** calls for the County to investigate funding options for implementing the Trail Plan. The Draft 2007 UVAP does not explicitly identify any new trail routes or trail construction.

Per ***Policy PR3.1***, the County will host community-sponsored cultural and recreational events. Under ***Policy LU5.5***, the County will identify a location for a Mercado and market the site to private developers and attract tenants.

The Draft 2007 UVAP also contains ***Implementation Measure LU4.1a*** that recommends establishing a growth management plan for the plan area. It will identify an annual growth rate for new housing units and commercial services. Such a plan would phase and prioritize growth in areas where adequate services and infrastructure are

available. ***Implementation Measure LU4.2*** states that new development would not be approved unless there are adequate services and infrastructure to serve that development.

The County General Plan also contains policies to ensure that new development can be served by the school district and other service providers. *General Plan Policy DE-120* states that projects to increase density or intensity should not be granted if there are basic infrastructure deficiencies, unless a program is in place for timely resolution of the deficiency. *General Plan Policy DE-121* states that new discretionary development will be required to demonstrate that basic infrastructure is available and the provider has adequate capacity to serve the project. *General Plan Policies DE-171* to *DE-185* specifically address parks and recreation issues. *General Plan Policy DE-178* recommends adopting a Quimby Act ordinance requiring parkland dedication of in lieu fees to cover the park needs established in *General Plan Policy DE-179* (listed previously in the Setting section).

The Draft 2007 UVAP does not designate sufficient park land to meet the needs of existing or future residents. However, the policies provide a framework for requiring the dedication of sufficient land for new parks. The critical policies and measures have timeframes of "ongoing" or "short-term." If the County adopts the impact fees and park land dedication ordinance within 1 to 3 years (and requires similar mitigation for projects proposed prior to adoption of the fees), deficiencies in the amount of park land available to serve new development in the plan area would be avoided.

However, the County would still need to develop sources of funding for ongoing park operations and maintenance. This is critical as the in-lieu fees and impact fees are only used to purchase park land. Unless the County receives fees to manage and operate the new parks, they would not be developed or would soon deteriorate from lack of staffing. The potential for a lack of sufficient park land and/or deterioration of park land would therefore represent a ***potentially significant impact.***

In addition, construction of new parks and/or trails needed to serve the additional population could have adverse environmental impacts. As is the case for new wastewater facilities, schools, and a new criminal justice center, it is speculative at this time to identify all impacts. However, impacts could include: exposure of park users to hazardous geologic conditions; increased runoff aggravating flooding; potential damage to rare plant and animal populations and sensitive biological habitat; increased traffic affecting streets near the park; increased risk of wildfire ignition; increased demand for fire, police, and emergency medical response; noise and visual impacts on park neighbors; land use conflicts with park neighbors; and other currently unknown impacts. These are ***potentially significant impacts.***

Mitigation Measures

3.10-M.1 The County shall provide for ongoing park operations and maintenance, the following implementation measure shall be added to the Parks, Recreation and Community Facilities Section:

PR2.2d Ongoing Park Operations and Maintenance
Provide for ongoing funding of park operations and maintenance through assessment districts, homeowners associations, and other means. *[Timeframe: Ongoing. Responsibility: Board of Supervisors]*

No additional mitigation is required for the impact on existing park facilities. However, commentors on the original Draft EIR recommended that the Draft 2007 UVAP include a policy or measure to establish a County Parks and Recreation Department. This department would be responsible for purchasing, developing, and maintaining parklands, other community facilities, and recreational and community programs. Currently, the County does not have such a department. The County did not include provision for such a department when adopting its new General Plan.

No mitigation can be recommended to reduce impacts from construction of new parks or trails. Those mitigations would be developed in the CEQA documents that would be prepared when the County proposed development of the park(s) or trail(s).

Impact Significance After Mitigation

Consistent with previous findings regarding future facilities, this EIR concludes that the Draft 2007 UVAP could result in development of new park facilities and trails. That construction may have significant environmental effects. At this time, it will be assumed that the development may have ***significant and unavoidable impacts.***

3.11 HAZARDS AND HAZARDOUS MATERIALS

A. Setting

1. Hazardous Materials

Definition

Title 22 of the California Code of Regulations (CCR) (Section 66260.10) defines a hazardous material as:[152]

> "A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious, irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed."

Hazardous materials are used throughout the plan area in various agricultural, industrial, commercial, medical, research, and household settings. Numerous federal and State laws, as well as local policies and plans, control the production, transportation, storage, and use of these hazardous materials and their waste products.

Safety Concerns

If improperly handled, hazardous materials can result in public health hazards through contamination of soils and groundwater, or through airborne releases in vapors, fumes, or dust. There is also the potential for accidental or unauthorized releases of hazardous materials that would pose a public health concern.

Exposure to hazardous materials and wastes could cause various short-term or long-term health effects that would be specific to each chemical or combination of chemicals. Possible health effects of exposure may be acute (immediate, or of short-term severity), chronic (long-term, recurring, or resulting from repeated exposure), or both. Construction workers typically have greater-than-average risk of exposure to contaminated soil or groundwater. Accidents or spills during transport of hazardous materials or wastes have the potential to expose the public and the environment to these substances. If contamination at a project site remains undetected, risks to workers and the public would be greater because risk-reducing precautions might not be taken during site development.

The presence of asbestos in a building does not necessarily mean that the building poses a health hazard. In many cases, the asbestos within buildings is inaccessible or sealed within another material, and thus unable to cause an exposure hazard. However, asbestos fibers can be released during building renovation or demolition, unless proper precautions are taken. Studies have demonstrated that chronic inhalation of asbestos

[152] *Ibid.*

fibers may lead to increased risk of developing respiratory or abdominal cancers. There is no known safe level of exposure.[153]

Use, Storage, and Transport in the Plan Area

Hazardous materials are commonly used in various commercial, agricultural, and industrial applications as well as, to a limited extent, in residential areas of the Ukiah Valley. A number of sites may contain hazardous materials and have the potential for public health hazards, including possible soil or groundwater contamination from past and present underground storage tanks, and hazards associated with the storage and handling of hazardous materials at area businesses.

Based on a search of various State and Federal databases, the Mendocino County Redevelopment Project Draft EIR identified sites that are contaminated with and/or are generators of hazardous materials in the redevelopment project area, an area that is located within and smaller than the UVAP area.[154] These sites include locations of aboveground and underground fuel storage tanks, and may also include existing or former commercial or industrial uses that may have involved hazardous materials use or storage.

According to the Background Report, transportation of hazardous materials has been an issue of concern in the County. Highway 101 and State Route 20 east of Calpella are the least restrictive for truck traffic. A 1996 study by the County Division of Environmental Health inspected commercial trucks traveling on these highways for presence of hazardous materials. The study found five propane trucks during a six-hour period on State Route 20, and an average of three loads per hour containing hazardous materials being carried north on Highway 101. The most common hazardous materials on County highways were petroleum products such as gasoline, diesel fuel, and liquefied petroleum gas (LPG). Other hazardous materials transported in significant amounts included liquid oxygen, sulfuric acid, lead acid batteries, and other acids and caustics.[155]

Another potential source of hazardous material releases would be rupture of pipelines. As discussed in ***Section 3.10, Public Services and Utilities***, local service districts in the UVAP area provide sewer services. Rupture of sewer lines would contaminate adjacent soils and waters, particularly with bacteria and other organic substances. In addition, one major natural gas pipeline traverses the County from the San Francisco Bay Area to the Willits area, and various distribution lines deliver natural gas to users. Generally, the responsibility for managing pipeline ruptures falls upon the agency that owns and operates the line. Other agencies may become involved, however, if the effects of the rupture become extensive.[156]

Hazardous wastes generated by residents and businesses must be collected and transported out of the County for disposal, since there is no permitted Recycling, Treatment, Transfer, Storage and Disposal Facilities (TSDF) within the County. There is

[153] *Mendocino County Redevelopment Project Draft EIR*, *op. cit.*
[154] *Ibid.*
[155] *Mendocino County General Plan Update Background Report*, *op. cit.*
[156] *Ibid.*

the potential for trucks carrying these hazardous wastes to become involved in an accident, thereby releasing these wastes into the environment.

Various property owners can and do apply pesticides, herbicides, insecticides, fungicides, and other chemical for commercial and household use. Household use of such chemicals is not regulated, and the amount used in the plan is unknown. Agricultural applications are monitored by the County Agricultural Commissioner. In 2008, a total of 952,824 pounds of these chemicals were applied (in 6,950 applications) by agricultural and other operators in the County as a whole.[157] Applications of agricultural chemicals vary considerably from year to year. Depending on the crop, dry years require modest applications of such chemicals as fungicides, while wet years require substantial applications of such chemicals.

Federal, State, and Local Regulations

Extensive Federal, State, regional, and local regulations govern the handling, storage, use, production, and disposal of hazardous materials and waste.

Federal Regulations

The U.S. Environmental Protection Agency (EPA) is the lead agency responsible for enforcing Federal regulations that affect public health and the environment. The EPA designates much of its regulatory authority to the individual states. The California Department of Toxic Substances Control (DTSC) within California EPA enforces hazardous materials laws and regulations in California in conjunction with the U.S. EPA.

The U.S. EPA provides asbestos standards. The Federal Occupational Safety and Health Administration (OSHA) and its State counterpart, CalOSHA, regulate various aspects of asbestos removal, handling, and disposal to ensure worker safety. Transport and disposal of asbestos-containing material are also regulated.[158]

The Federal Hazardous Materials Transportation Act (49 USC Section 1801 et seq.) aims to ensure the safe transport of hazardous materials via water, rail, highway, air, or pipeline transport. The Resource Conservation and Recovery Act (42 USC Sections 6901 et seq.) Subtitle I requires monitoring and containment systems for underground storage tanks that hold hazardous materials.[159]

State Regulations

The California Code of Regulations (CCR) sets forth California's hazardous materials control regulations, and the State Health and Safety Code (Division 20, Chapter 6.5) contains laws governing the transport, treatment, and disposal of hazardous wastes. In

[157] There are no existing summaries for the plan area, and preparing this would be a major work effort for the Agricultural Commissioners office. This total includes chemicals that are used for landscaping, road right of way work, and other uses where chemicals defined as "agricultural" are used. For example wood preservative treatment uses about 217,000 pounds of these chemicals. Sulfur applied mainly to grapes accounts for about 483,366 pounds State Department of Pesticide Regulation, *2008 Annual Pesticide Use Report Indexed by Chemical – Mendocino County*

[158] *Mendocino County Redevelopment Project Draft EIR*, *op. cit*.

[159] *Mendocino County General Plan Update Background Report, op. cit*.

general, the State considers a material to be a hazardous material if it poses a threat to human health or the environment. Under California law (CCR Section 66680), approximately 800 substances are listed as potentially hazardous depending on their property or combination of properties. A State-regulated hazardous waste can be present in a liquid, semi-solid, solid, or gaseous form. California law (CCR Sections 66471, 66680, and 66693 et seq.) requires that the source or generator of a potentially hazardous material determine if that material is in fact hazardous and stipulates the criteria and analytical methods for determining whether a material is hazardous.[160]

To protect the public and the environment during the transportation of hazardous waste, stringent State and federal regulations about container packaging and labeling, vehicle identification and manifesting have been established. California law requires that hazardous waste (as defined in California Health and Safety Code Division 20, Chapter 6.5) be transported by a California registered hazardous waste transporter that meets specific registration requirements. The requirements include possession of a valid Hazardous Waste Transporter Registration, proof of public liability insurance which includes coverage for environmental restoration, and compliance with California Vehicle Code registration regulations required for vehicle and driver licensing. A complete list of requirements can be found in Title 22 CCR, Chapter 13. State agencies with primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and Caltrans. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads. On State highways, Mendocino County can request a restriction on the hours of transport of nuclear wastes, but these restrictions must be approved by the California Highway Patrol.

The State also assigns authority to the North Coast Regional Water Quality Control Board (RWQCB) to regulate pollution discharge and water quality in the area. In addition, pursuant to the California Health and Safety Code, Division 20, Chapter 6.8, the State Department of Toxic Substances Control oversees the clean-up of sites where hazardous substances have been released. (See discussion in Section 1.7, Project Review and Required Approvals, and ***Section 3.2, Hydrology and Water Quality***, of this EIR.)

The regulation of pesticide storage, application, and waste disposal is under the jurisdiction of the County Agricultural Commissioner who implements the Cal EPA Department of Pesticide Regulations (DPR) program. The Agricultural Commissioners office annually compiles reports required of farmers and other users of agricultural pesticides that provide complete, site-specific documentation of every pesticide application. These reports are transferred to DPR.

Local Regulations

Regulations at the County level include adopted standards for use, storage, and handling of hazardous materials. The Land Use Element of the Mendocino County General Plan incorporates public health and safety considerations into long-term planning. (See further discussion under Section B, Potential Impacts and Mitigations, below.)

[160] *Mendocino County Redevelopment Project Draft EIR*, *op. cit*.

In 1989, Mendocino County adopted a Hazardous Waste Management Plan to guide future hazardous waste management decisions by the County and incorporated cities. The County is updating the Hazardous Waste Management Plan.[161]

The Mendocino County Division of Environmental Health is the local enforcement agency for issuing permits and regulating hazardous material operations. Businesses that require hazardous materials storage must submit a Hazardous Material Business Plan to the Division of Environmental Health. In 1997, the Division of Environmental Health assumed responsibility for administering hazardous waste generation and treatment regulations.[162]

Response to Hazardous Materials Releases

Through the Redwood Empire Hazardous Incident Team (REHIT), a Joint Powers Agreement (JPA) provides hazardous materials team emergency response throughout the County. This multi-agency response team is capable of handling all levels of hazardous materials incidents on a 24-hour basis, and providing training for local fire departments. Members of REHIT include State-certified hazardous materials specialists and technicians. Other agencies with hazardous materials capabilities include the fire departments of the incorporated cities, the Ukiah Valley and Redwood Valley fire districts, and the California Department of Forestry and Fire Protection. Local law enforcement agencies and the California Highway Patrol can assist in the management of hazardous materials incidents.[163]

The Mendocino County Office of Emergency Services (OES) is responsible for disaster planning, assistance, and coordination of all jurisdictions in the Mendocino Operational Area, which encompasses Mendocino County. In 2006 the County adopted the Mendocino Operational Area Emergency Operations Plan that describes how various departments and agencies will respond to the range of potential emergencies that might occur in the County.

OES administers the Mendocino County Operational Area Emergency Operations Plan for the planned response to extraordinary emergency situations, including hazardous materials releases within or affecting the County. This plan establishes the framework for implementation of the Standardized Emergency Management System (SEMS), a system required by the State for managing responses to multi-agency and multi-jurisdictional emergencies in California and the National Incident Emergency Management System (NIMS). In addition, OES reviews and makes recommendations regarding emergency operation plans for public and private institutions where pre-planning for emergency procedures is advisable. Coordination of emergency services and planning guidelines are provided for situations such as flooding, wildland fires, structure fires, explosions, hazardous materials, severe weather, and earthquakes.[164]

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[161] *Mendocino County General Plan Update Background Report, op. cit.*
[162] *Ibid.*
[163] *Ibid.*
[164] *Ibid.*

2. Airport Hazards

The City of Ukiah owns and operates the 165-acre Ukiah Municipal Airport, located west of Highway 101 just south of State Route 222 in the southern part of Ukiah. The airport was built in 1942 for the military and has remained in the same location for over 50 years. According to the City's airport master plan report, the airport's runway (Runway 15-33) is 4,415 feet long and there are no plans for extension. Since 1986, the City has expanded the Airport Runway Protection Zone, placed an emphasis on commercial and industrial development around the airport, and improved airport facilities.

Operations at the airport include the following:

- Commercial operations, including private and charter aircraft activities and delivery services;
- California Department of Forestry and Fire Protection air attack base, including air tankers and spotter plane during the summer and fall months;
- Medical flights, including fixed wing aircraft and helicopters;
- Mendocino County Sheriff's Air Squadron training missions and search operations;
- Law enforcement and traffic surveillance air patrols;
- PG&E plane flights checking for damaged gas lines; and
- Personal/recreational and business flying.

Accidents have seldom occurred at the airport, and there has never been a mid-air collision over Ukiah. City ordinance requires that airplanes turn east shortly after takeoff to avoid downtown Ukiah on northbound departures, or commercial and residential areas on southbound departures.

All of the airport property and the Runway 15 approach zone (north) are within the Ukiah City limits. Most of the Runway 33 approach (south) and the majority of the downwind leg traffic patterns are situated over lands in the County's planning jurisdiction.

Through the Ukiah General Plan and the Ukiah Municipal Airport Master Plan, the City controls land use on the airport property and in the immediate area within the City limits, emphasizing airport operations as established by the City's Airport Commission. Through the Mendocino County Airport Comprehensive Land Use Plan (CLUP), the Mendocino County Airport Land Use Commission controls land use in the City and surrounding unincorporated area as it relates to airport safety and viability as well as community safety and compatibility. Both the CLUP and the City's Airport Master Plan contain a Land Use Compatibility Map that establishes land use compatibility criteria for five zones: Zone A (the Runway Protection Zone); Zone B1 (encompasses the runway approach and departure zones and adjacent to the runway); Zone B2 (the Extended

Approach/Departure Zone); Zone (the Common Air Traffic Pattern); and Zone D (Other Airport Environs).[165]

B. Potential Impacts and Mitigations

1. Criteria Used for Determining Impact Significance

Land uses and development consistent with the Draft 2007 UVAP would have a significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, storage, handling, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable spillage or accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport, result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.

Hazards associated with flooding were addressed in the previous section on Hydrology, and hazards associated with wildfire was assessed in the previous section on Public Services.

2. Project Impacts

This section will describe the potential hazard and hazardous materials impacts resulting from buildout of the Draft 2007 UVAP as per the significance criteria discussed above. There are no private airstrips in the plan area, so there is no impact per the final criterion.

<u>Release of Hazardous Materials</u>

Impact 3.11-A Land use and development consistent with the Draft 2007 UVAP would result in increased transport, use, and disposal

[165] UVAP, June 10, 2003, pages 6-1 through 6-3.

of hazardous materials that could expose the public and environment to a significant hazard through either their routine use or an accidental release.

Human-induced safety risks have resulted from the use and disposal of hazardous materials. These conditions can be encroached upon by development, and conditions that are otherwise secure, can become destabilized by environmental hazards such as geologic, seismic, flood, and fire hazards. As with most any community, facilities that generate, use, or store hazardous materials are often located near residential areas, are near sensitive receptors (e.g., schools, hospitals, nursing homes), or near critical facilities. The potential exists for these areas to be impacted by the release of hazardous materials.

In addition to being sensitive receptor locations, some schools and all hospitals are handlers and generators of hazardous materials. The one hospital in Mendocino County (Ukiah Valley Medical Center at 275 Hospital Drive, Ukiah) has a variety of hazardous materials on-site. Significant potential earthquake-caused release threats are present in the community. Public health in Mendocino County can be threatened by hazardous materials in two ways:

- By long-term exposure to a contaminated medium; and
- By release of highly mobile hazardous materials to highly mobile mediums. Called "secondary disasters", these events can be triggered by hazardous material releases caused by accidents and natural disasters within and adjacent to Mendocino County.

When hazardous materials have previously degraded Mendocino County's environment, it has often been the result of a long-term conditions resulting from the improper use, storage, or disposal of these materials. Many of these past conditions have been identified and mitigated by present local, State, and federal regulations.

The part of the plan area along the State Street corridor, with the greatest concentration of people and industry in the County, is considered most susceptible to public health concerns and environmental degradation caused by both long-term and by secondary disasters. As population density and activities increase, so does the use of hazardous materials. The outlying parts of the plan area are considered most susceptible to public health concerns and environmental degradation caused by long-term conditions. However, one of the greatest risks for hazardous materials releases in Mendocino County is accidents from transportation of these materials. Additional risks include hazardous materials release during disasters (e.g., earthquakes) where the response times would be greater, sensitive environmental receptors abundant, and the roads impaired by environmental hazards such as landslides.

It is possible that future heavy commercial and industrial businesses would transport, store, and handle hazardous materials. Because future tenants are not known, it is not possible at this time to provide any analysis of what materials might be transported, stored, or handled in the plan area. It is also possible that hazardous materials would be transported and used within one-quarter mile of the numerous schools in the plan area. Transport, storage, and use of hazardous materials would continue to be regulated by current Federal, State, County, and City of Ukiah regulations.

As discussed in the Setting section above, soils or groundwater at a number of sites in the plan area may be contaminated by hazardous materials from past commercial, agricultural, and industrial uses. Development under the UVAP would create the potential for exposure to this contamination. In addition, development under the UVAP would increase the number of residents and workers who could be exposed to existing hazardous materials used in the plan area or transported through the area on roads such as Highway 101 and State Route 20. There is one site in the plan area that is on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. This is the Coast Wood Preserving site at Plant Road/Taylor Road southeast of Ukiah. This is a Federal Superfund Site that contains land use restrictions (due to past leakage of copper into local groundwater). Development potential is currently restricted at this site. All of these potential exposures to hazards are ***potentially significant impacts.***

The Health and Safety Section of the Draft 2007 UVAP contains an implementation measure under ***Policy HS1.5*** to prohibit residential development in areas where environmental hazards exist. This policy would be used when assessing the compatibility of new residential development adjacent to heavy industrial sites. ***Policy HS1.4*** states that the County will collaborate with OES to coordinate emergency planning and assemble a valley-wide emergency response team (this policy incorrectly references the Mendocino Emergency Services Authority, which no longer exists; the reference should be to the Office of Emergency Services).

The County General Plan contains a number of policies addressing hazardous materials. *General Plan Policy DE-195* requires that all development projects include plans and facilities to store and manage solid waste and hazardous materials and wastes in a safe and environmentally sound manner. *General Plan Policy DE-200* states that land uses, densities, and intensities be designed to reduce human risk and exposure to hazardous conditions and events. *General Plan Action Item DE-200.1* states that the County will identify and assess risks to life, property, and the environment and incorporate strategies into emergency response and land use planning.

All projects must comply with all pertinent State and Federal laws regarding hazardous materials transport, handling, and storage, as well as worker safety. Businesses in the UVAP area that require hazardous materials storage are required to submit a Hazardous Material Business Plan to the Mendocino County Division of Environmental Health. Farmers must comply with applicable State and federal laws regarding pesticide application, as well as County requirements. In addition, a variety of Federal, State, and local regulations address clean-up of hazardous materials contamination, as discussed in the Setting section above. These regulations require that Phase I Environmental Site Assessments of sites within the UVAP area be prepared pursuant to the requirements set forth in ASTM E 1527-97. If a Site Assessment identifies potential soil or groundwater contamination, the areas of contamination would be evaluated to determine the level of remediation required to satisfy the requirements of the North Coast Regional Water Quality Control Board.

Existing regulations also require that Risk Assessments of each project site be conducted to determine the health risk from workers and residents being exposed to chemical residues in the soil. Even if those Risk Assessments determine that chemical residue levels are not a significant health risk and are below Proposition 65 no significant

risk levels, the County may require engineering controls, as recommended by the North Coast Regional Water Quality Control Board or State Department of Toxic Substances Control, and warnings to workers and future residents.

Compliance with Draft 2007 UVAP and Mendocino County General Plan provisions, along with all pertinent State, Federal, and County laws and requirements for transport, handling, storage, and use of hazardous materials, would reduce potential health hazards resulting from transport, storage, use, and disposal of hazardous materials to a level that is typically accepted for new industrial or commercial development. The impact would be reduced to a level that is ***less than significant***.

Airport Hazards

Impact 3.11-B **New development near the Ukiah Municipal Airport could expose people to risk of injury or death due to aircraft accidents.**

The UVAP area encompasses unincorporated lands in the vicinity of the Ukiah Municipal Airport. Development in these areas would be subject to UVAP and County General Plan policies, as well as provisions of the Mendocino County Airport Comprehensive Land Use Plan (CLUP). Proposed land use classifications in the various "zones" around the airport are consistent with the CLUP with the exception of 22 parcels on about 13 acres of land located south of the airport, west of South State Street, extending from Norgard Lane to about one-quarter mile south of Plant Road. These parcels are within an area classified as Suburban Residential (SR). These parcels are also within an area the CLUP identifies as the B-2 zone (the Extended Approach/Departure Zone). On December 11, 2007, the Board of Supervisors overruled an earlier Airport Land Use Commission decision that found three of the twenty-two parcels inconsistent with the CLUP. In their action, the Board of Supervisors found these parcels consistent pursuant to PUC Code §21676.5(b), and that the proposed rezoning is consistent with the goals and purposes of PUC Code §21670.

The Draft 2007 UVAP contains ***Policy LU2.1*** that prohibits development in the airport clear zone and to allow new development consistent with the height, use, and intensity allowed by the CLUP. This policy ensures that any future development near the airport would not compromise safety or the future of the airport.

Policy DE-158 of the General Plan requires that land use decisions and development be carried out in a manner that will reduce aviation-related hazards. This could be accomplished through maintaining compatible zoning, land uses, densities, and intensities within airport influence zones and protecting the viability of existing airport operations and expansion potential. *General Plan Policy DE-159* states that new development within air traffic patterns, corridors, and airport influence zones shall be consistent with the Mendocino County Airport Comprehensive Land

The provisions of the UVAP, the General Plan, the CLUP, and the City's Airport Master Plan that address land use compatibility would reduce potential airport safety hazards to a ***less than significant*** level. The County will need to review the land use classifications for the 22 parcels within the B-2 zone to determine consistency with ***Policy LU2.1***.

3.12 ENERGY

A. Setting

1. Introduction

CEQA requires that EIRs discuss the potential energy impacts of projects, including avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. Energy conservation and efficiency goals can be achieved by:

- Decreasing overall per capita consumption;
- Decreasing reliance on fossil fuels such as natural gas and oil; and
- Increasing reliance on renewable energy sources.

The production and use of energy is closely tied to development. Patterns of land use and types of transportation systems strongly influence the need for and use of energy. By adopting general and other land use plans that establish land use patterns and circulation systems, the County can influence the amount of energy that will be used at the local level. The County regulates smaller, often renewable sources of power and can promote local energy independence by eliminating regulatory barriers to these types of technologies. The County can adopt energy conservation and efficiency standards that reduce the demand for energy.

Pacific Gas & Electric Company (PG&E) provides gas and electrical services in the UVAP area. The City of Ukiah (Ukiah Public Utilities) supplies electrical service within the City of Ukiah, and PG&E supplies gas service to the City. Various private companies provide propane gas to rural customers in the plan area.

PG&E maintains transmission lines throughout the plan area, including a natural gas pipeline that runs in the vicinity of Highway 101 through the length of the plan area. PG&E also maintains three electricity substations in the vicinity: the Ukiah Substation, the Calpella Substation, and the Mendocino Substation. The Ukiah Substation, located just outside the southeastern Ukiah City limits, has substantial capacity to serve new development.[166]

2. Energy Supply

California State Energy Sources

California's major sources of primary energy are fossil fuels. Petroleum (46%), natural gas (29.5%) and coal (8%) account for 83% of the state's total energy mix. Nuclear, large hydro projects and renewables make up the rest. A majority of these primary energy sources originate from out-of-state producers. As of 2007 [167], the state imported 61% of its oil (mostly from abroad) and 86.5% of its natural gas (majority from the US Rockies and Southwest). With minimal in-state coal production or consumption, electricity imports from the Intermountain West account for most of this state's coal use.

[166] John Culbertson, Supervising Engineer, PG&E, personal communication, March 15, 2005.
[167] 2009 California Integrated Energy Report

California's electrical mix in 2008 showed a similar dependence on fossil fuels with 45.7% and 18.2% originating from natural gas and coal respectively. Large hydro and nuclear facilities were also important, adding 11% and 14.4% to the state power mix. Only 10.6% of the state's electrical energy originated from qualifying renewable resources.

Mendocino County Energy Usage

It is estimated that in 2002, the County as a whole relied on the following sources for energy: gasoline (51.44%), electricity (20.29%), natural gas (17.32%), diesel fuel (7.59%), firewood (2.76%), propane (0.55%), kerosene (0.03%), and heating oil (0.01%). The total energy usage in 2002 was calculated to equate to about 282,000 therms per day, or about 7,800 megawatt hours per day.[168] Use of this energy generates greenhouse gas emissions as well as emissions of other air pollutants. The effects of these emissions were addressed previously in ***Section 3.7, Air Quality***.

3. Energy Conservation and Efficiency

There are many opportunities for County government, residents, and businesses to use energy wisely through conservation and efficiency programs. These opportunities include:

- Land use – following compact development and land use patterns;
- Transportation – decreasing reliance on cars and encouraging more walking, bicycling, and riding the bus;
- Building construction and retrofit – constructing more energy efficient homes and buildings;
- County facilities and operations – ensuring that County facilities and operations are as energy efficient as possible;
- Reduction of energy use in agricultural operations – continuing to take advantage of energy saving opportunities in agricultural operations;
- Reduction in solid waste – promoting solid waste reduction, recycling, and reuse programs; and
- Energy education.

Land Use

The existing General Plan Land Use Element contains goals and objectives that encourage city and community centered growth, compact city and community boundaries, and the phasing of rural and urban growth with the availability of adequate services. The County's number of small communities and history of rural residential

[168] *Draft Energy Usage and Its Impact on Mendocino County Including General Plan Recommendations*, Mendocino County Energy Working Group, June 2007.

development allows many current residents to live in rural areas, however, not necessarily in compact land use patterns.

Transportation

In California, 48% of all the energy used is for transportation; personal vehicles account for over 50% of all energy used in transportation statewide. The Mendocino County Bikeways Plan identifies goals, objectives, and policies for a county bikeways network, encouraging and facilitating commuting by bicycle, and increasing awareness of the benefits of bicycling and the rights and responsibilities of bicyclists.

Agriculture, Industry, Water Supply, and Wastewater Treatment

Agriculture, industry, and water supply and wastewater treatment operations consume approximately one-third of the electricity used in California. Energy represents the largest controllable cost of providing water or wastewater services to the public. Similar to other energy users, agriculture faces the challenge of enhancing productivity while sustaining its resource base and protecting the environment. In Mendocino County, agriculture is a key component of the economy and environment. Because energy costs affect profits directly, farmers are often highly aware of the energy costs associated with their operations in general and with individual pieces of machinery in particular. Public and private funding is available to leverage the costs of farm productivity improvements.

Energy Education

A 1988 California Energy Commission (CEC) study of the effectiveness of educational programs in conserving energy showed that information campaigns, audits of energy use or direct feedback on energy consumption, and financial incentives generate about 15 to 29% energy savings. The CEC offers cash rebates on eligible renewable energy electric-generating systems, including photovoltaics, small wind turbines, fuel cells, and solar thermal electricity systems.

Renewable Energy Sources

Jurisdictions throughout the State, including the State itself, are currently aggressively seeking alternate sources of energy to offset energy use and emissions of greenhouses gases. These sources include various techniques and equipment for capturing solar, wind, hydroelectric, geothermal, wave, and biomass energy. There are currently no nonrenewable energy generating facilities in the plan area.

B. Potential Impacts and Mitigations

1. Criteria Used to Determine Impact Significance

Land uses and development consistent with the Draft 2007 UVAP would have a significant impact if it would result in:

- Generate demand for energy services that would result in the need for new or physically altered facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives.

- Result in inefficient and/or unnecessary consumption of energy.

2. Impacts

Energy Consumption from Land Use Locations and Patterns

Impact 3.12-A **The Draft 2007 UVAP land use plan could affect energy usage by creating a land use pattern that could increase the dependence on single occupancy vehicles, which would use more energy.**

Land use patterns can significantly affect energy consumption. For example, compact and multi-use development can greatly reduce transportation energy demands by encouraging residential development in proximity to shop and work centers.

The UVAP land use plan focuses urban growth near the City of Ukiah, which is the area center for business, jobs, schools, and shopping. Of the total 5,430 residential units that could be developed at plan area buildout, about 4,144 units (76%) are within the seven development areas adjacent or near Ukiah.[169] The plan also includes provisions to allow 2,750 multi-family units in the seven discussion area near the City. By encouraging denser residential, commercial, and industrial development within urban areas the concentration of population, employment, and services allows for less frequent use of and reliance upon single-occupancy vehicles as a primary mode of transportation. Because automobile travel is a major user of energy, a reduction in reliance upon such travel would result in reduced levels of energy consumption.

The Land Use Section of the plan includes ***Policy LU1.1*** that includes measures to encourage a compact urban form, while ***Policy LU7.1*** states that the County will collaborate with the City to coordinate planning within the City's Sphere of Influence and pursue tax sharing.

While overall energy consumption would continue to increase as growth occurs, the Draft 2007 UVAP would reduce the reliance upon single-occupancy vehicles by encouraging the establishment of alternative modes of transportation. The Circulation and Transportation Section of the plan includes policies to develop an integrated transportation corridor and locate higher density proximate to that corridor (***Policies CT1.1*** and ***LU1****.4* similarly focus new development in High Intensity Development Corridors, which are primarily the main streets leading out of the City. ***Policy CT1.4*** encourages development of passenger rail traffic through the plan area. ***Policy CT2.1*** promotes enhanced pedestrian access, while ***Policy CT2.2*** promotes bicycle access improvements and other incentives to encourage bicycles as alternatives to motor

[169] This assumes that about half of the 600 units allowed in the North State Street discussion area are considered near the City of Ukiah).

vehicles. ***Policy CT2.3*** includes measures to enhance bus and mass transit access to new and existing development.

By focusing most of the allowed growth near Ukiah or along high intensity routes radiating from the City and encouraging mixed use with over half of the allowed development being multi-family units, the Draft 2007 UVAP would not result in increased energy demands due to wasteful land use planning. The impact is ***less than significant***. Mitigation Measure 3.1-B.1 also applies to this impact. It gives priority to projects that maximize green building techniques, energy conservation, and alternative energy systems. In addition, there are alternatives to the plan that would further reduce the number of new units and/or centralize development even nearer the City. These alternatives would further reduce the reliance on single-occupancy vehicles and reduce energy use. See Section 4.4 for a discussion of these alternatives.

Energy Consumption from Building Construction and Retrofit

Impact 3.12-B Land uses and development consistent with the Draft 2007 UVAP could result in inefficient and excessive use of energy resources.

The Mendocino County Energy Working Group state in their 2007 report (no more recent rapport is available) on energy usage that the County uses energy at a level that emits about 1.1 million tons of GHG per year, or about 10 tons per person. This energy use would increase as population grows and new businesses are established. The effects of this increased energy use on air quality was discussed previously in ***Section 3.7, Air Quality***. This energy also has significant economic effects on County residents. The Energy Working Group report states that by 2007, energy expenditures were about 31% of after-tax median household income expenditures in the County. This could increase substantially as petroleum and natural gas become more expensive. The highest share of energy expenditures is for transportation (59%) and the second highest for electricity (20%), both of which are reliant on petroleum. As energy demand uses more of the household income, less is available to purchase other goods and services, which could adversely affect County and City income and the services those jurisdictions can offer.[170]

The Energy Working Group recommends a number of approaches for the County to address these energy problems, which they recommended be included in the new County General Plan. These include promotion of electric vehicles; creation of a county-wide agency to perform energy audits and assist in planning/installing renewable energy systems to encourage conservation; develop a "community-owned utility" that can assist in funding conservation and fixed/low income renewable energy programs; promoting local food production; and promoting businesses and industries that hire local residents.

Building design and retrofit measures can make a building more energy efficient. Because the design and retrofit of commercial and industrial buildings is different than that of residential buildings, there is a greater potential for energy savings in commercial and industrial facilities. This is particularly true due to the large amounts of energy that commercial and industrial facilities typically use for the manufacturing process, space

[170] Mendocino County Energy Working Group, June 2007.

heating and cooling, refrigeration, and lighting. Furthermore, because commercial and industrial buildings are typically much larger than residential structures, there are more opportunities for the reduction of energy demands.

Passive heating, cooling, and lighting techniques can be used to not only reduce energy demands, but also significantly reduce operating costs. Techniques include high levels of insulation, interior massing, careful placement of windows, skylights, and doors, natural ventilation, deliberate design of lighting, use of energy efficient appliances, windows, and doors, and appropriate landscaping. While new construction provides the simplest opportunity for implementation of such techniques, older buildings can also benefit from retrofitting for energy efficiency that includes passive heating, cooling, or lighting. New construction also provides the opportunity for optimal solar access through building siting and orientation, and thus further reduces energy demands for heating and cooling.

Existing codes as well as several policies in the Draft 2007 UVAP would support energy efficiency in new and retrofit construction. ***Policy EA1.1*** calls for coordination with the Energy Working Group to revise the zoning code and develop design review guidelines to promote energy efficient techniques and equipment and other factors that promote energy efficiency. The policy also promotes the use of incentives for development that is energy efficient, and require solar building design in design review guidelines.

Consistent with the recommendations of the Energy Working Group, the plan contains policies that encourage local small businesses (***Policy LU5.3***), encourage value-added businesses ***Policy LU5.2***), attract business (***Policy LU5.1***), and provide labor force training and development (***Policy LU5.4***). ***Policy OC3.2*** contains measures to encourage small-scale intensive farming, organic farming, and integrated pest management. These policies would all encourage the development of local enterprises that would hire local residents, thereby reducing the need for people to commute out of the area.

Draft 2007 UVAP policies would result in a relatively compact urban form that would also reduce energy used to construct and operate that development. In addition, ***Policy CD1.1*** requires new parking lots to be planted with trees to shade the area and reduce solar heat gains.

The County General Plan contains a number of policies aimed at conserving energy and encouraging the use of solar energy and other renewable energy sources. *Policy RM-44* States that new development should be focused within and around community areas to reduce vehicle travel. *Policy RM-53* encourages the installation of solar or other renewable energy systems to adequately address year-round need. *Policy RM-55* requires the incorporation of energy conservation and renewable energy sources for new facilities and uses. *Policy RM-56* requires the incorporation of strategies for renewable energy and energy conservation into development planning, design and operation. *Policy RM-57* states that high density residential and intense non-residential land uses should be located in areas that minimize transportation energy consumption and/or increase alternatives to single-occupant automobiles. *Policy RM-58* promotes transportation modes and systems that are energy-efficient, incorporate renewable energy sources, and increase alternatives to single-occupant automobiles.

The Housing Element contains *Policy 8.1* that states the County will reduce energy costs for housing through energy efficient siting, design, construction methods, and weatherization. *Policy 8.2* states the County will reduce electricity and natural gas demands by promoting the use of renewable energy technologies in residential and mixed-use projects. Strongly promote solar energy and use of solar water heaters for new housing and, especially, multi-family housing. Encourage retrofitting older housing where feasible. An Action under this policy includes developing Green/Alternative Building Guidelines.

Finally, the State has strict energy conservation requirements that regulate construction of new buildings.

While all these policies would reduce energy use, the implementation measures under ***Policy EA1.1*** are not sufficiently detailed to ensure that energy efficiency will be required for new development. Therefore, the impact would remain ***potentially significant.***

Mitigation Measures

As traditional energy sources become scarcer and the price of that energy increases, it is important that the County encourage and, in some cases, require that new development be designed in a way to minimize energy consumption and maximize the potential for using alternative energy. One method for conserving energy is to adopt a green building program. Many California jurisdictions, including Novato, Sebastopol, Rohnert Park, Santa Monica, San Jose, San Francisco, and Marin County have adopted mandatory green building programs, and many others have adopted voluntary programs.

3.12-A.1 Energy shall be conserved to the degree feasible by requiring the following changes and additions to Policy EA1.1:

Policy EA1.1: Promote energy efficient planning practices.

EA1.1a Energy Efficiency
Coordinate with recommendations from the Energy Working Group to revise zoning code and develop design review guidelines to promote responsible design through the use of energy efficient techniques and equipment; setbacks and height limitations to promote optimal heating, cooling and cogeneration opportunities; materials and construction practices that minimize adverse environmental effects. <u>Adopt energy efficient standards and conservation requirements and integrate them as an energy efficiency ordinance into the development review and building permit process.</u>

EA1.1b Energy Incentives
Offer <u>permitting</u> incentives to encourage the use of energy-efficient construction practices and technology to minimize impacts to the local infrastructure and environment. <u>Provide incentives such as fee reductions and expedited processing for facilities that use renewable resources for energy production. Projects that conserve more energy than the minimum required by new County energy efficient building standards will be given priority in obtaining</u>

building permits under the Growth Management Program developed under UVAP Policy LU4.1

EA1.1c Solar Design
Integrate requirements for passive solar building design into design review guidelines. Ensure that building design maximizes air circulation, natural lighting, views, solar orientation, and shading areas to interior and exterior spaces. Require orientation of buildings to maximize solar heating during cool seasons, avoid solar heat gain during hot periods, enhance natural ventilation, promote effective use of daylight, and optimize opportunities for on-site solar generation.

EA1.1d County Facilities
The County shall adopt and implement energy efficient standards and conservation requirements for new County facilities. The County shall strive to replace its vehicle fleet with fuel-efficient vehicles. *[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]*

EA1.1e Renewable Resources
Preserve opportunities for development of renewable energy resources. Promote renewable energy. *[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]*

EA1.1f Community Choice Aggregation
Evaluate and pursue implementation of Community Choice Aggregation if it proves to be a cost-effective and low-risk strategy to accelerate the use of renewable resources. *[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]*

EA1.1g Green Building Standards
New construction shall comply with the California Green Building Code. Adopt and integrate green building standards into the development review and building permit process. Offer incentives to encourage green building practices. *[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]*

Mitigation Measure 3.1-B.1 also applies to this impact. It gives priority to projects that maximize green building techniques, energy conservation, and alternative energy systems.

The County should work with the Energy Working Group or some other County-appointed task force to develop green building concepts. The task force is encouraged to look at the U.S. Green Building Council's LEED (Leadership in Energy and Engineering Design) rating system and standards. These standards, or similar standards, should be used for all new public buildings and, by using the discretionary permit process, the County should encourage or require developers to meet these standards. The LEED standards are a list of ways to actively and passively reduce energy consumption in new development. A developer can use the appropriate measures, and if the project reaches a certain "score," it is then certified as a "green building." These standards are being increasingly adopted by California jurisdictions as

a flexible way for developers to reduce energy demand in new projects. If the County wished to be more proactive in this regard, it could develop bonus incentives for developers who are certified as meeting the LEED standards.

Impact Significance After Mitigation

The policies and measures in the Draft 2007 UVAP and the Housing Element plus the recommendations included above provide a policy framework that would reduce the impact to a ***less than significant*** level.

3.13 GLOBAL CLIMATE CHANGE

The following discussion of greenhouse gas emissions and their impact on climate is a summary of the extensive analysis prepared on this topic by the County Department of Planning and Building Services, who is also responsible for the recommended mitigation measures. That complete report is on file with the County Department of Planning and Building Services.

A. Setting

1. Introduction

Global atmospheric concentrations of Greenhouse Gases (GHG) have dramatically increased in the past 200 years due to human activity. The principal effect from those increases is a warming climate. Over the past 100 years, the global average temperature has increased by 0.74ºC (1.3ºF). The majority of the warming has occurred over the past 50 years, with an increase of 0.65ºC (1.2ºF), demonstrating an increased rate of warming. The rising global temperatures have resulted in increased intensity and duration of droughts since the 1970s, increased frequency of heavy precipitation events, and more extreme temperatures recorded. Recent legislation, such as the California Global Warming Solutions Act of 2006 (AB 32) and Executive Order S-3-05, set statewide greenhouse gas (GHG) emission reduction goals for the State of California and established that the issue of climate change must be addressed in the planning process.

Although GCC is a widely accepted concept, the extent of the change from anthropogenic sources remains in debate. The connection between local land use decisions and global climate change is not well understood. The National Research Council, a branch of the National Academies of Science, stated, "…the mechanisms involved in land-atmosphere interactions are not well understood, let alone represented in climate models". Most recently, the California Air Resources Board (CARB) deferred the topic of "GHGs in General Plans and CEQA" for further analysis, so there is no early action recommendation for evaluation of GHGs in CEQA documents at this time.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHG needed to stabilize global temperatures and climate change impacts. The IPCC predicted that the range of global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1°C to 6.4°C (IPCC 2007). Regardless of analytical methodology, global average temperature and sea level are expected to rise under all scenarios (IPCC 2007).

Greenhouse Gases

Gases that trap heat in the atmosphere are often called greenhouse gases (GHG), analogous to the way in which a greenhouse retains heat. Common GHG include water vapor, carbon dioxide, methane, nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. GHG are emitted by both natural processes and human activities. The accumulation of GHG in the atmosphere regulates the earth's temperature. Without the natural heat trapping

effect of GHG, the earth's surface would be about 34°C cooler (CAT 2006). However, it is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

2. Regulatory Setting

Greenhouse gas analysis results must be evaluated within the context of the applicable legal framework and regulatory environment. Since 2005, there have been a number of legislative and legal developments that guide how this document will analyze and disclose GHG impacts arising from the adoption of the proposed Ukiah Valley Area Plan.

Executive Order S-3-05

Governor Schwarzenegger issued Executive Order S-3-05 in June of 2005. This order set GHG emission targets for the state to meet, starting with a reduction to 2000 GHG emission levels by 2010, with an eventual reduction to 80% below 1990 numbers by 2050. This also directed the California EPA, Business Transportation and Housing Agency, California Air Resources Board (CARB), the California Energy Commission and the Public Utilities Commission to work together to develop a Climate Action Plan and report back on progress made toward meeting those established statewide targets.

California Global Warming Solutions Act of 2006 (AB 32)

The first significant climate change-related legislation is Assembly Bill 32; the California Global Warming Solutions Act of 2006. This bill established the first set of limits on GHG emissions for the State of California and put into place the regulatory framework needed to reach those targets. AB 32 set the 1990 GHG emissions level as a target to be achieved by 2020. In order to meet this goal, CARB is required to develop greenhouse gas emissions reporting procedures and adopt rules and regulations for reducing emissions by January 1, 2011, enforceable by January 1, 2012. These regulations will include the most cost-effective and technologically feasible measures to reduce emissions. Pursuant to this legislation, CARB is to identify early action measures to reduce GHG emission levels before the 2012 deadlines, which were adopted in October of 2007. By 2009, CARB was required to adopt a Scoping Plan to identify the legal and market mechanisms needed to fully comply with AB 32.

Taken together, both S-3-05 and AB 32 set the emission reduction targets that the State of California is required to attain. While explicit thresholds, mitigation requirements or local emission reduction targets have yet to be developed, various state agencies have begun to examine proposed land use plans and specific projects for their potential GHG impacts. At the same time, these agencies have begun to provide advice and direction on how to address GHG impacts prior to the 2012 deadlines established under AB 32.

Senate Bill 97 (SB 97)

This legislation was adopted in August of 2007 to help clarify how the subject of greenhouse gas emissions and targets identified by AB 32 would be addressed under CEQA. It also sets deadlines for the Office of Planning and Research (OPR) to publish

and adopt feasible guidelines for agencies to address and mitigate GHG emissions in their environmental documents under CEQA.[1]

3. Baseline Emissions

At this point, no formal (Air Resources Board or Mendocino County Air Quality Management District) current or historical inventory of GHG emissions exists for the Ukiah Valley or Mendocino County. However, the County estimates that plan area emissions in 2007 were 353,177 tons of CO2e (Carbon Dioxide Equivalent). The full report on file with the County describes the emissions by various components (e.g., transportation, electrical use, natural gas use, etc.). Over the next year or two, the County plans to develop a formal inventory of its GHG emissions from which it can begin to develop strategies and measures to reduce overall emission levels.

B. Potential Impacts and Mitigations

1. Criteria Used to Determine Impact Significance

Land uses and development consistent with the Draft 2007 UVAP would have a significant impact if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The Mendocino County AQMD has established that discrete projects would have a significant impact if they would emit more than 6.6 metric tons of CO2e per year. For regional plans like the Draft 2007 UVAP, the plan would have a significant impact if it resulted in a net increase in emissions. The Mendocino County AQMD has also recommended that guidelines and standards adopted in 2010 by the Bay Area Air Quality Management District (BAAQMD) be used to assess new projects.[2] These guidelines state that a specific plan such as the Draft 2007 UVAP would have a significant impact if it would result in emission of more than 6.6 metric tons of CO2e per year per "service population" (residents plus employees)

2. Impacts

Impact 3.13-A **Land uses and development consistent with the Draft 2007 UVAP could result in greenhouse gas emissions that exceed State emission targets and would adversely affect climate.**

The County has prepared estimates for emission from projected buildout for the project and the three alternatives. These estimates are shown in Tables 3.13-1 and 3.13-2.

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[1] Senate Bill 97, Chapter 185, § 1, 21083.05.(a)-(c)

[2] *Bay Area Air Quality Management District CEQA Guidelines*, June 2010.

Table 3.13-1
Annual Greenhouse Gas Emission Rate by Subcomponent for Each Alternative

Greenhouse Gas Factor	Base Year Emissions (2009)	Draft 2007 UVAP (2030)	Land Use Alternative A (2030)	Land Use Alternative B (2030)	Existing General Plan & Alt. C (2030)
Transportation Fuel Use	158,153.0	205,271.0	197,235.0	190,661.0	185,182.0
Non-Transportation Fuel Use	16,898.0	25,100.6	23,082.9	21,495.4	20,056.9
Electricity Use	33,782.7	59,521.7	57,272.3	56,612.1	55,350.8
Natural Gas Use	55,230.0	74,846.0	71,631.8	70,431.2	69,167.9
Water Usage	826.9	1,435.0	1,263.7	1,189.9	1,129.6
Sewage Treatment	93.3	161.5	155.9	148.5	143.2
Trash Disposal	1,581.8	2,349.6	2,160.7	2,012.1	1,877.5
Recyclables Removal	227.0	337.2	310.1	288.8	269.4
Green Waste Hauling	241.6	358.8	330.0	307.3	286.7
Food Consumption	46,908.0	69,678.0	64,077.0	59,670.0	55,677.0
Concrete (new construction)	0.0	8,660.1	6,870.7	6,009.9	5,344.9
City of Ukiah Landfill	39,234.8	16,217.0	16,217.0	16,217.0	16,217.0
Recurring Total (less Food)	***306,269.0***	***385,598.6***	***369,659.5***	***359,363.3***	***349,681.0***
Recurring Total (incl. Food)	***353,177.0***	***455,276.6***	***433,736.5***	***419,033.3***	***405,358.0***
Grand Total (All Sources)	**353,177.0**	**463,936.6**	**440,607.2**	**425,043.2**	**410,702.9**

Table 3.13-2
Cumulative Emissions (2009-2030) by Subcomponent for Each Alternative (tons)

Greenhouse Gas Factor	Cumulative GHGs from the Existing Population	← EMISSIONS FROM NEW DEVELOPMENT → Draft 2007 UVAP	Land Use Alt. A	Land Use Alt. B	Existing General Plan & Alt. C
Transportation Fuel Use	3,479,366	518,298	429,902	357,588	297,319
Non-Transportation Fuel Use	371,756	90,229	68,034	50,571	34,748
Electricity Use	743,219	283,129	258,386	251,124	237,249
Natural Gas Use	1,215,061	215,776	180,419	167,212	153,316
Water Usage	18,191	6,690	4,805	3,994	3,330
Sewage Treatment	2,053	750	688	606	548
Trash Disposal	34,799	8,446	6,369	4,734	3,253
Recyclables Removal	4,994	1,212	914	680	467
Green Waste Hauling	5,315	1,290	972	723	497
Food Consumption	1,031,976	250,470	188,859	140,382	96,459
Concrete (new construction)	0	190,521	151,156	132,218	117,587
City of Ukiah Landfill	860,000	0	0	0	0
Recurring Total (less Food)	***6,734,754***	***1,125,820***	***950,490***	***837,232***	***730,727***
Recurring Total (incl. Food)	***7,766,730***	***1,376,290***	***1,139,349***	***977,614***	***827,186***
Grand Total (All Sources)	**7,766,730**	**1,566,811**	**1,290,505**	**1,109,831**	**944,773**

The project as well as the alternatives would be responsible for significant quantities of emission increases over the next two decades, absent any changes in development policy or the introduction of revolutionary new technologies. These results are well above California's statewide emission targets of 10% below 1990 levels by 2020 and 80% below those levels by 2050. The emissions exceed the significance criteria of 6.6 metric tons of CO2e per year per "service population. This is a ***potentially significant impact.*** Consistent with BAAQMD CEQA Guidelines, the Draft 2007 UVAP needs to identify mitigation measures that will address this impact.

County staff evaluated the proposed Goals, Policies, and Implementation Measures (GPIM) component of the Draft 2007 UVAP to assess potential impacts to GHG emissions. These recommendations were assessed for the potential to reduce/increase GHG emissions and were grouped by reduction type and category. A total of 48 measures were identified as potentially GHG-reducing. Three measures had GHG-increasing potential. The results were as follows:

- 26 implementation measures reduce GHG emission potential from transportation sources, particularly with the factors that influence vehicle trip generation and length.
- 17 implementation measures reduce GHG emission potential from energy use. Most dealt with reducing electrical, natural gas and liquid fuel usage through conservation or replacement with non-GHG emitting sources.
- 5 measures reduced emissions from utility services (water, sewer, trash removal, etc.), through conservation or reduction in use.
- 3 measures could potentially increase GHG emissions.
- All remaining policies and measures were determined to be GHG-neutral in nature.

These 48 measures could potentially reduce GHG emissions by a significant (but unknown) amount. Due to the lack of specificity, targets, and enforceable language, the exact quantity is unknowable. Three measures within the Draft 2007 UVAP could potentially increase GHG emissions by an unknown amount. Any potential impact from those measures would be small and strongly tied to the level of development or redevelopment in the existing urbanized areas. Taken together, the net impact of the Draft 2007 UVAP would likely be a slight decrease of the GHG emission rate when compared to the "No Project" alternative. This decrease would be more than offset by the increased amount of growth allowed by the Draft 2007 UVAP and all alternatives.

Based on staff evaluation, the existing policies and implementation measures would be insufficient to attain State-mandated emission reduction targets. It would likely not even be sufficient to reduce emissions to existing levels. Thus, the impact would be ***potentially significant.***

Mitigation Measures

The complete report on file with the County contains a lengthy discussion of approaches and methods to reduce GHG emissions. From those recommendations, the following changes to the plan are recommended:

3.13-A.1 Greenhouse gas emissions shall be reduced to the degree feasible by requiring the following changes and new measures:

Add the following new policy:

EA1.1h Building Code and Standards Update
Revise the County Building Code to require structures to be 25% more efficient than existing Title 24 standards in energy and water use. Where possible the County shall:

- Identify technologies best suited to achieve energy efficiency goals;
- Identify ideal building siting, envelope, landscaping and design standards;
- Educate architects and builders in developing the new building standards; and
- Update codes on an ongoing basis as legislation and technology changes.
- *[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]*

Revise Implementation Measure EA1.3b to say:

EA1.3b Clean Air Sources
Update the County building code and other relevant ordinances to require that primary heat sources in all new development and additions involving space heating use ~~low/no air~~ zero emission heat sources (solar, electricity, or geothermal ~~natural gas, propane or butane~~) for space heating and hot water appliances. All-electric housing and commercial structures are to be encouraged. Verify through plan-check process.

Support the Mendocino County Air Quality Management District in the development of incentive programs to encourage voluntary replacement of older, highly polluting wood stoves and fireplaces in existing homes with EPA certified clean burning appliances.[3]

While natural gas is the cleanest fossil fuel, it still is a significant source of GHG. In the Ukiah Valley, the most prevalent use of natural gas is for space heating and domestic hot water. By substituting electrical heating and hot water appliances, significant GHG emissions savings can be realized, due to both utility's low GHG emission factors. However, this measure does not preclude the use of natural gas in industrial or commercial applications where suitable substitutes are not available, nor prevent the use of the fuel in transportation vehicles.

Add the following new implementation measures:

EA1.1i Zero Net Energy Development
All new development shall have sufficient onsite renewable energy collection/generation devices to meet the expected annual demands of that unit. If space or other considerations preclude installation of onsite renewable

[3] The District has noted that it is not responsible for implementing this Implementation Measure.

generation devices, off-site installation of renewable energy sources will suffice. The applicant can choose to install the energy-generating system directly or pay an offset fee for a third party to construct the devices elsewhere. *[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]*

EA1.1j Electric Vehicle Recharging Opportunities
All new construction and vehicular related remodeling efforts in urbanized areas are required to include at least one electric vehicle recharging opportunity. Mendocino County Planning and Building Services shall codify this measure into the building code and establish specific standards such as the number of connections per unit or square feet." *[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]*

EA1.1k Fleet Vehicle Replacement Program
Mendocino County will replace their vehicle fleet with more fuel efficient and/or clean-burning models and will encourage other entities to do the same. The County promotes the use of all-electric vehicles for local use and hybrids for extended replacements. *[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]*

EA1.1l Electric Vehicle Incentives
Mendocino County shall investigate potential electric vehicle purchase incentives for individuals and/or businesses. *[Timeframe: Ongoing. Responsibility: Department of Planning and Building Services]*

Actual incentives may occur as part of a local or statewide program to reduce GHG emissions via the use of mitigation funds that subsidize the purchase of electric vehicles. The UVAP is unable to specify those funds or programs at this time. While the three measures listed above will reduce GHG emissions, they do not include performance standards or reduction targets necessary to properly quantify the reductions. Consequently, emission reductions are not identified for these measures in Tables 3.13-3 and 3.13-4 below. The following new measure is recommended.

EA1.1m Prepare and Adopt a Qualified Greenhouse Gas Reduction and Energy Management Plan
Mendocino County shall prepare and adopt a Qualified Greenhouse Gas Reduction and Energy Management Plan that establishes a baseline inventory of GHG emissions from all sources, GHG reduction targets that are consistent with the goals of AB32, and enforceable GHG emission reduction strategies and performance measures. Unless revised by additional analysis done while preparing this plan, the targets will be to reduce emissions 22% countywide from today's levels by 2020 and by 83% by 2050. The plan will include enforcement and monitoring tools to ensure regular review of progress in meeting the reduction targets to allow revising the plan as needed. *[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]*

Implementation Measure EA1.1m identifies two specific reduction points - 22% below today's levels by 2020 and 83% below by 2050. Both points are derived from the State reduction targets of 10% below 1990 levels (285.92 MMTCO2e) by 2020 and 80% below

1990 levels (85.76 MMTCO2e) by 2030. The County's targets shall mirror the State's in percentage terms. Unless modified by analysis done while preparing the Greenhouse Gas Reduction and Energy Management Plan, the plan will use the following targets:

- By 2020: 275,478 T/CO2e
- By 2050: 60,040 T/CO2e

While developing this plan, the County may amend the Draft 2007 UVAP to include additional policies or implementation measures that would reduce GHG emissions. The BAAQMD *CEQA Guidelines* contains a list of recommended plan policies and measures that would be considered. Many of these are included in the Draft 2007 UVAP, while others are not applicable to a less urban area than the Bay Area. Once this plan is developed, future projects can be assessed whether they are consistent with that plan.

> **EA1.1n Building Code Standardization**
> The County of Mendocino will work together with the incorporated cities to establish a uniform set of building standards for all new construction. *[Timeframe: Short-Term. Responsibility: Department of Planning and Building Services]*

The City of Ukiah maintains its own building code. If the city were to modify it to match the County's building code as described above, the full GHG reduction potential estimated below could be reached.

The County also recommends that a solid waste landfill gas recovery project be implemented for the old City of Ukiah landfill. However, the County does not have the authority to require this mitigation, so it is not included here.

Impact Significance After Mitigation

Table 3.13-3 estimates the potential GHG emission reductions from the directly enforceable measures (Implementation Measures EA1.1a, EA 1.1b, and EA1.3b) for the proposed project and the three land use alternatives. It assumes that the City of Ukiah revises its building code similar to what is recommended in the Draft 2007 UVAP.

Table 3.13-3
Estimated GHG Reduction Amounts (Annual Emissions, CO2e)

Reduction Suggestion	Draft 2007 UVAP	Land Use Alt. A	Land Use Alt. B	Existing General Plan Alternative[4] & Alt. C
No Reductions	463,936	440,607	425,043	410,703
Reductions from IM EA1.1a, EA1.1b, & EA1.3b	450,989	429,375	414,438	NA
Reductions from IM EA1.1a and EA 1.1b,	418,438	400,613	386,925	NA
UVAP only reductions [5]	*425,432*	*407,608*	*393,970*	*NA*
Base Year Emissions	**353,177**			

Of the four alternatives and one scenario analyzed in the report, the Draft 2007 UVAP had the largest GHG increase. This is because this land use alternative allows the largest amount of new development. Other alternatives resulted in smaller GHG emissions, decreasing proportionally by the amount of projected growth. All alternatives studied result in new GHG emissions that would be considered potentially significant under CEQA and will make compliance with AB32-mandated reductions more difficult to achieve.

Table 3.13-4
Comparison of Potential GHG Emission Rates, Reductions, and Targets

Potential GHG Emission Level/Targets	Draft 2007 UVAP	Land Use Alt. A	Land Use Alt. B	Existing General Plan & Alt. C
With No Mitigation	463,936	440,607	425,043	410,703
With IM EA1.1a and IM EA1.1b	418,438	400,613	386,925	*NA*
With Landfill Gas recovery	409,006	391,181	377,493	*NA*
Current Year Emissions	353,177	353,177	353,177	353,177
…2020 Emissions Target	275,478	275,478	275,478	275,478
…2030 Emissions Target	203,878	203,878	203,878	203,878
…2050 Emissions Target	60,040	60,040	60,040	60,040
Additional reductions[6] needed from:				
New growth-related sources	-55,829	-38,004	-24,316	-57,526
Existing res./com. sources	-77,699	-77,699	-77,699	-77,699

[4] The suggested reductions R1-R3 would not be applied in absence of the UVAP

[5] Potential GHG emissions if the City of Ukiah does not change its building code to match the County's.

[6] Reductions from both new growth and existing development to reach the permissible GHG emission levels set by AB32 for the Year 2020 (10% below 1990 levels).

Land use plans can only regulate and mitigate some of the GHG emissions. Transportation and concrete-related emissions can only be partially mitigated by land use and construction standards. Much of the emission reduction will come from state or federal mandates regulating motor vehicles (e.g., requirements for increased gas mileage, alternative energy vehicles, etc.). increased energy efficiency of appliances and other equipment, controls on cement manufacture and landfills, use of renewable energy sources for electricity production, and other actions that are mainly not under the control of the County. Smart land use planning and improved transportation planning may account for about 27% of the required emission reduction as shown below.

Emissions from the various goods and services that new residents and businesses will be responsible for generating are not possible to mitigate within the context of a land use plan. Nor can a plan for new development reduce emissions from existing development. Based on the inventory of existing GHG sources, this report concludes that annual emissions from existing homes and businesses must fall by 77,699 tons of CO2e by 2020 to meet the AB32 target identified for this county. Only the preparation of a separate Qualified Greenhouse Gas Reduction Plan (that addresses existing sources) can reduce overall emission rates within the timeframe set by the State of California. This report recommends that the UVAP include a policy (EA1.1m) to prepare such a plan within a timely manner. With inclusion of the recommendations, the Draft 2007 UVAP would be consistent with the BAAQMD *CEQA Guidelines.* However, until the Qualified Greenhouse Gas Reduction Plan is prepared and adopted, it is unknown whether the County can meet AB32 goals. As such, the project would make a ***cumulatively considerable*** contribution to this ***significant and unavoidable impact.***

Impact 3.13-B The changing climate could cumulatively result in a decrease in water supply, increase in air pollution, and increase in health hazards.

The cumulative emission of more GHG will change the climate in the plan area, more than likely resulting in a hotter climate. A hotter climate increases the formation of ground-level ozone and particulate matter, making it more difficult to meet the health-based air quality standards for these pollutants. Air pollution is also made worse by increases in natural hydrocarbon emissions and evaporative emissions of fuels and solvents which lead to higher levels of ozone and PM10 during hot weather. Warmer temperatures that result in increased use of air conditioners can cause increased air pollutants from power plants and from vehicle operation. In addition, warming, drying, and increased winds could mean hotter, harder-to-control wildfires. These wildfires could emit increased levels of fine particulate matter that could also exceed state and federal standards and harm public health. These wildfires increase the risk of death and property destruction.

Reduced snowpack will reduce hydropower generation potentially resulting in the use of other more polluting energy sources to produce electricity. Reduced snowfall and possibly reduced precipitation would adversely affect how much water is available for use. A changing climate could adversely affect many plan area resources, including: reductions in crop and timber.

These consequences would potentially affect the residents of the County. For instance, according to a press release issued by the Sonoma County Water Agency in April 2007, unusually dry springs experienced in the region over the past few years have inhibited the ability to fill Lake Mendocino to capacity. The press release suggested that such unusually dry springs may be a result of global climate change. Decreasing spring rains and spring stream flows coupled with increasing demand for water resulting from both a growing population and hotter climate could lead to increasing water shortages. By the end of the century, if temperatures rise to the medium warming range and precipitation decreases, late spring stream flow could continue to decline substantially.

Agricultural areas could be hard hit with California farmers losing as much as 25 percent of the water supply they need. Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, if temperatures rise to the medium warming range, there will be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley relative to today's conditions. This is more than twice the increase expected if temperature rises are kept in the lower warming range.

Global warming scenarios provided by the California Climate Change Center in their report *Our Changing Climate, Assessing the Risk to California*, indicate that by 2100, if temperatures rise to the higher warming range, there could be up to 100 more days per year with temperatures above 95°F in Sacramento which means that temperatures in Mendocino County may certainly rise as well. It is possible that higher valley temperatures could pull marine moisture and fog into the plan area. However, under some modeling that is currently being done, ocean temperatures will change and the conditions that generate fog will diminish or disappear. This is a striking increase over historical patterns. As temperatures rise, residents of the plan area will face greater risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat. Increased emission of GHG from plan area buildout contributes to this ***potentially significant cumulative impact***.

Mitigation Measures

The policies of the Draft 2007 UVAP and General Plan that address this impact were listed above under Impact 3.13-A. The same additional policies recommended under that impact apply to this impact.

Impact Significance After Mitigation

As described for Impact 3.13-A, the project would make a ***cumulatively considerable*** contribution to this ***significant and unavoidable impact.***

4.0 TOPICAL ISSUES AND IMPACT SUMMARIES

4.0 TOPICAL ISSUES AND IMPACT SUMMARIES

4.1 GROWTH-INDUCING IMPACTS

1. Introduction

CEQA mandates that an EIR assess potential growth-inducing impacts of a project. The *CEQA Guidelines* describe the required assessment in the following way:

> *Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment (CEQA Guidelines, Section 15126.2(d)).*

The causes of growth typically involve a complex and varied relationship between a number of factors, including economic conditions and employment opportunities, natural population increase, public policies, the local environmental setting, and, increasingly, housing costs compared to other housing in the region. Because population and/or economic growth generally produce a varied range of effects that occur simultaneously, attempts to label growth as categorically adverse or beneficial are considered subjective. Furthermore, as noted above, *CEQA* does not assume that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

The Draft 2007 UVAP accommodates new growth in the plan area. This growth was described in Table 1.6-1 of this EIR, and Chapter 3.0 of this EIR assessed the impacts of that projected buildout development. The plan intends that this new development be developed in a way that, insofar as feasible, reduces impacts to the environment. Amendments to land use classifications in the Draft 2007 UVAP provide land that can be developed for new residential and commercial uses, with a general reduction in the land available for industrial uses. This EIR assesses the long-term impacts on the environment that would result from the projected growth.

Land uses and development consistent with the Draft 2007 UVAP would result in additional housing, commercial, industrial, and public services and infrastructure development within the plan area. For example, development consistent with the Draft 2007 UVAP would result in approximately 5,430 additional housing units in the unincorporated area over existing conditions. The Draft 2007 UVAP has several growth-inducing components as described below.

2. Increased Development Potential

The Draft 2007 UVAP increases the development potential that would be allowed under the existing General Plan land use classifications. As shown on Table 1.6-1, the Draft 2007 UVAP would allow 3,704 more residential units (215% more units) than the existing General Plan and 2.8 million square feet of more commercial development, while reducing the maximum industrial development by 1.3 million square feet. By changing the land use classifications, the Draft 2007 UVAP allows or "induces" additional development in the plan area. This additional development would have more impacts than would occur under the existing General Plan (see Section 4.4 for a comparison of these impacts).

The development potential of the Draft 2007 UVAP substantially exceeds the amount of developable land projected by the State Department of Finance for the year 2030. The State projects a need for 2,772 new housing units by 2030, which is about 54% of the maximum buildout allowable under the Draft 2007 UVAP.

3. Roadway Extensions

The extension of Redemeyer Road could induce additional development in the eastern hills area as the County has not been supportive of recent development applications in that area due to the lack of a secondary access. If such an access is constructed, there could be additional development applications for lands in the Redemeyer Road and Vichy Springs Road area. The reclassification of 290 acres of land east of Redemeyer Road and north of Vichy Springs Road from Range Lands to rural residential would set a precedent for similar requests for general plan amendments in this area. This precedent, along with the extension of Redemeyer Road, could induce additional development in the eastern hills area. Given the objectives of the Draft 2007 UVAP to focus new development west of the Russian River and to preserve range lands, the combination of this road extension and this land reclassification would have significant growth-inducing impacts.

4. Agricultural Land Conversions

The Draft 2007 UVAP would convert about 430 acres of land currently classified for agricultural use to other uses (though about 133 acres of land currently classified for rural residential development would be reclassified to agricultural use, thereby resulting in a net loss of about 300 acres of agricultural land). The Draft 2007 UVAP would also result in development of 150 acres currently under a Williamson Act contract, a net of about 500 acres of land that is currently cultivated, and 694 acres of land that the State classifies as important Farmlands. These conversions plus allowing additional development near agricultural lands may induce additional conversion of farmlands. Owners of agricultural lands may seek future general plan amendments on the basis of incompatibility with growth allowed under the Draft 2007 UVAP and cite the conversions allowed under the Draft 2007 UVAP as precedents to allow such conversions. The most likely areas where additional conversions might be sought would be between Highway 101 and the Russian River, Calpella, and the area north of the Lovers Lane area.

5. Future Growth Inducement

It is speculative that the County would approve general plan amendments that would allow additional growth. However, growth beyond the levels assessed in this EIR, if that growth occurs, would or could have the following major significant effects (virtually all impacts identified in this EIR would be expanded; the following discusses the more important impacts). A more precise assessment of these impacts would be documented in the subsequent CEQA study that would be required for the general plan amendment. However, for discussion purposes, the possible impacts could include:

- Water resources and quality could be adversely affected by additional water demands, soil erosion, use of landscaping herbicides and other chemicals, and motor vehicle-generated residues, impacting domestic and other uses, downstream users, fisheries, and other biological resources.

- Additional paving and other impermeable surfaces could aggravate flooding problems and reduce aquifer recharge.

- Biological habitats would be converted to suburban or urban uses or degraded. Ecological diversity and integrity would be affected, thereby adversely affecting plants and animals that reside on or use that habitat.

- Increased traffic volumes could exceed the carrying capacity of the roadway system. Major roadways (and intersections along those roadways) such as State Street, Orchard Avenue, Gobbi Street, Perkins Street, Talmage Road, and others would operate at less than acceptable levels of service. Most roads in the plan area would experience increased traffic volumes and congestion.

- Increased traffic volumes could cause congestion and increased traffic on residential streets, adversely affecting the residential character of some neighborhoods.

- The increased traffic volumes would increase the emission of pollutants into the air and noise levels along major streets.

- There would be increased loss of open space, open space views, and rural character, though most of the additional development would likely occur in areas where open space views are already impacted by existing development.

- There would be increased demand for public services and utilities. The UVSD treatment and disposal facility and other facilities would need to be expanded beyond current planned expansion. Additional fire, police, and emergency medical staff and equipment would be needed. New schools would need to be constructed. Additional water supplies and storage would need to be developed and conservation intensified. There could be inadequate water to meet new demands.

- It is possible that there could be increased pressure to amend the plan to allow conversion of agricultural lands and allow increased hillside development thereby affecting hillside stability, water quality, distribution of services, energy use, oak woodlands, viewsheds, and other resources.

These additional impacts would result in significant and unavoidable impacts similar to those identified for the Draft 2007 UVAP (e.g., loss of open space views, loss of prime agricultural soils, deterioration of the character of certain residential neighborhoods, and inadequate water supplies) and could result in other significant and unavoidable impacts that this EIR concludes can be reduced to a less than significant level for the projected 2030 population. However, at this time it is speculative whether this additional growth would be allowed.

The growth-inducing impacts from the additional development potential, roadway extensions, and agricultural land conversion are considered to be a ***significant and unavoidable growth-inducing impact***.

4.2 CUMULATIVE IMPACTS

Every EIR must discuss "cumulative impacts" (CEQA 21083[b]), which are defined by the *CEQA Guidelines* to be "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts," *CEQA Guidelines* 15355[a]). Cumulative impacts may be either: a) the cumulative impacts of the various individual effects of a single project; or b) the cumulative impacts of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. The *CEQA Guidelines* state that one method of assessing cumulative impacts is to assess the project vis-à-vis growth projections in the general plan. Because this project is intended to be a part of the County's General Plan, the cumulative impact analysis is based on buildout under the plan. As a worst case, it is assumed this buildout would occur by 2030. Chapter 3.0 contained the cumulative impact analysis of buildout under the Draft 2007 UVAP.

In addition to impacts that are cumulatively significant under the Draft 2007 UVAP, there is an additional level of cumulative impact resulting from growth in the unincorporated plan area together with projected growth in the City of Ukiah. Rather than assess specific projects that are currently proposed within the City, this EIR assesses cumulative impacts of buildout of the City to 2030. The County Planning and Building Department has calculated that buildout in the City would add as many as 594 new housing units and 1,312,983 to 2,387,573 square feet of new commercial development, mainly in the Airport Industrial Park area, south of Brush Street along Orchard Avenue, and along Perkins and Gobbi Streets, along with some increase in intensity due to redevelopment, infill and reuse. Once buildout is reached, the City would grow (if it so chose) by annexing adjacent plan area lands within its Sphere of Influence.

There are a number of projects that have been approved but not constructed or are in some stage of entitlement. However, these projects, to the degree that the project description has been finalized, are all consistent with the land use classifications of the Draft 2007 UVAP or the City's General Plan (for projects within the City). The cumulative effects are therefore incorporated in the analysis of the buildout projections.

For a few resources, there are also cumulative impacts resulting from development in other portions of Mendocino County or elsewhere. These impacts are regional or global impacts, including impacts to air quality and climate change.

The impacts of new development in the City plus development in the plan area would mainly be the same (though increased for some impacts) as the impacts identified for the Draft 2007 UVAP. The principal cumulative impacts that would occur from the combination of new development in the City and the plan area are described below.

1. Land Use

The cumulative development scenario for land use includes the development allowed under the Draft 2007 UVAP together with development in the City. Such growth, particularly in the plan area, would result in significant cumulative land use, population, and housing impacts. As discussed in ***Section 3.1 Land Use***, land uses and development consistent with the Draft 2007 UVAP would induce substantial growth of population within the plan area. The projected plan area growth constitutes most of the growth projected for the entire valley. The impacts of this added population are addressed in other sections of the EIR.

The cumulative development of new commercial retail development would cause urban decay within the City of Ukiah and in the plan area. The Draft 2007 UVAP would make a cumulatively considerable contributions to this significant impact.

As discussed in ***Section 3.1, Land Use***, the Draft 2007 UVAP would have a significant impact on farmland and prime agricultural soils. Development areas within the City do not support farmland and are already classified for urban uses, so there would not be a cumulative impact beyond that discussed in Impact 3.1-B.

2. Geology and Soils

As discussed in ***Section 3.2 Geology and Soils***, as population within the unincorporated plan area together with the City grows, so would the opportunity for geologic and soils hazards (e.g., seismic ground shaking, seismic related ground failure, landsliding, tsunamis and seiches, subsidence and settlement, and expansion of soils).

Implementation of the Draft 2007 UVAP policies would reduce the danger from these hazards, however; this would be a significant cumulative impact as regards damage from seismic events. The Draft 2007 UVAP contribution to this impact would be cumulatively considerable. This would result in a significant cumulative impact for which the Draft 2007 UVAP contribution would be cumulatively considerable. Mineral resource and septic suitability impacts would not be exacerbated by development in the city, and no cumulative impact would occur.

3. Hydrology

Land uses and development consistent with the Draft 2007 UVAP, together with development in the City would result in cumulative hydrology and water resource impacts. As discussed in ***Section 3.3 Hydrology and Water Quality***, land uses and development consistent with the Draft 2007 UVAP would result in significant water quality, groundwater, drainage, and flooding impacts. For example, cumulative development in the plan area plus the City would increase the number of residences

constructed in the floodplain and the dam failure inundation zone. Also, cumulative development would result in additional flooding, alterations to existing drainage patterns and in the placement of structures within 100-year flood hazard areas that could impede or redirect flood flows, resulting in secondary flood damage including bank instability and erosion, and new storm drain improvements. The cumulative development would adversely impact water quality through increased erosion and runoff of pollutants from streets and other developed areas. Cumulative development would result in cumulative hydrology and water resource impacts. Land uses and development consistent with the Draft 2007 UVAP would make a cumulatively considerable contribution to these cumulative hydrology and water resources impacts. ***Section 3.3 Hydrology and Water Quality*** identifies additional policy mitigation measures that would reduce the impacts of the Draft 2007 UVAP related to development within the floodplain and the dam inundation zone, new flooding, drainage, and groundwater to a less than significant cumulative level. There would be significant cumulative impacts on water quality (impact 3.3-G) and potentially for construction of new storm drain facilities (Impact 3.3-D). The Draft 2007 UVAP would make a cumulatively considerable contributions to these two significant impact.

4. Biological Resources

Because buildout in the City would be almost entirely on sites that have previously been disturbed, it is not expected that there would be a cumulative impact to special status species, wetlands, riparian corridors, or other sensitive biological resources that would be much greater than described for the Draft 2007 UVAP. The only area where buildout within the plan area and the City might combine to produce a cumulative impact would be the aforementioned cumulative effects to water quality. As discussed in Impact 3.4-B in ***Section 3.4 Biological Resources***, this is a significant impact. The addition of the City runoff results in a significant cumulative impact, and the Draft 2007 UVAP contribution to this impact would be cumulatively considerable.

5. Cultural Resources

The cultural resources analysis in ***Section 3.5 Cultural Resources*** considers all land uses and development within the unincorporated plan area and the cumulative impacts of such growth on cultural resources. Growth within the boundaries of the City could increase the severity of impacts to cultural resources from cumulative development pursuant to the Draft 2007 UVAP. Consistent with the Draft 2007 UVAP, project sponsors would be required to take appropriate measures to protect or preserve cultural resources affected by individual projects. This would reduce the impacts of cumulative development on these resources. However, many land uses and development do not require permits which would subject them to review and mitigation. Therefore, this would be a significant cumulative impact (impacts 3.5-A and 3.5-B). The contribution of the Draft 2007 UVAP would be cumulatively considerable.

6. Traffic

As described in ***Section 3.6 Circulation and Transportation***, a travel forecast model was used to prepare the traffic projections for this EIR. This modeling effort included both roadway improvements and growth in the unincorporated area of Ukiah Valley, as

projected under the Draft 2007 UVAP, as well as projected growth in the City of Ukiah. Therefore, the traffic analysis provided in Section 3.6 included cumulative development considerations.

As indicated in Table 3.6-5 growth in the City along with growth in the unincorporated plan area would result in unacceptable levels of service along 2 roadway links and several intersections in the area. Policy mitigations are identified to improve the Level of Service on these affected roadways and intersections that would allow the circulation improvements to operate at acceptable levels of service. The cumulative impacts on traffic congestion and traffic safety are less than significant.

7. Air Quality

As discussed in ***Section 3.7 Air Quality***, the land uses and development consistent with the Draft 2007 UVAP would result in a significant air quality impact due to increased emission of pollutants. Emissions of toxic air contaminants and odors would be reduced to a less than significant level. Buildout of the City of Ukiah would contribute to all of these impacts, and resulting in a significant cumulative impact on air quality as regards criteria emissions. As a result, the cumulative air quality impact (Impact 3.7-A) would be significant and the Draft 2007 UVAP contribution would be cumulatively considerable. This is similar to the conclusion of the EIR prepared for the new County General Plan.

8. Noise

The analysis of noise impacts that are associated with auto and transit traffic are, in large part, based upon the traffic analysis which considers cumulative development in the plan area and the City as described above under Transportation. Future land uses and development within the City and plan area would result in potential cumulative noise level increases along four roadway segments. However, as described in ***Section 3.8 Noise***, the cumulative impacts would be reduced to a less than significant level due to UVAP and General Plan policies.

Noise impacts resulting from stationary sources are identified as less than significant impacts under the Draft 2007 UVAP. It is possible that new noise sensitive land use and development consistent with the Draft 2007 UVAP could occur adjacent to existing noise generating land uses at the fringe of the cities, or that new noise generating land uses could occur adjacent to noise sensitive uses. Yet these cumulative impacts would also be less than significant due to the policies included in the General Plan that would address the noise impacts of new noise generating uses.

9. Aesthetics

Land uses and development consistent with the Draft 2007 UVAP could impact the visual quality of the plan area. As discussed in ***Section 3.9 Aesthetics***, policies contained in the Draft 2007 UVAP would reduce the impacts to views, but the overall loss of open space views, potential inconsistency with the existing visual character, and additional light trespass impacts on the night sky would remain significant impacts. The additional development of the City would further reduce open space views (Impact 3.9-A), increase inconsistency with the existing visual character (Impact 3.9-B), and add

night lighting (Impact 3.9-C), so there would be significant cumulative impacts, and the Draft 2007 UVAP would make a cumulatively considerable contribution to those impacts.

10. Public Services

Schools

As discussed in ***Section 3.10 Public Services,*** buildout of the plan area would add 2,335 new students. Buildout within the City of Ukiah would add an additional 255 additional students. These additional students would exacerbate potential overcrowding of the elementary and high schools. One to two new elementary schools and a small high school might be needed to serve the cumulative buildout population, and the impacts of constructing those new schools might be significant. These impacts could be cumulatively significant (Impact 3.10-A), and the students generated by the Draft 2007 UVAP would be a cumulatively considerable contribution.

Police

As discussed in ***Section 3.10 Public Services***, buildout of the plan area would increase the demand for services by the Sheriff's Department. Buildout within the City of Ukiah would add additional development and increase in population that would require additional response from the City Police Department, and somewhat from the Sheriff's Department (for mutual aid response). There is a need for a new Criminal Justice Center. The additional development within the City would increase that need. Construction of that facility could have significant impacts (Impact 3.10-B). The impacts could be cumulatively significant, and the new residents and businesses resulting from buildout under the Draft 2007 UVAP would be a cumulatively considerable contribution.

Fire

As discussed in ***Section 3.10 Public Services***, buildout of the plan area would increase the demand for services by the Ukiah Valley Fire District (UVFD). Buildout within the City of Ukiah would add additional development and increase in population that would require additional response from the City Fire Department, and somewhat from the UVFD (for mutual aid response). However, new facilities are not required to serve this buildout. Therefore, there would not be a significant cumulative impact.

Additional development would increase traffic congestion potentially hampering emergency response. However, planned road and intersection improvements (discussed in Section 3.6 of this EIR) would provide adequate levels of service on area roadways, and there is no evidence that increased congestion would substantially reduce emergency response capabilities. Therefore, there would not be a significant cumulative impact.

Emergency Medical

As discussed in ***Section 3.10 Public Services,*** buildout of the plan area would increase the demand for emergency medical services from the Ukiah Valley Fire District (UVFD), City of Ukiah Fire Department, and Ukiah Ambulance Service. Buildout within the City of Ukiah would add additional development and increase in population that would require

additional response from the these agencies. Because the EMS system is near the breaking point, the cumulative impact would be cumulatively significant and the additional demand resulting from buildout under the Draft 2007 UVAP would be a cumulatively considerable contribution.

Water

As discussed in ***Section 3.10 Public Services*****,** buildout of the plan area would increase the demand for water from the plan area water providers. Buildout within the City of Ukiah would add additional development and increase in population. However, the City has adequate water supplies to serve buildout in the City and the City is not responsible for serving plan area development. So there would be no cumulative impact as regards water.

Wastewater

As discussed in ***Section 3.10 Public Services*****,** buildout of the plan area would increase the demand for wastewater treatment and disposal. The UVSD facility has inadequate capacity to serve buildout of the plan area and the City. However, the Draft 2007 UVAP contains sufficient policy guidance to ensure that new development would not be approved if there was inadequate capacity in this facility. Future expansion of this facility and/or construction of another facility could have significant environmental impacts. This is a significant cumulative impact (Impact 3.10-J), and the Draft 2007 UVAP would make a cumulatively considerable contribution to the impact.

Solid Waste

As discussed in ***Section 3.10 Public Services***, buildout of the plan area would generate solid waste, but there is adequate capacity in the transfer station and the landfill to accommodate this waste. There would also be sufficient capacity to handle the additional buildout in the City. There would not be a significant cumulative impact. Additional development of other areas served by the Potrero Landfill will eventually require expansion of that landfill or development of an alternate site or method of disposal. The impacts of whatever other landfill or disposal methods developed would be speculative at this time.

Parks and Recreation

As discussed in ***Section 3.10 Public Services*****,** buildout of the plan area would increase the demand for new parks and recreational facilities. Buildout under the City General Plan would add additional residents and increase this areawide demand for such facilities. Construction of these new parks and recreational facilities could have significant cumulative impacts, and the additional demand resulting from buildout under the Draft 2007 UVAP would be a cumulatively considerable contribution.

11. Hazards and Hazardous Materials

As discussed in ***Section 3.11 Hazards and Hazardous Materials,*** land uses and development consistent with the Draft 2007 UVAP would result in less than significant impacts related to hazardous materials. City and cumulative project land uses and development could result in additional transport and/or release of hazardous materials, but this cumulative impact would be less than significant given compliance with existing laws and regulations. Additional development in the City could be located near the airport. However, it is expected that this development would be consistent with the Mendocino County Airport Comprehensive Land Use Plan (CLUP), and there would be a less than significant cumulative impact.

12. Energy

As discussed in ***Section 3.12 Energy***, land uses and development consistent with the Draft 2007 UVAP could substantially increase the demand for and consumption of energy resources. Wasteful use of energy related to land use patterns, energy efficiency in new construction and building retrofits, would be less than significant with the addition of EIR-related mitigations. Buildout of the City would add to the new energy demand, but the cumulative contribution to the impact from the Draft 2007 UVAP would be less than considerable given the energy conservation policies included in the Draft 2007 UVAP and this EIR.

13. Global Climate Change

The discussion in ***Section 3.13 Global Climate Change*** is a cumulative impact discussion and include GHG emissions from the City of Ukiah. As described in that section, the buildout of the plan area and city would make cumulatively considerable contributions to the significant impacts.

14. Summary

To summarize, buildout in the City combined with plan area development over the next 20+ years will have cumulative effects on many environmental resources. The significant long-term impacts identified for the Draft 2007 UVAP will be increased in severity. In general, the area will become more urbanized and its rural character will decrease. There will be a loss of open space views. The valley will be a busier place with more traffic, noise, and air pollution. Biological habitat will be replaced with development. Water quality could be affected by transport of various pollutants to the Russian River and its tributaries. Public service providers will need to expand infrastructure, staffing, and equipment to meet the needs of a larger population.

4.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

The *CEQA Guidelines* require that an EIR discuss irreversible environmental changes that would occur if the project were approved (Section 15126.2[c]). Development of the plan area would irrevocably commit undeveloped portions of the County to residential, commercial, industrial, and office use. The commitment of financial resources, energy, raw materials, and labor would be associated with this conversion of land use.

The use of nonrenewable resources during the construction and use phases of future projects would be irreversible since a large commitment of such resources makes removal or non-use thereafter unlikely. Primary impacts and secondary impacts generally commit future generations to similar uses.

The following list summarizes those resources that would be irretrievably committed to the development of the plan area (these resources were assessed in detail in the preceding sections of ***Chapter 3.0, Environmental Impact Analysis***):

- Loss of prime agricultural soils
- Loss of soil resources
- Loss of biological habitat and reduced biological diversity
- Decreased water quality
- Decreased air quality and changes to valley microclimate
- Reduced water recharge including floodplain capabilities
- Loss of open space and scenic resources
- Loss of unknown archaeological resources
- Commitment of nonrenewable and renewable energy and materials for construction and operation of transportation, utility, community, and individual commercial, industrial, and residential facilities and uses
- Increased use of organic and inorganic materials consumed to meet energy needs of individuals and public services demands

These commitments must be weighed against the provision of increased housing, jobs, other economic opportunities, and tax revenues and additional protections for other environmental resources that would occur if the Draft 2007 UVAP is adopted.

4.4 PROJECT ALTERNATIVES

CEQA requires that the EIR assess alternatives to the project if the project will have significant environmental impacts, even if these impacts can be mitigated to a level that is less than significant. As noted in Chapter 3.0 of this EIR, the project will have a number of significant impacts, including 25 significant and unavoidable impacts. This EIR therefore assesses alternatives to the project.

The *CEQA Guidelines* offer a number of requirements and recommendations regarding the alternatives analysis. The more pertinent issues regarding these requirements and recommendations are summarized as follows:

1. A range of reasonable alternatives must be assessed. The range must be sufficient to permit a reasonable choice of alternatives so far as environmental aspects are concerned. The EIR need not assess multiple variations of alternatives. The range of alternatives to be assessed is governed by the rule of reason.

2. Alternatives must be ones that could feasibly attain most of the basic objectives of the proposed project. While alternatives can impede the attainment of the objectives, they should not substantially impede those objectives. Alternatives that fundamentally change the nature of the project do not meet the basic objectives of the project.

3. The alternatives must be feasible. Feasibility takes into account factors such as site suitability, economic viability, availability of infrastructure, consistency with plans and regulatory limitations, jurisdictional boundaries, and ability to acquire, control, or gain access to alternative sites.

4. The analysis of the alternative must determine whether the alternative reduces the significant impacts identified for the project. If the alternative would generate additional significant impacts, those must be identified and discussed.

5. One of the alternatives to be assessed must be the “no project” alternative. (See discussion below under that heading.)

6. In order for the analyses to be meaningful, the alternatives also must be distinctly different and readily discernible in order to distinguish between their effects and determine the environmentally superior alternative. The EIR must assess the identified alternatives and determine which among the alternatives (including the project as proposed) is the environmentally superior alternative. If the no project alternative is identified as the environmentally superior alternative, then another of the alternatives must be identified as the environmentally superior alternative among the remaining alternatives.

Given these mandates, this EIR assesses the following alternatives:

1. No Project – Existing General Plan

2. Land Use Alternative A

3. Land Use Alternative B

4. Land Use Alternative C – Policy Only

1. No Project Alternative – Existing General Plan

1. Description

The *CEQA Guidelines* requires that an EIR address the impacts that would result if no project were approved. For EIRs on general plans (and the Draft 2007 UVAP would be considered the equivalent of a general plan), the *CEQA Guidelines* states that the "no project" alternative will be the continuation of the existing general plan (CEQA Guidelines, Section 15126.6[e][3][A]). This poses a problem for this assessment of alternatives, because the existing General Plan adopted in 2009 states that land uses in the plan area will be regulated and guided by the UVAP (even though the UVAP had not been adopted at the time the General Plan was adopted); the new General Plan does not provide any land use designations for the plan area. For purposes of this analysis it is assumed that the existing land use designations from the old 1982 General Plan would apply to this alternative. Otherwise all policies and action items contained in the new General Plan would apply to new development under this alternative. The combination of old land use designations and new policies are hereafter referred to as the Existing General Plan (EGP).

Table 1.6-1 presented in the first chapter of this EIR shows the buildout potential for the Draft 2007 UVAP, and the other three plan alternatives. To facilitate this discussion of project alternatives, the table is reproduced again below as Table 4.4-1. Excluding areas classified as Commercial, the EGP allows a maximum buildout of 1,726 residential units, of which 1,430 units would be single-family units.[171] Almost 60% of the possible single-family units would be located on scattered lots outside of the nine main development areas. Many of these properties are used for agriculture or other uses and may never be developed. So, though the EGP has a listed residential potential for up to a maximum of 1,726 units, the areas where more than an occasional single home or a small group of homes could be built is limited to about 853 units. Given this small reserve of vacant land classified for residential development, it is expected that in the future there could be increasing applications for mixed use development proposals for Commercial areas (since residential use is allowed in Commercial designations with approval of a Use Permit) and/or requests to amend the plan to allow additional residential development.

This alternative reduces the maximum amount of future commercial development from about 4.6 million square feet to 1.8 million square feet. It expands the maximum amount of future industrial development from about 2.4 million square feet to about 3.7 million square feet. See Figure 4-1 that shows the land use classifications for the EGP.

The purpose of presenting this alternative is to compare the effects of future development under the project with the effects that would occur if development were guided by the EGP.

[171] All estimates of future development in the plan area, its sub-planning areas, districts, or resource zones presented in this Alternatives section were provided by the Mendocino County Department of Planning and Building Services and are based on the Department's analysis of its GIS database for the project and the alternatives.

Table 4.4-1
Maximum Buildout Development Potential

	Discussion Area (DA)										
	DA #1 Calpella	DA #2 North State	DA #3 Lover's Lane	DA #5 South State	DA #6 Masonite	DA #7 Brush St. Triangle	DA #8 East Ukiah Hills	DA #9 South Ukiah Valley	Not in any discussion area	UVAP MASTER TOTAL	CITY OF UKIAH TOTAL
DRAFT 2007 UVAP											
Single Family Units	25	236	712	0	0	241	65	490	909	2,678	78
Multifamily Units	153	364	636	165	599	391	0	432	12	2,752	516
Min Com Lease Area*	68,656	411,039	187,308	263,901	493,930	135,655	0	183,729	325,191	2,069,409	1,312,983
Max Com Lease Area*	228,855	607,489	624,360	390,808	1,646,436	388,695	0	354,710	355,308	4,596,661	2,387,573
Industrial Uses	0	1,771,755	0	0	10,230,767	0	0	0	0	12,002,522	0
Public Uses	0	459,166	1,151,263	0	494,702	375,739	0	0	238,089	2,718,959	263,980
EXISTING GENERAL PLAN ALTERNATIVE & ALTERNATIVE C											
Single Family Units	28	92	3	0	0	0	1	449	857	1,430	78
Multifamily Units	137	0	0	147	0	0	0	0	12	296	573
Min Com Lease Area**	93,479	347,559	0	263,902	0	0	0	55,493	126,066	886,499	1,312,983
Max Com Lease Area**	205,654	831,574	0	359,082	0	0	0	55,493	347,481	1,799,284	2,387,573
Industrial Area	0	1,770,360	213,194	0	13,196,567	3,367,968	0	0	105,697	18,653,786	0
Public Uses	0	0	0	0	0	0	0	0	0	0	263,980
LAND USE ALTERNATIVE A											
Single Family Units	25	95	63	0	0	241	65	490	909	1,888	78
Multifamily Units	153	124	184	165	599	391	0	432	12	2,060	516
Min Com Lease Area*	68,656	287,064	74,338	263,901	493,930	135,655	0	183,729	325,191	1,832,464	1,312,983
Max Com Lease Area*	228,855	287,064	247,796	390,808	1,646,436	388,695	0	354,710	355,308	3,899,672	2,387,573
Industrial Uses	0	2,587,171	0	0	10,230,767	0	0	0	0	12,817,938	0
Public Uses	0	0	96,884	0	494,702	375,739	0	0	238,089	1,205,414	263,980
LAND USE ALTERNATIVE B											
Single Family Units	25	95	63	0	0	136	1	490	857	1,667	78
Multifamily Units	153	124	184	165	0	331	0	146	12	1,115	516
Min Com Lease Area*	68,656	135,681	74,338	392,075	0	336,446	0	183,729	163,778	1,354,703	1,312,983
Max Com Lease Area*	228,855	135,681	247,796	518,982	0	526,732	0	354,710	163,778	2,176,534	2,387,573
Industrial Uses	0	2,717,592	0	0	13,196,567	0	0	0	105,697	16,019,856	0
Public Uses	0	0	96,884	0	0	361,486	0	0	238,089	696,459	263,980

* leasable commercial space is calculated from both commercial and mixed use classification
Source: Mendocino County Planning Team

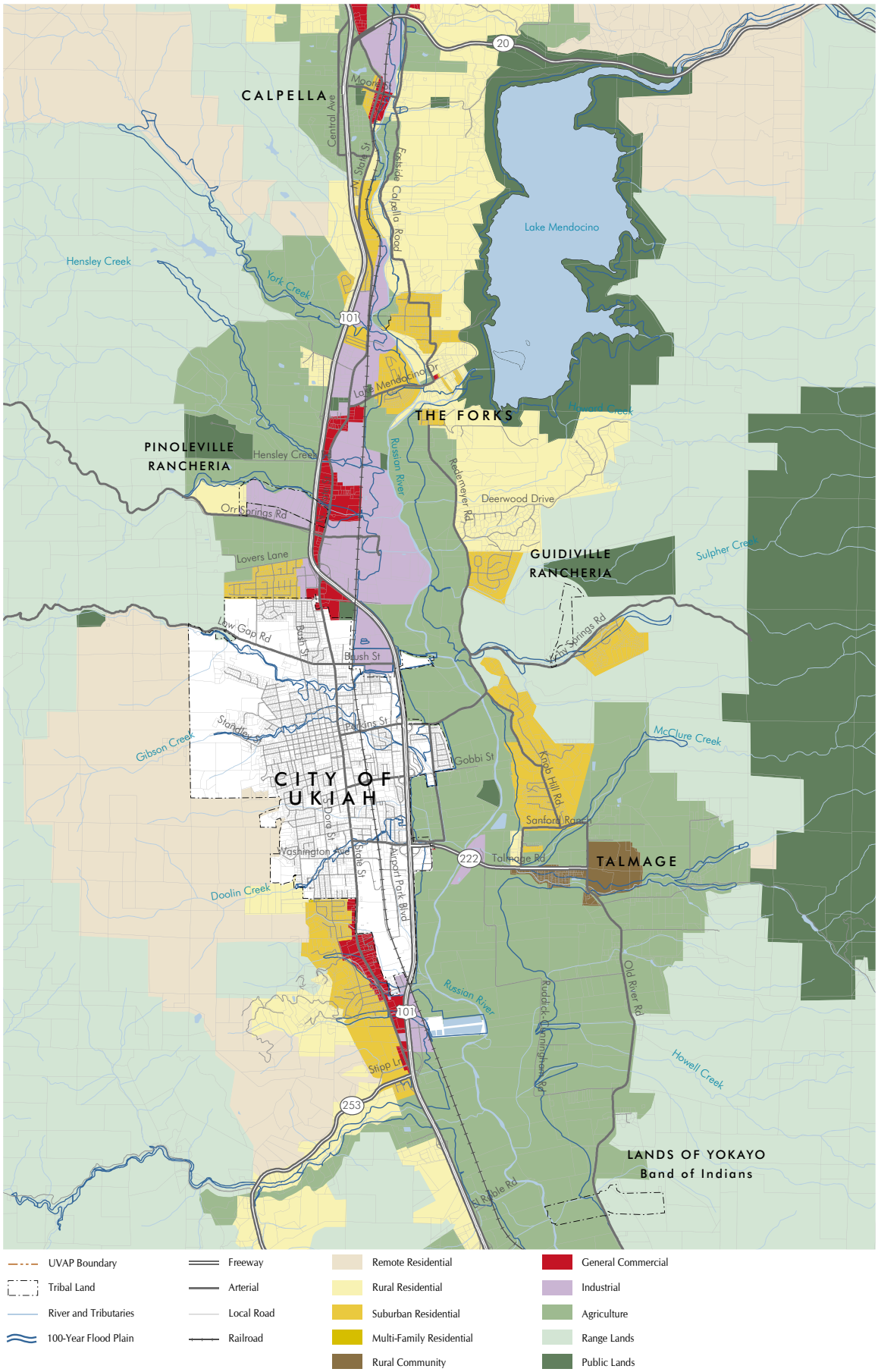

Figure 4-1 Existing General Plan and Land Use Alternative C - Policy Only

Source: Mendocino County Planning & Building Services

Table 4.4-2 (presented earlier as Table 1.6-2) shows the summarized buildout potential for the project and the other alternatives.

Table 4.4-2
Maximum Buildout Potential in the Plan Area

	Maximum Number of Dwelling Units	Maximum Commercial (square feet)	Maximum Industrial (square feet)
Draft 2007 UVAP	5,430	4.6 million	2.4 million
Existing General Plan & Alternative	1,726	1.8 million	3.7 million
Land Use Alternative A	3,948	3.9 million	2.6 million
Land Use Alternative B	2,782	2.2 million	3.2 million

Source: Mendocino County Department of Planning and Building Service

The following discussion determines whether the policies included in the Existing General Plan adequately mitigate the impacts of buildout under that plan. In some cases, the conclusion of impact significance in the following discussion may vary from the conclusions of the General Plan EIR. This is because that plan did not address buildout in the UVAP plan area. This buildout of the most urban part of the County would often result in more extensive or identifiable impacts than were addressed in the countywide General Plan or its EIR.

2. Environmental Impacts

A. Land Use

The Land Use section contains analyses of a variety of topics, as described below.

Agriculture

New development allowed under the EGP will displace farmlands and commercial agricultural operations. Proposed roadway extensions in the Draft 2007 UVAP could result in loss of farmlands and impacts to farming activities on the east side of the valley. New development could cause conflicts with agricultural operations resulting in those operations going out of business.

While the General Plan contains policies to preserve agriculture and restrict the conversion of prime farmlands to other uses, that Plan allows for development on prime agricultural soils. However, as shown on Table 3.1-1, the 2007 Draft UVAP would allow conversion of about 656 acres of classified Farmland, as compared to about 520 acres

that could be converted under the EGP. The Lovers Lane area would remain agricultural under this alternative. Even though less Farmland would be converted, there would remain a significant and unavoidable impact on Farmlands.

The EGP provides strong policy language to protect agriculture from incompatible uses that would threaten the owners' ability to operate. The Draft 2007 UVAP builds on these policies and provides some additional protection. In both cases, the impact would be reduced to a less than significant level.

Housing and Population

Development under the EGP would potentially displace people and housing, similar to development under the Draft 2007 UVAP. In both cases, the impact would be less than significant.

Buildout of the plan area under the land use classifications and policies of the EGP would result in 1,726 new dwelling units and 4,315 new people. Buildout under the Draft 2007 UVAP would be substantially greater, allowing potential development of 5,430 new dwelling units, which would add about 13,575 people to the area population. The reduction in buildout population under the No Project alternative is sufficiently substantial that it reduces the impact (Impact 3.1-E, which was found to be a significant and unavoidable impact for the Draft 2007 UVAP) to a less than significant level.

Urban Decay

The urban decay analysis (see the previous discussion in Chapter 3 under Impact 3.1-G) prepared for the County concluded that for this alternative the amount of new commercial space that would be developed by 2025 would be approximately what the market could support. There would be no urban decay resulting from this project, and that significant impact of the project would be eliminated.

Plan Consistency

The land use classifications of the EGP are generally more consistent with the City of Ukiah's General Plan land use designations than are the designations in the Draft 2007 UVAP. The principal areas where the EGP is more consistent include:

1. The Masonite site, which is classified as Industrial in the EGP and as North State Commercial Industrial Complex in the City's General Plan;

2. Various areas where the Draft 2007 UVAP changes the designation from suburban residential to Mixed Use, which allows more development;

3. The Brush Street Triangle where the City and EGP designate the area as mainly commercial with some industrial;

4. The southern end of the North State Street area where the City and the EGP designate the area for commercial and industrial; and 5) the east half of the East Hills area (Area #30 on Figure 1-4 of this EIR) where the City and EGP designate the area as Rangeland.

However, the Draft 2007 UVAP is more consistent with the City's designations as regards the Lovers Lane area where the City and Draft 2007 UVAP designate the area for mixed use, and the Calpella area where the City and Draft 2007 UVAP designate the area as Rural Community.

B. Geology and Soils

As would occur under the Draft 2007 UVAP, new development under this alternative would be subject to seismic activity, landsliding, and unstable soil conditions. The policy direction provided in the EGP to address these concerns would reduce the impact to a less than significant level for discretionary projects. However, as is the case for the Draft 2007 UVAP, the seismic impacts remain significant and unavoidable, as it is not possible to protect all new development and residents from harm during a major earthquake.

The potential for landsliding, soil constraints for septic systems, and soil erosion would be the same under either the project or the alternative. In both cases, the impacts would be reduced to a less than significant level by implementing policy language either in the EGP or Draft 2007 UVAP. Potential impacts to mineral resources would be the same and would be reduced to a less than significant level for either the plan or the alternative.

C. Hydrology

The Hydrology section contains analyses of a variety of topics, as described below.

Flooding

As shown in Table 3.3-1, development under the EGP instead of the Draft 2007 UVAP would result in 955 fewer residential units and a maximum of about 400,000 less square feet of commercial development being constructed in the 100-year floodplain, though more industrial development would be permitted in the floodplain. The impacts of this development can be mitigated by Draft 2007 UVAP policies (as amended with EIR-recommended additions).

However, reducing residential development in the floodplain from what the Draft 2007 UVAP would allow does reduce the risk of people being stranded or adversely affected by floods. The No Project alternative would result in approximately equivalent impacts on floodplain storage, since more industrial development would be allowed in the floodplain under the alternative. The Draft 2007 UVAP contains more stringent guidelines, and a timeline for adopting new floodplain building standards that are not included in the EGP, including development of a Flood Management Plan, which is not recommended in the EGP. This is an advantage of the proposed project.

As shown in Table 3.3-2, this alternative reduces the number of new residential units within the Coyote Dam inundation area by 1,928 units as well as a maximum of about 1,900,000 square feet of new commercial development. This impact is less than significant for the project, but, again, reducing the number of people in the inundation area is a beneficial effect of this alternative.

Runoff

New development would increase runoff and cause potential flooding similar to the flooding potential described for the project. With the exception of the 188 acres in the Lovers Lane area being reclassified Mixed Use from Agriculture and the 300 acres in the East Hills area being reclassified to Rural Residential (that would allow 86 new residences), the same parts of the plan area would be developed (with industrial development replacing residential or commercial development under this alternative). The 200+ acres that could be developed on these two areas would not cause a substantial difference in overall hydrologic and water quality impacts for the plan area as a whole. The Draft 2007 UVAP contains more stringent standards to regulate runoff from new development than the EGP has, which is an advantage of the proposed project.

Additional runoff from new development would result in potential streambank erosion. However, this impact is mitigated to a less than significant level for both the project and this alternative.

The additional development and runoff would require construction of new storm drains, and that construction could have significant environmental impacts. It is expected that these impacts will be mitigated as part of the CEQA review for the new projects. However, because it is possible that one or more of these improvements might have significant effects that cannot be satisfactorily mitigated, the impacts are considered significant and unavoidable for both the project and this alternative.

Water Pollution

Construction and future use of new development would generate sediments and pollutants that would adversely affect water quality of receiving streams. The EGP contains policies to address water quality impacts. With the County's recent adoption of a Stormwater Ordinance and a Standard Urban Storm Water Mitigation Plan, the impact would be reduced to a less than significant level for both the project and this alternative, with the project providing additional protection for water quality.

Agricultural use will continue to generate sediments and other pollutants that will enter receiving streams. Because more land would remain in agricultural production under this alternative, it would have more water quality effects than the proposed project. However, in both cases, the amount of future agricultural production would be less than the current baseline situation, so the impact would be less than significant for both the project and this alternative.

Groundwater

The alternative will generate additional demand for groundwater. The alternative would result in approximately the same number of new residences in areas outside the service areas of municipal water providers. In these areas new development would rely on groundwater supplies. The impact would be the same for the project and the alternative, and in both cases the impact would be less than significant.

Aquifer Recharge

Because the alternative would result in about the same amount of new impermeable surface, it would have about the same potential impact as the proposed project on reducing aquifer recharge. The EGP does not address this impact, while the Draft 2007 UVAP contains policy language to reduce the impact to a less than significant impact.

In summary, because the alternative would result in approximately the same amount of land being developed in the plan area, it would have similar hydrologic impacts regarding flooding, new runoff, and water quality. The EGP does not contain the policy guidance or a timeline for adoption of flood control and water quality standards that are contained in the Draft 2007 UVAP. Therefore, the alternative would have more significant hydrologic and water quality impacts than the proposed project.

D. Biological Resources

Development under the EGP would potentially affect special status species of plants and wildlife. It is expected that the potential impacts for this alternative would be approximately the same as those described for the project since these special status species inhabit areas outside the main development areas. More details are provided below:

Riparian and Wetland Habitat

New development will adversely affect riparian habitat in the plan area. It is expected that the impact would be approximately the same for the project and this alternative. The EGP contains policy language to protect this habitat, but it is not as detailed as the Draft 2007 UVAP, and the impact would remain significant. The Draft 2007 UVAP, as modified by EIR-recommended mitigations, would provide protection for these resources and would reduce the impact to a less than significant level.

Both the project and this alternative, along with other adopted regulations, would provide protection for wetlands, and the impact would be reduced to a less than significant level for both plans.

Oak Woodlands

The alternative would slightly reduce the potential conversion of oak woodlands (306 new residences under the EGP as compared to 380 new residences under the Draft 2007 UVAP for the 19,000 acres containing oak woodlands and other native forest communities). While the EGP contains policy language to address this impact, the Draft 2007 UVAP provides additional mitigation and protection. The Draft UVAP, as modified with EIR-recommended mitigations, does provide adequate mitigation by requiring development of an Oak Woodland Habitat Inventory and Conservation Plan and requiring specific mitigations for oak removal.

Wildlife Travel and Nursery Sites

Development under either plan could disrupt wildlife travel and harm nursery sites. While the EGP contains policy language to address this impact, the Draft 2007 UVAP provides additional mitigation and protection.

In general, this alternative reduces the amount of new development, but the reduction is not substantial in the areas that support most of the sensitive biological resources. The Draft 2007 UVAP provides more explicit and comprehensive protections for these resources as well as an established timeline for implementation of new programs and requirements.
Both plans have policy protections for these species, but the EGP does not contain a timeline for when protective standards would be finalized and adopted, so the impact would remain significant. As such, the Draft 2007 UVAP provides more protection for these species than the EGP.

E. Cultural Resources

Future development under the EGP would have about the same potential for damaging or destroying cultural and paleontological resources as could occur under the Draft 2007 UVAP. The plans contain policies that would protect these resources for new discretionary projects. For both plans, the impacts remain significant because of the inability of the County to regulate development that does not require a discretionary permit.

F. Circulation and Transportation

This alternative would generate about 40% fewer new vehicle trips at buildout than the project would. As a result, there will be less additional congestion on plan area roadways and intersections.

The AB 1600 study done to determine the nexus for future traffic mitigation fees determined that the following circulation improvements that are required under the project (listed in Table 3.6-5) would not be required for this alternative:

1. Extending Orchard Avenue north of the Brush Street Triangle;
2. Extending Hensley Creek Road and Orr Springs Road to the Orchard Avenue Extension; and
3. Extending Orr Springs Road to Lovers Lane.

In addition, as described under Impact 3.6-A, the Redemeyer Road Extension and the extension of Oak Knoll Road to Stipp Lane or Highway 253 would not be required to relieve traffic congestion. The other improvements listed on that table would be needed for this alternative to facilitate buildout traffic from the plan area plus the City of Ukiah. Construction of proposed roadway and intersection improvements would reduce traffic congestion impacts to a less than significant level.

Policies in both the EGP and the Draft 2007 UVAP restrict new development that would cause inadequate levels of services and reduce the impact of new traffic on streets and intersections to a less than significant level.

By reducing the amount of new traffic, this alternative also would reduce the risk of accidents between vehicles and other vehicles, bicyclists, and pedestrians, though this impact is considered less than significant for the project. Policies in both the EGP and the Draft 2007 UVAP require a safe transportation network and reduce the safety impact of new traffic on streets and intersections to a less than significant level.

By maintaining most vacant lands along the railroad for non-residential use, buildout under the EGP would have fewer potential land use conflicts if and when the railroad resumes operations.

In general, by reducing buildout, the alternative substantially reduces all circulation impacts. This is an environmental advantage of this alternative.

G. Air Quality

As shown in Table 3.7-8, buildout under this alternative would generate less emission of pollutants than the proposed project. NOx (an ozone precursor) emissions would be 1,040 pounds per day as compared to 1,160 pounds for the Draft 2007 UVAP. Corresponding reductions would occur for other pollutants. Year 2030 emission levels would be below current conditions except for PM10. The alternative would be consistent with the MCAQMD Air Quality Plan and with particulate control regulations. This alternative would eliminate the significant and unavoidable project impact on air quality.

H. Noise

As would be the case for buildout under the Draft 2007 UVAP, new development built under the EGP could be located where there are existing unacceptable noise levels. The EGP contains sufficient policies to ensure that new land uses are compatible with the existing noise environment, thereby reducing the impact to a less than significant level. Because there would be less mixed use and residential use near commercial or industrial uses, the risk of incompatible uses is reduced under this alternative compared to the project.

There would be about a 40% reduction in traffic under this alternative, thereby reducing traffic-generated noise. As shown on Table 3.8-2, of the four roadway sections where new traffic would increase noise levels by more than 4 decibels (dBA) under the project, it is expected that the traffic reductions under the EGP would result in the following changes:

Lovers Lane noise would increase by 2 dBA rather than 4 dBA. Despina Drive would increase by 5 dBA rather than 19 dBA, due to the Lovers Lane area not being classified for Mixed Use. The Bush Street noise would increase by 1 dBA rather than 5 dBA since mixed use would not be allowed in the Brush Street triangle. The noise increase along South Dora Street would increase by 4 dBA rather than 6 dBA.

The EGP alternative provides 50% more developable Industrial land than the project. Therefore, there would be a potential increase in noise from stationary sources. However, EGP policies and other adopted regulations would reduce these emissions to a less than significant level. In addition, the EGP does not allow residential uses near industrial uses, thereby limiting exposure to stationary noise sources.

Construction of new development would generate noise. The EGP does not address this impact, which would remain significant for this alternative. It can be mitigated by revising the Zoning Ordinance to require the Exterior Noise Limit Standards for construction projects, as recommended as part of the project.

The EGP contains policies that reduce all noise impacts to a less than significant level. Because the Draft 2007 UVAP does not contain a Noise Element, development in the plan area would be subject to the EGP Noise Element policies under either alternative. In general, the reduction in development would reduce the number of people exposed to unacceptable noise levels.

I. Aesthetics

New development under the EGP and the Draft 2007 UVAP would replace views of open space with views of development. New development could be inconsistent with the scale and character of existing neighborhoods. The visual impacts of developing open space and potential inconsistency with the visual character of the area are significant for both plans. While both plans provide substantial guidance for ensuring that new development does not have substantial visual impacts, there is no way to regulate non-discretionary projects, so that even with good design guidelines, there will be an inevitable loss of open space views.

This alternative slightly reduces the amount of new development, thereby retaining more open space. Specifically, the Lovers Lane area would remain in open space, but otherwise most areas slated for development under the project would also be developed under the EGP.

This EIR calls for development of a specific plan for the Brush Street Triangle area, and this mitigation should be required for the EGP alternative.

The EGP also contains polices relevant to lighting impacts. However, because these guidelines lack any timeline for adoption, the impact would remain significant as is also the case for the project.

In summary, this alternative would somewhat reduce impacts to open space views by reducing the amount of new development, though the reduction in impact would not be substantial. Lighting impacts would be greater under the alternative. All visual impacts would be significant under this alternative.

J. Public Services and Infrastructure

The following describes and compares impacts for the various public services.

Schools

New development under this alternative would generate about 742 new students as compared to 2,335 new students generated by buildout under the project. Existing schools would have sufficient excess capacity to educate these students without the need for additional schools. The significant impacts resulting from possible new school construction reported for the project would be eliminated for this alternative.

Law Enforcement

The reduction in development potential would correspondingly reduce the number of new calls for the Sheriff's Office and the City Police Department. It would also reduce tax revenues used to finance these agencies. A new County criminal justice center is required under either plan. The potentially significant impacts of building that new center would apply to both plans.

Fire

The reduction in development potential would reduce the calls for response from fire suppression agencies. Under either plan, there is sufficient policy language to reduce impacts to fire agencies to a less than significant level.

The alternative would eliminate the additional development of 65 residences in a high fire hazard area in the East Hills. It would reduce the number of new residences in the very high fire hazard zone from a maximum of 565 units to 495 units. This would reduce the fire hazard impact. However, the EGP does not contain as substantive policies as the project for guiding new development in high fire hazard zones. Under both plans, there would be new development that does not require discretionary approval that would be at risk from wildfires. This remains a significant impact for both plans.

Emergency Services

The existing problems of inadequate emergency and evacuation routes in several parts of the plan area are not addressed by the EGP. Thus, with additional development in the eastern hills area and other constrained locations, more people would be at risk. The Draft 2007 UVAP partially addresses this impact by calling for several new road extensions, including a new crossing of the Russian River from Redemeyer Road. The impact on emergency services is significant and unavoidable for the project and this alternative.

The reduction in buildout population would reduce calls for emergency medical response. However, the emergency medical system has insufficient resources to serve even this reduced new population. The impact remains significant under both plans. The alternative would eliminate extension of Orchard Avenue and extension of Hensley Creek Road and Orr Springs Road to the future Orchard Avenue. Eliminating these new roads slightly reduces the ability to respond to emergencies and evacuate areas near those roads.

Water

The WSA prepared as a source document for this EIR assessed the ability of water providers to provide water for buildout under the No Project alternative. The WSA concludes that there is inadequate water to serve projected buildout under this scenario. Table 6-4 of the WSA reports that the additional water needed to serve full buildout under the normal year scenario (in acre-feet per year or AFY) is:

1. Calpella CWD: 188 AFY (132 AFY if conservation is applied)
2. Rogina Water Company: 233 AFY (66 AFY if conservation is applied)
3. Areas Not in a District: 2,271 AFY (1,817 AFY with conservation) (if State determines that all water in the valley is Russian River water)

Willow CWD and Millview CWD have sufficient water to serve buildout under the normal year scenario. The additional water needed to serve full buildout under the extended/critical dry year scenario is:

1. Calpella CWD: 201 AFY (145 AFY if conservation is applied)
2. Millview CWD: 311 AFY (achievable if conservation is applied)
3. Rogina Water Company: 333 AFY (166 AFY if conservation is applied)
4. Areas Not in a District: 2,271 AFY (1,817 AFY with conservation) (if State determines all water in the valley is Russian River water)

Willow CWD has sufficient supplies to serve buildout for extended/critical dry years. Millview CWD has sufficient supplies if water conservation measures are enacted.

In summary, buildout under this alternative results in a reduced water demand compared to the demand of the Draft 2007 UVAP. However, there still may be the need to develop additional water sources. As was the case for the proposed plan, development of these additional sources could have significant and unavoidable secondary impacts.

Wastewater

The reduction in maximum potential development would reduce the demand for service from the Ukiah Valley Sanitation District. It is estimated that a maximum of about 842 new residential units would be constructed within that district. The District has sufficient excess capacity to serve those units plus additional non-residential development. All development could be hooked up, and there would be no need to construct any new facilities. The significant impact involved with building new facilities would be eliminated under this alternative. The Calpella CWD facility has sufficient capacity to serve buildout under either plan. Individual septic systems in areas outside menial service areas would be under the jurisdiction of County septic system regulations under both plans.

Solid Waste

The reduced maximum population under the EGP would be less than the amount of solid waste generated under the Draft 2007 UVAP. However, existing solid waste

facilities are adequate to serve buildout under both plans, and the impact is less than significant under both plans.

Parks and Recreation

Compared to the project, the reduced maximum population would reduce the potential demand for parks and recreational facilities. The EGP does not identify any new park sites in the area, though it contains policies to provide for parks and recreational facilities for new development. It does not contain any policies to fund ongoing maintenance of these facilities. The potential impacts of building new parks and recreational facilities remain significant.

To summarize, this alternative reduces the demand on public service providers. It eliminates the significant and unavoidable project impacts of needing to build new schools and wastewater treatment and disposal facilities. The alternative does not provide as many emergency response/evacuation routes, and it does not provide adequate mechanisms for ensuring construction of needed new recreational facilities as the proposed project does. It reduces the demand on water providers, but new water sources still may need to be developed. On the whole, the reduction in demand for services is an environmental advantage of this alternative.

K. Hazards and Hazardous Materials

The transport, storage, and use of hazardous materials would continue to be regulated by Federal, State, County, and City of Ukiah laws and regulations, which would reduce the risk of exposure to such materials to a less than significant level for both the plan and this alternative. Land use around the Ukiah Municipal Airport would be guided by the General Plan and the County's Comprehensive Land Use Plan, which would ensure that appropriate land uses are allowed near the airport. Hazard-related impacts would be reduced to a less than significant level for buildout under the project or this alternative.

L. Energy

Buildout under both the No Project alternative and the Draft 2007 UVAP would result in increased energy consumption. This alternative would have lower increases in energy use because it would result in fewer new households. While the EGP contains policy language to address energy usage, the Draft 2007 UVAP provides additional mitigation and protection.

M. Global Climate Change

As shown in Tables 3.13-1 and 3.13-2, by reducing the number of households, energy consumption, and vehicle trips, this alternative would reduce the regional production of greenhouse gasses and other corresponding contributions to the cumulative impact of global climate change. However, the impact would remain significant and unavoidable. While the EGP contains policy language to address this impact, the Draft 2007 UVAP provides additional mitigation and protection

The alternative would reduce the growth-inducing impacts described for the project because: 1) it does not include the Redemeyer Road extension (and therefore continues to freeze approvals of discretionary projects in the eastern hills area); 2) it reduces the conversion of Farmland to non-agricultural uses; and 3) it does not include the potential for more development than currently allowed. Growth-inducing impacts would be less than significant for this alternative.

O. Cumulative Impacts

The cumulative impacts that were found to be significant for the project would all be reduced by this alternative because it substantially reduces the development potential for the plan area. However, the following cumulative impacts would remain significant despite the reduction in growth potential:

1. Exposure of people and improvements to seismic-caused damage;
2. Pollution of water;
3. Damage to cultural resources;
4. Emission of greenhouse gases causing global climate change;
5. Climate change impacts on water supply, air quality, and health;
6. Impacts on views; and
7. The impacts of constructing new storm drains, recreational facilities, and/or criminal justice center.

3. Conclusions

The project alternative of using the Existing General Plan to guide and regulate future development in the plan area would reduce the development potential for residential and commercial developments, while increasing the potential for industrial development.

Specifically, residential development potential would decrease from a maximum of 5,430 new units to a maximum of 1,726 units. Commercial development would decrease from a maximum of about 4.6 million square feet to about 1.8 million square feet. Maximum of new industrial development would expand from about 2.4 million square feet under the Draft 2007 UVAP to about 3.7 million square feet under the EGP.

The overall area of development (I.e., the area of land developed with some form of improvement) would be approximately the same – land that would be potentially developed with industrial uses under the EGP is reclassified by the project to allow additional residential and commercial development.

The principal environmental advantages of the alternative as compared to the project are:

1. A reduction in the future population of the area;

2. Less Farmland converted to non-agricultural use;

3. Maintenance of the Lovers Lane area in Agriculture;

4. Fewer new residents located within the 100-year floodplain and the Coyote Dam inundation area;

5. Elimination of several new road extensions;

6. Less traffic congestion;

7. Reduced risk of accidents involving motor vehicles;

8. Reduced emission of air pollutants;

9. Reduced emission of greenhouse gases;

10. Reduced traffic-generated noise;

11. Reduced demand for public services; and

12. No impacts from construction of new schools or a new municipal wastewater treatment and disposal facility.

This alternative reduces 6 of the 25 significant and unavoidable impacts identified for the project to a less than significant level. This alternative maintains more land for industrial uses, especially on the Masonite site, the North State Street planning area, and the Brush Street Triangle. The County will need to determine whether this is a preferable land use for those areas.

The principal environmental disadvantages are that General Plan policies do not provide as strong:

1. Preservation of Farmlands;

2. Regulation of development in floodplains;

3. Protection of water quality from new runoff;

4. Protection of wetlands, riparian habitat, oak woodlands, and wildlife travel corridors; and

5. Protection of views.

2. Land Use Alternative A

1. Description

At their August 21, 2007 meeting, the Mendocino County Board of Supervisors selected the land use alternative that they wished to identity as the "project" for purposes of this CEQA analysis. They also selected Land Use Alternative A for inclusion in this EIR (this

is shown on Figure 4-2). As described in Table 1.6-5 and Figure 1-4, this alternative would include all the land use changes included in the proposed project except for the following:

1. The existing land use designations of Suburban Residential and Agriculture would be maintained on 8.5 acres in the North State Street area instead of being reclassified as Mixed Use (Site 13, shown on Figure 1-4).

2. The existing land use designation of Agriculture would be maintained on 56 acres south of Lake Mendocino Drive instead of being reclassified as Mixed Use (Site 15).

3. The existing land use designation of Industrial would be maintained on 29 acres in the North State Street area instead of being reclassified as Mixed Use (Site 16).

4. The existing land use designation of Commercial would be maintained on 25 acres in the North State Street area instead of being reclassified as Mixed Use (Site 17).

5. Most of the Lovers Lane area (Site No. 21) would be maintained as Agriculture rather than designated as Mixed Use.

The policies and implementation measures of the project are part of this alternative. Figure 4.4-2 shows the land use classifications for this alternative.

Table 4.4-2 shows that this alternative would reduce the residential buildout potential for the plan area by up 27% and the commercial development potential by 15%; it would increase the industrial development potential by 8%.

The purpose of including this alternative is to compare the project with an alternative that reduces the development potential of the project so that the Board of Supervisors can judge which land use classifications should apply to the North State Street and Lovers Lane areas.

2. Environmental Impacts

A. Land Use

The Land Use section contains analyses of a variety of topics, as described below.

Agriculture

New development allowed under this alternative will displace existing Farmlands and commercial agricultural operations. Proposed roadway extensions could result in loss of Farmlands and impacts to farming activities on the east side of the valley. New development could cause conflicts with agricultural operations resulting in those operations going out of business.

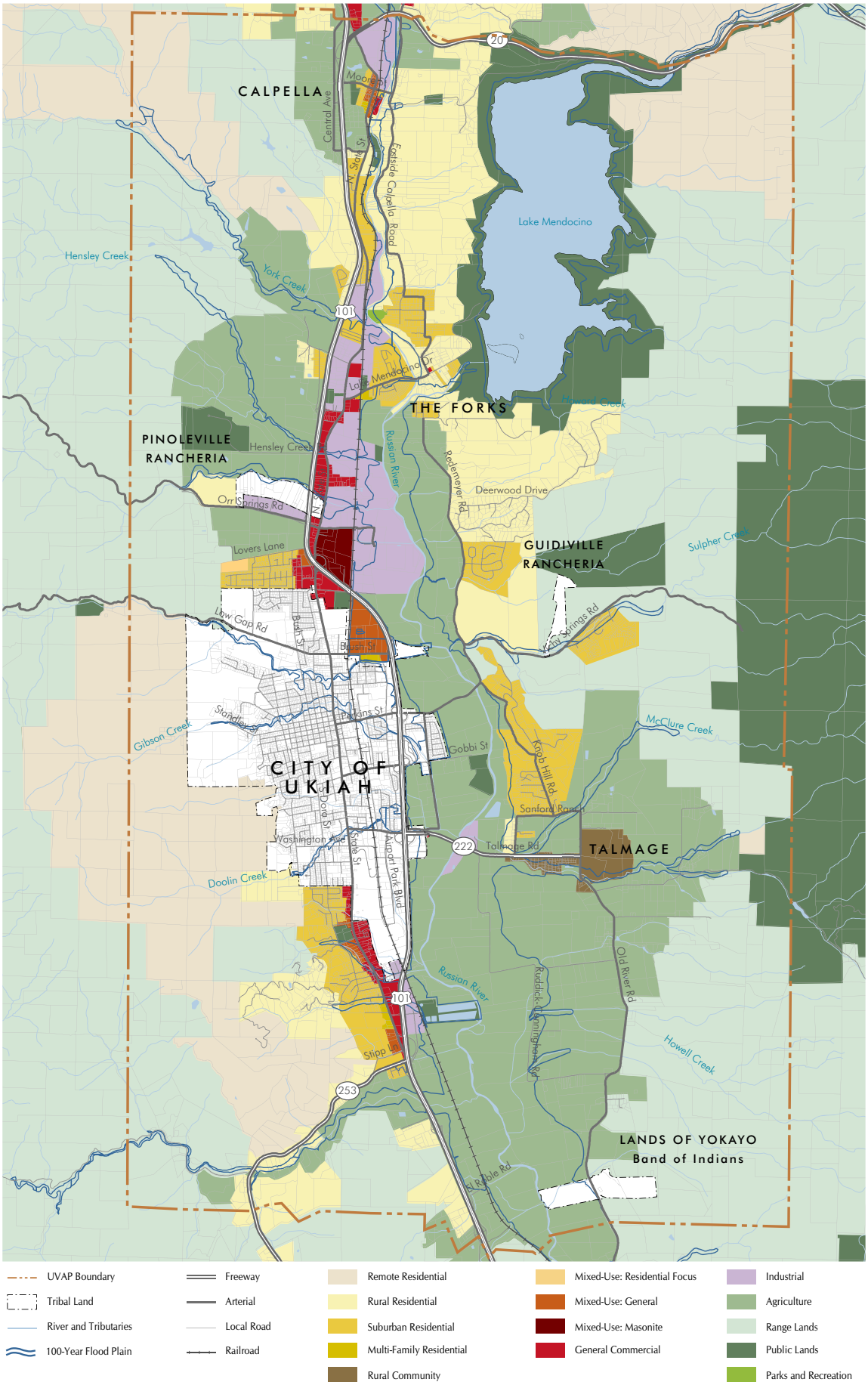

Figure 4-2 Alternative A Land Use Plan

Source: Mendocino County Planning & Building Services

This alternative would result in less conversion of agricultural lands. As shown on Table 3.1-1, future development under this alternative would result in conversion of about 495 acres of Farmland to non-agricultural uses as compared to 656 acres for the project as proposed, and more land would remain classified as Agriculture. While the impact of Farmland conversion remains significant for this alternative, the alternative does reduce the impact.

The Draft 2007 UVAP provides strong policy language to protect agriculture from incompatible uses that would threaten the owners' ability to operate, and all Draft 2007 UVAP Policies apply to this alternative. The impact would be reduced to a less than significant level.

Residential Housing

Development under this alternative would potentially displace people and housing, similar to development under the Draft 2007 UVAP. In both cases, the impact would be less than significant.

Buildout of the plan area under the land use classifications and policies of this alternative would result in 3,948 new dwelling units and 9,870 new people. This is less than buildout under the Draft 2007 UVAP, which would provide potential for development of 5,430 new dwelling units and add about 13,575 people to the area population. The 27% reduction in buildout population under this alternative is substantial, but the population increase impact (Impact 3.1-E) would remain significant and unavoidable.

Urban Decay

The urban decay analysis prepared for the County (see the previous discussion under Impact 3.1-G) concluded that both this alternative and the project would create such a sizable oversupply of commercial retail space (695,157 square feet) that long-term vacancies would be a likely outcome. The oversupply and consequent urban decay would not be as substantial under this alternative as they would be under the project, but the environmental impacts would remain significant.

B. Geology and Soils

As would occur under the Draft 2007 UVAP, new development under this alternative would be subject to seismic activity, landsliding, and unstable soil conditions. The plan provides policy direction to address these concerns that would reduce the impact to a less than significant level for discretionary projects. However, as is the case for the Draft 2007 UVAP, the seismic impacts remain significant and unavoidable, as it is not possible to protect all new development and residents from harm during a major earthquake.

The potential for landsliding, soil constraints for septic systems, and soil erosion would be the same under either the project or the alternative. In both cases, the impacts would be reduced to a less than significant level by implementing policy language in the Draft 2007 UVAP. Potential impacts to mineral resources would be the same and would be reduced to a less than significant level by plan policies.

C. Hydrology

The Hydrology section contains analyses of a variety of topics, as described below.

Flooding

As shown in Table 3.3-1, development under this alternative would result in 323 fewer residential units being constructed in the 100-year floodplain; approximately the same amount of non-residential development would be allowed in the floodplain under either alternative. While development in the floodplain can be mitigated by Draft 2007 UVAP policies (as amended with EIR-recommended additions), reducing residential development in the floodplain reduces the risk of people being stranded or adversely affected by floods. This alternative would result in approximately equivalent impacts on floodplain water storage, since more industrial development would be allowed in the floodplain under the alternative. Plan policies reduce flood-related impacts to a less than significant level.

As shown in Table 3.3-2, this alternative reduces the number of new residential units within the Coyote Dam inundation area from 2,337 units to 2,016 units. Though this impact is less than significant for the project, reducing the number of people in the inundation area is a beneficial effect of this alternative.

Runoff

New development would increase runoff and cause potential flooding similar to the flooding potential described for the project. With the exception of about 167 acres in the Lovers Lane area being retained as Agriculture, the same parts of the plan area would be developed. The 167 acres that would not be developed would not cause a substantial difference in overall hydrologic and water quality impacts for the plan area as a whole. The alternative contains the same standards to regulate runoff from new development as does the proposed project. Given plan policies, the impact is reduced to a less than significant level for both the project and this alternative.

Additional runoff from new development would result in potential streambank erosion. However, given plan policies this impact is mitigated to a less than significant level for both the project and this alternative.

The additional development and runoff created by this alternative and by the project would require construction of new storm drains, and that construction could have significant environmental impacts. It is expected that these impacts will be mitigated as part of the CEQA review for the new projects. However, because it is possible that one or more of these improvements might have significant effects that cannot be satisfactorily mitigated, the impacts are considered significant and unavoidable for both the project and this alternative.

Water Pollution

Construction and future use of new development would generate sediments and pollutants that would adversely affect water quality of receiving streams as was described for the project as proposed. Given plan policies, the water quality impact would remain significant for both the project and this alternative.

Agricultural use will continue to generate sediments and other pollutants that will enter receiving streams. Because more land would remain in agricultural production under this alternative, it would have more related water quality effects than the proposed project. However, in both cases, the amount of future agricultural production would be less than the current baseline situation, so the impact would be less than significant for both the project and this alternative.

Groundwater

The alternative would generate the same additional demand for groundwater as would the project. The alternative would result in the same number of new residences in areas outside the service areas of municipal water providers. In these areas new development would rely on groundwater supplies. The impact would be the same for the project and the alternative, and in both cases the impact would be less than significant.

Aquifer Recharge

Because the alternative would result in about the same amount of new impermeable surface, it would have about the same potential impact as the proposed project on reducing aquifer recharge. Given plan policies, the impact is reduced to a less than significant impact.

In summary, because the alternative would result in approximately the same amount of land being developed in the plan area, it would have similar hydrologic impacts regarding flooding, new runoff, and water quality. There would be a small overall reduction in development potential due to the maintenance of much of the Lovers Lane area as Agriculture. The alternative includes the same policies for protecting water quality and avoiding flood impacts as the project. The principal advantage of the alternative is the reduction of residential units in the floodplain and the dam inundation zone.

D. Biological Resources

Development under this alternative would have the same potential impacts on special status species, wetlands, riparian habitat, oak woodlands, nursery sites, and wildlife corridors as the proposed project. The few locations where there would be a reduction in development potential would not have a measurable effect on biological resources, as these locations generally do not support sensitive biological resources. The plan policies would reduce all these impacts, except the impact to special status species, to a less than significant level for both the project and this alternative.

E. Cultural Resources

Development under this alternative would have the same potential impacts on cultural resources as the proposed project. The few locations where there would be a reduction in development potential would not have a measurable effect on cultural resources. The impact to cultural and paleontological impacts would be significant and unavoidable for both the project and this alternative.

F. Circulation and Transportation

About 18% fewer new vehicle trips would be generated by buildout under this alternative as compared to buildout under the project.[172] As a result, there will be less additional congestion on plan area roadways and intersections.

The AB 1600 study done to determine the nexus for future traffic mitigation fees determined that the following circulation improvements that are required for the project and listed in Table 3.6-5 would not be required for this alternative:

1. Extending Orchard Avenue north of the Brush Street Triangle;
2. Extending Hensley Creek Road and Orr Springs Road to the Orchard Avenue Extension; and
3. Extending Orr Springs Road to Lovers Lane.

In addition, as described under Impact 3.6-A, the Redemeyer Road Extension and the extension of Oak Knoll Road to Stipp Lane or Highway 253 are not required to relive traffic congestion. The other improvements listed on that table would be needed for this alternative to facilitate buildout traffic from the plan area, as well as from the City of Ukiah. Construction of proposed roadway and intersection improvements would reduce traffic congestion impacts to a less than significant level.

By reducing the amount of new traffic, this alternative also would reduce the risk of accidents between vehicles and other vehicles, bicyclists, and pedestrians, though this impact is considered less than significant for the project.

In general, by reducing the maximum buildout, the alternative reduces all circulation impacts. This is an environmental advantage of this alternative.

G. Air Quality

As shown in Table 3.7-8, buildout under this alternative would generate less emission of pollutants than the proposed project. NOx (an ozone precursor) emissions would be 1,100 pounds per day as compared to 1,160 pounds for the Draft 2007 UVAP. Corresponding reductions would occur for other pollutants. Year 2030 emission levels would be below current conditions except for PM10. Because the alternative would not be consistent with the MCAQMD Air Quality Plan (because it increases the vehicle miles traveled over baseline conditions and what could occur under the Existing General

[172] The estimates of traffic generated for the alternatives is based on the traffic modeling done for the plan area as described in *Ukiah Valley Area Transportation Impact Fee Nexus Study*, Economic & Planning Systems and Fehr & Peers, September 2008.

Plan), the impact on air quality would remain significant for this alternative. In general, the reduction in development potential reduces traffic, which correspondingly reduces the amount of air pollutants emitted into the air. This is an environmental advantage of this alternative.

H. Noise

As would be the case for buildout under the Draft 2007 UVAP, new development under this alternative could be located where there are existing unacceptable noise levels. The alternative contains sufficient policies to ensure that new land uses are compatible with the existing noise environment, thereby reducing the impact to a less than significant level.

There would be about an 18% reduction in traffic under this alternative, thereby reducing traffic-generated noise. As shown on Table 3.8-2, of the four roadway sections where new traffic would increase noise levels by more than 4 decibels (dBA) under the project, it is expected that the traffic reductions under this alternative would result in the following changes:

1. Despina Drive noise would increase by 10 dBA rather than 19 dBA under the project; and
2. South Dora Street noise would increase by 4 dBA rather than 6 dBA under the project.

The Lovers Lane noise increase (4 dBA) would be the same as under the project, as would the Bush Street noise increase (5 dBA).

The Land Use Alternative A provides 8% more developable Industrial land than the project. Therefore, there would be a potential small increase in noise from stationary sources. However, plan policies and other adopted regulations would reduce these emissions to a less than significant level.

Construction of all new development would generate noise. The impact would remain significant for this alternative. As is recommended under the project, it can be mitigated by revising the Zoning Ordinance to require the Exterior Noise Limit Standards for construction projects.

In general, this alternative would have approximately the same noise impacts as the project, with a decrease in traffic noise along a few streets.

I. Aesthetics

New development under both this alternative and the project would replace views of open space with views of development. New development could be inconsistent with the scale and character of existing neighborhoods. This alternative reduces the amount of new development, thereby retaining more open space. Under this alternative, most of the Lovers Lane area would remain in open space, but otherwise most areas slated for development under the project would also be developed under this alternative.

The visual impacts of developing open space and potential inconsistency with the visual character of the area are significant for both the project and this alternative. While both the project and the alternative provide substantial guidance for ensuring that new development does not have substantial visual impacts, there is no way to regulate non-discretionary projects so that even with good design guidelines, there will be an inevitable loss of open space views.

The alternative would result in approximately the same lighting impacts, with the exception that there would not be new lights in the bulk of the Lovers Lane area and the Masonite site would probably contain fewer lights when developed with Industrial uses rather than large commercial outlets and residential units.

In summary, the alternative would somewhat reduce impacts to open space views by reducing the amount of new development, though the reduction in impact would not be substantial. Lighting impacts would be somewhat less under the alternative, but the impact would remain significant. The loss of open space and potential inconsistency with the surrounding visual character would remain significant impacts for the project and this alternative.

J. Public Services and Infrastructure

The following describes and compares impacts for the various public services.

Schools

The new development would generate about 1,698 new students as compared to 2,335 new students generated by buildout under the project. Existing elementary and high schools would have insufficient excess capacity to educate the possible 869 new elementary school students and 513 new high school students without the need for additional schools. The significant impacts resulting from possible new school construction reported for the project would also apply to this alternative. However, the reduction in new students would postpone the need to build these new facilities.

Law Enforcement

The reduction in development potential would correspondingly reduce the number of new calls for the Sheriff's Office and the City Police Department. It would also reduce tax revenues used to finance these agencies. A new County criminal justice center is required under either plan. The potentially significant impacts of building that new center would apply to both the project and this alternative.

Emergency Services

The reduction in development potential would reduce the calls for response from fire suppression and emergency medical response agencies. Under both the project and this alternative, there is sufficient policy language to reduce impacts to fire agencies to a less than significant level.

Fire

The alternative would have the same impact as the project regarding development in areas of high fire hazard. Under both options, there would be new development that does not require discretionary approval that would be at risk from wildfires. This remains a significant impact for both plans.

Emergency Services

The reduction in buildout population would reduce calls for emergency medical response. However, the emergency medical system has insufficient resources to serve even this reduced new population.

This alternative would eliminate the extension of Orchard Avenue and the extension of Hensley Creek Road and Orr Springs Road to the future Orchard Avenue. Eliminating these new roads slightly reduces the ability to respond to emergencies and evacuate areas near those roads. However, despite this change the potential impact on emergency response remains a less than significant impact.

Water

The WSA prepared as a source document for this EIR assessed the ability of water providers to provide water for buildout under this alternative. The WSA concludes that there is inadequate water to serve projected buildout. As shown in Table 6-2 of the WSA, additional water needed to serve full buildout under the normal year scenario (in acre-feet per year or AFY) is needed for the following providers:

1. Calpella CWD: 201 AFY (143 AFY if conservation is applied)
2. Rogina Water Company: 272 AFY (98 AFY if conservation is applied)
3. Areas Not in a District: 2,298 AFY (1,838 AFY with conservation) (if State determines that all water in the valley is Russian River water)

Willow CWD and Millview CWD have sufficient water to serve buildout under the normal year scenario.

Additional water needed to serve full buildout under the extended/critical dry year scenario is needed for the following providers:

1. Calpella CWD: 201 AFY (145 AFY if conservation is applied)
2. Millview CWD: 374 AFY (can meet demand if conservation is applied)
3. Rogina Water Company: 372 AFY (198 AFY if conservation is applied)
4. Areas Not in a District: 2,298 AFY (1,838 AFY with conservation) (if State determines all water in the valley is Russian River water)

Willow CWD has sufficient supplies to serve buildout under the extended/critical dry year scenario. Millview CWD has sufficient supplies if water conservation measures are enacted.

In summary, buildout under this alternative has a lesser water demand compared to the demand of the Draft 2007 UVAP. However, there may be the need to develop additional water sources. As is the case for the proposed project, development of these additional sources could have significant and unavoidable secondary impacts.

Wastewater

The reduction in maximum potential development would reduce the demand for service from the Ukiah Valley Sanitation District. It is estimated that a maximum of about 2,625 new residential units could be constructed within that district. The District does not have existing capacity to serve those units plus additional non-residential development. The significant impact involved with building new facilities would remain under this alternative. The Calpella CWD facility has ample capacity to serve buildout under either plan. Individual septic systems in areas outside menial service areas would be under the jurisdiction of County septic system regulations under both plans.

Solid Waste

The reduced maximum population would reduce the amount of solid waste generated. However, existing solid waste facilities are adequate to serve buildout under both the project and this alternative, and the impact is less than significant under both plans.

Parks and Recreation

Compared to the project, the reduced maximum population would reduce the demand for parks and recreational facilities. In both cases, policies in the plan provide for needed new parks. However, the potential impacts of building these new facilities remain significant.

To summarize, this alternative reduces the demand on public service providers. It eliminates the project impact of needing to build a new wastewater treatment and disposal facility. The alternative does not provide as many emergency response/evacuation routes as the proposed project does. On the whole, the reduction in demand for services is an environmental advantage of this alternative.

K. Hazards and Hazardous Materials

The transport, storage, and use of hazardous materials would continue to be regulated by Federal, State, County, and City of Ukiah laws and regulations, which would reduce the risk of exposure to such materials to a less than significant level for both the plan and this alternative. Land use around the Ukiah Municipal Airport would be guided by the General Plan and the County's Comprehensive Land Use Plan, which would ensure that appropriate land uses are allowed near the airport. Hazard-related impacts would be reduced to a less than significant level for buildout under the project or this alternative.

L. Energy

This alternative reduces energy use because it would result in fewer new households.

M. Global Climate Change

As shown in Tables 3.13-1 and 3.13-2, by reducing the number of households, energy consumption, and vehicle trips, this alternative would reduce the regional production of greenhouse gasses and other corresponding contributions to the cumulative impact of global climate change. However, this contribution would remain cumulatively considerable, and the impact would remain significant and unavoidable.

N. Growth-Inducing Impacts

This alternative would reduce the growth-inducing impacts described for the project because it reduces the conversion of Farmland to non-agricultural uses. The growth-inducing impacts would remain significant for this alternative.

O. Cumulative Impacts

The cumulative impacts that were found to be significant for the project would all be reduced by this alternative because it reduces the development potential for the plan area. However, the following cumulative impacts would remain significant despite the reduction in growth potential:

1. Exposure of people and improvements to seismic-caused damage;
2. Pollution of water;
3. Damage to cultural resources;
4. Particulate pollution of the air;
5. Emission of greenhouse gases causing global climate change;
6. Climate change impacts on water supply, air quality, and health; impacts on views; and
7. The impacts of constructing new storm drains, schools, wastewater facilities, recreational facilities, and/or criminal justice center.

3. Conclusions

Using the Land Use Alternative A to guide and regulate future development in the plan area would reduce the development potential from a maximum of 5,430 new residential units to a maximum of 3,948 residential units. This alternative would decrease the residential buildout potential for the plan area by up 27% and the commercial development potential by 15%; it would increase the industrial development potential by 8%. The overall area of development (i.e., the area of land developed with some form of improvement) would be approximately the same – land that would be potentially developed with industrial uses under this alternative is reclassified by the project to allow additional commercial development.

The principal environmental advantages of the alternative are:

1. A reduction in the future population of the area

2. Less Farmland converted to non-agricultural use

3. Maintenance of most of the Lovers Lane area in Agriculture

4. Fewer new residents located within the 100-year floodplain and the Coyote Dam inundation area

5. Elimination of several new road extensions

6. Less traffic congestion

7. Reduced risk of accidents involving motor vehicles

8. Reduced emission of air pollutants

9. Reduced emission of greenhouse gases

10. Reduced traffic-generated noise

11. Reduced demand for public services

The alternative reduces all project impacts. However, the 25 impacts identified as significant and unavoidable for the project would also be significant and unavoidable for this alternative

This alternative maintains more land for industrial uses, especially in the North State Street planning area. The County will need to determine whether this is a preferable land use for those areas.

Because the Draft 2007 UVAP policies also apply to this alternative, the alternative does not have any environmental disadvantages as compared to the project. It is environmentally superior to the plan as proposed.

3. Land Use Alternative B

1. Description

The County developed Land Use Alternative B based on direction from the Board of Supervisors and citizen input received during the NOP review. This alternative further reduces development potential as compared to the project and Land Use Alternative A. As described in Table 4.4-1 and Figure 1-4, Land Use Alternative B would include all the land use changes included in the proposed project except the following:

1. Several parcels south of Calpella (Site Nos. 3, 5, and 10 as shown on Figure 1-4) would be maintained as Agriculture rather than as Rural Residential;

2. Residential and Rural Residential designations on several parcels in the Calpella area (Site Nos. 6 and 7) would be maintained;

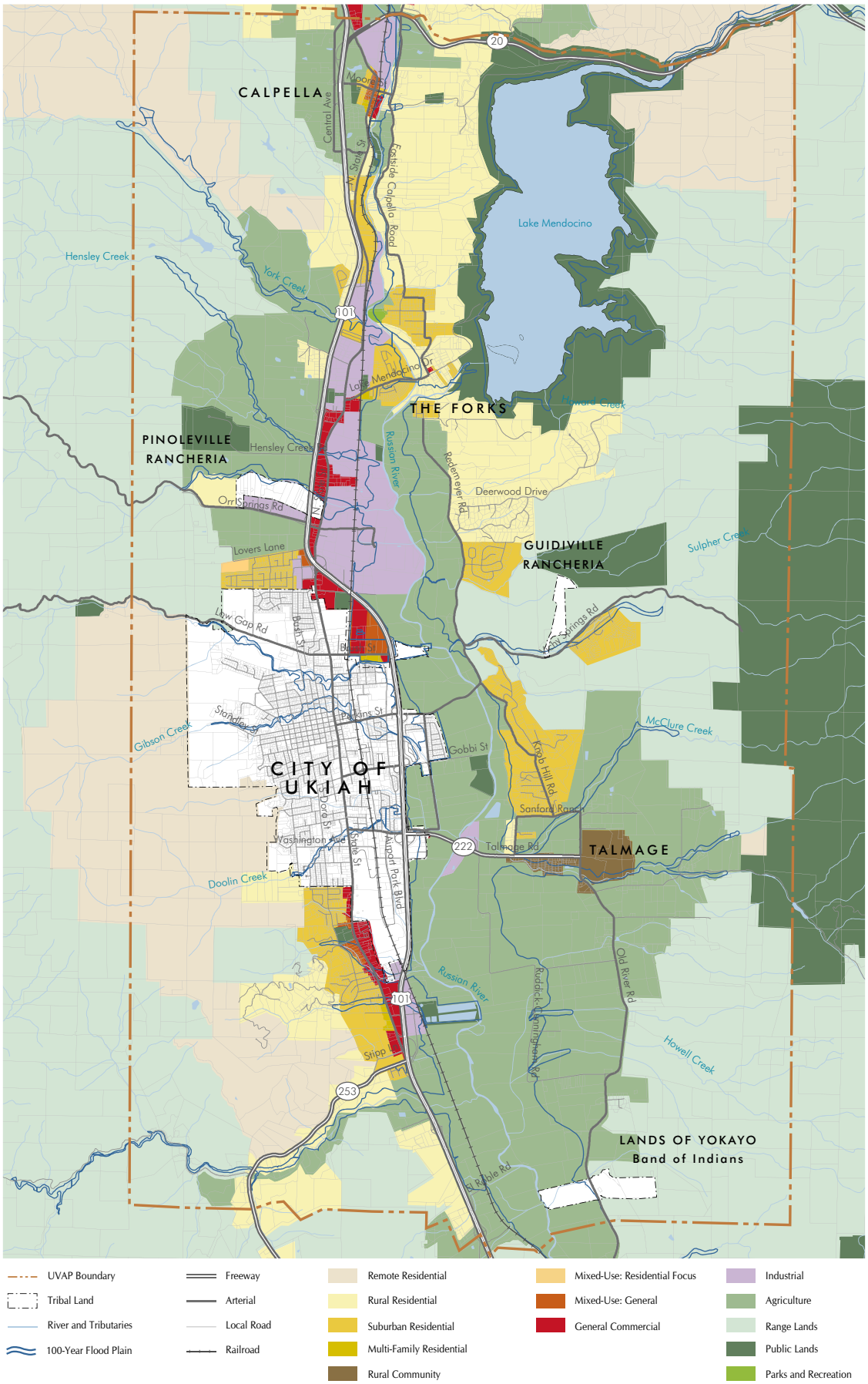

Figure 4-3 Alternative B Land Use Plan

Source: Mendocino County Planning & Building Services

3. Existing lands use designations for much of the North State Street area would be maintained rather than allowing Mixed Use or Commercial designations (Site Nos. 13 through 17 and 24);

4. 15.6 acres on Tollini Lane would be maintained as Rural Residential rather than be designated as Suburban Residential (Site No. 18);

5. The Masonite site (Site No. 20) would be maintained as Industrial rather than designated as Mixed Use;

6. Most of the Lovers Lane area (Site No. 21) would be maintained as Agriculture rather than designated as Mixed Use;

7. An the Brush Street Triangle area would be maintained as Industrial rather than be designated as Commercial or Mixed Use (Site Nos. 24, 25, and 27);

8. The Eastern Hills area would be maintained as Rangeland rather than be designated as Rural Residential (Site No. 30);

9. 13 acres north of Stipp Lane would be maintained as Suburban Residential rather than be designated as Mixed Use (Site No. 37); and

10. 100+ acres south of Ukiah would be maintained as Rural Residential rather than be designated as Agriculture or Rangeland (Site Nos. 40 and 41).

The policies and implementation measures of the project would also be included in this alternative. Figure 4.4-3 shows the land use classifications for this alternative.

Table 4.4-2 shows that this alternative would reduce the residential buildout potential for the plan area by 48.8% and the commercial development potential by 52.2%; it would increase the industrial development potential by 33%.

The purpose of including this alternative is to compare the project with an alternative that reduces the development potential of the project so that the Board of Supervisors can judge which land use classifications should apply in many parts of the plan area.

2. Environmental Impacts

A. Land Use

The Land Use section contains analyses of a variety of topics, as described below.

Agriculture

New development allowed under this alternative will displace Farmlands and commercial agricultural operations. Proposed roadway extensions could result in loss of Farmlands and impacts to farming activities on the east side of the valley. New development could cause conflicts with agricultural operations resulting in those operations going out of business.

As shown on Table 3.1-1, future development under this alternative would result in conversion of about 536 acres of Farmland to non-agricultural uses as compared to 656 acres for the project as proposed. While the alternative does reduce the amount of Farmland conversion, the impact remains significant.
The Draft 2007 UVAP provides strong policy language to protect agriculture from incompatible uses that would threaten the owners' ability to operate, and all Draft 2007 UVAP policies apply to this alternative. The impact would be reduced to a less than significant level.

Residential Housing

Development under this alternative would potentially displace people and housing, similar to development under the Draft 2007 UVAP. In both cases, the impact would be less than significant.

Buildout of the plan area under the land use classifications and policies of this alternative would result in 2,782 new dwelling units and 6,955 new people, whereas buildout under the Draft 2007 UVAP would provide potential for development of 5,430 new dwelling units and add about 13,575 people to the area population. The 49% reduction in buildout population is substantial but the population increase impact (Impact 3.1-E) would remain significant and unavoidable.

Urban Decay

The urban decay analysis (see the previous discussion under Impact 3.1-G) prepared for the County concluded that the oversupply of commercial retail space built under this alternative (181,168 square feet) would be smaller than under the project, but still equivalent to more than one big-box retail store or a community-serving shopping center. If the retail area built out while the residential component did not, the oversupply problem would be greater. This scenario would result in the possibility of long-term vacancies. Thus there is some potential for a significant level of urban decay resulting from this alternative. The impact would remain significant and unavoidable.

B. Geology and Soils

As would occur under the Draft 2007 UVAP, new development would be subject to seismic activity, landsliding, and unstable soil conditions. The plan provides policy direction to address these concerns that would reduce the impact to a less than significant level for discretionary projects. However, as is the case for the Draft 2007 UVAP, the seismic impacts remain significant and unavoidable as it is not possible to protect all new development and residents from harm during a major earthquake.

The potential for landsliding, soil constraints for septic systems, and soil erosion would be the same under either the project or the alternative. In both cases, the impacts would be reduced to a less than significant level by implementing policy language in the Draft 2007 UVAP. Potential impacts to mineral resources would be the same and would be reduced to a less than significant level by plan policies.

C. Hydrology

The Hydrology section contains analyses of a variety of topics, as described below.

Flooding

As shown in Table 3.3-1, development under this alternative would result in 488 fewer units being constructed in the 100-year floodplain; approximately the same amount of non-residential development would be allowed in the floodplain under either alternative. While development in the floodplain can be mitigated by Draft 2007 UVAP policies (as amended with EIR-recommended additions), reducing residential development in the floodplain reduces the risk of people being stranded or adversely affected by floods. This alternative would result in approximately equivalent impacts on floodplain water storage capacity, since more industrial development would be allowed in the floodplain under the alternative. Plan policies reduce flood-related impacts to a less than significant level. As shown in Table 3.3-2, the alternative reduces the number of new residential units within the Coyote Dam inundation area from 2,337 units to 969 units. Though this impact is less than significant for the project, reducing the number of people in the inundation area is a beneficial effect of this alternative.

Runoff

New development would increase runoff and cause potential flooding similar to the flooding potential described for the project. With the exception of about 167 acres in the Lovers Lane area being retained as Agriculture, the same parts of the plan area would be developed. The 167 acres that would not be developed would not cause a substantial difference in overall hydrologic and water quality impacts for the plan area as a whole. The alternative contains the same standards to regulate runoff from new development as proposed project. Given plan policies, the impact is reduced to a less than significant level for the project and this alternative.

Additional runoff from new development would result in potential streambank erosion. However, given plan policies this impact is mitigated to a less than significant level for both the project and this alternative.

The additional development and runoff would require construction of new storm drains, and that construction could have significant environmental impacts. It is expected that these impacts will be mitigated as part of the CEQA review for the new projects. However, because it is possible that one or more of these improvements might have significant effects that cannot be satisfactorily mitigated, the impacts are considered significant and unavoidable for both the project and this alternative.

Pollution

Construction and future use of new development would generate sediments and pollutants that would adversely affect water quality of receiving streams as was described for the project as proposed. Given plan policies, the impact would be significant for both the project and this alternative.

Agricultural use will continue to generate sediments and other pollutants that will enter receiving streams. Because more land would remain in agricultural production under this alternative, it would have more water quality effects than the proposed project. However, in both cases, the amount of future agricultural production would be less than the current baseline situation, so the impact would be less than significant for both the project and this alternative.

Groundwater

The alternative will generate additional demand for groundwater. The alternative would result in the same number of new residences in areas outside the service areas of municipal water providers. In these areas new development would rely on groundwater supplies. The impact would be the same for the project and the alternative, and in both cases the impact would be less than significant.

Aquifers

Because the alternative would result in about the same amount of new impermeable surface, it would have about the same potential impact as the proposed project on reducing aquifer recharge. Given plan policies, the impact is reduced to a less than significant impact.

In summary, because the alternative would result in approximately the same amount of land being developed in the plan area, it would have similar hydrologic impacts regarding flooding, new runoff, and water quality. The alternative includes the same policies for protecting water quality and avoiding flood impacts as the project. The principal advantage of the alternative is the reduction of residential units in the floodplain and the dam inundation zone.

D. Biological Resources

Development under this alternative would have the same potential impacts on special status species, wetlands, riparian habitat, oak woodlands, nursery sites, and wildlife corridors as the proposed project. The few locations where there would be a difference in allowable land use would not have a measurable effect on biological resources. The plan policies would reduce all these impacts, except the impact to special status species, to a less than significant level for the project and this alternative.

E. Cultural Resources

Development under this alternative would have the same potential impacts on cultural resources as the proposed project. The few locations where there would be a difference in land use would not have a measurable effect on cultural resources. The impact to cultural and paleontological resources would be significant for the project and this alternative.

F. Circulation and Transportation

About 32% fewer new vehicle trips would be generated by buildout under this alternative as compared to buildout under the project.[173] As a result, there will be less additional congestion on plan area roadways and intersections.

The AB 1600 study done to determine the nexus for future traffic mitigation fees determined that the following circulation improvements that are listed in Table 3.6-5 would not be required for this alternative:

1. extending Orchard Avenue north of the Brush Street Triangle;
2. extending Hensley Creek Road and Orr Springs Road to the Orchard Avenue Extension; and
3. extending Orr Springs Road to Lovers Lane.

The other improvements listed on that table would be needed for this alternative to facilitate buildout traffic from the plan area plus the City of Ukiah. Construction of proposed roadway and intersection improvements would reduce traffic congestion impacts to a less than significant level.

By reducing the amount of new traffic, this alternative also would reduce the risk of accidents between vehicles and other vehicles, bicyclists, and pedestrians, though this impact is considered less than significant for the project.

In general, by reducing the maximum buildout, the alternative reduces all circulation impacts. This is an environmental benefit of this alternative.

G. Air Quality

As shown in Table 3.7-8, buildout under this alternative would generate less emission of pollutants than the proposed project. NOx (an ozone precursor) emissions would be 1,060 pounds per day as compared to 1,160 pounds for the Draft 2007 UVAP. Corresponding reductions would occur for other pollutants. Year 2030 emission levels would be below current conditions except for PM10.

Because the alternative would not be consistent with the MCAQMD Air Quality Plan (because it increases the vehicle miles traveled over baseline conditions and what could occur under the Existing General Plan), the impact on air quality would remain significant for this alternative. In general, the reduction in development potential reduces traffic, which reduces the amount of air pollutants emitted into the air. This is an environmental advantage of this alternative.

[173] The estimates of traffic generated for the alternatives is based on the traffic modeling done for the plan area as described in *Ukiah Valley Area Transportation Impact Fee Nexus Study*, Economic & Planning Systems and Fehr & Peers, September 2008.

H. Noise

As would be the case for buildout under the Draft 2007 UVAP, new development built under this alternative could be located where there are unacceptable noise levels. The alternative contains sufficient policies to ensure that new land uses are compatible with the existing noise environment, thereby reducing the impact to a less than significant level.

There would be about a 32% reduction in traffic thereby reducing traffic-generated noise. As shown on Table 3.8-2, of the four roadway sections where new traffic would increase noise levels by more than 4 decibels (dBA), it is expected that the traffic reductions would result in the following noise reductions when compared to the project:

1. Despina Drive noise would increase by 10 dBA rather than 19 dBA;
2. South Dora Street noise would increase by 4 dBA rather than 6 dBA;
3. and Bush Street would increase by 4 DBA rather than 5 dBA.

The Lovers Lane noise increase (4 dBA) would be the same as the under the project.

The Land Use Alternative B provides 33% more developable Industrial land than the project. Therefore, there would be a potential small increase in noise from stationary sources. However, plan policies and other adopted regulations would reduce these emissions to a less than significant level.

Construction of new development would generate noise. The impact would remain significant for this alternative. It can be mitigated by revising the Zoning Ordinance to require the Exterior Noise Limit Standards for construction projects, as recommended as part of the project.

In general, the alternative would have approximately the same noise impacts as the project with a decrease in traffic noise along a few streets.

I. Aesthetics

As would be the case for the project, new development under this alternative would replace views of open space with views of development. New development could be inconsistent with the scale and character of existing neighborhoods. This alternative reduces the amount of new development, thereby retaining more open space. Under this alternative, the Lovers Lane area would remain in open space, but otherwise most areas slated for development under the project would be unchanged.

The visual impacts of developing open space and potential inconsistency with the visual character of the area are significant for both the project and this alternative. While both the project and the alternative provide substantial guidance for ensuring that new development does not have substantial visual impacts, there is no way to regulate non-discretionary projects so that even with good design guidelines, there will be an inevitable loss of open space views.

The alternative would result in approximately the same lighting impacts, with the exception that there would not be new lights in the Lovers Lane area, and the Masonite site would probably contain fewer lights when developed with Industrial uses rather than large commercial outlets and residential units.

In summary, the alternative would somewhat reduce impacts to open space views by reducing the amount of new development, though the reduction in impact would not be substantial. Lighting impacts would be somewhat less under the alternative, but the impact would remain significant. The loss of open space and potential inconsistency with the surrounding visual character would remain significant impacts for the project and this alternative.

J. Public Services and Infrastructure

The following describes and compares impacts for the various public services.

Schools

The new development would generate about 1,196 new students as compared to 2,335 new students generated by buildout under the project. Existing elementary and high schools would have insufficient excess capacity to educate the possible 612 new elementary school students and 362 new high school students without the need for additional schools. The significant impacts resulting from possible new school construction reported for the project would also apply to this alternative. However, the reduction in new students would postpone the need to build these new schools.

Law Enforcement

The reduction in development potential would reduce the number of new calls for the Sheriff's Office and the City Police Department. It would also reduce tax revenues used to finance these agencies. A new County criminal justice center is required under either plan. The potentially significant impacts of building that new center would apply to both the project and this alternative.

Fire

The reduction in development potential would reduce the calls for response from fire suppression and emergency medical response agencies. Under either the project or this alternative, there is sufficient policy language to reduce impacts to fire agencies to a less than significant level.

The alternative would have the same impact as regards development in areas of high fire hazard. Under both the project and this alternative, there would be new development that does not require discretionary approval that would be at risk from wildfires. This remains a significant impact for both plans.

Emergency Services

The reduction in buildout population would reduce calls for emergency medical response. However, the emergency medical system has insufficient resources to serve

even this reduced new population. The alternative would eliminate extension of Orchard Avenue and extension of Hensley Creek Road and Orr Springs Road to the future Orchard Avenue. Eliminating these new roads slightly reduces the ability to respond to emergencies and evacuate areas near those roads.

Water

The WSA prepared as a source document for this EIR assessed the ability of water providers to provide water for buildout under this scenario. The WSA concludes that there is inadequate water to serve projected buildout under this alternative.

Table 6-3 of the WSA reports that the additional water needed to serve full buildout under the normal year scenario (in acre-feet per year or AFY) for the following providers:

1. Calpella CWD: 187 AFY (131 AFY if conservation is applied)
2. Millview CWD: 240 AFY (none if conservation is applied)
3. Rogina Water Company: 233 AFY(66 AFY if conservation is applied)
4. Areas Not in a District: 2,271 AFY (1,817 AFY with conservation) (if State determines that all water in the valley is Russian River water)

Willow CWD has sufficient water to serve buildout under the normal year scenario. Millview CWD has sufficient water if conservation is applied.

The additional water needed to serve full buildout under the extended/critical dry year scenario for the following providers:

1. Calpella CWD: 200 AFY (144 AFY if conservation is applied);
2. Millview CWD: 617 AFY; (none if conservation is applied)
3. Rogina Water Company: 333 AFY (166 AFY if conservation is applied); and
4. Areas Not in a District: 2,271 AFY (1,817 AFY with conservation) (if State determines all water in the valley is Russian River water)

Willow CWD has sufficient supplies to serve buildout under the extended/critical dry year scenario. Millview CWD has sufficient supplies if water conservation measures are enacted.

Overall, buildout under this alternative has a reduced water demand compared to the demand of the Draft 2007 UVAP. However, there still may be the need to develop additional water sources. As was the case for the proposed plan, development of these additional sources could have significant and unavoidable secondary impacts.

Wastewater

The lower levels of development would correspondingly lower the demand for service from the Ukiah Valley Sanitation District. It is estimated that a maximum of about 1,885 new residential units would be constructed within that district. The District has inadequate capacity to serve those units plus additional non-residential development. The significant impact involved with building additional facilities would remain for this

alternative. The Calpella CWD facility has ample capacity to serve buildout under either plan. Individual septic systems in areas outside menial service areas would be under the jurisdiction of County septic system regulations under both plans.

The reduced maximum population would reduce the amount of solid waste generated. However, the solid waste facilities are adequate to serve buildout under both the project and this alternative, and the impact is less than significant under both plans.

Parks and Recreation

Compared to the project, the reduced maximum population would reduce the demand for parks and recreational facilities. In both cases, policies in the plan provide for needed new parks. However, the potential impacts of building new parks and recreational facilities remain significant.

To summarize, this alternative reduces the demand on public service providers. The alternative does not provide as many emergency response/evacuation routes as the proposed project does. On the whole, the reduction in demand for services is an environmental advantage of this alternative.

K. Hazards and Hazardous Materials

The transport, storage, and use of hazardous materials would continue to be regulated by Federal, State, County, and City of Ukiah laws and regulations, which would reduce the risk of exposure to such materials to a less than significant level for both the plan and this alternative. Land use around the Ukiah Municipal Airport would be guided by the General Plan and the County's Comprehensive Land Use Plan, which would ensure that appropriate land uses are allowed near the airport. Hazard-related impacts would be reduced to a less than significant level for buildout under the project or this alternative.

L. Energy

This alternative reduces energy use because it would result in fewer new households.

M. Global Climate Change

As shown in Tables 3.13-1 and 3.13-2, by reducing the number of households, energy consumption, and vehicle trips, this alternative would reduce the regional production of greenhouse gasses and other corresponding contributions to the cumulative impact of global climate change. However, this contribution would remain a cumulatively considerable part of the significant cumulative impact.

N. Growth-Inducing Impacts

The alternative would reduce the growth-inducing impacts described for the project because it reduces the conversion of Farmland to non-agricultural uses. The growth-inducing impacts would remain significant for this alternative.

O. Cumulative Impacts

The cumulative impacts that were found to be significant for the project would all be decreased under this alternative because it reduces the development potential for the plan area.

However, the following cumulative impacts would remain significant despite the reduction in growth potential:

1. exposure of people and improvements to seismic-caused damage;
2. pollution of water;
3. damage to cultural resources;
4. particulate pollution of the air;
5. emission of greenhouse gases causing global climate change;
6. climate change impacts on water supply, air quality, and health;
7. impacts on views; and
8. the impacts of constructing new storm drains, schools, wastewater facilities, recreational facilities, and/or criminal justice center.

3. Conclusions

Using Land Use Alternative B to guide and regulate future development in the plan area would reduce the development potential from a maximum of 5,430 new residential units to a maximum of 2,782 residential units. This alternative would decrease the residential buildout potential for the plan area by up 49% and the commercial development potential by 52%; it would increase the industrial development potential by 33%.

The overall area of development (I.e., the area of land developed with some form of improvement) would be approximately the same – land that would be potentially developed with industrial uses under this alternative is reclassified by the project to allow additional commercial development.

The principal environmental advantages of the alternative are:

1. A reduction in the future population of the area;

2. Less Farmland converted to non-agricultural use;

3. Maintenance of the Lovers Lane area in Agriculture;

4. Fewer new residents located within the 100-year floodplain and the Coyote Dam inundation area;

5. Elimination of several new road extensions;

6. Less traffic congestion;

7. Reduced risk of accidents involving motor vehicles;

8. Reduced emission of air pollutants;

9. Reduced emission of greenhouse gases;

10. Reduced traffic-generated noise; and

11. Reduced demand for public services.

The alternative reduces all project impacts. However, the 25 impacts identified as significant and unavoidable for the project would also be significant and unavoidable for this alternative.

This alternative maintains more land for industrial uses, especially on the Masonite site, the North State Street planning area, and the Brush Street Triangle. The County will need to determine whether this is a preferable land use for those areas.

Because the Draft 2007 UVAP policies also apply to this alternative, the alternative does not have any environmental disadvantages as compared to the project. It is environmentally superior to the plan as proposed, and also to Alternative A.

4. Land Use Alternative C – Policy Only

1. Description

This alternative is a hybrid of the Draft 2007 UVAP and the Existing General Plan. The alternative maintains the land use designations of the EGP and incorporates the policies of the Draft 2007 UVAP (except where those polices directly describe/discuss the land use changes included in the Draft 2007 UVAP).

2. Environmental Impacts

The impacts of maintaining the land use designations of the EGP were previously described and evaluated under the No Project alternative discussion presented previously, as were the basic differences between the policies of the two plans. Chapter 3 of this EIR describes the ability of Draft 2007 UVAP policies to regulate land development and reduce impacts of that development This alternative differs from the No Project alternative in that it incorporates the Draft 2007 UVAP policies as part of the General Plan, and these policies rather than the more general ones in the General Plan would provide additional guidance for future development in the plan area.

As shown on Table 4.4-2, this alternative would substantially reduce the development potential in the plan area. The EGP contains numerous strong policies to regulate new development and protect sensitive resources. However, the policies in the Draft 2007 UVAP are generally more detailed and provide more protection. Most importantly, the policies in the Draft 2007 UVAP have been tailored to address the specific land use issues in the plan area and the concerns of local residents.

The purpose of including this alternative is to compare the project with an alternative that reduces the development potential of the project but incorporates the new Draft 2007 UVAP policies.

3. Conclusions

The principal environmental advantages of the alternative as compared to the project are:

1. A reduction in the future population of the area;
2. Less Farmland converted to non-agricultural use;
3. Maintenance of the Lovers Lane area in Agriculture;
4. Fewer new residents located within the 100-year floodplain and the Coyote Dam inundation area;
5. Less traffic congestion;
6. Reduced risk of accidents involving motor vehicles;
7. Reduced emission of air pollutants; reduced emission of greenhouse gases;
8. Reduced traffic-generated noise;
9. Reduced demand for public services;
10. No impacts from construction of new schools or a new municipal wastewater treatment and disposal facility; and
11. Stronger environmental protections for most environmental resources.

This alternative reduces 6 of the significant and unavoidable impacts of the project to a less than significant level. There are no environmental disadvantages as compared to the Draft 2007 UVAP. The alternative allows the least amount of new development while incorporating the stronger environmental protections afforded by the Draft 200y UVAP policies. It is environmentally superior to the plan as proposed and to all other alternatives.

Additional Hybrid Alternatives

The Board of Supervisors may elect to adopt some hybrid of the project and the four alternatives presented above. The preceding discussion provides sufficient examination of the range of impacts under the project and the alternatives for the Board to select portions of one alternative and add it to another. For example, the Board could adopt most of Alternative C, but add in some of the land use changes proposed in the Draft 2007 UVAP. If that were the case, when the County would provide a discussion of how the final selected alternative was addressed by one or more parts of this EIR and the

alternatives analysis. This discussion would be included in the Findings that the Board would need to adopt prior to adopting the plan.

5. Environmentally Superior Alternative

The following discussion provides a summary comparison of the project and the four alternatives and identification of the environmentally superior alternative.

Draft 2007 UVAP (Including EIR-Recommended Mitigations). The plan as proposed would result in construction of a maximum of 5,430 new dwelling units 7 million square feet of non-residential development. As described in Section 3.0 of this EIR, buildout under the proposed plan would result in 60 potentially significant impacts, of which 25 impacts would remain significant and unavoidable after recommended mitigations are added to the plan.

No Project - Existing General Plan Alternative. Under this alternative future land use would be guided by the existing land use classifications and the policies of the Existing General Plan. The Draft 2007 UVAP would not be adopted. As shown In Table 1.6-2, the Existing General Plan would allow substantially less development - a maximum of 1,726 additional residential units as compared to a maximum of 5,430 units under the Draft 2007 UVAP - a 72% reduction in residential development). New development would occur primarily in Calpella, the South Ukiah Valley, and the South State Street areas, and as scattered rural residential development in areas outside the main nine discussion areas. There would be minimal development in the North State Street area, and virtually no additional residential development in the Brush Street Triangle, Lovers Lane, East Ukiah Hills, and Masonite areas. There also would be a substantial decrease in the maximum amount of new commercial and industrial development that would occur under this alternative.

This substantial reduction in residential and non-residential development potential would result in a similar decrease in most impacts to environmental resources. On the other hand, the policies of the Existing General Plan are not as detailed and strong regarding plan area resources compared to the Draft 2007 UVAP policies, nor do they address the specific issues and impacts of future development of the plan area as completely as the Draft 2007 UVAP.

Land Use Alternative A. This alternative would reduce the maximum allowed under the Draft 2007 UVAP by over 20%. As shown In Table 1.6-2, Land Use Alternative A would allow a maximum of 3,948 additional residential units as compared to a maximum of 5,430 units under the Draft 2007 UVAP). Discussion areas where residential development potential would most substantially be reduced include the Lovers Lane, Brush Street Triangle, and North State Street areas. There also would be a decrease in the maximum amount of new commercial development that could occur under this alternative. There would be an increase in the maximum amount of new industrial development that could occur. Overall, the amount of nonresidential development is less – 5.5 million square feet as compared to 7.0 million square feet.

This reduction in residential and non-residential development potential would result in a similar decrease in most impacts to environmental resources. As regards policy

direction, this alternative maintains the proposed policies of the Draft 2007 UVAP. This alternative is environmentally superior to the project.

Land Use Alternative B. This alternative would reduce the maximum allowed under the Draft 2007 UVAP by about 50%. As shown In Table 1.6-2, Land Use Alternative B would allow a maximum of 2,782 additional residential units as compared to a maximum of 5,430 units under the Draft 2007 UVAP. Development potential would be substantially reduced in the North State Street and Lovers Lane areas. Residential development of the Masonite site would not be allowed, and development potential of the East Ukiah Hills would be limited to one unit. There would be some reduction in residential development potential in the South Ukiah Valley and Brush Street Triangle areas. There also would be a substantial decrease in the maximum amount of new commercial development that would occur under this alternative, but there would be an increase in the amount of new industrial development that could occur.

This substantial reduction in residential and non-residential development potential would result in a similar decrease in most impacts to environmental resources. As regards policy direction, this alternative maintains the proposed policies of the Draft 2007 UVAP. This alternative is environmentally superior to the project and Alternative A.

Land Use Alternative C – Policy Only. This alternative is a hybrid alternative that combines the policies of the Draft 2007 UVAP (the proposed project) with the land use classifications of the Existing General Plan (the No Project Alternative). As such, it would allow the least new residential and commercial development and the most new industrial development. This new development would be guided by the new policies and implementation measures of the Draft 2007 UVAP (as amended by EIR-recommended additions). Development under this alternative would have the fewest environmental impacts, and it is identified as the ***environmentally superior alternative.***

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Persons and Agencies Contacted

Atherton, Bill	Ukiah Unified School District Fiscal Services
Barrett, Bryan	Ukiah Unified School District, Assistant Superintendent
Bengston, Dave	Mendocino County Agricultural Commissioner (retired)
Bradley, Tim	Millview CWD Manager
Brown, Christopher	Mendocino County Air Quality Management District
Burck, Ann	Ukiah Water Utility Project Engineer
Burton, Bruce	California Department of Health Services
Caylor, Paul	Mendocino County Administrators Office
Chadwick, Raymond	Ukiah Unified School District Superintendent
Culbertson, John	PG&E.
Dewey, Chris	Ukiah Police Department
Enberg, Ted	California Department of Forestry and Fire Protection
Ford, Patrick	Mendocino County Department of Planning and Building Services
Gorny, Phil	Mendocino County Department of Planning and Building Services
Grebil, Dan	Ukiah Valley Fire District
Hershey, Diana	Mendocino County Department of Planning and Building Services
Hudson, Gary	Mendocino County Sheriff's Office
Hession, Tom	Redwood Valley-Calpella Fire Department
Hoy, Brian	Mendocino County Division of Environmental Health
Jamison, Alan	Ukiah Water Treatment Plant Supervisor
Linegar, Tony	Mendocino County Agricultural Commissioner
Lynch, Frank	Mendocino County Department of Planning and Building Services
Kennedy, Rick	Former City of Ukiah Utilities Director
McMichael, Frank	Mendocino County LAFCo
O'Hagan, John	SWRCB, Division of Water Rights
Otis, Peter	North Coast RWQCB
Pedroni, Gary	Mendocino County Department of Planning and Building Services
Redding, Dave	Willow and Calpella CWDS, Manager
Rogina, Dan	Rogina Water Company, Owner
Sanford, Roland	Mendocino County Water Agency Director
Seanor, Rick	City of Ukiah Public Works Director
Slota, Dennis	Mendocino County Water Agency
Spazek, Barbara	Russian River FCD
Stull-Otto, Jessica	Mendocino County Department of Planning and Building Services
Stump, Charley	City of Ukiah Community Development Director
Sweeney, Mike	Mendocino County Solid Waste Management Authority
Thurston, Norma	Mendocino County Sheriff's Office
Townsend, Pam	City of Ukiah Community Development Department
Whealen, Paula	Wagner & Bonsignore Engineers

Yates, Chuck	Ukiah Fire Department (now retired)
Ziemanek, Bernie	Formerly Ukiah Public Utilities Director

Report Preparers

Leonard Charles, Ph. D.	Principal in Charge
Lynn Milliman	Analyst and Report Production
Natalie Macris	Environmental Planner
Jacoba Charles	Ecologist
Rich Rodkin, P.E.	Acoustical Engineer (Illingworth & Rodkin, Inc.)
Michael Thill	Acoustical Consultant (Illingworth & Rodkin, Inc.)
James Reyff	Air Quality Consultant (Illingworth & Rodkin, Inc.)