

PREPARED BY THE LAKE COUNTY COMMUNITY DEVELOPMENT DEPARTMENT

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MIDDLETOWN AREA PLAN



VIEW OVER COYOTE VALLEY
Source: Steve Mitchell

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	3
LIST OF FIGURES	9
1.0 EXECUTIVE SUMMARY	1-2
2.0 INTRODUCTION	2-2
2.1 THE PLANNING PROCESS	2-3
The Function of an Area Plan	2-3
Methodology	2-7
Relationship to Other Plans	2-8
2.2 ORIENTATION TO THE MIDDLETOWN AREA	2-11
Climate	2-11
County Geography	2-12
Planning Area Geography	2-12
2.3 HISTORY AND DEVELOPMENT	2-12
Historic	2-12
Present	2-14
Assumptions	2-17
Major Planning Issues	2-17
3.0 NATURAL RESOURCES	3-2
3.1 GEOLOGY & SOILS	3-2
3.2 WATER	3-6
Ground Water	3-8
Surface Water	3-11
Water Quality	3-12
Water Induced Erosion	3-13
Water Reclamation	3-14
3.3 BIOLOGICAL RESOURCES	3-17
Natural Communities & Habitats	3-18
Oak Woodlands	3-20
Riparian Corridors	3-22
Wetlands	3-23
Sensitive and Critical Resource Areas	3-24

Wildlife	3-28
Rare, Threatened and Endangered Plants	3-28
3.4 AGRICULTURE	3-32
Buffer Zones	3-36
3.5 RESOURCE EXTRACTION	3-38
Mining and Aggregate Resources	3-38
Geothermal Resources	3-40
3.6 CULTURAL RESOURCES	3-43
Native American Ethnographic Groups	3-44
Archaeological Resources	3-45
Historical Resources	3-45
3.7 OPEN SPACE & RECREATION	3-49
Scenic Resources	3-49
Recreation	3-51

4.0 PUBLIC SAFETY

4-2

4.1 LAND	4-2
Slope Instability	4-2
Expansive Soils	4-3
Liquefaction	4-3
Volcanism	4-3
Seismic Activity	4-5
4.2 WATER	4-7
Flooding	4-7
Dam Inundation	4-9
Underground Fuel Tanks	4-9
4.3 FIRE, LAW ENFORCEMENT & EMERGENCY MGMT.	4-11
Fire	4-13
Law Enforcement	4-15
Hazardous Materials	4-15
Public Emergencies	4-16
4.4 AIR QUALITY	4-18
4.5 NOISE	4-21

5.1 ECONOMY	5-2
Commercial	5-3
Geothermal	5-4
Tourism	5-5
Agriculture	5-5
Public Services	5-5
Code Enforcement	5-6
5.2 HOUSING	5-12
5.3 NETWORKS	5-18
Streets and Highways	5-18
Transit and Parking	5-27
Bicycle and Pedestrian	5-29
5.4 PUBLIC SERVICES & UTILITIES	5-32
Service Systems	5-32
Stormwater Drainage	5-38
Solid Waste Disposal	5-41
Communications	5-42
Energy Systems	5-43
Airports	5-44
Military Installations	5-45
Parks & Recreational Facilities	5-45
Education	5-48
Cemeteries	5-49
Lighting & Utilities	5-49
Libraries & Museums	5-50
Health Care	5-50
Visitor Services	5-51
5.5 LAND USE AND ZONING PLANS	5-51
Commercial	5-53
Residential	5-55
Agriculture & Rural Areas	5-61
Open Space	5-62
Special Zoning Recommendations	5-63

6.0 SPECIAL STUDY AREAS

6-2

6.1 SPECIAL STUDY AREA NO. 1: MIDDLETOWN	6-2
6.2 SPECIAL STUDY AREA NO. 2: COYOTE VALLEY	6-8
Residential	6-8
Commercial	6-8
Open Space/Recreation	6-10
6.3 SPECIAL STUDY AREA NO. 3: LANGTRY/GUENOC	6-15
Guenoc Valley Existing Conditions	6-15
Future Development	6-15

7.0 DESIGN GUIDELINES

7-2

7.1 COMMERCIAL DEVELOPMENT	7-2
Overview	7-2
The Review Process	7-2
Basic Design Principles	7-3
7.2 MIDDLETOWN DESIGN GUIDELINES	7-4
Applicability	7-4
Purpose	7-4
Design Guidelines	7-5
Signage Guidelines	7-10
Types of Signage	7-12
7.3 COYOTE VALLEY DESIGN GUIDELINES	7-17
Applicability	7-17
Purpose	7-17
Design Guidelines	7-18
Signage Guidelines	7-23
Types of Signage	7-24

LIST OF FIGURES

Chapter 2

Figure 2-1	Regional and Location Map	2-4
Figure 2-2	Community Areas	2-6
Figure 2-3	Planning Area Population Characteristics	2-16

Chapter 3

Figure 3-1	Serpentine Soils Map	3-4
Figure 3-2	Critical Resource Areas	3-26
Figure 3-3	Rare, Threatened and Endangered Plants Potentially Occurring within the Planning Area	3-29
Figure 3-4	Rare, Threatened and Endangered Animals Potentially Occurring within the Planning Area	3-34
Figure 3-5	Important Farmland Map	3-45

Chapter 4

Figure 4-1	Slope Map	4-4
Figure 4-2	Flood Hazards Map	4-8
Figure 4-3	Fire Hazards	4-12

Chapter 5

Figure 5-1	Employment Characteristics	5-2
Figure 5-2	Commuting Patterns	5-3
Figure 5-3	Population and Housing Characteristics	5-14
Figure 5-4	Functional Road Classification	5-20
Figure 5-5	Middletown Unified School Dist. Facilities & Enrollment	5-48
Figure 5-6	Acreage of Existing and Proposed General Plan Land Use Designations	5-52
Figure 5-7	Acreage of Existing and Proposed Zoning Designations	5-52
Figure 5-8	Middletown Community Growth Boundary	5-58
Figure 5-9	Coyote Valley Community Growth Boundary	5-60
Figure 5-10	Scenic Corridors	5-64
Figure 5-11	B5 Combining District	5-66

Chapter 6

Figure 6-1	Special Study Area 6.1—Middletown	6-6
Figure 6-2	Special Study Area 6.2—Coyote Valley	6-14
Figure 6-3	Special Study Area 6.3—Langtry/Guenoc	6-20

MIDDLETOWN AREA PLAN

EXECUTIVE SUMMARY

1

HIDDEN VALLEY LAKE

Source: Alan Flora



1.0 EXECUTIVE SUMMARY

The Middletown Area Plan is a guide for long-term growth and development in the Planning Area and is a complement to the Lake County General Plan. It is a planning tool that will facilitate refined planning decisions based on community values and priorities of the residents in the area. The relationship between the General Plan and an area plan must be mutually complementary and consistent. Policies in the area plan should supplement general plan policies, yet more precisely reflect the characteristics found in the Planning Area. The higher level of policy accountability for this plan ensures the residents of the future that the vision of the citizens in 2009 is carried out as adopted. County landowners and residents seek assurances that the use of a neighbor's property will be compatible with the health, safety, welfare and preservation of property values, the economy and the County's rural character. Therefore, facilitating land development and land use must balance a property owner's right of reasonable use and the impact of that use on neighboring property owners.

A long-range plan should provide adequate land use allocations to meet the community's needs while also protecting vital natural resources. This plan includes three special study areas (Middletown, Coyote Valley and Langtry/Guenoc Valley). Land use designations have been amended where necessary to reduce potential land use impacts. Environmental concerns have been identified and policies developed to protect the unique natural features of the area. Several of the benefits of this plan are as follows:

- Promotion of a diversified economic base by continuing to promote agriculture, recreation services, and commerce. Provides adequate land uses to encourage industrial and non-industrial development, and the development of geothermal resources.
- Protection of prime agricultural areas and the promotion of agricultural uses including: value-added agriculture, agricultural tourism and conservation easements and buffers.
- Provides for land use foundation to accommodate a diverse number of housing types. Encourage the use of infill development on appropriate sites in existing neighborhoods with access to important public services.
- Future development will be directed away from areas of known environmental concern through the use of low land use densities. Properties in areas with safety and environmental constraints, including landslide areas, steep slopes and areas of high erosion potential have been designated "RR", Rural Residential or "RL", Rural Lands to limit development to lower densities in these potentially hazardous areas.
- Community Growth Boundaries have been developed within which, more intensive residential, retail and service oriented commercial development is appropriate. Higher density residential development outside of the Community Growth Boundaries is not appropriate due to existing infrastructure and safety constraints, or long range land use goals of the General Plan.
- This plan establishes general design guidelines for commercial development aimed at preserving established community character and scale, including heritage and historic character.
- Promotes the establishment of a comprehensive parking plan for commercial business districts.
- Encourages the design of pedestrian and bicycle-friendly streets.
- Ensures that adequate and efficient public utilities and services are provided to meet the needs of residents and businesses in the Planning Area
- Policy and implementation measures include wildfire protection measures and promotion of fire safe communities.
- Plan policies and guidelines provide opportunities for the protection of existing resort and recreational uses.
- Wetlands and riparian corridors along existing creeks will be protected from the impacts of future development through the use of the "W" Wetlands, "FF", Floodway Fringe and "WW", Waterway combining districts.

- Addresses the preservation and protection of scenic resources in the Planning Area.
- Promotes the establishment of an interconnected diverse trial system.

To the extent possible, parcels containing land uses inconsistent with existing zoning districts have been rezoned to be consistent with the land use. The major recommendations within the three special study areas are:

Middletown Special Study Area – Measures should be taken to enhance the economic viability of the area while preserving the unique historical qualities of the downtown area. Commercial development should be diversified in this area. Mixed use development, with residences above the commercial uses should be considered. The development of a comprehensive parking plan is critical to the health of the local business community. Design guidelines are detailed in Section 7 of this plan.

Coyote Valley Special Study Area – Commercial development should be diversified in this area to provide retail and entertainment services to the region while at the same time encouraging the development of new job opportunities in areas other than the retail service sector. Mixed use development, with residences above the commercial uses should be considered. Focus is centered on the establishment of a town center on the north side of Hartman Road between State Highway 29 and Coyote Valley Road. Design guidelines are detailed in Section 7 of this plan.

Langtry/Guenoc Valley Special Study Area – Contains the vision for future development of the 16,000-acre Langtry property in more detail with a goal of allowing the flexibility to create an economically diverse job base, innovative resort/residential communities, agritourism opportunities and resort-related uses while at the same time protecting significant agricultural lands, open space and natural resources of the area.

The recommendations in each of the basic land uses are as follows:

Commercial – All new commercial development should be subject to the Design Review Guidelines in Chapter 7 of this area plan. The Special Study Areas contained in Chapter 6 of this plan for the Middletown, Coyote Valley and Langtry/Guenoc should be utilized for new commercial development projects proposed in these areas. Community Commercial uses should be encouraged within the established community centers and encourage the development of pedestrian friendly features to encourage shoppers to leave their vehicles while traveling between multiple store fronts. Service Commercial should be directed away from town centers. The Resort Commercial designation has been applied to existing resorts and lodging facilities.

Industrial – Future light industrial and manufacturing development should be directed to the industrial designated properties in the south end of Coyote Valley and the west end of Middletown near the sewer treatment facility. Future industrial development is encouraged to utilize the “PDC” Planned Development Commercial process and be subject to the Design Guideline provisions outlined in Chapter 7 of this Area Plan. Other areas within the Planning Area may be considered for industrial uses, but should only be allowed to occur in areas that have access to both public water and sewer.

Residential – Future residential development should be directed to infill sites within the existing subdivisions and Community Growth Boundaries. Adequate land has been provided to meet the diverse housing needs of the Planning Area. Higher density residential developments should be encouraged near the town centers where better access to public transit and other public services are readily available. New large residential subdivisions should be encouraged to utilize the planned development process to allow for flexibility in design and integrated

open space. Combining districts have been incorporated together with base zoning districts to protect sensitive and hazardous areas from development in the rural portions of the Planning Area. Small subdivisions on large acreage in the rural areas should be encouraged to utilize the "B5" density transfer combining district to encourage the clustering of development and preservation of rural areas. Pedestrian walkways and trails that connect residential areas with commercial areas and with the public schools should be encouraged.

Agriculture – The primary areas within the Planning Area designated as Agriculture include the Gue-noc region along Butts Canyon Road, large acreage properties surrounding the Middletown community area, lands between Grange Road and the Hidden Valley Lake Subdivision and properties with active Williamson Act (Agricultural Preserve) contracts. These areas typically contain prime agricultural soils (Class I-IV). Lands that have limitations, including steep slopes or non-prime soils have been designated Rural Residential or Rural Lands. Crops of Mediterranean origin, such as wine grapes, grow very well within the Planning Area on lands that are not identified as "prime." Lands that are currently developed with vineyards or are used for grazing, but do not contain prime soils, are typically zoned and designated Rural Lands in order to allow their continued agricultural use without encroachment of incompatible uses. Agricultural resources are discussed further in Chapter 3 of this Plan.

Open Space/Resource Conservation/Public Facilities – All publicly owned land has been designated as Resource Conservation or Public Facilities and zoned Open Space. Lands designated Resource Conservation includes the lands of the BLM, State and County. Watercourses and wetlands have also been included within the Resource Conservation designation. Lands designated Public Facilities includes the lands of schools, fire districts and water treatment facilities.

Environmental Impacts

The potential significant effects of the Middletown Area Plan identified by the Environmental Impact Report prepared for this plan are:

- Wildland Fires
- Agricultural Uses and Possible Conflicts with Non-Agricultural Uses
- Impacts to Water, including Erosion, Flooding and Sedimentation
- Infrastructure Impacts, including Traffic, capacity for public water and sewer, and Recreational Facilities
- Wetlands, Vegetation and Wildlife
- Historical, Cultural and Archaeological Resources
- Increased Development Impacts, including Air Quality, Green House Gas Emissions, Noise, Scenic Resources, Aesthetics, Light and Glare

The Area Plan provides mitigation for potential impacts from future development through use of policies and implementation measures.

Both residents and visitors value the county's varied landscape. Both the county's character and economy fundamentally depend on the land, air, water, soil, physical and ecological processes that together sustain the County's human, plant and animal communities. Therefore, land stewardship is the basis of both conservation and development. Accepted practices of stewardship vary among different land uses. Whether these are agricultural uses, residential developments, timber harvesting, mining, wildlife habitat protection or recreational uses, stewardship is an important aspect of land use and protection. With proper attention to environmental concerns and impacts, the growth that is expected over the next twenty years can enhance the quality of life in the county without degrading the natural environment. The Middletown Area Plan provides a guide for this growth that will help ensure that the quality of life experienced by area residents will not be compromised.

- 2.1 THE PLANNING PROCESS
- 2.2 ORIENTATION TO THE
MIDDLETOWN AREA
- 2.3 HISTORY & DEVELOPMENT

INTRODUCTION

2

HARBIN SPRINGS RESORT
Source: Cate Young



2.0 INTRODUCTION

This introductory section discusses the purpose of this plan and how it relates to the County General Plan. Plan organization, area history, population data and community participation are also covered in this section.

The Lake County General Plan provides long-term guidance with regard to the values, goals, and future development of the entire county. Lake County's diverse communities create unique Planning Areas, each with their own distinct character. The General Plan distinguishes eight planning regions within the county. The Area Plan for each region addresses specific issues within that Planning Area that are distinct from other regions, since community concerns, issues and development objectives vary between regions. Area Plans serve to enhance the County General Plan by identifying objectives and policies specific to each region, and they are developed with considerable community participation to reflect the goals of each community. Area Plans usually are updated more frequently than the General Plan resulting in refinements to the County land use and zoning maps.

At the policy level, area plans are developed specifically to reflect community values and priorities. A Planning Area's character and values are generally reflected in the character of its land use classifications. The residents of the Planning Area would like to not only maintain their quality of life but also nurture and enhance it. Priorities on quality of life and the rural character of the area are carried throughout this plan's goals, policies and implementation programs. The recommendations of this plan are designed to define, nurture and enhance the quality of life in the Planning Area, while also providing for economic development activities such as additional resort development, business park/ industrial park development, and increased opportunities for retail and support related commercial.

The 2008 County General Plan and recently updated Area Plans include references to a relatively new set of community planning and development terms. Foremost among these is Smart Growth, which incorporates all of the following concepts designed to limit urban sprawl and improve the quality of life.

- **Community Growth Boundaries (CGB's)**, support open space, agriculture and greenbelts around urban centers and place limitations on new development outside of CGB lines. These CGB's are refined through the area plan process to provide for local input into their size and the development potential allowed within them.
- **Mixed-Use Development** allows housing and community commercial uses on the same site. This reduces the need for automobile trips by making it possible for people to shop and work within easy walking distance, clusters development to encourage public transit and permits higher density in-fill in urban centers. Another effect is rejuvenation and improved safety in downtown areas.
- **Walkable Communities** have visually appealing pedestrian level amenities and mixed-use development in downtown core areas that encourage people to walk instead of drive. Attractive streetscapes with seating, plazas, landscaping, connecting walkways, road crossing improvements, traffic calming devices and buildings near the road frontage that face the street are all part of this concept.
- **Jobs-Housing Balance** seeks to link development of new residential subdivisions with the creation of new jobs or commercial facilities that would attract new businesses to the area. Significant increases in population should have corresponding increases in the local job base.
- **Green Building** utilizes alternate energy sources, such as solar power, environmentally friendly building materials and energy efficient designs, such as better insulation and south facing windows.
- **Smart Growth** and **Sustainable Communities** follow the foregoing principals limiting growth within community boundaries and promoting energy efficiency, public transit and mixed-use development. Effectively these principles foster a greater sense of community and reduce the environmental impacts of growth development, especially upon air quality, traffic, energy demand and open space. All of these policies combined define sustainable development, which reduces average daily automobile trips, makes public transit more feasible, reduces energy consumption, improves air quality and supports a

diverse economy.

Urban sprawl has in the past created patterns of suburbanization that undermine rural character and cause unwelcome traffic and air quality impacts. Lake County is subject to urban growth pressures from development in Sonoma, Napa and Mendocino Counties. The General Plan supports the application of any and all of these concepts. This area plan utilizes smart growth principles by defining Community Growth Boundaries in which higher density is appropriate, while establishing lower density development outside those areas. This plan further encourages commercial development within the Planning Area that will provide jobs to its residents in all age and income categories, and supports both mixed-use and transit oriented development through a planned development process. The Zoning Ordinance promotes energy efficiency and low income housing by offering density bonuses. The Middletown and Coyote Valley Special Study Areas take these ideas a step further and support walkable downtown centers. All of these principles promote the reduction of urban sprawl and the development of diverse communities with a strong sense of place.

2.1 THE PLANNING PROCESS

THE FUNCTION OF AN AREA PLAN

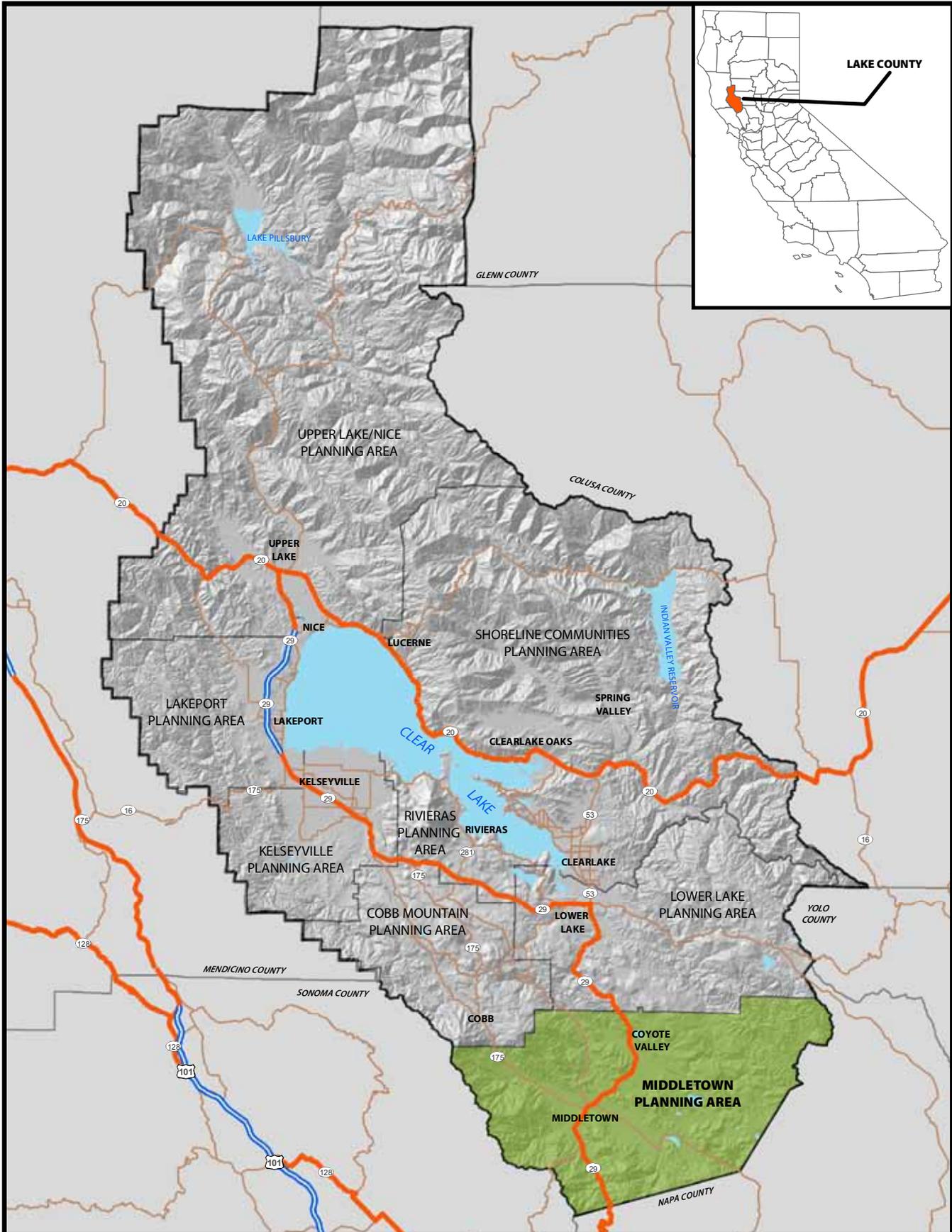
Purpose

The purpose of the Middletown Area Plan is to provide guidance for the long-term growth and development in the area over the next twenty years. Policies of the 2008 Lake County General Plan require detailed plans to be prepared for the unincorporated areas to facilitate refined planning decisions. The General Plan recommends that the area plans be adopted as supplements to the County General Plan. A Middletown Area Plan was first adopted on December 19, 1989, and it is one of eight area plans adopted or in the process of development. Figure 2-2 illustrates the boundaries of the Middletown Area Plan and the two community areas.

Focus

The Middletown Planning Area includes 148.43 square miles in the southernmost portion of Lake County. The area borders Napa County to the south and southeast and Sonoma County to the west. There are three special study areas that the plan addresses in more detail. Special Study Area No. 1 is a portion of the community of Middletown. Special Study Area No. 2 is a portion of the community of Coyote Valley including the Hidden Valley Lake subdivision. Special Study Area No. 3 is the Langtry/Guenoc Valley.

Although the community of Middletown is the principal economic and social focal point in the Planning Area, Hidden Valley Lake subdivision, located four miles north of Middletown, is growing at a faster rate. The community of Middletown is located in the Callayomi Valley, which is in the Planning Area's geographic center, and the Hidden Valley Lake subdivision is located in the Coyote Valley in the northernmost portion of the Planning Area east of Highway 29. Another subdivision of importance is Anderson Springs. This subdivision is located on Highway 175 approximately five miles west of Middletown. It currently has 195 dwellings but is not expected to experience any significant growth during the planning period due to a lack of sewer service, steep slopes and high fire hazards. The Guenoc Valley, which runs along Butts Canyon Road



REGIONAL & LOCATION MAP
FIGURE 2-1



to the Napa County line, presents significant future growth and development potential due to large land holdings. Detert Reservoir is located on the property, which also includes the historic Lily Langtry house, a winery and an 18-hole golf course under construction. The estate is primarily open space and agricultural and has the oldest established vineyard and wine appellation in Lake County. The Langtry Estate is a 16,000 acre land holding within Lake County, which remains intact under single ownership. This area is further analyzed in Section 6.3 Special Study Area: Langtry/Guenoc Valley.

Organization

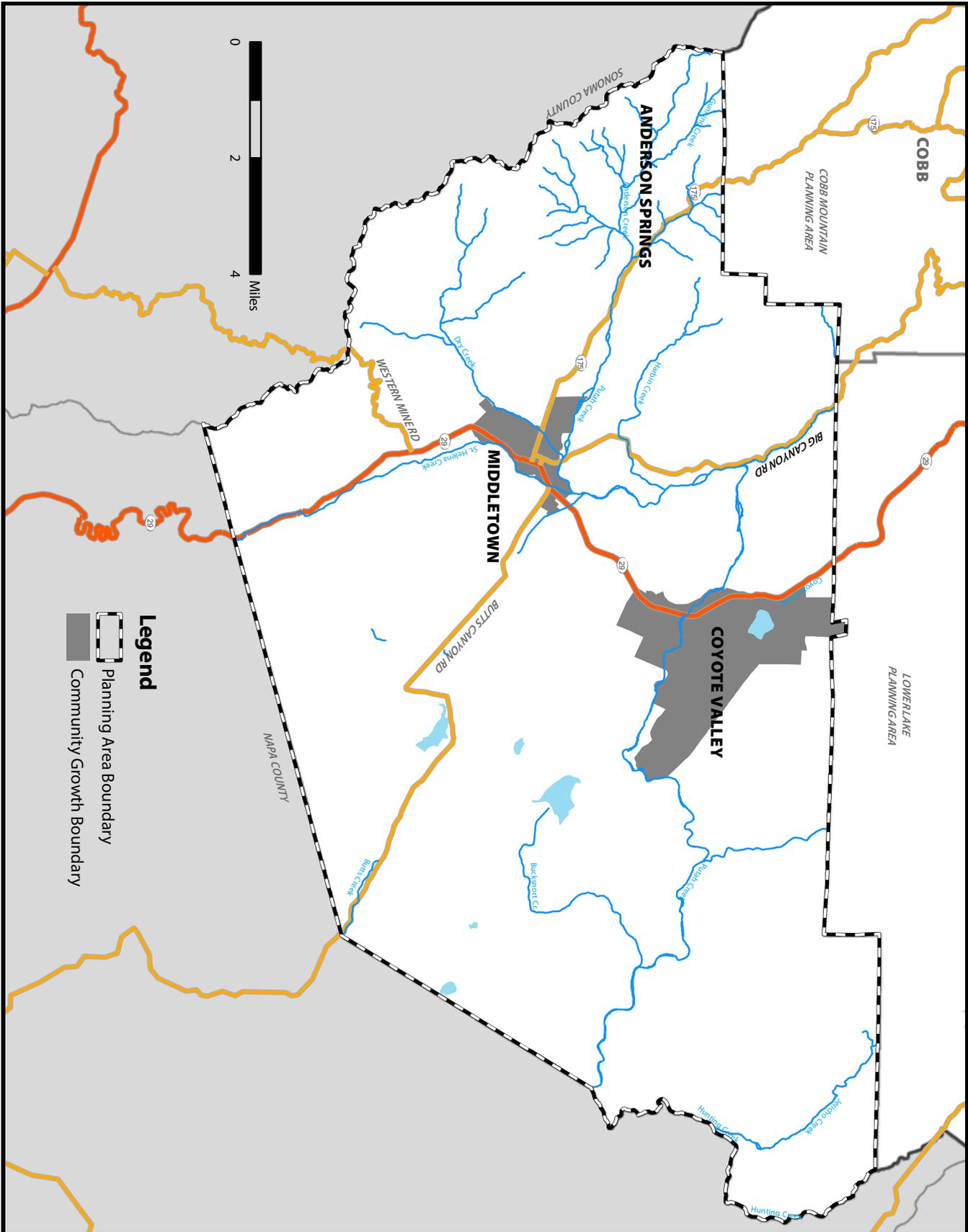
The Area Plan is divided into the following sections: (1) Executive Summary, (2) Introduction, (3) Natural Resources, (4) Public Safety, (5) Community Development and (6) Special Study Areas, and (7) Design Guidelines. This Introduction section covers the planning process, function of the Area Plan, plan methodology and orientation, and the history of the Middletown Planning Area. The Natural Resources section includes discussions of development limitations due to land, water and biological resources. The Public Safety section addresses geologic hazards, wildfire and air quality constraints. The Community Development section covers economic development, housing, road networks, public and private services and land use issues. The sections covering Land Use, Public Safety and Community Development are organized to first present the information related to each topic, followed by an objective that sets a course of action to resolve the problems identified. The objective is then followed by specific policies that address direction of action in more detail as it relates to the individual objectives.

The Lake County General Plan describes various ways the General Plan and the area plans are to be implemented. General plans do not directly regulate land use and development practices. By law, these plans must be implemented by other actions and measures. There are various regulatory actions and programs defined in the General Plan to implement its components, including:

- Zoning and Subdivision Consistency
- Zoning Activities
- Subdivision Requirements
- Land Capacity/Capability Implementation Policy
- Building Codes
- Compliance with local, state & federal codes and regulations
- Specific Plans

The General Plan includes goals and policies covering the following elements: Community Profiles, Land Use, Housing, Public Facilities and Services, Transportation and Circulation, Health and Safety, Noise, Open Space, Geothermal Resources, Water Resources and Agricultural Resources. The Lake County General Plan also describes how procedures, such as the California Environmental Quality Act (CEQA) requirements, implement the General Plan. Other planning implementation tools include General Plan consistency findings for public works projects, review procedures for cultural heritage resources and compliance with other County regulations such as the Floodplain Management and Grading Ordinances. A table of implementation measures addressing each of the policies is included in each chapter.

The Middletown Area Plan is consistent with the goals of the General Plan, and implementation of the Plan follows the programs described in the General Plan. Supplemental objectives and policies that are not contained in the General Plan, but that are necessary to meet the specific



COMMUNITY AREAS
FIGURE 2-2



needs of the Planning Area, are included in the area plan. Implementation measures are outlined with each related policy with a short description, along with the responsible agencies, funding considerations, proposed priorities and timeframe. Implementation of the policies contained in the area plan will ultimately depend upon available funds and personnel. Assuming available funding, it is the County’s goal to implement the recommended programs. The following priority designations are determined during the public review process by the Planning Commission and the Board of Supervisors based on the recommendations of the Area Plan Advisory Committee and Planning Division:

- High - High Priority, most important
- Moderate - Medium or middle priority
- Low - Low Priority, least important

The following timeframe designations are also determined during this process:

Continuous - Ongoing throughout the duration of the 20-year plan

- Immediate - Within one year
- Short-term - One to three years
- Medium - Three to five years
- Long-term - Five to ten years

METHODOLOGY

Plan Preparation

Area plans are prepared using a team approach between the Community Development Department and the community. The public is invited to provide input about the issues faced in their area. The project coordinator’s role is to obtain and review all relevant information related to the Planning Area, including community issues and data such as population, endangered species and natural hazard areas. This information is presented to an Area Planning Advisory Committee (APAC) that provides suggestions for objectives and policies to address the issues. The project coordinator and team then prepare a draft of the area plan document for review by the APAC and the public. Specialists within the County, as well as other local, state and public agencies contributed heavily to this plan.

Citizen Participation

Citizen participation was an essential component in the creation and direction of this plan. Citizen participation and public input are fundamental for the planning process to be successful in creating a useful planning tool that reflects community values. Local residents provide valuable insights to specific issues, needs and opportunities in their area. Furthermore, plans formulated with public involvement are more likely to be successful in the long term and supported by the community.

In December of 2003, the Lake County Board of Supervisors appointed local residents to serve as members of the Middletown Area Planning Advisory Committee (APAC). These committee members were chosen to represent a cross-section of the residents of the Planning Area. APAC members and the community were asked to provide input and advice to Planning Division staff as the Area Plan was developed. A public workshop was held, and was attended by over 100

community members, to allow the community to express its concerns and values. The APAC and staff then held public meetings where facts and ideas were presented for consideration and consolidation into the plan. Public attendance and participation at these meetings was high. There were a number of guest speakers who spoke to central issues within the Planning Area. Guest speakers from local government agencies included David Miinch from the South Lake Fire Protection District & California Department of Forestry, who discussed fire safety; Todd Mansell, Pamela Francis and Thomas Smythe from the Department of Public Works, who discussed road infrastructure, trail networks and water resources; Mel Aust from the Hidden Valley Lake Community Service District who discussed water and sewer resources in Coyote Valley; Kim Clymire from the Public Services Department who discussed solid waste disposal, parks and recreation and the emergency management plan; and, Sheriff Rod Mitchell who discussed law enforcement and emergency response issues.

The APAC finalized the public draft of the Middletown Area Plan Update through a series of meetings in 2009. Information obtained through previous APAC meetings and presentations was formalized and incorporated into the Area Plan Update and proposed land use mapping for the Planning Area.

Process

The process for the writing of the Middletown Area Plan started with the appointment of the APAC. Community Development Department staff presented materials to the APAC and the community at public meetings, including topics such as zoning, land use, public safety and services. From the questions and discussions at these committee meetings, which included significant public input from the community, a list of issues important to the Planning Area was formulated. The issues and opportunities identified during this process guided the preparation of the Area Plan. The conclusions and recommendations from the analysis were used to formulate the objectives, policies and implementation measures. Following the preparation of the plan by staff and review by the committee, the plan goes through public hearings with the Planning Commission and ultimately is reviewed and approved by the Lake County Board of Supervisors.

RELATIONSHIP TO OTHER PLANS

2008 Lake County General Plan

The General Plan, Area Plans and Zoning Ordinance must be mutually complementary and consistent.¹ The objectives and policies of the Middletown Area Plan are an area-specific supplement to the County General Plan, and reflect in more precise detail the characteristics found in the Planning Area. The Middletown Area Plan also includes zone change recommendations that, when approved will help implement the goals, objectives, policies and implementation measures of the plan. Staff ensured that all aspects of this plan are consistent with the County General Plan. All General Plan elements were reviewed for goals and policies applicable to the Middletown Planning Area.

Lake County Groundwater Resources Management Plan, 2007

The Groundwater Resource Management Plan supports the long-term maintenance of high quality groundwater resources within the 13 groundwater basins and seeks to improve the understanding of the water resources in Lake County. The Plan was formulated through a collaborative effort between responsible governmental agencies and local stakeholders. The Groundwater Management Plan provides guidance for the responsible management of groundwater resources in Lake County. It addresses water resource issues, including documenting the current status of water use and supply,

¹ Government Code Section 65300.5

identifying areas of need, and developing recommendations to ensure a supply of high quality water into the future.

Lake County Housing Element, 2005

Housing is a required element of any General Plan, but it is governed by special legislation that requires it to contain specific data and analysis and to be updated normally every 5 years. The Housing Element is published as a separate document from the rest of the Lake County General Plan. It is, therefore, not covered in depth in any of the Area Plans. For additional information, refer to the Housing subsection of the Community Development section of this plan.

Lake County Aggregate Resources Management Plan, 1992

The Lake County Aggregate Resources Management Plan was adopted in November of 1992 as an element in the County General Plan. Although the 1981 General Plan only called for two special elements – Clear Lake and Geothermal Resources – the Board of Supervisors deemed the County’s aggregate resources important enough to warrant a separate special element. This was done because there were significant issues associated with the mining of aggregate in Lake County. These include potential adverse impacts to vegetation and wildlife, hydrology, geology and soils, air quality, noise, circulation, land use, public services, aesthetics, socio-economics and cultural resources. The most controversial issues are the impacts of in-channel mining on groundwater levels and creek bed and bank erosion. The environmental and social impacts must be weighed against the needs for aggregate by growth and development industries.² This Area Plan must be consistent with the Aggregate Resource Management Plan, as it is an element of the General Plan. These resources are further discussed in the Mineral and Aggregate Resources section in Chapter 3 of this plan.

Lake County Regional Transportation Plan, 2005

The most recent Lake County Regional Transportation Plan was adopted by the Area Planning Council (APC) in October, 2005. The Plan addresses the local roadway system, the State highway system, transit services, bikeways and pedestrian facilities, aviation and transportation funding sources. The Plan is currently being revised and is scheduled to be completed in 2010. The Plan assesses the issues, problems and challenges of the existing circulation system, presents action programs and discusses environmental considerations. Land use planning is fundamentally related to transportation. Transportation is discussed in further detail in the Networks section in Chapter 5 of this Area Plan.

Lake County Regional Bikeway Plan, 2002

The Lake County/City Area Planning Council prepared the 2002 Lake County Regional Bikeway Plan to meet the provisions of the California Bicycle Transportation Act, found in the Streets and Highway Code Sections 890 – 894.2. The Bikeway Plan includes all existing and proposed bike routes throughout the County, including the two incorporated cities of Lakeport and Clearlake. It includes non-motorized transportation policies, maps and descriptions of existing and proposed routes and an implementation plan. There are routes included within the Middletown Planning Area. These routes are discussed in greater detail in the Open Space section of Chapter 5.

² Lake County Aggregate Resource Management Plan (November 1992).

Lake County Road Needs Survey, 2000

Prepared by the consulting firm W-Trans for the Lake County/City Area Planning Council and adopted in November 2000 the Lake County Roadway Needs Survey presents a comprehensive study of road and street needs on arterial streets and roads in Lake County. The document establishes funding priorities for capacity, circulation and safety improvements to the Region's arterial streets and roads system. A traffic model was developed to predict future traffic volumes out to the year 2020. The model is used to evaluate the effects of major changes to the Region's transportation system as well as developing long term improvement strategies and priorities for State highway improvements. This study is currently in the process of being updated.

Community Wildfire Protection Plan, 2009

The Community Wildfire Protection Plan (CWPP) aims to reduce risks and hazards from wildfire while exercising due care of natural resources. The plan provides very specific strategies and recommendations on how to achieve these goals by identifying, prioritizing and implementing fire protection and fuel hazard reduction programs and activities. It also takes into account the challenges of coordinating fire protection strategies across property boundaries and jurisdictions, as well as identifying ways to encourage the integration of private land management goals with community needs and expectations.

Konocti Regional Trails Plan

For the past year, a stakeholder's group together with the Lake County Department of Public Services, has been developing the concept of the Konocti Regional Trails system in conjunction with a technical assistance grant from the National Park Service, River Trails and Conservation Assistance (NPS RTCA) program. The land and water-based trails would provide hikers with scenic views of Clear Lake, Mt. Konocti, vineyards, low-lying valleys, small communities and distant wilderness areas. Wherever possible, plans are to use low-impact existing trails, utility easements, fire roads or fire breaks located on public lands, or on private lands of willing property owners. The County contracted with Alta Planning & Design to organize and seek community input in the development of a regional trails plan. Alta Planning will assist in compiling existing and proposed trail information into the county GIS mapping database, work with community volunteers to assess proposed trails segments, develop a signage plan and design guidelines, and ultimately compile a proposed master trails and implementation plan. This plan is scheduled to be completed in the Fall of 2010.

Special District Master Plans

Most service districts such as fire, water, wastewater and schools have master plans estimating future demand, infrastructure and supply requirements. The analysis and policies in this area plan take these master plans into consideration when those plans are available. Master Plans on file include Hidden Valley Lake Community Service District, Lake County Sanitation District, Callayomi County Water District and Middletown Unified School District. The area plan also includes an analysis of any proposed district boundary changes.

Draft Coyote Valley Strategic Economic Development Area Plan, 2000

The draft of this plan was completed in June, 2000. The plan included an extensive community needs survey, and the process involved significant input from the community at large as well a citizen's advisory committee. The Plan provides guidance regarding long-term growth and development for the community of Hidden Valley Lake and surrounding rural area in Coyote Valley. The Plan focuses on

specific planning issues and outlines goals and policies aimed at implementing the overall community vision. Although the final draft was not completed or adopted, the community and the Hidden Valley Lake Homeowner’s Association continues to support the contents of this proposal. The Middletown Area Plan Citizen’s Advisory Committee has sought to implement some of its key elements into this area plan (see Section 6.2 Special Study Area: Coyote Valley).

Cobb Mountain Area Plan, 1989

The Cobb Mountain Area Plan, adopted in March 1989, covers approximately 73.5 square miles to the adjacent to the northern boundary in the western portion of the Middletown Planning Area. It extends to just north of Socrates Mine Road, which is a few miles north of Anderson Springs Subdivision. It includes the communities of Cobb, Loch Lomond and Whispering Pines. Cobb Mountain is a rural area that does not have centralized community or commercial areas, and Middletown is the nearest shopping and service district. The commercial base of the Cobb Planning Area includes resorts and activities for visitors and locals such as golf courses and nature trails. Some of the major planning issues are the preservation of open space, wildlife areas and viewsheds, water service and sewage disposal, utilization of conservation easements, development of geothermal resources, and control of erosion resulting from poor road construction and maintenance practices.

Lower Lake Area Plan, 1988

The Lower Lake Area Plan, adopted in 1988, is adjacent to the Middletown Area Plan on the northwest and covers approximately 108 square miles south of Kelseyville and east of Cobb Mountain in the southcentral and eastern portion of Lake County. It extends south to the northerly boundary of the Middletown Area plan at Hidden Valley Lake Subdivision and east to the Napa County line. It includes the community of Lower Lake, and the rural, agricultural and grazing land of Morgan Valley, Little High Valley and Jerricho Valley. The major planning issues identified in the plan are: agricultural land preservation, restoration of historic downtown Lower Lake, installation of improved public services and facilities, coordination of new growth with the provision of public services, affordable housing for seniors, the need for multifamily housing and a housing rehabilitation program, and the planning and implementation of economic diversification in the Lower Lake area.

2.2 ORIENTATION TO THE MIDDLETOWN AREA

CLIMATE

The climate of the Planning Area is characteristically Mediterranean. Temperatures in the area are characterized by warm to hot summers with days often exceeding 100 degrees and cool winters with occasional frosts and snowfalls at higher elevations. Average temperature highs range from 55°F in December to 90°F in August. Average temperature lows range from 31°F in December to 54°F in August. Annual rainfall ranges from about 25 to 30 inches. Western portions of the Planning Area receive greater rainfall amounts which decrease to the east. Rainfall averages can dramatically increase in rural mountainous areas. Approximately 90 percent of the area’s normal rainfall occurs in the six month period from November through April. Year-to-date rainfall can vary substantially.

COUNTY GEOGRAPHY

Lake County is within the Coast Ranges Geomorphic Province, which includes the mountainous area between the Sacramento-San Joaquin Valley and the Pacific Ocean. The Coast Ranges have been greatly affected by tectonic processes associated with movement along the North American and Pacific plate boundaries. The prevailing structural pattern within the North Coast Range has a northwesterly alignment controlled by faulting occurring during the late Tertiary period between five to seven million years ago. In general, topography of the Coast Ranges is rugged and mountainous, with deeply incised, youthful stream valleys bounded by moderately steep sided slopes.

PLANNING AREA GEOGRAPHY

Terrain throughout the Planning Area is mostly mountainous, with central valleys and drainage basins. Elevations of the Planning Area range from approximately 660 feet as Putah Creek crosses the Lake County line to the east, to 4,300 feet above sea level at the summit of Mt. St. Helena. The entire area is within the upper Putah Creek drainage basin. Creeks flowing from the area's western mountain ranges flow year-round, however, gradually becoming seasonally intermittent before reaching the Callayomi and Coyote Valleys.

The western portion of the Planning Area in the Mayacamas Mountains is steep terrain in the Franciscan Formation. The area is geothermically active and subject to frequent microseismic events. The central portion of the Planning Area contains alluvial valleys (Callayomi, Coyote and Guenoc) lying between upland areas of undifferentiated rocks of the Great Valley Sequence. This area is characterized by sandstones and interbedded shales. Generally, the eastern portion of the Planning Area contains the Cache Formation. This consists of highly erodable sedimentary rocks such as silts and gravels with tuffs and limestone found near the surface. The Planning Area also contains numerous volcanic formations, the largest of which runs northwest to southwest in the Hidden Valley Lake area.

2.3 HISTORY AND DEVELOPMENT

HISTORIC

There is evidence that people have inhabited Lake County since at least 6000 B.C. Ethnographically, the Planning Area is situated on a divide between two Native American linguistic groups: the Wappo and the Southeastern Pomo.

The area around Middletown was inhabited by three ethnographic groups; the Wappo, the Lake Miwok and the Patwin. The territory of the Wappo was divided into two portions, one small (the southern portion of Clearlake) and one large, encompassing the south, central and western portion of the Middletown Planning Area. The closest Wappo village northeast of the present community of Middletown was called "lok-noma".

The Lake Miwok were hunters and gatherers who had permanent dwelling areas along the drainages of several small creeks and stream valleys south of Clear Lake. The Lake Miwok had 17 villages throughout the Middletown Planning Area. The third group, the Patwin, is linguistically related to the Wintuans of the western Sacramento Valley. The Patwin inhabited the easternmost portion of the Middletown Planning Area. Although not located in the Middletown Planning Area, another ethnographic group, the Pomo,

was located to the area's west and east. The Pomo Indians were the most prevalent group in Lake County.³ Native American population estimates range between 3,000 and 5,000 inhabiting the Clear Lake region at the time that the first Euroamerican settlers started to arrive. In comparison, the 2000 U.S. Census reported 1,749 Native Americans residing in Lake County.

The original Spanish land grant that encompassed the area now occupied by Middletown and the surrounding vicinity was filed in 1844, called the Calloyomi, consisted of 13,314 acres. The village of Guenoc, which was located in the Coyote Valley, four miles north of Middletown near to the present day subdivision of Hidden Valley Lake, was recognized with the establishment of a post office in 1867. The village derived its name from the Guenoc land grant that was first awarded in 1845. In 1871 the Callayomi grant was divided into small tracts, and deeded out to settlers. Settlers in Guenoc Rancho were evicted when the grant was confirmed in 1852. Later, portions of the grant were ultimately divided into small tracts and sold to settlers. The village of Guenoc, located approximately 3 miles north of Middletown in the Coyote Valley, dates back to the 1850's and was the first community in the Middletown Planning Area. Herrick & Getz had a store at the site of the Stone House that was north of Guenoc in what is now Hidden Valley Lake. Several buildings were at Guenoc, but when the community of Middletown started up around 1870, the residents of Guenoc moved to the new community in the Loconomi Valley.

When the original California counties were formed the Callayomi Land Grant was in Napa County. In 1855, Clear Lake Township was organized within Napa County. Lake County was established in May of 1861 absorbing areas previously in Napa, Colusa and Mendocino Counties, and the County seat was set in Lakeport, although there was no town there at the time.

In 1870, John H. Berry and Oscar Armstrong purchased 40 acres of land from the Callayomi land grant and later 40 acres from William J. Armstrong. The site of Middletown was laid out on this acreage in 1872. It was surveyed and plotted by B.R. Wardlaw in 1874 and recorded as a town map in March, 1878.

A post office was established in Middletown in 1871. In 1880, the post office at the village of Guenoc, was discontinued and the population of the village and some of the buildings moved to Middletown. It was clear at that time that Middletown would prosper more readily than Guenoc and the original road to Guenoc was moved.

The community of Middletown is located at a junction of two main stage roads, and in closer proximity to the mercury mines south of town which served as the economic base of the community. The community was named Middletown since it was midway between Lower Lake and Calistoga. Middletown was connected with other areas along the Lakeport, Lower Lake and Calistoga stage lines with tri-weekly stages and daily mail service. The town's original name was Middleton, but was changed to Middletown in 1875. The population of Middletown in the 1870s was 350. At this time the businesses of the town were represented as follows: five stores, one drug store, two hotels, one livery stable, one meat market, one barber shop, three blacksmith's shops, three saloons, one shoe and harness shop, one jeweler, one doctor, one church, a school house, a post office, telegraph and express office, and a brewery.

The mineral springs industry in Lake County started as early as the 1850s. By the 1880's all the major springs in Lake County had been located and developed. During the 1880s, Middletown became a destination place for persons visiting the numerous hot spring resorts in the area. These included Harbin Hot Springs, Howard Springs, Anderson Springs, Bonanza Springs and Siegler Springs. Most of the resort guests came from the San Francisco Bay Area by stagecoach from the Napa Valley. The stagecoaches made connections with the trains at Calistoga, and it took a visitor

³ Handbook of North American Indians, Vol. 8, Robert Heizer ed., 1978.

from three to five hours ride to reach one of the springs in the area. The resorts received additional tourist interest with the completion in the 1920s of the highway system from the Napa Valley. The construction of highways in the 1920s drew crowds of weekend guests from urban areas to the hot springs resorts who expected city comforts and entertainment. By the late 1940s many of the early resorts closed their doors as interest in the hot springs resorts began to decline and shifted to the vicinity of Clear Lake and the rising popularity of "auto camps." As auto ownership increased, auto camps became popular as a way for owners to camp out of their vehicles. They were an early form of recreational vehicle (RV) parks.

The main economic force behind the early development of Middletown was mercury mining. The mercury mining industry started in 1873 with the opening of the American (Helen) Mine. This and other mining ventures were financed primarily by capital from the San Francisco Bay Area, although a few were controlled by British capitalists. The most important mines were the Great Western and the Mirabel Mines. The Great Western opened in 1873 and remained in constant production for more than 35 years. It was credited with a total production of 98,296 flasks. The Mirabel opened in 1887 and is credited with a total production of 30,600 flasks. It was abandoned when worked out in 1897. The mining industry continued until after the Second World War when the demand for mercury started to decline.

After the decline of mercury mining, Middletown experienced a resurgence of interest in resorts and spas, including Hoberg's Forest Lake, Whispering Pines, Cobb Mountain Lodge and Salmina's. The popularity in these resorts and spas again started to wane in the 1960s most likely due to the advanced age of the resorts, loss of many resorts to fires and newer destinations that were closer to the bay area.

The carp industry in the Middletown area arose in the 1880's. Carp ponds of Messrs, Swartz and Webber were located about three miles northwest of Middletown near the present Anderson Springs. These ponds were quite extensive and were thought to be among the largest in California. Carp was sold for \$.75 to \$1.00 per pound in the San Francisco Market.⁴

The next major economic stimulus to affect Middletown and the surrounding area was the development of the geothermal steam fields in the neighboring Cobb Mountain area for the generation of electricity. In 1960 PG&E established the first modern plant at The Geysers. Currently, a number of geothermal wells are located in the surrounding Mayacamas mountain range. It should be noted that because of early overdevelopment of the area for electricity, the steam fields were actually losing their capacity to produce energy in the 1980s. In 2003, construction of a treated wastewater pipeline for underground injection from neighboring Sonoma County to the Geysers area, was completed and a second treated wastewater pipeline serving certain communities in Lake County for additional injection was also finished at approximately the same time. As such, the geysers are again producing increasing amounts of environmentally friendly electrical power and are being expanded. Currently there are 22 operating geothermal wells at The Geysers complex, with more drilling planned.

PRESENT

With the limited records available, determining the population data and future trends for the Planning Area was challenging. Population counts reported by the U.S. Census Bureau in the 2000 Census Blocks do not follow the County's Community Growth Boundaries. As a result, the Planning Area population numbers are generalized estimates and not an exact population count. The year 2000 census data showed that 1,020 people lived in Middletown, 3,777 lived in Hidden Valley Lake and it is estimated that approximately 6,050 people lived within the Planning Area. Table 2-1 includes estimates for 2006. These estimates were derived by reviewing building permit data for new dwelling units between January 2000 and December of 2006, and then factoring in occupancy rate and household population estimates, and then using that data to normalize the 2000 Census numbers. This time

⁴ History of Lake County, 1881 reprinted by Valley Publishers, Fresno, CA, 1974.

period coincided with a significant construction boom that resulted in a growth rate of over 3% for those six years. However, the housing construction slowdown that began in 2007 has been factored into the year 2010 projections by using a much lower (0.5%) growth rate for the years 2007 through 2010. This lower growth rate is supported by reductions in the number of new building permits issued and foreclosure and vacancy rates.

FUTURE

Population projections are routinely used in land use planning, economic development and infrastructure planning, and are a useful tool to help municipalities plan for the future. With any method of population analysis, there are limitations to the accuracy of the data, primarily based on the accuracy of the base data and the assumptions at the core of the analysis. There may be an infinite number of projections for a given population since the parameters may be infinitely variable. Therefore, it is important to remember the limitations of population projections. Projections are intended to be approximate forecasts that demonstrate general trends. They should not to be interpreted as exact targets or as absolute predictions of what will occur. Projections are based on certain assumptions that can be significantly impact natural factors. Unforeseen changes in economic, social and demographic conditions and events could substantially alter the actual future population of a given area.

Overall, Lake County's population growth was not vigorous between 1980 and 2000. However, the Hidden Valley Lake Subdivision experienced a huge increase, growing from 326 people in 1980 to 3,777 in 2000. The Middletown Planning Area also experienced a significant increase in population between 2000 and 2006. Due to a downturn in the housing market, population growth has leveled since then. The Business Outreach and Response Team (BORT) estimated that the countywide population will be approximately 69,259 in 2010, 79,676 in 2020 and 89,638 in 2030.⁵

In addition to providing current population estimates for the two Communities and the Planning Area as a whole, Figure 2-1 illustrates the projected population and household totals from 2010 through the year 2030 utilizing an annual 2% growth rate. A 2% growth rate is used by the 2008 Lake County General Plan, and has been accepted as a reasonably accurate growth rate when looking at historical population data for Lake County. The population and household projections represent a key planning component to the Area Plan. The projections illustrate how many new dwellings should be developed to meet the need for the expected growth to the year 2029.

For the purpose of determining the appropriate sizes for the Community Growth Boundaries, an average annual growth rate of 3% was used, through the year 2030. While it is not anticipated that the Communities of Middletown and Coyote Valley will experience a sustainable growth rate of 3% during the next 20 years, using this rate for land use planning purposes assures that the Community Growth Boundaries are of adequate size to avoid undue restrictions on development during this planning period. Restricting the size of these Boundaries too much could result in unintended consequences for future residential development, such as a situation where one or two large vacant parcels are held by owners unwilling to subdivide or sale to developers.

⁵ Lake County Business Outreach and Response Team website (2006).

Figure 2-3 Population and Housing Unit Projections

MIDDLETOWN PLANNING AREA										
Population and Housing Unit Projections										
	Year									Projected Increases (2010-2030)
	1980	1990	2000	2006	2010	2015	2020	2025	2030	
Middletown CDP										
Population (2% annual increase)	763	977	1,020	1,305	1,331	1,464	1,611	1,772	1,949	618
Occupied Housing Units (2.56)*	N/A	N/A	392	510	520	572	629	692	761	241
Average Annual Increase in Housing Units		N/A	N/A	20	3	10	11	13	14	
Hidden Valley Lake CDP										
Population (2% annual increase)	326	1,961	3,777	5,394	5,502	6,052	6,657	7,323	8,055	2,553
Occupied Housing Units (2.67)*	371	615	1,411	2,020	2,061	2,267	2,493	2,743	3,017	956
Average Annual Increase in Housing Units		24	80	102	10	41	45	50	55	
Middletown Planning Area (including HVL & Middletown)										
Population (2% annual increase)	1,892	4,224	6,050	8,332	8,499	9,349	10,284	11,312	12,443	3,944
Occupied Housing Units (2.60)*	N/A	1,184	2,274	3,205	3,269	3,596	3,955	4,351	4,786	1,517
Average Annual Increase in Housing Units		N/A	109	155	16	65	72	79	87	

Sources: 1980, 1990 & 2000 Census, US Census Bureau, Community Dev. Dept. building permit numbers. 2006 estimates based on the 2000 census data and adding number of building permit from '00-06.

Note: There are no complete building permit numbers for the Middletown Planning Area. The numbers shown were normalized based on the percentage of the population that lived in HVL CDP and Middletown CDP, compared to the Planning Area as a whole

Note: Due to the economic slow down and the lack of new construction permits between 2007 and 2009, have been figured at an annual growth rate of 0.5%.

*Average household size is from the 2000 Census and is based on Occupied Housing Units.

ASSUMPTIONS

General assumptions about future planning conditions have been incorporated into the preparation of the Middletown Area Plan. These assumptions help provide a consistent long-term planning framework. If the basis for an assumption were to dramatically vary, then related planning decisions could become inconsistent and result in internal conflicts within the plan. The basic assumptions used during preparation of this plan are:

- Funding sources will be limited due to federal, state and local budget constraints. Increased reliance on efficient use of locally generated revenues will occur throughout the planning period. It will likely be necessary to locate grant funding or form capital improvement programs, special districts or facilities benefit districts in order to finance some of the desired programs and improvements, such as public parking, sidewalk improvements, open space acquisition and trail development.
- There will continue to be a high level of community participation in planning for future development. The design review process for new development projects will include higher standards and include more public involvement.
- The area will continue to feel strong but intermittent development pressure and is expected to experience average population growth of 2% annually within the established Community Growth Boundaries.
- The automobile will continue to be the primary source of transportation in the Planning Area and traffic will continue to increase on arterials and major collector roads.
- Conflicts between agricultural and non-agricultural land uses will intensify.
- The Planning Area will continue to feel pressure from developers wishing to subdivide properties for additional housing.
- The burden on public infrastructure and services will also continue to be a significant factor influencing new development.
- Tourism will increase as new economic development strategies and programs are implemented, particularly in agritourism and ecotourism.
- The Planning Area will need additional active and passive recreation areas to serve its current and projected populations as well as its economic objectives.
- Planning for an airport in the South County region may become increasingly important.

MAJOR PLANNING ISSUES

The community workshop and the Middletown Area Planning Advisory Committee developed the following summary of major issues and opportunities facing the Middletown Planning Area. These issues helped to guide and focus development of this plan, and the analysis and policy development incorporate these community concerns.

Public Safety

- Fire is a serious threat to safety due to the large wildland areas and heavy fuel loads. Steep terrain and lack of alternate exit routes are also a problem in much of the Planning Area.
- The Planning Area needs more law enforcement presence and more fire and emergency personnel.
- Slope stability and the risk of landslides is a concern.
- Much of the Community Area of Middletown is located within the 100 year flood plain. Many areas have localized flooding and many intersections pond during storms. It is especially inconvenient for pedestrians in the community areas. Improved street drainage would help in many

cases. Offsite ponding from new home construction is a serious concern.

- There is not enough information about seismicity in the area and

Public Services

- The area is clean and safe, and crime is very low.
- This a good place to raise a family, and the schools are good. However, the school facilities need to be continually monitored to assure that they remain adequate, and will be able to serve an increase in population.
- There is a need for additional local services including health care, senior services, parks and recreation, solid waste and code enforcement.
- There are many vacant and under developed lands available for much needed parks within community areas. Existing parks need maintenance and improvement, and more active recreation is needed, especially for children, in the urban areas including playgrounds, playing fields and ball courts.
- There should be a County visitor's center in Middletown.
- County facilities should be cleaned-up. Unused county facilities should not be sold, until they have been considered for other public uses, particularly in downtown Middletown for public parking.
- More teen and senior programs are needed.

Natural Resources

- The air and water quality are both good.
- The weather and climate are good and could attract more residents, businesses and tourism.
- The geographic isolation protects open space and the rural character of the area from heavier development pressures.
- Development on steep slopes is an increasing problem. Erosion should be controlled because it causes dangerous land instability and the degradation and sedimentation of waterways.
- The views of night skies should be protected from light intrusion. Outdoor lighting should be limited and protective lighting standards for new development are necessary.
- Scenic ridge views need to be protected.
- Measures should be taken to preserve oak woodland in the Planning Area.

Networks

- There is no gridlock, and except during peak hours, there is very little traffic.
- While the geographic isolation protects the rural character of the region from heavy development pressures, better access to the area would improve the quality of life for the community. It would make urban areas more accessible for jobs, shopping and services and provide better exit routes in case of emergencies, such as wildland fires. It would also make the south county more accessible to tourists.
- A comprehensive parking plan is needed for downtown Middletown.
- Pedestrian improvements are needed in the community centers as well as adequate infrastructure providing non-motorized alternatives from the community centers to the surrounding residential neighborhoods.
- There needs to be better access to public transportation.
- Major intersections have peak traffic flow problems. Intersection improvements are needed on Highway 29 at Hartmann Road, Spruce Grove Road and Butts Canyon Road. Traffic problems on Wardlaw Street also need to be addressed.
- The Planning Area needs a public airport.
- More curbs, gutters and sidewalks are needed to prevent ponding and allow pedestrian use.

- Highway signage, such as population statistics and gateway signs, need to be updated.
- Water and sewer infrastructure needs to be improved and expanded.
- Traffic and parking around schools is a particular concern and may be dangerous.

Economic Development Issues

- The area needs more lodging units, especially affordable family inns and hotels.
- There should be more organized marketing, promotion and publicity for local business and events.
- The area needs to increase its commercial base:
 - to provide more local shopping and prevent leakage of money out of the area for basic goods and services
 - to provide more local job opportunities
 - to create more reasons for motorists to stop in the area
- More arts, theater, cultural and entertainment opportunities are needed to attract tourists and serve local residents, particularly programs geared toward children.
- Parents are particularly concerned about road safety for teenagers because there are no local entertainment venues and few teen friendly restaurants or services.
- There needs to be more enforcement of County codes. Open outdoor storage, abandoned vehicles and illegal junk yards and dumps need to be cleaned-up.
- The financial stability of agriculture is threatened, and steps should be taken to make it more economically viable.

Housing

- Housing growth should be approached with more careful consideration of the existing communities, the rural character of the area and available infrastructure development pressure.
- More affordable housing is needed for existing residents whose income levels are, on average, lower than in Napa and Sonoma Counties and the greater Bay Area.

Open Space & Recreation

- Open space, riparian corridors and views should be protected from development.
- More passive recreation areas are needed to protect natural resources and provide access to waterways and public lands. In particular, Putah Creek access near Highway 29 and along Hartmann Road is highly desirable, and would be beneficial to the town center area.
- A mixed-use recreation area with both passive and active recreation opportunities is highly desirable. Additional public parks with amenities such as ball fields and playground equipment is needed.
- It is an advantage that there are several creeks running through Middletown, which makes the town very attractive. The creeks, especially St. Helena Creek, could be improved with public access points and walking paths for both residents and tourists.
- There should be multi-use trails for pedestrian, equestrian and bicycle access. Existing recreational facilities should be connected.

Land Use

- The community wishes to retain the small town, friendly, and quiet slow-paced atmosphere. The community desires to maintain the rural character of the Planning Area and prevent haphazard development.

- It is important to maintain and enhance the current quality of life, including air quality, night sky views and open space.
- The community would like to maintain small, local retail shops and discourage fast food or chain stores because they may undermine local retailers and detract from the rural character.
- Historic buildings are important and should be protected.
- Significant areas of open space, agriculture and vacant lands should be maintained and kept available for future use. Commercial sprawl should be avoided.
- The definition of downtown areas and town identities needs to be improved. The location is excellent for attracting motorists because it is on a well traveled highway that is the gateway to Clear Lake, the Napa wine county and Cobb Mountain resorts.
- The lack of a strong and effective design review process and guidelines for residential subdivisions and commercial development is a problem. Aesthetics, including building renovation, occupancy and town gateways should be considered. A community theme should be developed as part of new design guidelines.

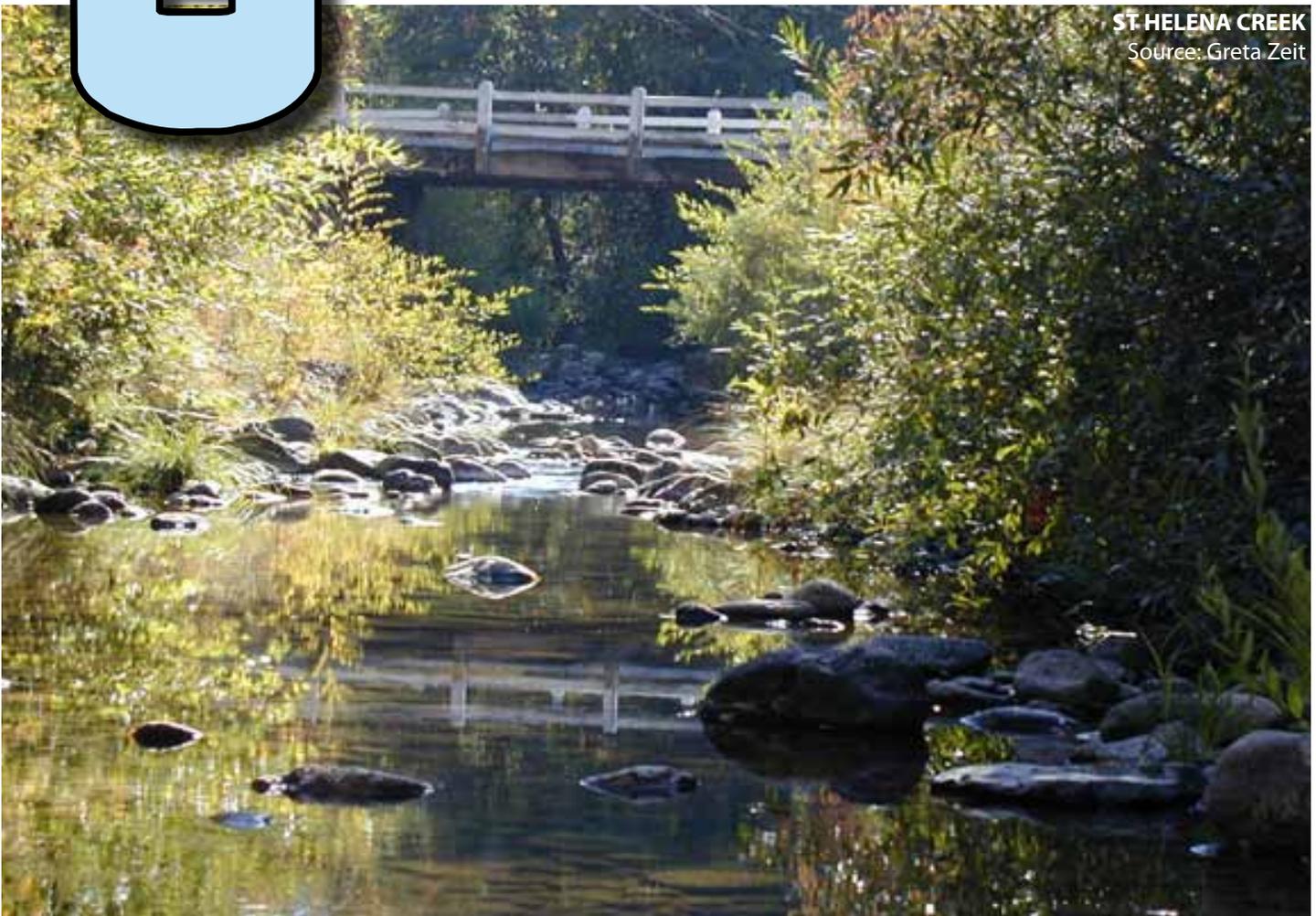
Funding Issues

- More funding resources and revenues need to be explored and identified to meet community needs.
- Development impact fees should be included in new projects to support community needs. Options such as the development of feasibility studies and capital improvement programs and special districts for business improvement, parking and open space should be explored.

- 3.1 GEOLOGY & SOILS
- 3.2 WATER
- 3.3 BIOLOGICAL RESOURCES
- 3.4 AGRICULTURE
- 3.5 RESOURCE EXTRACTION
- 3.6 CULTURAL RESOURCES
- 3.7 OPEN SPACE & RECREATION

NATURAL RESOURCES

3



ST HELENA CREEK
Source: Greta Zeit

3.0 NATURAL RESOURCES

This section discusses geology, hydrology, soil resources, mineral resources, vegetation, wildlife and cultural resources, open space and recreational resources. This section includes recommendations, objectives and policies with respect to these resources to guide development. Figure 3-2 shows important natural resource features within the Planning Area.

3.1 GEOLOGY & SOILS

Lake County is a topographically diverse area in the Coast Range of California. Hills, mountains and valleys are the predominant landforms. Geology in the Coast Ranges consists of a metamorphic rock (basement rock) that forms many ridges and underlies most groundwater basins; volcanic rocks that form volcanoes, hills, geysers, and hot springs; and sedimentary rocks that form groundwater basins in valleys. Soils and slope conditions in the Planning Area vary widely. The area is characterized by the alluvial plains of Coyote Valley, Callayomi Valley, Long Valley and Guenoc Valley surrounded by foothills and steep, mountainous terrain. The current extents of geologic formations are shown in a geologic map of Lake County.¹

The geologic history of the Coast Range includes underwater deposition, mountain building episodes, volcanism, and regional faulting. The Franciscan Formation was originally deposited 125 million years ago at the edge of the Pacific Ocean, and the fluctuating sea levels caused alternating deposition of shale and sandstone. After the formation was deposited, it was uplifted and squeezed by movement of tectonic plates, forming the majority of the Coast Ranges as they are today. The Franciscan Formation forms the bedrock in the majority of mountains and under valleys in Lake County

Faulting occurred in Lake County, lowering a prehistoric area in the Coast Ranges that filled with water and began to deposit lacustrine sediments². Volcanic activity occurred intermittently through the Pleistocene with the extrusion of a number of separate lava flows, beginning the deposition of the Clear Lake Volcanics. Other depressions and valleys in the Coast Ranges began to be filled with sands, silts and gravels carried by streams, resulting in the deposition of alluvial basins³.

The central Planning Area is in the Middletown (34) and Detert Reservoir (38) Topographic Quadrangles. The western area is in the Whispering Pines (33) and Mt. St. Helena (39) Quadrangles, and the eastern Planning Area is in the Jericho Valley (35) and Aetna Springs (37) Quadrangles. Over 50% of the Middletown Planning Area has slopes above 30%. The steepest areas are located in the south and west portions of the Planning Area. The community of Anderson Springs has slopes averaging 8 to 15%, whereas the community of Hidden Valley Lake contains slopes ranging from 0% in the vicinity of the golf course to up to 30% in the northernmost boundaries. The community of Middletown lies in the Callayomi Basin, which is lightly sloping. Development in the Middletown area is best suited in areas where slope is not substantial. In areas exceeding 30%, there are significant constraints to development.

Much of the area of higher elevation in the western portion of the Middletown Planning Area consists of rocks of the Franciscan Group containing sandstones, greenstones, serpentines and quartz, and rocks of the Knoxville group, mostly of gray shale, chert, graywacke, greenstone and schist⁴. The

1 Lake County Groundwater Management Plan (GWMP) 2007, Appendix (Figure 2-5 and Table 2-1)

2 Sims, John D. 1988, Late Quaternary Climate Tectonism, and Sedimentation in Clear Lake, Northern California Coast Ranges. Geological Society of America Special Paper 214

3 Geology of the Lower Lake Quad. by J. Brice, 1953

4 These units also contain metamorphosed rocks, ultramafic rocks, serpentinite, greywacke, sandstone, shale, submaring,

eastern portions of the Planning Area consist largely of tuffs, intrusive rocks such as serpentines and unconsolidated sedimentary rocks.

The central and eastern portions of the Planning Area contain alluvial valleys with deep, well-drained soils lying between upland areas of undifferentiated rocks of the Great Valley Sequence. This area is characterized by sandstones and interbedded shales. Generally, the eastern portion of the Planning Area is located in the Cache Formation. This consists of highly erodible sedimentary rocks such as silts and gravels with tuffs and limestone found near the surface.

To the south, Mount Saint Helena is composed primarily of Sonoma Volcanics that date back to the Pliocene era, with some serpentine exposures. The Volcanics are predominantly andesitic with some rhyolitic tuffs, tuff-breccia and welded tuffs. The mountain, though composed of volcanics from unknown eruptive sources, is not a volcano. The Coyote Valley is part of the Clearlake Volcanic field formed by volcano that surrounded the Clearlake area, principally Mt. Konocti, which is still an active volcano.

While much of the Planning Area is relatively flat, there are areas with 30% to 60% slopes that have severe erosion hazards. Figure 4-1 in Chapter shows the average percent of slope of lands within the Planning Area and The Public Safety Element of the Area Plan and of the Lake County General Plan identifies portions of the south Planning Area as variably stable or unstable with risks of landslides or existing landslide debris.

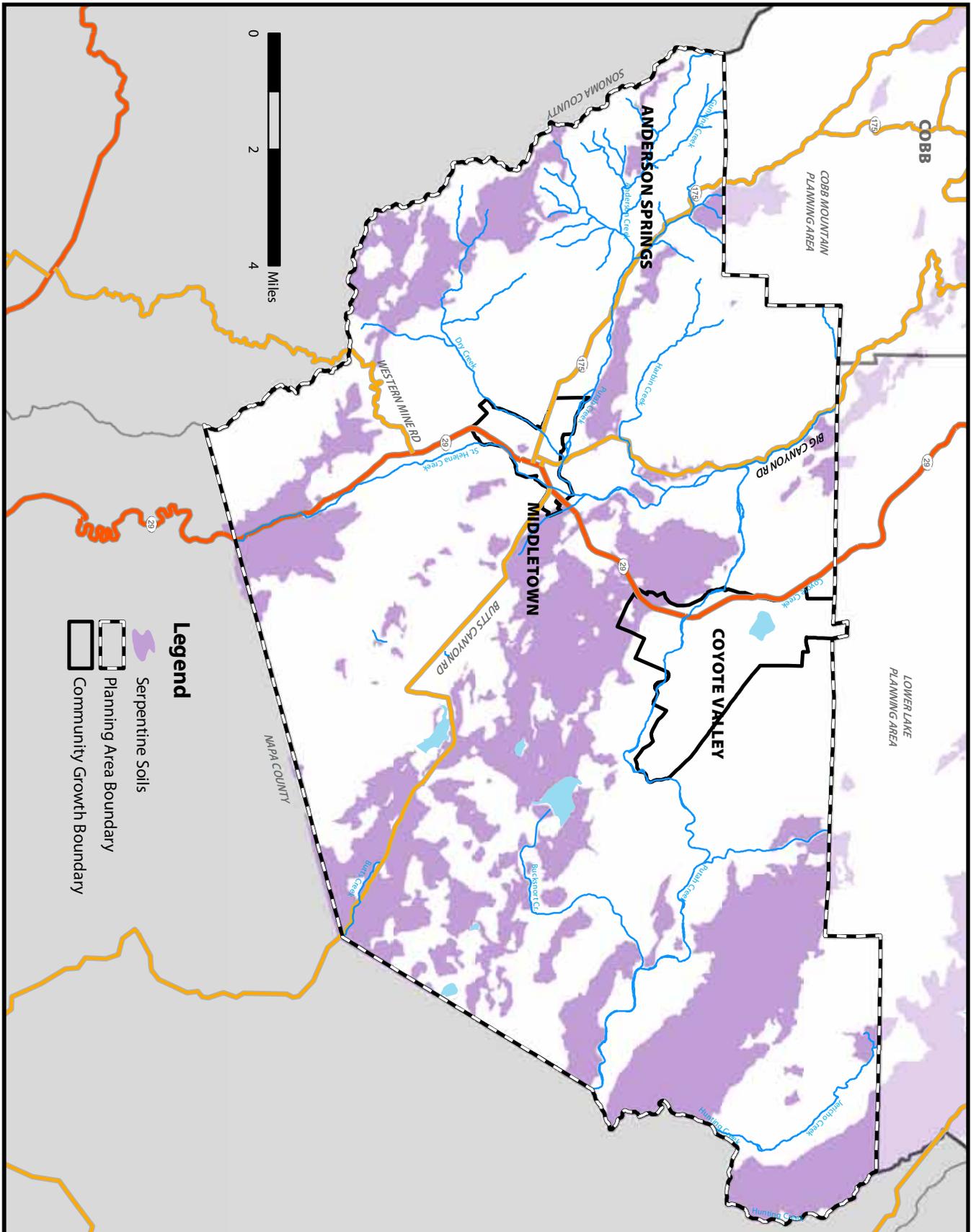
Areas of known landslides are common in the Upper Putah Creek Watershed. The central portions of the Planning Area consist primarily of alluvium produced by St. Helena, Putah and Dry Creeks with small amounts of serpentine, basalt and landslide deposits. The Ford Flat slide area has attracted much concern, but according to the EIR for Ford Flat Geothermal Steam Area the Ford Flat Slide *“site is covered with ancient debris flow composed of volcanic rock fragments ranging from sand-sized particles to huge coherent blocks. This debris flow from Cobb Mountain filled in over a very irregular, pre-existing topography, creating the present more gentle topography of Ford Flat. The debris flow no longer has the potential to move in mass, but small scale landslides exist locally in this material.”*

Lands which consist of uplifted and dissected hills or uplands of volcanic origin are generally limited to watershed, wildlife habitat, light grazing and resource-related activities. Uses of land consisting of valley and basin soils may differ according to their ability to drain and availability of water supplies. If poor drainage exists or water is limited, then valley and basin soils are best utilized for seasonal grazing and wildlife habitat. When water is available, then valley and basin soils are suitable for cultivated crops, including orchards and vineyards.

Serpentine soils are widespread throughout Lake County, and there are mapped serpentine soils in the Planning Area, which may pose air quality hazards if disturbed. Serpentine is a mineral that is found as a constituent in many metamorphic and weathered igneous rocks. Rocks that contain serpentine are typically light to gray green, but they may appear gray when seen as scattered rock outcroppings on slopes with sparse vegetation. Few plants are naturally adapted to survive in the low-nutrient serpentine soils, and rare and endangered plant species are often characteristic of serpentine soils. Natural asbestos, which is a known cancer causing agent when it becomes airborne, is found in some forms of serpentine. mapped serpentine soils within the Planning Area.

Development and earthmoving activities have the potential of increasing sedimentation in waterways and contributing to off-site flooding in some areas. Development within the steeper

tuffs and breccias, chert beds and volcanic rocks (greenstone) containing pillow lavas. (Geology of the Lower Lake Quad. by J. Brice, 1953)



SERPENTINE SOILS
FIGURE 3-1



portions of the Planning Area, in stream corridors and in flood prone areas should be limited to ensure public safety and control run-off. Engineering and special erosion control measures may be necessary in these steeper areas as well. Additional soil constraints found in the Planning Area include expansive soils in the valleys which require engineered foundations as well as high groundwater tables in the valleys and shallow soils on steep slopes which are poorly suited for use as septic tank absorption fields. Soil erosion can cause significant loss or damage to property value, agricultural productivity, wildlife habitat and revenue from tourism.

Objective

3.1.1 Promote soil conservation, reduce and control erosion, and protect unique soils and slopes that are steep or unstable.

Policies

3.1.1a Development should be focused in areas of low to moderate erosion hazard. Substantial development on hillsides or other areas with high erosion hazard is discouraged.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Utilize the "RR" and "RL" zoning districts in areas of high erosion potential. Avoid significant road cuts in steep areas. Enforce the Lake County Grading and Stormwater Ordinance.	Community Development Department, Department of Public Works Water Resources Division	Funding Source	None
		Priority	High
		Timeframe	Continuous

3.1.1b The County shall strive to improve its mapping and identification of areas prone to geologic hazard as new information becomes available.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Update County mapping database whenever new or more accurate geologic hazard information becomes available so that information is readily available to the public.	Community Development Department, Information Technology Department	Funding Source	None
		Priority	Low
		Timeframe	Long-Term

3.1.2a New development in areas that are prone to geologic hazards, on hillsides or other areas with high erosion potential shall be designed, constructed and maintained such that:

- Development does not cause or worsen natural hazards such as erosion, sedimentation, fire or water quality concerns;
- Erosion and sediment control measures, including temporary vegetation sufficient to stabilize disturbed areas, shall be included;
- Risk to life and property from slope failure, landslides and flooding is minimized; and
- The character and visual quality of the hillside is maintained.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
<p>Require that erosion prevention and control methods <i>following established BMP's</i> are included in new development in areas of high erosion potential.</p> <p>Apply the Lake County Grading and Stormwater Ordinance standards to all earthmoving activities and ensure appropriate control measures are implemented through the grading permit process.</p>	Community Development Department, DPW Water Resources Division	Funding Source	None
		Priority	High
		Timeframe	Continuous

3.2 WATER

Like much of California, Lake County is facing water supply challenges. The Lake County General Plan 2008 includes a Water Resources element and together with the Lake County Groundwater Management Plan (GWMP)⁵, the Grading, Stormwater Management and Groundwater Export Ordinances as well as numerous state and federal regulations, there are extensive policies in place to protect the County's water supplies and quality.

Water supply concerns affect all growth and development in the County, including the agricultural sector. Lake County has been experiencing an influx of new residents, businesses, and agricultural uses which require additional water supplies. Although the trend is slowing, from 2000 to 2004, the County's population increased over 8 percent, about 5,000 residents, to 63,110. The majority of agricultural and urban development uses groundwater. There are some areas which have a surface water supply, such as Mirabel Estates, or rely on surface water as a supplemental source.

The Lake County Board of Supervisors have approved and adopted an ordinance regulating the extraction and exportation of groundwater from Lake County. In developing this ordinance the Board recognized the principle developed in the case law of California that water may be appropriated from a groundwater basin if the groundwater supply is surplus and exceeds the reasonable and beneficial needs of overlying users. Furthermore, the Board determined the protection of health, welfare, and safety of the residents of the County, and the public benefit of the State, that groundwater resources of Lake County be protected from harm resulting from extraction of groundwater for use on lands or for any other purpose outside the County, until such time as needed additional surface water supplies are obtained for use on lands of the County, or over drafting of groundwater is alleviated, to the satisfaction of the Board. For further information on groundwater and water rights please see the following section.

The geologic setting of the county is dominated by basement rock that forms the majority of ridges and mountains. While there is an adequate supply of water within the water service districts of Anderson Springs, Callayomi and Hidden Valley Lake, Callayomi and Hidden Valley Lake will require additional storage capacity. Limited water availability is a significant limitation on new development and agricultural growth in many areas of the South County.

Most of the Planning Area is within the Upper Putah Creek Watershed, with a portion along the eastern boundary that is remote and sparsely developed in the Middle Putah Creek Watershed. Putah Creek is the principal water course of the area. All other creeks in the basin are direct or indirect tributaries of Putah Creek. Local resources for watershed management include the Eastlake Resource Conservation

⁵ Prepared by CDM for the Lake County Watershed Protection District, Department of Public Works, Water Resources Division in cooperation with the California Department of Water Resources Northern Division, March 31, 2006.

District (Eastlake RCD) and Upper Putah Creek Stewardship. These groups work with property owners and grant programs to assist in erosion control, restoration and assessment. Information on these and other programs may be obtained from the Lake County Watershed Coordinator through the Department of Public Works, Water Resources Division.

Precipitation levels and climate significantly influence surface and ground water availability and demand. Mean annual precipitation in Lake County ranges from 32 inches per year near Clear Lake to over 80 inches per year in the higher elevations of the Mayacamas Mountains along the southwest border of the County. Average annual precipitation in the Middletown Planning Area is approximately 38.5 inches. Due to the relatively mild winter conditions in Lake County, there is no appreciable storage of water in the form of snow pack. Water demand varies according to seasonal climatic changes. The most obvious demand change is the result of irrigation activities during the agricultural growing season. Domestic water demand also fluctuates in response to seasonal climatic changes. This fluctuation is related to domestic irrigation of gardens and landscaping and is not as significant as commercial agricultural demands.

Climate influences the water demand of agricultural activities in two ways. The first influence is in the length of the crop growing season, which influences the type and location of crops. According to the Lake County Resource Management Plan, on average, Lake County experiences approximately 140 to 200 days between heavy frosts that act to define the local growing season.⁶ The second influence that climate has is on the evapotranspiration rate of crops, surface water bodies and exposed soils. The evapotranspiration rate of agricultural crops varies according to the crop, but ranges from 3 acre-feet per acre per year for irrigated pasture to 1.2 acre-feet per year for wine grapes⁷. The Resource Management Plan averages domestic water demand at approximately 0.145 acre-feet per year per capita or approximately 122,850 gallons per year for the average household. Large tracts of resource conservation areas, open space and grazing lands should be retained whenever possible because they function as water recharge areas at an annual rate of one acre foot (325,851 gallons⁸) times the average annual rainfall for the area per acre. Within the Planning Area the average would be 1,045,439.gallons⁹ per acre annually.

Domestic water in the community of Middletown is provided by the Callayomi County Water District, in Anderson Springs by the Anderson Springs Community Services District and in Hidden Valley Lake by the Hidden Valley Lake Community Service District. Recent rulings by the State Division of Water Rights based on a study by the Hidden Valley Lake Community Service District¹⁰, indicate the Hidden Valley and Callayomi water districts have sufficient water rights and an adequate supply of water to support further build-out and expansion of the districts, if the supporting infrastructure can be funded.

Anderson Springs obtains its water from springs located on Cobb Mountain. Surface water stored in Detert Reservoir provides most of the water for the Langtry estate agricultural operations in Guenoc Valley; although studies indicate there are additional groundwater supplies in this area. A few parcels and small subdivisions, such as Mirabel Estates, have surface water uptake from streams or springs. In the remainder of the Planning Area, groundwater is the primary water supply, provided by public water companies, small private water companies and individual wells. There were plans, initiated in the early 1960's, for a Dry Creek water storage project to contain 6,600 acre feet of water. Although interest persists in the project, it was eventually determined to be infeasible and has since been abandoned. Further discussion of domestic water supplies

6 Ott Water Engineers, Inc., Lake County Resource Management Plan Update (1987), p. 14

7 Ott Water Engineers, Inc., p.15

8 43,560 square feet per acre times 7.48 gallons per cubic foot

9 38.5 inches divided by 12 inches per foot times 325,851 gallons

10 Winzler & Kelly, 2003 or 2004

is found in the Community Development Chapter: Public Services Section. Domestic water quality for Anderson Springs, Hidden Valley Lake and Callayomi County Water Districts is generally good. Water quality concerns are discussed in more detail in the Water Quality section of this chapter.

The Lake County Watershed Protection District works to protect and maintain water resources within the county. There are 12 groundwater basins and one groundwater source area in Lake County¹¹. The amount of information available for each basin varies significantly; however, the basins with the most development are generally better characterized. This district includes water supplies in Callayomi and Coyote Valleys and some of the remote eastern sections of the Planning Area, but does not include the Guenoc Valley.

GROUND WATER

The 2006 Lake County Groundwater Management Plan (GWMP) supports the long-term maintenance of high quality groundwater resources within the 12 groundwater basins and one groundwater source area of the county. This plan should be used in concert with planning documents, including this area plan, to determine water availability for future development. Specifically, the objectives of the Groundwater Management Plan are:

- Improve the understanding of groundwater hydrology and quality in Lake County
- Maintain a sustainable, high quality water supply for agricultural, environmental and urban uses
- Minimize the long-term drawdown of groundwater levels
- Protect groundwater quality
- Minimize changes to surface water flows and quality that directly affect groundwater levels or quality
- Minimize the effect of groundwater pumping on surface water flows and quality
- Facilitate groundwater replenishment and cooperative management projects
- Prevent inelastic land surface subsidence from occurring as a result of groundwater pumping

As part of the development of the GWMP, an inventory of available information for all of the County groundwater basins was conducted. Specific capacity is a calculated number based on the pumping rate in gallons divided by a measurement of the difference of static and pumping levels in the well. Higher specific capacities indicate a productive well, and low specific capacities indicate an unproductive well. Transmissivity is the capacity of an aquifer to transmit water. A higher transmissivity indicates the aquifer is able to transmit more water.

Groundwater basins are composed primarily of shallow alluvial deposits and deposits of the Clear Lake Volcanics over the fractured basement rock of the Franciscan Formation. Significant information is available for sedimentary deposits in major groundwater basins; however, very little information is available for the smaller alluvial basins and the water in the Clear Lake Volcanics (a "source area").

Groundwater in many basins is close to the surface in the spring, and decreases in level over the summer. As noted above, the information available for each groundwater basin varies widely, and some basins have little or no data information to characterize groundwater conditions. In general, significant information is available for sedimentary deposits in major groundwater basins; however, very little information is available for the smaller alluvial basins and the Clear Lake Volcanics groundwater source area.

In order for the Watershed Protection District to effectively manage the groundwater resources of Lake County, knowledge of projects that affect groundwater must be maintained by the District. Any pro-

¹¹ Lake County Groundwater Management Plan, 2007

posal for projects involving conjunctive use, groundwater recharge or storage, remediation of contamination should be maintained at the District level. Further protection of groundwater resources may require the planning and construction of groundwater recharge projects such as the Kelsey Creek Detention Structure that would maximize groundwater recharge, allow bed load movement through the detention structure and maintain fish passages.

The State Water Resources Control Board (SWRCB) has jurisdiction over the utilization of “subterranean streams flowing through known and definite channels.”¹² Groundwater not flowing in a known subterranean stream, such as water percolating through a groundwater basin, is not subject to the SWRCB jurisdiction. Only adjudicated basins have an established system of rights; in non-adjudicated groundwater basins, users are not required to apply for groundwater rights before use. Owners of land overlying a groundwater basin or other common water supply source have the first right to withdraw water for reasonable, beneficial use on their overlying lands. The right of each owner is equal to the right of all other owners similarly situated. If there is insufficient water for the reasonable, beneficial use of all owners, the available water supply must be equitably apportioned. The groundwater supply may be appropriated for use on non-overlying lands, so long as the surplus water is withdrawn without creating an overdraft on the groundwater supply. When groundwater has been appropriated, every person who digs, bores, drills, deepens, or re-perforates a water well must first file a notice of intent with the California Department of Water Resources, and then a report of completion.

Preservation and conservation of groundwater resources is a necessary component in rural planning. Destruction of the aquifer either from pollution or overdrafting will affect all resident extracting water from that aquifer. Groundwater export projects can adversely impact groundwater resources. Exporting groundwater can lower groundwater tables, create overdraft, and adversely affect third parties. The Lake County Board of Supervisors enacted Chapter 28, Regulation of the Extraction and Exportation of Groundwater from Lake County, to protect the County’s groundwater resources.

Coyote Valley Basin

Coyote Valley Basin is in the southeastern portion of the county along Putah Creek and is part of the Upper Putah Inventory Unit. Coyote Valley Basin is 5 miles long and 2.5 miles wide.

Holocene alluvium is the primary water-bearing unit in the basin and overlies the Cache Formation. The alluvium consists of floodplain and channel deposits of Putah Creek and alluvial fan deposits in the southwestern portion of the valley and at the valley boundaries. Wells drilled in the alluvium produce on average 1,000 gallons per minute.¹³ The Cache Formation has low permeability because most of the strata are too high in clay or silt to allow for great water movement.

Putah Creek is the main groundwater recharge source for Coyote Valley Basin. Some recharge occurs from precipitation on the alluvial plain and from side-stream runoff. Hydrographs show groundwater levels in the Coyote Valley Basin are shallow in the spring, decrease over the summer, and recover during the winter. Water levels in the basin are between 10 to 15 feet below ground surface on average in the spring. Spring groundwater levels have been generally stable throughout the valley.

Spring to summer drawdown of the water table varies by position in the Coyote Valley Basin, with areas in the west experiencing larger drawdown than the rest of the basin. Basin draw-

¹² California Water Code, §12003

¹³ Mel Aust, Hidden Valley Lake Community Service District, 2006

down during the spring to summer timeframe in the western areas ranges from 20 to 25 feet, and basin drawdown on the eastern side of the valley ranges from 5 to 10 feet. The general direction of groundwater flow in the Coyote Valley is to the southeast, in the direction of Putah Creek flow. The California Department of Water Resources estimated 29,000 acre feet of storage capacity and 7,000 acre feet of useable storage capacity in 1960. Average-year agricultural groundwater demand in the Coyote Valley basin is approximately 671 acre-feet per year.

Callayomi Valley Basin

The Callayomi Valley Basin is in the southern portion of Lake County and is the source of water supply for Middletown and adjacent agricultural areas. The basin includes Callayomi and Long Valley, both in the Upper Putah Inventory Unit. The two valleys are considered a single groundwater basin due to their hydrologic continuity. The boundary is typically the edge of the valley floor.

Total storage in the basin is approximately 37,000 acre-feet (CMA 1987). The California Department of Water Resources estimates groundwater storage in the Callayomi Basin to be 29,000 acre-feet with a useable storage capacity of 7,000 acre-feet (DWR 1960). Average-year agricultural groundwater demand in the Callayomi Valley basin is 266 acre-feet per year.¹⁴ The current estimated water requirement is 3,745 acre feet per year. To accommodate the estimated population of the Coyote Valley and Middletown communities' water demands in the year 2040 it is estimated that it would require between 3,019 acre-feet per year in normal precipitation years to 4,006 acre-ft per year for a drought year.¹⁵

Recharge occurs in the Callayomi basin next to Putah, Dry, and St. Helena Creeks. Some recharge also occurs from infiltration of irrigation water and direct rainfall. Recharge in Long Valley may be impeded by hardpan conditions near the ground surface (DWR 1976). Rainfall and runoff provide an adequate supply of water to replenish the groundwater except during extremely dry years or series of dry years. Groundwater flows from the south and west to the north where it discharges into Putah Creek and the groundwater flow in Long Valley is from the east to the west where it discharges into Putah Creek

Quaternary alluvium in the Callayomi Valley Basin generally is a productive water bearing unit. Groundwater levels in the Callayomi Valley Basin are shallow in the spring and experience fluctuations over the irrigation season. Water levels in the basin range from 3 to 15 feet below the ground surface in the spring, and spring groundwater levels have remained generally constant over the last 40 years.

Spring to summer drawdown of groundwater is generally between 5 and 20 feet throughout the Callayomi Valley Basin. The direction of groundwater flow in the Callayomi Valley is to the north where it discharges to Putah Creek. Groundwater flow in Long Valley is from the southeast to the northwest where it also discharges to Putah Creek. Groundwater in both valleys generally flow the same direction as surface flow (CMA 1987). Groundwater levels in the basin seem to completely recover each wet season, and overall there does not appear to be any increasing or decreasing trend in groundwater levels.

Clear Lake Volcanics

Groundwater in the Clear Lake Volcanics occurs primarily in fractures, joints, and within weathered zones that formed in between volcanic eruptions. The amount of groundwater available to a well in the formation is highly dependent on the size, openness, frequency, and interconnection of fractures and joints encountered in the well.

Overall, the hydrogeologic properties of the Clear Lake Volcanics vary widely between different locations in the area, and are not well defined. In some areas, pump tests have been performed to determine aquifer properties. Pump tests determine an aquifer's characteristics at a particular well location.

¹⁴ Middletown Groundwater Recharge Enhancement Investigation, 1987

¹⁵ Lake County Groundwater Management Plan, 2007 Table 2-4.

Pump tests typically reveal specific capacity and transmissivity.

Because of the uncertain character of fractured rock aquifers, it is difficult to determine the amount of storage and groundwater movement within the basin. The need for groundwater monitoring in this basin is emphasized in the GWMP.

SURFACE WATER

Surface water is an important source of water in Lake County. Agricultural and domestic users who own properties adjacent to waterways have riparian water rights to local streams. Lake County water users generally have water rights on smaller, often ephemeral waterways. The largest water bodies that supply surface water to users in Lake County are Clear Lake, Putah Creek and St. Helena Creek.

Riparian rights are the highest priority water rights and are attached to land that borders natural waterways. Based on legal precedents, riparian water rights can only be used on the property adjacent to the waterway and users are prohibited from transferring their water. Previously, riparian rights secured unlimited water use. A later court case established that riparian rights water users must be held to a standard of “reasonable use” and are prohibited from waste, unreasonable use, or unreasonable methods of diversion.

Appropriative rights are the second type of water rights and can be secured by properties that do not directly border waterways. Miners were the first to initiate this water rights system by posting a notice to divert water and secure the water right. Appropriative water rights were recognized legally in 1855, and are prioritized by a “first in time, first in right” hierarchy. Appropriative water rights must be put to “beneficial use” and can expire if the water is not used for a period of five years. Surface water rights maintain that water use must be “reasonable and beneficial.” Beneficial uses include hydroelectric power, municipal and industrial, domestic, irrigation, stock watering, fire protection, frost protection, recreation, protection and enhancement of fish, wildlife habitat, and aesthetic enjoyment.

During years of water shortage, appropriative rights users must cut back their water use. If conditions are so severe that a shortage remains even after all appropriative rights holders have stopped using water, then riparian right-holders must share the remaining reduction. Conflicts regarding the quantity of water available for parties with water rights can be resolved by adjudicating (a legal process, conducted through the Superior Court). Adjudication does not create new rights, it only confirms existing rights.

Putah Creek

Putah Creek is a major stream in Northern California, a tributary of the Yolo Bypass. The 70-mile (113 km) long creek has its headwaters in the Mayacamas Mountains a part of the Coast Range. The creek originates from springs on the east side of Cobb Mountain south of Cobb in southwestern Lake County. It descends eastward to Whispering Pines, where it turns southeast, paralleling State Route 29. It passes the town of Anderson Springs, where it joins Bear Canyon Creek. North of Middletown, it curves counterclockwise around Harbin Mountain, merging in close succession with Dry Creek, St. Helena Creek, Crazy Creek, Harbin Creek, and Big Canyon Creek. From Harbin Mountain, it flows east again, joining Bucksnot Creek, then enters Napa County at a confluence with Hunting Creek about 11 mi (18 km) east of Middletown. In Napa County, the creek flows southeast, merging with Butts Creek just before it empties into Lake Berryessa.

Monticello Dam, which forms Lake Berryessa, is the only major storage dam on the creek. The dam was built as part of the Solano Project, which began operation in 1959, and led to disputes related to diversions of water from Lake and Napa Counties to Solano County. In 2000, the Putah Creek Accord finally resolved all of these disputes. The settlement provides increased flows to Putah Creek, but reduces flows when Lake Berryessa storage is low and addresses illegal surface water diversion from Putah Creek. A committee, including Yolo and Solano County representatives, monitors creek issues, including habitat enhancement projects and a "streamkeeper" monitors the habitat.

Putah Creek's drainage includes Harbin Creek, Big Canyon Creek, St. Helena Creek, and Soda Creek. The drainage also includes Callayomi Valley, Long Valley, and the Coyote Valley. The general hydrologic characteristics of the Putah Creek drainage consist of direct rainfall runoff with a very small snowmelt and base flow components. The portions of Putah Creek within Lake County do not have any reservoirs to provide surface storage to regulate flows. There is a strong correlation between rainfall and flows on Putah Creek.

St. Helena Creek

St. Helena Creek is the primary water source for properties east of Highway 29 and south of Middletown that are outside the water district service area. It supplies water for private agricultural operations, rural residential parcels and the Mirabel Estates subdivision south of Middletown.

Cobb Mountain

There are numerous springs and creeks flowing from Cobb Mountain that provide water for the Anderson Springs community as well as individual parcels in the northwest section of the Planning Area. Water assessments in this area indicate there are no current or projected shortages of water from these sources.

Lakes & Reservoirs

There are a number of lakes and reservoirs in the Planning Area that are supplied by surface water drainage including Hidden Valley Lake, Detert Reservoir, McCreary Lake and Lower Bohn Lake. At present, only Detert Reservoir is used as a water supply, providing agricultural and domestic water in Guenoc Valley. Hidden Valley Lake is used for recreational purposes only, although any of these lakes and reservoirs may from time to time be used for fire fighting purposes.

WATER QUALITY

Water quality is a critical factor in determining the type and location of future development. Poor water quality can adversely affect public health as well as agricultural and livestock production.

Throughout Lake County, water sources have water quality limitations. Environmental Health conducted a Groundwater Protection Program from January 1997 through 1998. The main objectives of the project were to:

- Develop a county-wide contaminant source inventory using Geographic Information System (GIS) technology.
- Identify and abate potential sources of groundwater contamination by performing inspections of suspected hazardous material facilities not currently on the permit inventory in addition to inspecting septic systems in selected areas throughout the County.
- Increase public awareness of groundwater protection issues through outreach.

This effort resulted in a GIS database that enhances the County’s ability to link groundwater quality problems to probable sources of contamination and allows environmental health staff to focus their efforts. The program assisted Environmental Health in identifying un-permitted hazardous materials facilities.

Water quality contamination is often due to a combination of factors including poor soil conditions, high water tables and contamination from septic systems. Water running through abandoned mines may contain heavy metals, salts, sulfides, and chlorides. Mining activities, particularly from historic mercury mines, have produced the most significant water quality concerns statewide. Once in surface water, mercury enters a complex cycle where biological processes can convert the metallic mercury into methyl-mercury which is very toxic and can accumulate in aquatic organisms. Mercury levels in fish, streams and reservoirs are regularly monitored by the State. Other sources of water quality degradation include spills and mishaps, soil erosion resulting from construction and earthmoving activities, and inadequate disposal and containment of geothermal waste from older well drillings.

Water quality issues are a major concern for the Callayomi Valley and Coyote Valley Groundwater Basins. Iron and manganese have been detected in water supplies in both basins. Sulfide, boron, aluminum and nickel were detected in a water supply well in Callayomi Valley, and chromium was detected in a water supply well in Coyote Valley. Some of the constituents may be related to geothermal water intrusion into the groundwater basins. The Ground Water Management Plan (GWMP) objectives focus on monitoring water quality constituents to sustain long-term groundwater resources.

Groundwater quality monitoring is performed by the Department of Water Resources (DWR). Monitoring in Lake County has been sporadic and there is insufficient data to establish water quality trends for the two groundwater basins. Data from the California Department of Health Services (DHS) regarding Lake County public water suppliers was analyzed for constituents of concern and compared to Secondary Water Quality Levels (SWQLs). The SWQLs are thresholds at which water may begin to have an affected taste or odor. Some constituents were detected at levels exceeding the (SWQLs) and are listed in the description of each groundwater basin.

WATER INDUCED EROSION

Erosion’s cumulative impacts over time can be severe. Soil erosion occurs both incrementally, as a result of many small rainfall events, and more dramatically, as a result of large but relatively rare storms. Generally, there are two situations that lead to water runoff during rain events: (1) During periods of extended rainfall, soils can become saturated and water will no longer soak into the soil, or alternatively, (2) water can also run off soils during high intensity rains when water arrives too quickly for it to infiltrate into the soil.¹⁶ When runoff becomes concentrated, rill (small channels) or gully (larger channels, too big to be removed by tillage) erosion occurs, depending on the topography. Heavy precipitation on steep slopes that have been subjected to heavy grazing or vegetation removal may also trigger severe sheet erosion (the removal of thin, relatively uniform layers of soil). Another form of water-induced erosion that occurs within the Planning Area is a result of natural springs that have the potential of creating landslides.

Erosion has long-term impacts both on and off the site on which it occurs. The main on-site impacts erosion causes are reduced water-holding capacity and reduced soil quality that results from the loss of the nutrient-rich upper layers. Eroded soils become depleted of their finest constituents over time which often reduces their water-holding capacity. Increased use of

¹⁶ Soilerosion.net Website (2006).

fertilizers may, to an extent, and for a time, compensate for erosion-induced loss of soil quality. This is not a feasible long-term solution. Movement of sediment and associated agricultural and household pollutants into watercourses is the major off-site impact resulting from erosion. Rates of erosion do not have to be high for significant quantities of agricultural pollutants to be transported off-site. The finest constituents of eroded soil tend to be transported furthest. Erosion can lead to sedimentation in watercourses and lakes, disruption of ecosystems, and contamination of drinking water. Excess nutrients in Clear Lake can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels. Contaminated drinking water has obvious health risks and increases drinking water treatment costs. In some cases, increased runoff that occurs as a result of a reduced capacity of eroded soil to absorb water can lead to downstream flooding and local property damage.

Direct, or "point source", pollution, including sediments carried in stormwater run-off, that may discharge into waters of the United States, either directly or indirectly via local drainage ways, is regulated through the National Pollutant Discharge Elimination Program (NPDES). The program, which is administered for the Environmental Protection Agency (EPA) by the State Regional Water Quality Control Board and county agencies is designed to reduce discharge from stormwater and may require permits for earthmoving activities.

Erosion and sedimentation during construction can be controlled effectively, and at a reasonable cost, if certain principles are followed in the use and treatment of land. These principles are (1) using soils that are suited for development, (2) leaving the soil bare for the shortest time possible, (3) reducing the velocity and controlling the flow of runoff (4) detaining runoff on the site to trap sediment, (5) releasing runoff safely to downstream areas and (6) phased development to reduce the area of ground disturbance to a minimal level.^{17,18} Erosion control should be provided in the development plans and Best Management Practices, as prescribed by the California Stormwater Quality Association, should always be employed, as required by the Environmental Protection Agency NPDES program, state laws, and the county's Grading and Stormwater Ordinances.

Major sources of erosion in the Middletown Planning Area are agricultural operations, home site development and ATV uses in open space areas. New subdivisions invariably involve removal of vegetation, impermeable surface coverage and road and/or driveway construction, which all can cause erosion problems if not properly managed. This plan designates lands that have a high hazard for erosion, primarily those lands that have an average of 30% cross slope or more, with the Rural Residential or Rural Lands zoning and land use designation in order to minimize environmental, health and safety impacts by encouraging low density development in those areas. Areas of low erosion hazard and that have few environmental constraints are designated Low Density Residential and Suburban Residential Reserve to allow higher density development. Agricultural operations are encouraged to seek advice from the Natural Resource Conservation Service (NRCS) and Eastlake Resource Conservation District (RCD) on Best Management Practices for erosion control. Significant new grading, tilling and removal of vegetation are subject to Grading Ordinance regulations.

WATER RECLAMATION

Efficient use of water is critical to maintain the economy and quality of life in California. Simple measure such as using drought resistant vegetation for landscaping, and low flow plumbing fixtures can greatly increase the efficient use of water. A goal of the State Water Resources Control Board (SWRCB)

¹⁷ Agricultural Information Bulletin of the U.S. Department of Agriculture, Soil Conservation Service, Controlling Erosion on Construction Sites Vol. 347 (Washington, D.C., 1970) 9.

¹⁸ Department of Public Works Memorandum, September 26, 2006.

is to encourage balanced and efficient use of water through water transfers, recycling and conservation. One of the ways we can stretch our available water supplies is to recycle treated wastewater. Water recycling, also known as water reclamation, involves treating wastewater to protect public health for re-use. Water reclamation projects use advanced technologies that provide outside treatment well in excess of that typically provided for tap water. The uses for recycled water can include practically the entire spectrum of water uses, from irrigating crops and landscaping, re-injection into groundwater, geothermal uses to feeding cooling towers in power plants. In order to re-inject treated effluent into groundwater basins, an advanced method of secondary treatment providing filtration and the removal of nitrogen may be required.

The SWRCB actively promotes water recycling through both regulatory and financial assistance programs. In 2004, the California Water Resources Control Board (CWRCB) approved the Water Recycling Funding Program Guidelines, which include the requirements and criteria for the administration of approximately \$42 million in construction grant funding provided by the Water Security, Clean Drinking Water, Coastal and Beach Protection Act (Proposition 50). They maintain the Water Recycling Construction Program and the Water Recycling Facilities Planning Grant Program that provide funds to local public agencies to plan, design and construct water recycling facilities. Through the Division of Financial Assistance, the CWRCB provides financial assistance for water recycling projects in the form of low-interest loans and/or grants for project construction and grants for project planning.

Recycled water has been in use in California since the late 1800s.¹⁹ Public health restrictions have been in effect since the early 1900s. The CWRCB maintains information on wastewater reclamation and the reuse of reclaimed water by various agencies throughout California. According to the CWRCB, the following nearby areas utilize recycled water: the Cities of Willits, Santa Rosa and St. Helena use it for agricultural irrigation, the Meadow Wood Resort Hotel in Napa County uses it for landscaping and the City of Arcata utilizes recycled water for wildlife habitat. Lake County has also taken steps to reuse treated wastewater. The first phase was the Southeast Geysers Effluent Pipeline project, which transports recycled water from Clearlake, Lower Lake and Middletown to the Geysers for injection into the geothermal reservoir. The second phase of the project is referred to as Clear Lake Basin 2000 and it connected the Clearlake Oaks Wastewater Treatment Plant and all the north shore communities served by the Northwest Regional Wastewater Treatment Plant into the Phase 1 pipeline. The Full Circle project is the third phase which will connect the Kelseyville Wastewater Treatment Plant and the City of Lakeport Wastewater Treatment Plant into the system. A portion of recycled wastewater from the Kelseyville Wastewater Treatment Facility has been used to irrigate wine grapes on the southwest slopes of Mount Konocti for the last six years. Additionally, the Hidden Valley Lake Community Service District recycles all of its treated wastewater for irrigation of the Hidden Valley Lake golf course, significantly reducing groundwater demand in Coyote Valley. The County should continue to be open to and encourage alternative methods of water conservation.

Objective

3.2.1 Maintain and ensure there are adequate water resources for sustainable long-term beneficial uses within the Middletown Planning Area.

¹⁹ California Environmental Protection Agency, State Water Resources Control Board, Water Recycling Programs Website (2006).

Policies

3.2.1a New development should be designed to conserve water through the use of drought resistant vegetation, low flow plumbing fixtures.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Develop educational brochures, flyers & pamphlets. Require low flow plumbing fixtures. Amend the Zoning Ordinance to include provisions for plants adapted to the native environment for landscaping and encourage permeable surfaces for driveways. Design guidelines should require native, fire resistant or drought resistant landscaping. Alternative water conservation methods, such as recycling, should be encouraged.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

3.2.1b Encourage groundwater monitoring within the Middletown Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
New entitlement projects using onsite groundwater should be required to participate in groundwater monitoring programs as a means to improving available groundwater data.	Community Development Department Water Resources Division	Funding Source	None
		Priority	Low
		Timeframe	Continuous

3.2.1c Projects shall implement appropriate erosion control measures that reduce soil stability problems and landslide hazards, especially as it affects waterways utilizing the following principles:

- Selecting land where drainage patterns, topography and soils are favorable for the intended use.
- Development shall be fitted to the site and provide erosion control in the site development plan.
- Those areas that are not well-suited for development shall be designated for open space, recreation, wildlife corridors or other low impact use.
- Larger projects should be developed in small, workable units on which construction can be completed in a timeframe so that large areas are not left bare and exposed for long periods.
- Grading and vegetation removal shall be kept to a minimum, wherever possible.
- Runoff shall be controlled so that it will not erode the land or cause off-site damage or pollution.
- Critical areas shall be protected during construction with mulch or temporary cover crops and with mechanical measures, such as diversions, prepared outlets and other Best Management Practices (BMPs).
- Sediment basins may be utilized during and after construction to detain runoff and trap sediment.
- Provide for safe, off-site disposal of runoff, including the increased runoff resulting from construction.
- Establishing permanent vegetation and installing erosion control structures as soon as possible.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
<p>Require the utilization of Best Management Practices and engineered plans that mitigate all possible erosion impacts for projects proposed in areas of high erosion potential.</p> <p>Support soil conservation efforts including use of Best Management Practices (BMP's) as established by the Natural Resources Conservation Service and other appropriate agencies and discourage development that may increase erosion and sedimentation.</p> <p>Require all development to adhere to the provisions of the Lake County Grading Ordinance and Lake County Storm Water Ordinance.</p>	Community Development Department & Department of Public Works	Funding Source	None
		Priority	High
		Timeframe	Continuous

3.3 BIOLOGICAL RESOURCES

Large and relatively undisturbed tracts of natural vegetation support a wide variety of wildlife throughout much of the County. The loss of suitable habitat is of major concern for the preservation of native plants and wildlife that depend on these habitats for survival. These areas of natural habitat are valuable for wildlife habitat, scenic enjoyment and recreation. The General Plan contains goals and policies to preserve and protect environmentally sensitive and significant habitats, to enhance biodiversity and promote healthy ecosystems throughout the County and to establish and maintain interconnected open spaces for the protection of native vegetation and wildlife.

There are areas of sensitive habitats within the Planning Area, such as wetlands and critical resource areas which maybe damaged and even destroyed by human intrusion or development. (See Figures 3-2, 3-3 and 3-4). Generally most habitats within the Planning Area are compatible with conservation management practices that include other uses such as managed livestock grazing, limited development, controlled brush and tree removal, hunting and fishing. Planned regulated development and controlled livestock grazing are typically compatible uses with natural resource conservation as long as appropriate buffers and conservation measures are employed.

Subdivisions in undeveloped, rural areas have impacts on wildlife, which include but aren't limited to the elimination of habitat, disturbance of territories and migration corridors by man-made structures, disturbance and harassment of wildlife by humans and domestic animals, reduction (and sometimes elimination) of available water when re-appropriated for residential use, and the elimination of oak woodlands, through the loss of oak trees during land clearing activities and for the production of firewood. The protection of endangered, rare and sensitive plant and animal species, including sensitive habitats is an important factor in reviewing new development proposals. The loss of native plants and wildlife habitat, regardless of their regulatory status, should be considered when reviewing new development proposals. Developers should be encouraged to present opportunities for wildlife habitat improvement and connectivity.

Buffers are necessary to separate any type of urban development from habitat areas, particularly sensitive area such as stream corridors, wetlands, sensitive species habitats, and old growth

forests. Land altering aspects of development itself, and/or the secondary effects of development (for instance, runoff from pavement carrying pollutants, air pollution emissions, traffic, noise, glare and increased pedestrian access) can degrade habitat areas. Important and sensitive habitat types in the Planning Area include coastal and valley freshwater marsh, Great Valley mixed riparian forest, oak woodlands and Clear Lake drainage "resident trout streams". The "WW", zoning combining district requires a minimum setback of thirty (30) feet from top of a perennial stream bank, and twenty (20) feet from top of the bank of an intermittent stream. Additionally, the Lake County Grading Ordinance further restricts development adjacent to watercourses predicated on the soil Erosion Hazard Rating and the watercourse classification. The watercourse classifications are defined as follows: Class I lakes that provide habitat for fish, Class II lakes, vernal pools and wetlands that do not provide fish habitat but do provide habitat for aquatic non-vertebrates or macro-invertebrates, Class III lakes, vernal pools and wetlands that do not provide habitat for aquatic life. Depending on the Erosion Hazard Rating and the watercourse classification the setback distance may vary from 100 feet for soil with an Erosion Hazard Rating of severe adjacent to a Class I waterway, to 20 feet on soils with a slight soil Erosion Hazard Rating next to Class III waterway. The purpose of the "W", Wetlands zoning combining districts is to preserve and protect environmentally sensitive wetlands valuable for their plant and animal habitat and water cleaning capabilities. The Waterway, and Wetland combining district, along with the Grading Ordinance are utilized by this area plan to facilitate the protection of these resources. The Resource Conservation land designation is also applied to sensitive areas, the purpose of which is to assure the maintenance of natural resources.

Conservation easements are a tool that may be utilized to preserve and protect natural areas in the Planning Area and throughout California. California defines a conservation easement as, "an interest in real property voluntarily created, for the purpose of retaining land predominantly in its natural scenic, historical, agricultural, forested, or open-space condition in perpetuity" (California Civil Code 815.1 & 815.2). The specific characteristics of a conservation easement are specified in the deed, will or other instrument creating or transferring the easement. Conservation easements are binding upon successive owners of land. California Code only allows the following entities to acquire and hold conservation easements (California Civil Code 815.3):

- Qualified tax-exempt nonprofit organizations whose primary purpose is the preservation, protection, or enhancement of land in its natural, scenic, historical, agricultural, forested or open-space condition or use.
- The California Civil Code 815.3(b) precludes local governmental entities from conditioning the issuance of an entitlement for use on the applicant's granting of a conservation easement. The creation of a conservation easement may be a mitigation measure that can be considered for the purpose of CEQA but the conservation easement must be voluntarily entered into by the property owner and cannot be required by the County.

The County is also working with the California Department of Fish and Game on other conservation tools that might be available in the future, for example mitigation banking. When developed, the mitigation bank will allow for developers to purchase mitigation credit for their project while preserving selected critical plant and wildlife habit.

NATURAL COMMUNITIES & HABITATS

Natural communities of native plants and animals are adapted to specific habitat types or niches, such as woodlands, wetlands, chaparral and grasslands. Within the Planning Area, the most predominant natural biotic communities include grasslands, chaparral, mixed chaparral woodlands, oak woodlands, wetlands (including waterways, lakes, marshes and vernal pools), mixed deciduous and evergreen forests and riparian woodlands. Within these broader groups there are several variations based on fac-

tors such as slope, elevation, water availability, sun exposure, etc. There may be differences between similar communities if they are, for instance, located in valleys or on hillsides (cismontane) on north slopes or along a lakeshore (lacustrine). In general, woodlands, wetlands and riparian corridors are highly valued for wildlife habitat and the abundance biodiversity that exists within the habitat. Rare and endangered species may be found in wetlands and riparian areas, and they are almost always present in vernal pools, critical resource areas and serpentine soils. Overgrazing and development are major concerns in wetland, riparian and grassland areas because they may lead to erosion of watercourses as well as the destruction of wildlife habitat. Protection of oak woodlands is of statewide concern due to the significant loss of this habitat over the years to development.

Callayomi, Coyote and Long valleys are primarily grassland communities. Grasslands tend to occur in lowland and upland areas which do not support dense shrub or tree species. Locally overgrazing has led to erosion, destruction of grasslands, loss of wildlife habitat, localized flooding and stream sedimentation.

Chaparral communities including chamise are primarily found throughout the Planning Area's eastern and northeastern portions. Chamise is generally found in the upland areas above the valley floors and is regarded by the California Division of Forestry as a high fire hazard. Mixed chaparral, in association with oak woodlands, are found in western, central and eastern portions of the Planning Area and is its predominant plant community.

Oak woodland, which is characterized by a combination of oak canopy and grasslands, occurs primarily in the central and western portions of the Planning Area at lower elevations. Mixed deciduous and evergreen forests consisting primarily of black oak, madrone, yellow pine and Douglas fir are found in the localized areas throughout the Planning Area at lower elevations. Evergreen forests consisting primarily of yellow pine and Douglas fir are located primarily on the northern facing slopes in the western portions of the Planning Area. The Sargent cypress, a species of special concern, grows on serpentine soils and exists locally in the upper elevations of Dry Creek Canyon.

Other major biotic communities in the Planning Area include areas of wetlands and riparian woodlands which are associated with waterways and pond region. Areas of riparian vegetation, located along the sides of streams and lakes are highly valued for wildlife habitat. Overgrazing is a major concern in the wetlands and riparian woodland area as in the grassland area. The overgrazing of these areas may lead to erosion of watercourses and destruction of wildlife habitat.

Recommended sensitive natural community management policies include:

- outright public purchase
- tax incentives
- conservation easements
- performance zoning
- real estate transfer tax
- transferable development rights (TDRs)
- voluntary registry programs
- public agency programs
- tree ordinances
- grading ordinances

The following policies should be avoided:

- transfer from agricultural-based zoning to low-density urban centers
- un-regulated growth
- lack of monitoring
- planning for biological diversity instead of biological integrity

OAK WOODLANDS

Oak woodlands occur primarily in the central and western portions of the Planning Area at lower elevation in the valleys and foothills. California has 632 native terrestrial vertebrates (amphibians, reptiles, birds and mammals). Of these, over 300 species use oak woodlands for food, harborage and reproduction, including 120 species of mammals, 147 species of birds and approximately 60 species of amphibians and reptiles. Every effort should be made to preserve Valley Oaks and oak woodlands (defined as oaks clustered together with 10% or more canopy cover per parcel). However, a balance must be found so that the presence of oak trees does not prevent the development process from proceeding. When reviewing development proposals in areas with oak woodland habitat, the County should encourage clustering development away from sensitive areas.

Oak woodland cannot thrive without periodic thinning or controlled burning to promote new growth and prevent the woodland from decaying. Healthy woodland should have trees of varying ages. Seedling germination and sapling survival rates increase after thinning due to better sun exposure and less competition. Oaks are also distinctive among conifers in that they have evolved mechanisms to survive periodic burning. More acorns will germinate after exposure to fire and mature oaks may suffer little long-term damage from burning of their foliage during low-intensity and moderate fires.²⁰

If fire occurs early in the growing season, oaks may actually grow new leaves before autumn and by the end of the year it may be difficult to tell which trees were scorched in the fire. If fires occur in the summer, oaks usually will not produce a complete crop of new leaves until the following spring. Following such fires, the trees may appear dead, but many of these trees will survive, an important fact for landowners to understand so they don't remove trees, believing they will not recover.

Recommended oak woodland management practices include²⁰:

- Allow compatible uses such as sustainable grazing, firewood cutting, hunting and native landscaping adapted to this setting.
- Selective thinning should consider the woodlands long-term regeneration capabilities. Never remove more wood than can be added by growth.
- Maintain a mixed species and unevenly aged woodland for a diversity of shrubs and trees in varying age classes.
- Allow moderate grazing to reduce competition and retain natural diversity of understory. Manage grazing to leave understory vegetation. Reduce grazing disturbance during the fawning season and exclude cattle from known fawning areas during spring to late summer.
- Landscaping plants should be compatible with oak woodland habitat water and sun/shade conditions and should not be invasive non-native species.
- Maintain corridors that will enable wildlife to move between blocks of habitat. Maintain dense north slope areas, shrub patches and at least one snag per acre for cover.
- Maintain good acorn producing trees. Allow small clearings to enhance forage production.

²⁰ From the Management Guides for Owners, Living Among the Oaks (University of California Cooperative Extension, Berkeley, Natural Resources Program) and Wildlife Among the Oaks (University of California Berkeley, Integrated Hardwood Range Management Program) brochure publications.

- Maintain large trees in riparian areas for nesting and roost sites
- Development or disturbance within the driplines may damage trees. Avoid trenching and heavy equipment in the root zone. Protect trees in the vicinity with temporary construction fencing outside the dripline.
- Avoid changing conditions or ponding due to cuts & fills. Install permanent dams or barriers if necessary and maintain natural stream flows.
- No more than 40% of the existing trees may be removed for any purposes. All trees removed shall be replaced at a 3:1 ratio within the woodland area. Retained saplings and seedlings may be counted as replantings. Encourage natural regeneration and protect seedlings and saplings from wildlife and livestock.
- Controlled burning may be advisable (with appropriate permits) in decadent areas of oak woodland and chaparral to promote increased germination.

The Oak Woodland Conservation Act (Fish and Game Code Section 1360-1372) created a fund in the State Treasury that is designated for the preservation and restoration of oak woodlands. Money from the fund may be used for the following:

- Grants for purchase of oak woodlands conservation easements by qualified entities.
- Grants for land improvement.
- Cost-sharing incentive payments to private landowners who enter into long-term conservation agreements.
- Public education and outreach to identify and communicate the social, economic, agricultural and biological benefits to strategies to conserve oak woodlands and promote the economic sustainability of farming and ranching operations.
- Assistance to local governments, park and open-space districts, resource conservation district and nonprofit organizations for the development and implementation of oak conservation elements in the general plan.
- Technical assistance consistent with the purpose of preserving oak woodlands.

The California State Legislature passed senate Bill 1334 in 2004 which outlined oak woodlands mitigation options for counties to achieve feasible and proportional habitat mitigation under the California Environmental Quality Act (CEQA). Bill 1334 mandates that any non-agricultural development affecting oaks determine the significance as defined under CEQA thereby requiring mitigation alternatives. The California Environmental Quality Act (CEQA) requires counties to determine whether projects may result in conversion of oak woodlands that will have a significant effect on the environment (Section 21083.4). If a county determines that there may be a significant effect to oak woodlands, the county can require one or more of the following mitigating alternatives:

- Conserve oak woodlands, through the use of conservation easements.
- Plant an appropriate number of trees or restore former oak woodlands, and maintain them for seven years.
- Contribute funds to the Oak Woodlands Conservation Fund.
- Other mitigation measures developed by the County.

Project that are exempt from this CEQA requirement include certain affordable housing projects for lower income households and agricultural land that is used to produce or process plant and animal products for commercial purposes.

RIPARIAN CORRIDORS

Riparian vegetation is vegetation on land that directly influences, is influenced by or adjoins a body of water. Riparian vegetation limits erosion, protects water quality and provides valuable wildlife habitat. Riparian vegetation buffers water temperature, provides shade and constantly deposits fine organic materials and woody debris in the waterway, which provide food and important habitat for invertebrates and fish. They also provide food, shelter and wildlife corridors for terrestrial animals. Game species such as deer, rabbit and quail, and non-game species, including migratory birds, make use of riparian areas for their food and safety. Studies show greater numbers of fish and more species live in areas with ample riparian vegetation.²¹

Due to the rich growing environment provided by wetlands, these areas possess a diversity of plant and animal life. Vegetation that grows along streams, river or reservoirs act as a protective buffer between the land and the water. Riparian zones act as a filter for sediments, debris, nitrogen, phosphorus, pesticides and other pollutants, which improves the quality of water entering watercourses. Vegetation protects watercourses from excessive sedimentation, and the roots of riparian vegetation stabilize creek beds and banks, bind soil and protect against erosion and slumping. They slow floodwaters, thereby helping to maintain stable stream banks and protect downstream property. Slowing floodwaters allow the riparian zone to function as a site of sediment deposition, trapping sediments that build stream banks that would otherwise degrade watercourses. By slowing down floodwaters and rainwater runoff, the riparian vegetation allows water to soak in to the ground and recharge groundwater.

The Planning Area's larger streams, such as St. Helena Creek and Putah Creek, possess valuable riparian corridors rich in stream life. Riparian resources constitute one of the most important wildlife habitats in the Middletown Planning Area, and as such, warrant adequate protection.

Riparian areas should be managed to maintain the health of existing native vegetation. Areas where vegetation has been removed should be rehabilitated by replanting or allowing natural regeneration. Riparian vegetation can be degraded as a direct consequence of clearing for agricultural purposes, such as crop planting or unlimited livestock access during grazing, or gravel extraction. On grazing lands, controlling livestock access to certain areas or providing alternative watering points. The amount of riparian vegetation that should be maintained depends on the particular location. Each location should be individually assessed. Management strategies that will enhance the benefits to riparian vegetation, and are supported by landholders, should be developed.

Degraded riparian buffers reduce water quality, reduce wildlife and fish populations and can cause serious property damage through bank erosion. Removal of riparian vegetation results in increased water temperatures and decreased dissolved oxygen. The loss of shade exposes soils to drying out by wind and sunlight and reduces the water storage capacity of the riparian area. Eroding stream banks contribute to sedimentation and lead to a wide shallow stream with little habitat value. On a larger scale, changes in flow regimes can affect riparian vegetation either directly or by drowning, or indirectly through erosion and bank slumping. These factors result in a significant reduction in stream life.

Recommended riparian management practices include:

- Protect or establish native shrubs, trees and vegetation along streams to help prevent bank erosion, trap sediment and filter out pollutants.
- Manage livestock grazing in riparian areas to avoid damage to existing plants and allow re-vegetation in areas that are degraded.
- Plan developments, gravel extraction activities and other land disturbing activities to include buffer zones that protect riparian habitat.

²¹ New South Wales (Australia) Department of Primary Industries website, January 2006

The following practices should be avoided:

- Altering flow of watercourses.
- Removing riparian vegetation.
- Farming or development up to the edge of a watercourse.
- Allowing unmanaged livestock access to riparian areas.
- Operating heavy equipment in the riparian zone.

Much of the sediments being deposited in creeks and streams were once naturally filtered out by vegetation, marshes and creek-bank structures. Changing the course of streams and altering vegetation along their banks has resulted in long-term environmental impacts. Altering riparian vegetation and in-stream gravel extraction also changes the groundwater recharge properties of the stream. Keeping streams in their natural state is extremely important both for the maintenance of adequate groundwater and to the well-being of the county’s interdependent ecosystems.

The California Department of Fish and Game regulates any activities within the bed and banks of streams and will become involved when a stream bed is to be altered or impacted. State regulations to protect riparian vegetation are otherwise limited in scope. The United States Army Corp of Engineers has jurisdiction over waters of the United States and regulates wetlands associated with waterways and biotic environments. The California Department of Forestry’s Timber Harvest Plan process controls impacts from cutting of hardwoods and the NPDES (see Water Induced Erosion) program regulates discharge of pollutants in stormwater that may affect jurisdictional waters of the U.S.

The Lake County Zoning Ordinance offers streams protection from encroachment of structures, through the implementation of the “WW”, Waterway combining district. As previously discussed, the “WW” district requires a minimum setback of 30 feet from top of bank of a perennial stream bank, and 20 feet from top of bank of an intermittent stream. Finally, the Lake County Grading Ordinance has mandatory setbacks from different classes of waterways predicated on the erosion hazard classification of the soil. The County has the responsibility to preserve natural resources, including native trees, plant communities and wildlife habitats. That responsibility extends especially to threatened, endangered, or special status species. Guidelines for the preservation of these resources should be integrated into new development projects whenever possible.

WETLANDS

Wetlands and riparian lands are natural resources that provide fish and wildlife habitat and scenic beauty. Wetlands are low-lying, waterlogged or shallow water lands (e.g., bogs, marshes, swamps and “wet meadows”) which usually have a permanently high water table just above or just below the ground. They are an important part of the hydrological cycle and perform a water quality function by collecting silt, organic materials, and pollutants from stormwater runoff. They may reduce flood peaks by serving as storage areas for floodwaters and may also serve as recharge areas for groundwater. These areas are frequently important wildlife habitats and spawning grounds and may possess aesthetic values as well. Wetland areas occur locally in the Middletown Planning Area near surface water bodies such as Detert Reservoir and along stream banks.

The U.S. Army Corps of Engineers and the Environmental Protection Agency jointly define wet-

lands as: "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."²² Wetlands can be identified by their distinct vegetation, soils and hydrology. Wetland vegetation may consist of more than one plant community, but the prevalent vegetation consists of hydrophytic (adapted to grow in water) species that have the ability to grow in anaerobic (the absence of atmospheric oxygen) soil conditions. Wetland soils are classified as hydric (characterized by considerable moisture), and they often possess characteristics that are associated with a reducing soil conditions. Wetlands are inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet, or the soil is saturated to the surface, at some time during the growing season of the prevalent vegetation.

Vernal pools are a type of wetland that result from a combination of soil conditions, a dry, summer Mediterranean climate, topography and hydrology and support a specialized biota, typically including threatened and endangered species.²³ They form in depressions underlain by a subsurface that limits drainage, resulting in seasonal flooding. Vernal pools may occur singly or in complexes of numerous pools in close proximity. The California Department of Fish and Game categorizes vernal pools using the Holland Vernal Pool Classification. Using this classification scheme, vernal pools in the Planning Area are primarily categorized as Northern Basalt Flow Vernal Pools.²⁴ According to Holland, these pools provide for a "very low, open mixture of amphibious annual herbs and grasses. Growth begins following fall rains and continues even while plants are submerged until standing water is evaporated in spring. Plant growth is abruptly terminated by warm spring weather. Pools typically are small, covering under about 50 square meters. These vernal pools occur in small depressions on tops of massive basalt flows. These pools fill and empty many times during the winter, and have extremely thin soils over the solid bedrock that prevents downward rainwater percolation."²⁵

The vicinity of Butts Canyon Road is rich with wetland areas. The underlying soil is generally a very deep, poorly drained soil, which forms from alluvium derived mostly from serpentine rock. The surface layer is typically dark gray clay loam 6 inches thick over gray clay 32 inches thick; the underlying 84 inches is calcareous gray clay. Clay may occur as the upper surface layer in some areas. Permeability is very slow. The soil erosion is slight. Because of the high clay content, shrink-swell potential is high. Several sensitive plant species associated with wetlands habitats are mapped in this area, according to the California Natural Diversity Database.²⁶ These include bent-flowered fiddleneck (*Amsinkia lunaris*), Jepson's milk-vetch (*Astragalus ratanii* var. *jepsonianus*), adobe-lily (*Fritillaria pluriflora*) and many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*).

Additionally, there is a geothermal waste Wetland Reclamation Area located 4 miles southeast of Middletown. The site includes portions of the former Geothermal Inc property and the adjacent former Freeman Ranch property. This facility operated for approximately 11 years, until 1987 when operations ceased. As a result of the subsequent closure of the landfill the facility is required to manage surface and groundwater on the project site as well as a wetland mitigation area.

SENSITIVE AND CRITICAL RESOURCE AREAS

The General Plan describes sensitive resources as unique natural areas. These areas are environmentally

²² United States, Environmental Laboratory, Corps of Engineers Wetlands Delineation Manual (on-line edition: 1987), 9-23.

²³ Holland, R.F. and S.K. Jain. 1988. Vernal pools. In Barbour, M.J. and J. Major, Terrestrial Vegetation of California. California Native Plant Society Publication No. 9, p. 515-531.

²⁴ California Department of Fish and Game Website, Holland Vernal Pool Classifications (2006).

²⁵ California Department of Fish and Game Website, Holland Vernal Pool Classifications (2006).

sensitive and include mountain regions, valleys, forest lands, stream corridors and lakes. Habitat that supports state or federally listed threaten or endangered species, or species that are under consideration for listing, is also considered a sensitive natural resource. Wetland, riparian, vernal pool and oak woodland habitats also fall within this category. The California Natural Area Coordinating Council completed an inventory of the biological, geological and paleontological features of the County and selected seven areas of special environmental significance located in the Middletown Planning Area, as shown in Figure 3-2. Two additional sites have been considered with one being added since the survey was completed. These areas are described as follows.

1. Big Rock Orchids

This is a riparian area located on private property located approximately three miles southwest of the community of Middletown on Dry Creek. This area is noteworthy for its abundance of *Spiranthes porrifolia* (Ladies’ Tresses). The surrounding lands are agricultural but the area itself is relatively undisturbed.

2. Butts Canyon Vicinity

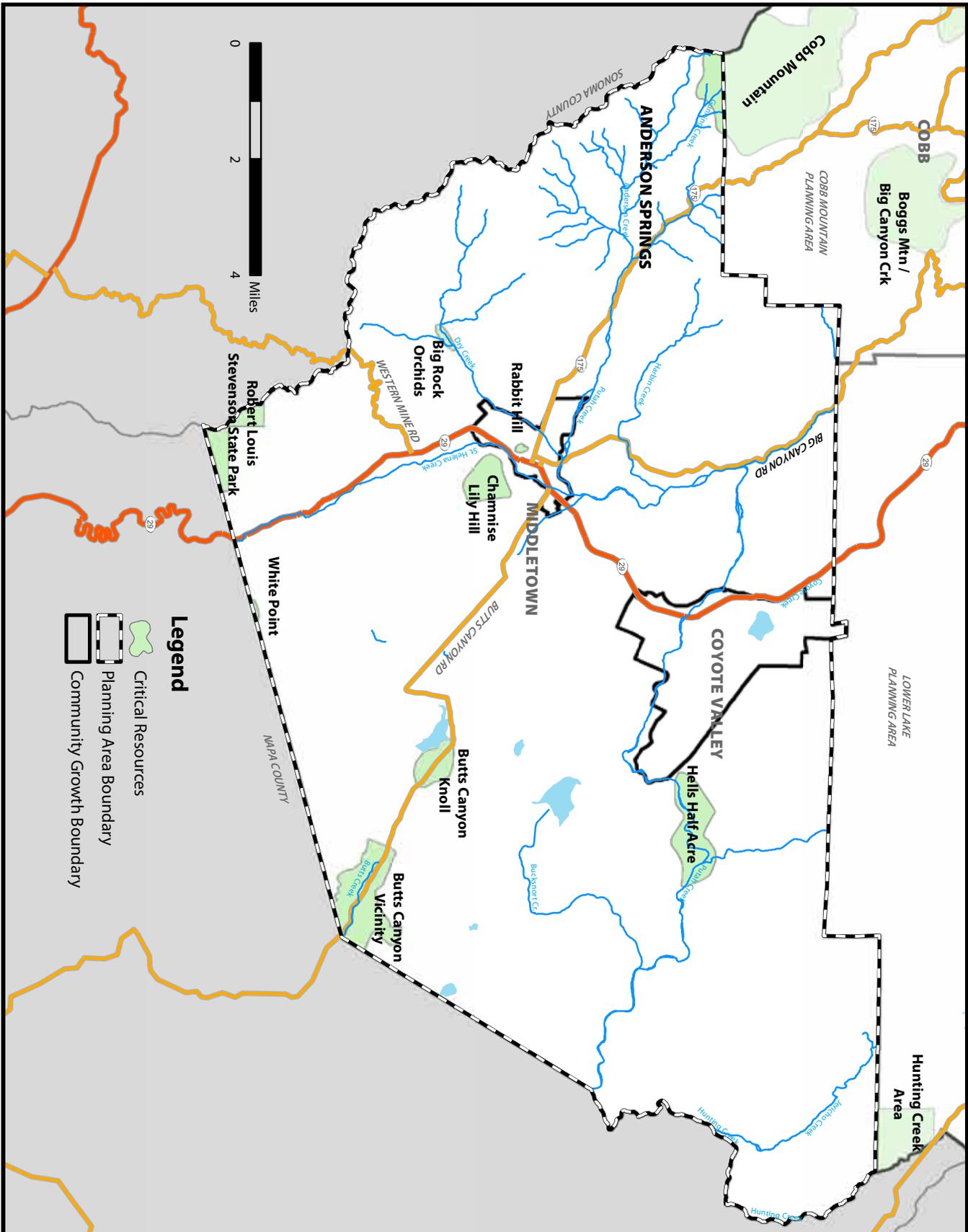
This area is oak-pine woodland located on private and public property at the eastern edge of the Planning Area. The terrain is moderately to steeply sloping. The canyon is approximately 2 miles long and 4 miles north of the point where Butts Creek enters Lake Berryessa. The public portion is used for research, education and observation of this vegetation type. Most of the area is undisturbed except for Butts Canyon Road and some buildings along the creek bottom. This area is an assemblage of serpentine flora with several endemics including the *Chorizanthe clevelandii*, *Delphinium ulginosum*, and *Astragalus clevelandii* (*Benthe*, *Larkspur* and *Locoweed*). The dry riparian community consists largely of willow, *Salix sp.*, and cottonwood, *Populus fremontii*, while the oak-pine woodland has dominant species including oak, *Quercus spp* and digger pine, *Pinus sabiniana*. Rare species in the area include *Fritillaria phaeantha*, *Erythronium helena*, and *Hesperolinon bicarpellatum* (Fritillary and Fawn lily).

3. Butts Canyon Knoll

This area is located at the [southern] mouth of Butts Canyon on a small serpentine knoll covered with grasslands and blue oaks near the Detert Reservoir on private property. The area supports a wealth of animal life and is relatively undisturbed. The dominant vegetation includes grasslands and blue oaks, (*Quercus douglasii*). The rare *Fritillaria purdyi* occurs here.

4. Chamise Lily Hill and Dead Horse Flat

This area is located in the Deadhorse Flat-Chamise Lily Hill area across St. Helena Creek east of the community of Middletown. It is private and has been disturbed by roads through the area and by past grazing activities. The area supports the California thrasher (*Toxostoma redivivium*), which is very abundant. The dominant vegetation is a mixed chaparral community with chamise, *Adenostoma fasciculatum*, *Arctostaphylos manzanita* and *A. sp.*, *Ceanothus sp.*, toyon, (*Heteromeles arbutifolia*), coffeeberry, (*Rhamus californica*) and leather oak, (*Quercus durata*). Associated with serpentine soils are the rare plants *Fritillaria purdi* and *Erythronium helena*. During some years there is an outstanding display of the Chamis lily, (*Erythronim californicum*). Various grasses include (*Brodiaea lugens*) and *Delphinium uliginosum*. An intermittent stream flows through the meadow at the base of the slopes and there are small seasonal wetlands during the winter and spring.



Legend

- Critical Resources
- Planning Area Boundary
- Community Growth Boundary

CRITICAL RESOURCES

FIGURE 3-2



5. Hells Half Acre, Geologic Feature, Chaparral

This geologic feature is approximately two miles east of Coyote Valley, where Putah Creek has cut a 650 foot gorge through the surrounding Pleistocene pyroclastic volcanic rocks. The area, which is privately owned, supports diverse fauna such as the Golden Eagle, (*Aquila chrysaetos*). The area is virtually undisturbed, although a military reservation borders the area to the south. Vegetation communities in the area include chaparral, grasslands, and valley oak, (*Quercus lobata*). Noteworthy plants include stream orchid, (*Epipactus gigantean*), *Calochortus luteus*, leopard lily, *Lilium pardalinum* and the *Fritillaria lanceolata*.

6. Robert Louis Stevenson State Park

A small portion of this park is located within the extreme southwestern part of the Planning Area and consists of chaparral, mixed evergreen, oak woodland, Douglas fir and redwood. Portions of the area are developed for park facilities which are used for research, education and observation. Fires have burned an extensive section of this portion of Mt. St. Helena. The Silverado Mine, producer of gold and silver, is located in the park. The area contains eight species of manzanita, *Arctostaphylos* seven of *Ceanothus*, six of oaks *Quercus*, redwoods, (*Sequoia sempervirens*), California nutmeg, (*Torreya californica*) and pine trees including *Pinus attenuata*, *P. ponderosa*, *P. sabiniana*, and *P. lambertiana*. Four species of rare plants occur within the park including *Eriogonum caninum*, *Erythronium helena*, *Fritillaria purdyi*, and *Lupinus sericatus*.

7. White Point

This area is located on virtually undisturbed private property approximately one mile east of State Highway 29 at the Napa County line. This area includes one rare plant species, the (*Streptanthus morrisonii* spp. *Elatus*).

8. Rabbit Hill

Rabbit Hill is a large hill made up of serpentine deposits, which create a unique environment that supports several rare and endangered plant species. Rabbit Hill, located in the southwest residential section of downtown Middletown, is managed by the Lake County Land Trust.

In addition to the above, many localized natural areas exist throughout the Middletown Planning Area. These are associated with stream corridors, standing bodies of water, and woodlands. Many of these areas contain threaten and endangered species which have not yet been surveyed or identified through biological reconnaissance studies.

WILDLIFE

Wildlife species generally common to California's interior north coastal foothill region are found throughout the Middletown Planning Area. Large mammals, including blacktail deer, mountain lion, coyote, bobcat and grey fox are present. Small mammals common in the area include western grey squirrel, California ground squirrel, black-tailed jackrabbit, bush rabbit and other rodents such as mice. The Planning Area also contains suitable habitat for numerous birds and raptors, including Cooper's hawk, red-tailed hawk, peregrine falcon and American crow. Many waterfowl frequent Clear Lake State Park. Riparian and wetland vegetation communities support the greatest number and diversity of mammals, reptiles, birds and amphibians, including numerous species of nesting birds. During the summer dry season, these communities become extremely important sources of food and water for wildlife. Some of the Planning Area's most clearly defined wildlife corridors are associated with intermittent water courses which lead to riparian and wetland areas. The establishment and maintenance of interconnected open spaces is very important for the protection of native vegetation and wildlife. Connectivity in the natural landscape should be examined by qualified professionals during the review process and ensured when approving development proposals to maintain the wildlife population.

Fisheries in the area include trout in the upper reaches of the Putah Creek Basin, black bass in lower Putah Creek, Hidden Valley Lake, Detert Reservoir, and several agricultural ponds and lakes in the Planning Area.

Upland game birds found in the Middletown Planning Area include the California quail, mountain quail, pheasant, turkey, mourning dove, and ban-tailed pigeon. There is a non-profit wildlife rescue and rehabilitation center in Loch Lomond that provides rescue for large dangerous birds or mammals and medical care for sick, injured or orphaned wildlife.

RARE, THREATENED AND ENDANGERED PLANTS

The California Native Plant Society (CNPS) is a non-profit group dedicated to preserving the state's native flora. They have developed a list of plants of special concern in California. They list approximately 100 special-status plant species that occur within Lake County. The determination as to whether a site may or may not contain a rare, threatened or endangered plant species should be made by a qualified biologist during a field survey. Climatic range has not been considered in the compilation of this list, therefore, some of these species may not be able to survive in the Planning Area. Site-specific surveys should be conducted by qualified professionals to determine the presence or likelihood of occurrence of each potential species.

Figure 3-3: Rare, Threatened & Endangered Plants Potentially Occurring within the Planning Area

SCIENTIFIC NAME	COMMON NAME	STATUS	CNPS LISTING
<i>Arctostaphylos manzanita ssp. elegans</i>	Konocti manzanita	None	1B.3
<i>Arctostaphylos canescens var sonomensis</i>	Sonoma manzanita	None	1B.2
<i>Astragalus rattanii var jepsonianus</i>	Jepson's milk-vetch	None	1B.2
<i>Brodiaea californica var leptandra</i>	Narrow-anthered California brodiaea	None	1B.2
<i>Brodiaea coronaria ssp. rosea</i>	Indian Valley brodiaea	CE	1B.1
<i>Ceanothus confusus</i>	Rincon Ridge ceanothus	None	1B.1
<i>Ceanothus divergens</i>	Calistoga ceanothus	None	1B.2
<i>Chlorogalum pomeridianum var. minus</i>	Dwarf soaproot	None	1B.2
<i>Cryptantha clevelandii var. dissita</i>	Serpentine cryptantha	None	1B.1
<i>Erigeron angustatus</i>	Narrow-leaved daisy	None	1B.2
<i>Eriogonum nervulosum</i>	Snow Mountain buckwheat	None	1B.2
<i>Erodium macrophyllum</i>	Round-leaved filaree	None	1B.1
<i>Fritillaria pluriflora</i>	Adobr-lily	None	1B.2
<i>Hamonia hallii</i>	Hall's harmonia	None	1B.2
<i>Hesperolinon bicarpellatum</i>	Two-carpeled dwarf-flax (western flax)	SC	1B..2
<i>Hesperolinon didymocarpum</i>	Lake County dwarf-flax (western flax)	CE	1B.2
<i>Hesperolinon serpentinum</i>	Napa western flax	SC	1B.1
<i>Leptosiphon jepsonii</i>	Jepson's leptosiphon	None	1B.2
<i>Lupinus sericatus</i>	Cobb Mountain lupine	None	1B.2
<i>Mielichhoferia elongate</i>	Elongate copper-moss	None	2.2
<i>Navarretia leucocephala ssp. bakeri</i>	Baker's navarretia	None	1B.1
<i>Navarretia myersii ssp. deminuta</i>	Small pincushion navarretia	None	1B.1
<i>Sedella leiocarpa</i>	Lake County Stonecrop	None	1B.2
<i>Sidalcea oregano ssp. hydrophila</i>	marsh checkerbloom	FE/CE	1B.2
<i>Streptanthus brachiatus ssp. hoffmanii</i>	Freed's jewel-flower	None	1B.2
<i>Streptanthus breweri var. hesperidis</i>	Green jewel flower	None	1B.2
<i>Streptanthus morrisonii ssp. kruckebergii</i>	Kruckeberg's jewel flower	None	1B.2

Key:

- (CE) State-listed Endangered – Listed in the State Register as being in danger of extinction
 - (CT) State-listed Threatened – Listed as likely to become endangered within the foreseeable future
 - (FE) Federally-listed Endangered – Listed in the Federal Register as being in danger of extinction
 - (FT) Federally-listed Threatened – Listed in the Federal Register as likely to become endangered within the foreseeable future
 - (SC) Species of Concern
 - (SLC) Species of Local Concern
 - (1B) Plants that are rare, threatened or endangered in California, but more common elsewhere according to the California Native Plant Society
 - (0.1) Seriously endangered in California according to the California Native Plant Society
 - (0.2) Fairly endangered in California, according to the California Native Plant Society
 - (0.3) Not very endangered in California, according to the California Native Plant Society
- Source: U.S. Fish and Wildlife Service, August 11, 2005 and California Native Plant Society website, December 1, 2005.

Rare, Threatened and Endangered Animals

The bald eagle and peregrine falcon, both on the state and federal rare and endangered species list, winter over much of the eastern portions of the Planning Area, particularly adjacent to Putah Creek, McCreary Lake, Detert Reservoir, Amel Lake and Lower and Upper Bohn Lakes. These areas support a variety of fish and waterfowl which provide a food source.

A field survey may not identify a rare or endangered species of wildlife since occupancy of a site by a particular wildlife species may be seasonal, and individuals may move from one location within a habitat to another or from one habitat to another. Except on rare occasions (such as locating a peregrine falcon nest) locations can only be identified as potentially suitable habitat for a given species. It is generally not necessary to observe a particular species in the habitat to determine that the site is suitable or unsuitable. Site-specific surveys should be conducted by qualified professionals to determine the presence or likelihood of occurrence of each potential species.

Figure 3-4: Rare, Threatened & Endangered Animals Potentially Occurring within the Planning Area

SCIENTIFIC NAME	COMMON NAME	STATUS
<i>Actinemys marmorata marmorata</i>	Northern pond turtle	SC
<i>Agelaius tricolor</i>	Tricolor blackbird	SC
<i>Antrozous pallidus</i>	Pallid bat	SC
<i>Aquila chrysaetos</i>	Golden eagle	
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	SC
<i>Falco peregrinus anatum</i>	American peregrine falcon	D-CA Endangered
<i>Falco mexicanus</i>	Prairie falcon	
<i>Haliaeetus leucocephalus</i>	Bald eagle	D-CA Endangered
<i>Hydrochara rickseckeri</i>	Ricksecker's water scavenger beetle	
<i>Hysterocharpus traski pomo</i>	Russian River perch	SC
<i>Lasionycteris noctivagans</i>	Silver-haired bat	
<i>Lasiurus blossevillii</i>	Western red bat	SC
<i>Lasiurus cinereus</i>	Hoary bat	
<i>Myotis evotis</i>	Long-eared myotis bat	
<i>Myotis thysanodes</i>	Fringed myotis bat	
<i>Progne subis</i>	Purple martin	SC
<i>Rana boylei</i>	Foothill yellow-legged frog	SC
<i>Trachykele hartmani</i>	Serpentine cypress wood-boring beetle	
<i>Vandykea tuberculata</i>	Serpentine cypress long-horned beetle	

Key:

(C) Candidate – Candidate to become a proposed species

(D) Delisted – Species will be monitored for five years

(E) Endangered – Listed (in the Federal Register) as being in danger of extinction

(T) Threatened – Listed as likely to become endangered within the foreseeable future

(SC) Species of Concern

(SLC) Species of Local Concern

Source: U.S. Fish and Wildlife Service, August 11, 2005 and California Natural Diversity Database, Department of Fish and Game, August 31, 2006.

Objective

3.3.1 Promote practices that ensure the protection of the Middletown Planning Area’s diverse biological resources.

Policies

3.3.1a Support protection and restoration of wetland, riparian, and significant natural areas in the Middletown Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Encourage restoration and maintenance of streamside vegetation and bank structures along waterways consistent with BMP’s established by the County, by land owners in the Planning Area. Consider the location of environmentally sensitive areas when developing land use designations and zoning classifications.	Community Development Department & Department of Public Works Department, Water Resources Division	Funding Source	None
		Priority	High
		Timeframe	Continuous

3.3.1b The County shall coordinate measures to protect and maintain sensitive and unique vegetation and wildlife habitat.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
The Resource Conservation land use designation, Planned Development “PD” zoning and Waterway (WW) and Wetland (W) combining districts shall be utilized where appropriate. Require wildlife corridors to be incorporated into new development plans where appropriate. Encourage use of conservation easements, transfer of development rights, mitigation banking or similar equity transfer documents to protect unique vegetation & wildlife habitats on new projects.	Community Development Department of Public Works, Lake County Watershed Coordinator, California Department of Fish & Game, U.S. Wildlife Conservation Service, & U.S. Army Corps of Engineers Eastlake Resource Conservation District, Upper Putah Creek Stewardship, Lake County Land Trust and other non-profit groups.	Funding Source	None
		Priority	High
		Timeframe	Continuous

3.3.1c The Planning Division shall make periodic updates to combining district mapping for waterways, floodways, wetlands and other critical resource areas as new information becomes available.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
<p>The Planning division shall review "WW" Waterway, "FW" Floodway, "FF" Floodway-Fringe, and "W" Wetlands combining district information on a periodic basis.</p> <p>Information including project specific wetland delineation studies, FEMA mapping changes, and waterway channel movements should be reviewed on a regular basis with land use mapping documents updated accordingly.</p>	<p>Community Development Department & Water Resources Department</p>	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

3.3.1d Mapped critical resource areas shall be considered significant and sensitive resources that require special protection to ensure that these resources are not damaged.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
<p>Private landowners should be encouraged to voluntarily enter into property tax-reducing conservation easements, pursuant to Civil Code Section 815 et. seq., for purposes of protecting wetlands, riparian areas, vernal pools and other critical habitat and resource areas. Encourage land owners adjacent to Critical Resource areas to conserve these areas through setbacks, conservation easements or dedications to the public. Encourage the purchase of conservation easements or public acquisition of critical resource areas by state and federal land & wildlife management agencies and land stewardship groups.</p>	<p>Community Development Department, Department of Public Works, Water Resources Division, County Counsel's Office, Lake County Watershed Coordinator, California Department of Fish & Game, U.S. Wildlife Conservation Service, & U.S. Army Corps of Engineers Eastlake Resource Conservation District, Upper Putah Creek Stewardship, Lake County Land Trust and other non-profit groups.</p>	Funding Source	Grant programs
		Priority	Moderate
		Timeframe	Continuous

3.4 AGRICULTURE

Agricultural lands are a major contributor to the economic base and beauty of Lake County. The County's agricultural potential is largely determined by the availability of soils with few natural limitations on their use, but also depends on topography, availability of water, climate, market conditions, and the technical expertise of the grower.

The agricultural potential of the Planning Area varies according to physical characteristics such as water availability, drainage and parcel size, and economic factors such as market conditions and opera-

tion costs. Shortage of quality irrigation water is one of the greatest limitations to extensive expansion of agriculture throughout the Planning Area. With the increase in firm water supplies, development of groundwater or surface water supplies would permit agricultural lands to become more intensively cultivated with orchard, vineyard, grain and irrigated pasture crops. Other factors such as the existence of alkali soils in the area south of Grange Road in the Coyote Valley and serpentine soils in the area's eastern portions present localized limitations to agriculture.

The United States Natural Resource Conservation Service has developed a classification system that groups soils into eight classes, based on their agricultural potential. The eight classes are designated by Roman numerals I through VIII. Class I and II soils have few limitations, the widest range of use, and the least risk of soil deterioration. These soils are highly conducive to agricultural production because they require little or no special treatment other than normal, good soil management. The remaining soil classifications have progressively greater natural limitations. Class III is suitable for cultivated crops, but requires additional attention to offset the soil's natural limitations. Class IV soils are considered suitable for limited cultivation. The majority of Class I-IV soils occur in valleys, floodplains, and other areas with relatively flat topography.

The map of Important Farmland within the Middletown Planning Areas shown in Figure 3-5 was obtained from the California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program. The Important Farmland maps were compiled utilizing United States Department of Agriculture – Natural Resource Conservation Service (USDA-NRCS) Soil Surveys and current land use information. The minimum mapping unit is 10 acres. Units of land smaller than 10 acres are incorporated into the surrounding map categories. Approximately 7,500 acres of Class I - IV soils are found in the Middletown Planning Area. Class I - IV soils account for 7.9% of the Planning Area's total land base. Class I - II soils, which are considered prime agricultural soils, account for approximately one-half of these soils. Some of these soils, particularly in portions of the Callayomi, Long and Coyote Valleys are devoted to existing development. The Guenoc Valley is primarily devoted to agriculture.

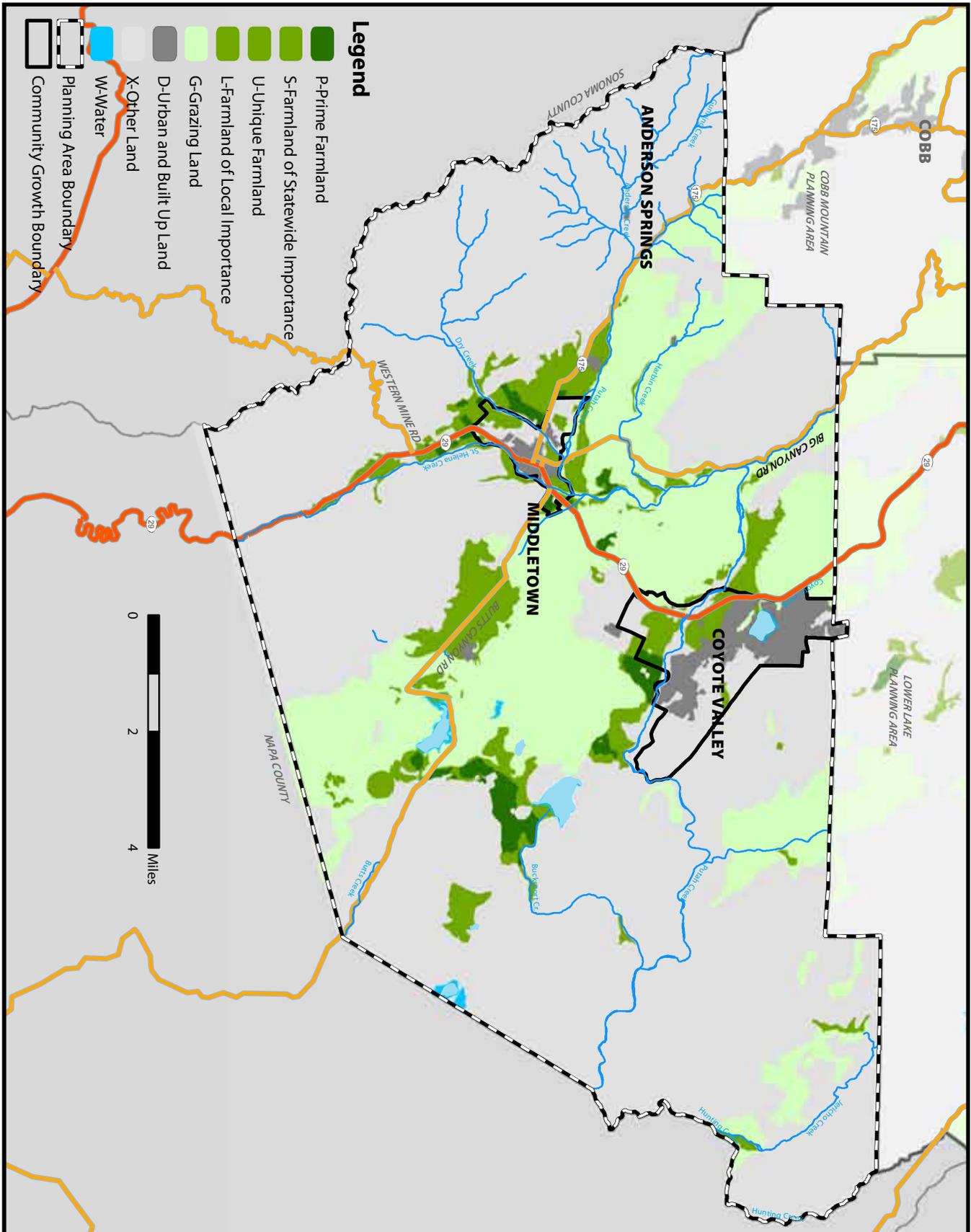
According to NRCS, Class V, VI and VII soils are best adapted to range and woodland plants. Classes V and VI are marginal for intensified agricultural uses but capable of some agricultural uses such as livestock grazing, tree farming, habitat protection or similar uses. Generally, Class VII and VIII lands have severe restrictions for typical agricultural crops, such as very shallow, stony soils, extremely rocky areas or exceedingly steep slopes that preclude commercial use of the land. The Plan also maintains "A", Agriculture zoning for these lands.

Wine grapes and olives thrive in Lake County due to its Mediterranean climate, and they can be grown in areas that were not traditionally farmed in Lake County. Grapes and olives can be dry-farmed, although most commercial farmers irrigate during the summer months. In 1995, commercial vineyards in Lake County covered 3,327 acres.²⁶ This number increased to approximately 5,000 acres in 1999 and 8,000 in 2000²⁷ and has remained stable since that time, reporting in at 8,345 acres in 2006 and 2007.²⁸ Lake County is also experiencing an increase in olive cultivation. There are many areas that are suitable for growing wine grapes and olives in the Planning Area. As these can be very specialized crops, the amount of acreage needed can be less than necessary for typical agricultural operations to realize a profit. The Rural Lands designation that provides for average lots sizes of 20 to 40 acres is appropriate for these areas.

26 Giusti, Gregory A. Five-Year Assessment of the Programs Affecting Oak Woodlands in Lake County, California. U.C. Integrated Hardwood Range Management Program (December 2001), p. 4.

27 Giusti, Gregory A., p. 4.

28 Lake County Department of Agriculture 2007 Crop Report



IMPORTANT FARMLAND
FIGURE 3-5



The Lake County General Plan defines agricultural lands as a collective term for farmlands designated as Prime, Unique, of Statewide or Local Importance or as Grazing Land in the California Department of Conservation’s Farmland Mapping and Monitoring Program. Most Class I through IV soils in Lake County that are located outside of community growth boundaries are designated as “Agriculture” on the County Land Use Map. These lands are also considered farmlands of local significance.

The most rapidly changing crop in the Planning Area is grapes. There are 616²⁹ acres currently in vineyards in the Callayomi, Coyote and Guenoc Valleys. There is a trend towards increasing acreage in vineyards in the Middletown Planning Area, which is a result of a spillover from the Napa and Sonoma Valleys, less expensive premium grape prices, and the increasing popularity of Lake County wines. English and Black walnuts traditionally were the dominant orchard crop in the Middletown Planning Area, but acreage in walnuts has been decreasing in recent years as more owners are abandoning their orchards or converting to vineyards. Much of the more hilly terrain throughout the Planning Area is devoted to livestock grazing. Animals such as cattle, sheep, lambs and horses are raised primarily in the central and eastern portions of the Middletown Planning Area. Remaining agricultural lands are dedicated to pasture and light grazing, most of which occur on non-irrigated dry lands.

The concentration of agricultural lands and their distribution in the County is a major contributing element to its rural character and scenic quality. However, because many of the historically grown crops are not currently economically viable, there is pressure to subdivide agricultural lands. Large ranches are of great value. They provide:

- areas for aquifer recharge
- scenic vistas
- open space and the feeling of wilderness
- significant wildlife habitat,
- recreational opportunities in some limited cases.

Lands capable of agricultural production should be preserved with the minimum parcel size limited to existing parcels or, if allowed to be subdivided, no less than 20 acres in size. Adjacent rural lands that can not be developed with economically viable agricultural uses should be maintained as buffers to the more intensive agriculturally productive lands. Efforts to preserve productive agricultural lands include tax incentives through the California Land Conservation Act of 1965, also known as the Williamson Act. This law allows farmers to pay reduced taxes as long as the land is developed with agricultural uses.

There are approximately 2,700 acres of lands in agricultural preserve contracts in the Middletown Planning Area. Approximately 600 acres of lands in agricultural preserves are considered prime agricultural lands. Most of the lands under agricultural preserves are used for grazing. The Lake County General Plan calls for the preservation of agricultural lands, both those in production and those with potential productivity. The plan calls for non-agricultural development to be directed onto non-agricultural lands. The General Plan further states that extension of sewer and water lines, roadways and other services should be avoided on agricultural lands and that non-agricultural development should be separated by buffers or transitional areas.

²⁹ 2007 Ag Commissioners Crop Report.

BUFFER ZONES

Conflict between agriculture and residential uses jeopardizes the viability of the Lake County agricultural industry. Agricultural operations create noise, odor, dust, seasonal truck traffic and often involve hazardous materials incompatible with residential uses. In order to reduce this conflict, buffer areas have been used ranging in size from 150 to 300 feet. The size of the buffer necessary is dependent on factors such as topography, prevailing winds, vegetation and the type of crop being cultivated. New residential development proposed near agricultural uses should utilize the "PDR", Planned Development Residential zoning district. This district can allow properties to be developed at considerably higher density and the flexibility to allow smaller parcel clustered inside buffer zones or conservation areas to separate dissimilar uses.

Objective

3.4.1 Encourage agricultural development in the Middletown area by supporting programs that help reduce agricultural costs and preclude intrusion of incompatible development into prime agricultural areas.

Policies

3.4.1a Support the continued use of agricultural lands and discourage conversion of these lands to other uses unless necessary to accommodate an orderly and logical pattern of urban development.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
<p>Retain "A" land use and zoning designations on agriculture lands, except those lands deemed necessary for orderly growth within the planning period.</p> <p>Limit residential uses and subdivisions adjacent to lands that are in agricultural production, unless adequate buffers are provided and/or the Planned Development Residential zoning is applied to mitigate potential impacts.</p> <p>Encourage the use of "PDR" zoning for all proposed subdivisions adjacent to agricultural lands or other means to provide adequate separation of land uses.</p> <p>Support existing policies and incentives for maintaining agricultural land and the use of preferential property tax assessments through the Land Conservation Act for productive agricultural and timber lands within the Planning Area should be encouraged.</p> <p>The County should work with the local agriculture community to identify ways to increase supplies of quality irrigation water in the Middletown Planning Area. Educate area residents about the role agricultural lands play in providing open space and rural character.</p>	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Continuous

3.4.1b Rezoning or division of lands that have historically been in agricultural production for non-agricultural purposes should be prohibited, except in special situations where all of the following criteria can be met:

1. Sewage disposal, water and adequate road access is available.
2. Utilization of the site for non-agricultural uses will not significantly impact adjacent agricultural uses.
3. The site is located within a Community Growth Boundary or the conversion is needed for expansion of the boundary, consistent with the criteria set forth in the Land Use element of the General Plan.
4. Development being proposed is clustered to maximize open space and provide buffer areas.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Follow these criteria when reviewing any future development proposals for conversion of property out of agricultural use.	Community Development Department, Planning Commission & Board of Supervisors	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

3.4.1c Adequate building setback lines or buffer areas shall be encouraged in land divisions in any areas contiguous to agricultural operations where dust, noise, spray drift or other nuisance conditions could result in conflicts due to normal farming practices.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Utilize the "RR" & "RL" zoning districts and the planned development process to provide buffer areas between intensive agricultural operations and residential and commercial development. Lands adjacent to agricultural uses shall be designated for low density use, wherever feasible, to serve as buffer areas between agricultural operations and suburban and higher density uses. Require new development proposals to include buffer areas between agriculture and non agricultural uses.	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Continuous

3.4.1d Protect large agricultural tracts from water quality and erosion damage due to improper management practices.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Educate area residents about programs and incentives for keeping lands in large tracts, and the role that agricultural lands play in providing groundwater recharge areas, open space and a rural character, such as, conservation easements, agricultural easements, etc. The County shall continue to work with the Resource Conservation District to encourage the widespread utilization of Best Management Practices, erosion control programs and techniques in erodible agricultural and timber harvest areas to insure the sustainability of agricultural operations and protect water and drainage ways.	Community Development Department, Farm Bureau, Agricultural Commissioner, Planning Commission & Board of Supervisors	Funding Source	None
		Priority	High
		Timeframe	Continuous

3.5 RESOURCE EXTRACTION

Policies of the Lake County General Plan and Aggregate Resource Management Plan urge the protection, management, and development of mineral, aggregate and geothermal resources. A major goal of these policies is to minimize land use conflicts between mineral and geothermal extraction activities and other uses.

MINING AND AGGREGATE RESOURCES

Mining activities in Lake County date back to the early 1860s. Mercury, which was found southwest of Middletown, was the primary mining activity. The mercury mines closed down in the 1940's as economic conditions became unfavorable. The mines, however, temporarily reopened for a period in the 1950s and 1960s. The scars of these mines still exist and some pose health and safety problems

unless properly abandoned. Other minerals were produced commercially in small quantities. These included copper and chromite [silver, mercury and gold]. Existing mining activities in the Middletown Planning Area consist of surface mining (gravel extraction) activities along the area’s creeks. Existing gravel extraction activities in the Middletown Planning Area are primarily located along Putah Creek.

The principal use for aggregate is building and road construction. Large-scale use of aggregate for road paving in Lake County began in the mid 1920s, with the paving of Main Street in Lakeport and Highway 29 between Lower Lake and Kelseyville.³⁰ This paving consisted of an aggregate base coated with a layer of asphalt binder. Prior to the 1870s, the vast majority of buildings in this county were constructed with wood or adobe. Notable examples of construction from that time include the brick school house and stone jail in Lower Lake and the old courthouse in Lakeport. Most of the masonry buildings along Main Street in Lakeport appear to have been constructed between the 1870s and the early 1900s. While local rock was undoubtedly used in the construction of stone buildings, brick was most likely imported from the San Francisco Bay area. All of these structures would have used sand from local creeks for the manufacture of mortar. Large-scale use of aggregate for the construction of buildings (for concrete foundations) began in the mid 1930s. The evolution of large, centralized aggregate mining operations followed the development of efficient transportation. To this day, transport remains the principal cost of aggregate.

There are two main types of aggregate extraction, in-stream and quarry operations. Substantial impacts have resulted from past in-stream gravel extraction operations, including bank erosion, localized flooding, general stream degradation, loss of riparian vegetation and increased sedimentation. Nutrients bound to sediment are thought to have been one of the primary causes of overgrowth of water plants and oxygenation of creeks and watercourses leading to fish kills, etc.³¹ For these reasons the use of quarries for aggregate is more desirable than in-stream extraction.

Mercury is a highly toxic element that is found both naturally and as an introduced contaminant in the environment. The amount of toxicity is directly related to the chemical form and route of exposure of the mercury. Methylmercury [CH₃Hg] is the most toxic form of mercury. The most common form is divalent mercury [HgII]. Methylization is the product of complex processes that transform and move mercury. Once in surface water, mercury may attach to particles which then can settle to the bottom sediment, where it can diffuse into the water column, be re-suspended, be buried by other sediments, or be methylated. The County of Lake works in coordination with other local, state and federal agencies in an attempt to identify and remediate hazards associated with abandoned mines. State law now requires that any surface mining project submit and have approved a reclamation plan and a financial assurance mechanism in order to preclude the illegal abandonment of mines.

The Lake County Aggregate Resource Management Plan (ARMP) was developed in 1992. One of the driving forces behind this plan was concerns about gravel mining impacts to groundwater recharge and supply. Policies in the Aggregate Resource Management Plan limit development of new in-stream mining operations [and strict erosion control measures] in the Planning Area. The ARMP sets policies for all gravel extraction operations that protect the groundwater supply. The ARMP is administered by the Lake County Community Development Department, Planning Division, assisted by technical information from the District.

30 Lake County Aggregate Resource Management Plan, adopted November 19, 1992.

31 The Causes and Control of Algae Bloom in Clear Lake. University of California, Davis, Division of Environmental Studies for Lake County Flood Control and Water Conservation District, California State Water Resources Control Board and United States Environmental Protection Agency, 1994.

Additionally, the Lake County Aggregate Resources Management Plan identifies four potential aggregate sources within the Planning Area which are as follows:

Excelsior Valley

This site is located about 2 miles southeast of Lower Lake between Excelsior Valley on the north and Little High Valley on the south. Total acreage is between 300 and 350 acres.

Spruce Grove Area

This site is located on a site measuring approximately 7,000 feet long, 4,000 feet in width, and is located approximately $\frac{3}{4}$ mile northeast of Highway 53 and $\frac{1}{2}$ mile northeast of Spruce Grove Road.

Jerusalem Grade North

This site is located about $\frac{1}{4}$ mile northeast of the intersection of Spruce Grove Road and Jerusalem Road. The site is roughly a rectangular shape and measures about 4,000 feet in length and 2,000 feet in width.

Jerusalem Grade South

This site is located immediately south of Jerusalem Grade North. The northern site boundary is peripheral to Jerusalem Road at a point about $\frac{1}{4}$ mile east of the intersection of Jerusalem and Spruce Grove Roads. The site is approximately 700 acres and is irregularly shaped.

If any of these potential aggregate resource sites are developed in the future, policies of the Lake County General Plan urge the protection, management and development of mineral resources. A major goal of these policies is to minimize land use conflicts between mineral extraction activities and other uses. It is important that gravel deposits do not become unobtainable as a result of unplanned growth into resource areas. Residential uses are incompatible with mining operations. Mining operations should be protected from encroachment by dissimilar uses.

GEOTHERMAL RESOURCES

The General Plan establishes a policy framework to guide geothermal development for the next 20 years and to maximize the benefits of the geothermal industry while minimizing adverse impacts. A key issue with regard to geothermal development is its proximity to sensitive environments including resorts, residential communities and waterways.

Most of the geothermal wells in Lake County are located in the Middletown Planning Area. The known Geysers vapor-dominated reservoir is located in the Mayacamas Range along the western edge of the Planning Area. Calpine currently operates the largest geothermal leasehold area. A small area along the southern boundary is operated by a municipal energy cooperative on state lands, which is outside the County jurisdiction and is not discussed in detail here.

Geothermal energy development began in the Geysers during the 1960s. Major construction activities including roads, well drilling and energy plants continued into the 1990s and have now been completed. During the construction period, there were major concerns regarding impacts to public roads, health and safety including traffic, air quality, water quality, noise and increased seismic activity. While the existing wells require ongoing maintenance and must be occasionally re-drilled, ongoing geothermal operations have a significantly lower impact on the environment than the construction phase.

There are five power plants in the Lake County portion of the Geysers: Bear Canyon, West Ford Flat, Big

Geysers, Calistoga and Quicksilver. The net capacity is 234³² megawatts. Direct employment in the geothermal industry in the Geysers has decreased from the initial construction phase, but there are still approximately 575 employees, including 275 full-time personnel at the power plants, 150 full-time personnel in other divisions and up to 150 contract employees. It is estimated that about 70% of these, or about 400 people, live in Lake County, most of them in the Planning Area, Cobb and Kelseyville.

Although geothermal energy is generally considered to be a sustainable and clean fuel, it is in fact a finite resource with potential contaminants that must be managed carefully. A certain amount of water stored in the underground reservoir is lost during power generation. Reclaimed water from steam evaporation and wastewater treatment plant pipelines is re-injected into the reservoir, but heat exchange between injected water and steam output must be balanced to avoid flooding the heat source. Even with careful management, the resource is limited, and will likely be exhausted in the next forty years or so. However, renewed interest in green energy development and spikes in energy costs are resulting in renewed interest in additional steam field development. While it is unlikely that additional geothermal power plants will be constructed within the Planning Area, additional well development is likely.

Over-burden material, or tailings, from well excavations may have high concentrations of elemental minerals (primarily sulfur and boron) and metals. These elements, in naturally occurring amounts may be nutrients, but at these higher concentrations may be toxic, and they must be placed in containment areas where they cannot leach into water supplies. The generation of power creates excess steam which may, like the tailings, contain concentrated minerals, with the primary concern being boron (which is damaging to plants) and hydrochloride gases (which is dangerous for humans, animals and fish). The Calpine facilities have state of the art abatement and monitoring systems with a zero net pollutant emission policy. The power plants shut down automatically if any abatement system fails, and system wide operations have averaged three days per year of down time.

The Calpine plants are constructed for 100% containment, except during a 100-year storm event. A cooling system with associated cooling towers condenses and processes steam, gases and contaminants including boron (affecting plants), ammonia (affecting fish) and hydrogen sulfide (affecting animals) and prevents any steam drift outside of the plant yard area. Hydrogen sulfide is converted to elemental sulfur and the resulting cake is recycled as a soil supplement. Excess water derived from condensed steam is filtered and re-injected into the wells. Water quality is monitored on an ongoing basis at several points along the Anderson Springs creek, and the quality has been deemed to be consistently good.

The Geysers operates a model program using a condenser, and safety monitoring for full containment of dangerous gasses, including carbon dioxide, hydrogen sulfide, ammonia, radon, heavy metals and trace hydrocarbon emissions. Operations are closely monitored and regulated and the operations are in full compliance with emission regulations. Graphs and data are available from the Lake County Air Quality Management District (AQMD). Odors experienced in this region are not due to power generation activities.

A former geothermal waste landfill with a wetland mitigation area is located on Butts Canyon Road. This site was used to dispose of wastes from the geothermal industry until operations ceased in 1987. During its period of operation, contaminated pond water escaped from the containment area and affected groundwater on the property. Often referred to as the "Geothermal Inc. or GI Site", it was the subject of a massive clean-up project by a group of waste dis-

32 Information per John Farison with Calpine, Nov/2008.

posers under the oversight of the Regional Water Quality Control Board for the Sacramento Valley Region. The project also included a small wetland mitigation project under the oversight of the U.S. Army Corps of Engineers. The landfill closure has been fully completed, and groundwater is now undergoing remediation. The site is now owned and maintained by PG&E. The wastes are fully contained, the site is continually monitored, and there have been no offsite surface or subsurface discharges of impacted groundwater to the Regional Water Board, the site is protected from any unauthorized earth-moving activities, ground disturbance, or groundwater usage.

Some problems which were attributed to geothermal development have never been substantiated and may have natural causes. Natural geothermal activity in the region frequently causes emission of a “rotten egg” smell from naturally occurring steam vents containing hydrogen sulfide gases. Prevailing weather conditions in the summer and fall carry these emission easterly into the residential and recreational areas of Anderson Springs and the Callayomi Valley. In the past, chemical constituents detected in streams in the Upper Putah Creek basin were attributed to geothermal development, but this was never conclusive. There are many natural sources of these constituents within the basin, including natural geothermal activity³³.

There have been concerns that geothermal extractions may cause increased seismic activity. The U.S.G.S. maintains and controls a network of seismometers in the area. This region has always been seismically active, with frequent small quake activity under 4.0 in magnitude. These microseismic events have been increasing in frequency. The Seismic Monitoring Advisory Committee (SMAC) appointed by the Lake County Board of Supervisors keeps up to date information on this subject.

Objective

3.5.1 To encourage sustainable extraction of resources in a manner which provides short-term and long-term benefits to the Middletown Planning Area, while preserving environmental resources and the public health and safety.

Policies

3.5.1a The development of conflicting land uses near known resource extraction areas shall be discouraged.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Once identified by an approved plan or permit, including the County Aggregate Resources Management Plan, promising resource extraction sites in environmentally acceptable locations shall be protected from the encroachment of incompatible uses. Dissimilar uses should not be allowed contiguous to resource extraction operations.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

3.5.1b Resource extraction is encouraged in environmentally acceptable locations, where visually protected by local topography and subject to Best Management Practice for development and operations.

³³ McMillan, 1985

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Use permits for resource extraction should be granted where environmental impacts, including visual impacts, can be mitigated to insignificant levels.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

3.5.1c Geothermal reservoir management practices and water use should be conducted in a comprehensive manner which does not adversely affect existing beneficial uses.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
As geothermal use permits are renewed, or new applications for steam field development processed, special attention to review ground water use shall be given.	Community Development Department Water Resources Division	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

3.5.1d Reclamation plans for resource extraction areas should enhance the area and promote activities or development compatible with surrounding uses.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Permit applicants for reclamation plans shall be strongly encouraged to restore sites to a balanced, natural state.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

3.5.1e Encourage coordination between local, state, and federal agencies to identify and remediate hazards associated with abandoned mines in the Middletown Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Maintain a database of existing mines and update their status annually.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

3.6 CULTURAL RESOURCES

The Middletown Planning Area contains many accounts of its past in the form of archaeological sites and buildings constructed by early settlers. This area has been inhabited by people for thousands of years. The remaining historic sites and structures are important to the community. Consequently, proposed development sites should be thoroughly investigated and evaluated for cultural resources prior to construction.

The protection, study, and enhancement of these cultural resources can provide a significant data base for scientific research and serve as an educational tool. By studying the area’s cultural resources, scientists are able to reconstruct past cultural patterns and learn about contemporary

cultural processes, providing us with a better understanding of the history of the area. Knowledge of these resources can also serve as a focal point for increased tourism and economic development.

The main economic force behind the early development of Middletown was mercury mining. The first mercury mine in the Middletown area was established in 1873. The largest mines included the Great Western and the Mirabel Mines. The mining industry continued until after the Second World War when the demand for mercury started to decline. After the decline of mercury mining, Middletown experienced a resurgence of interest in resorts and spas, including Hoberg's Forest Lake, Whispering Pines, Cobb Mountain Lodge and Salmina's. The popularity in these resorts and spas again started to wane in the 1960s most likely due to the advanced age of the resorts and destinations that were closer to the bay area and offered more amenities.

The next economic stimulus to affect Middletown and the surrounding area was the development of the geothermal steam fields in the neighboring Cobb Mountain area for the generation of electricity for bay area communities. In 1960 PG&E established the first modern plant at The Geysers. Currently, a number of geothermal wells are located in the surrounding Mayacamas mountain range. It should be noted that because of early overdevelopment of the area for electricity, the steam fields were actually losing their capacity to produce energy in the 1980s. In 2003, construction of a treated wastewater pipeline for underground injection from neighboring Sonoma County to the Geysers area was completed and a second treated wastewater pipeline serving certain communities in Lake County for additional injection was also finished at approximately the same time. As such, the geysers are again producing increasing amounts of environmentally friendly electrical power and are actually being expanded. Currently there are 22 operating geothermal wells at The Geysers complex with more drilling planned.

The mainstay of economic vitality of Middletown today is that a base of permanent residences has been established in the town itself and within the immediate area along with local serving businesses located along the downtown corridor on State Highway 29 and to a lesser degree on State Highway 175. The large amount of daily commuters living in the Hidden Valley Lakes subdivision and traveling to Napa and Sonoma Counties, frequent the numerous coffee shops and small local businesses. Additionally, the visitors to the large casino just south of downtown Middletown could be a boost to the economy of the community.

Agriculture also has played a role in the Middletown area's growth with the establishment of a number of vineyards. British stage actress Lillie Langtry owned property near Middletown and it was on this land that she and her partner, Freddie Gebhard, grew grapes and produced wine. Today the area owned by Ms. Langtry is recognized as its own appellation, Guenoc Valley, and a large winery is located at the site that is approximately 13 miles east of Middletown on Butts Canyon Road. Additional agricultural endeavors within the Middletown area have included cattle ranching, walnut orchards and a limited number of pear orchards.

NATIVE AMERICAN ETHNOGRAPHIC GROUPS

The area around Middletown was inhabited by three ethnographic groups; the Wappo, the Lake Miwok and the Patwin. The territory of the Wappo was divided into two portions, one small (the southern portion of the City of Clearlake) and one large, encompassing the south, central and western portion of the Middletown Planning Area. The closest Wappo village, located northeast of the present community of Middletown was called "lok-noma".

The Lake Miwok were hunters and gatherers who had permanent dwelling areas along the drainages of several small creeks and stream valleys south of Clear Lake. The Lake Miwok had 17 villages

throughout the Middletown Planning Area. The third group, the Patwin, is linguistically related to the Wintuans of the western Sacramento Valley. The Patwin inhabited the easternmost portion of the Middletown Planning Area. Although not located in the Middletown Planning Area, another ethnographic group, the Pomo, was located to the area's west and east. The Pomo Indians were the most prevalent group in Lake County (Handbook of North American Indians, Vol. 8, Robert Heizer ed., 1978).

ARCHAEOLOGICAL RESOURCES

Less than two percent of the Middletown Planning Area has been systematically surveyed to locate and record cultural resources. A large survey was conducted in the eastern edge of Middletown along the St. Helena Creek channel. Typically, surveys in the vicinity of creeks in the Middletown Community Area have revealed archaeological sites. A pattern has been identified in the Middletown area revealing that archaeological sensitivity is extreme at the confluence of creeks, along creeks themselves, or where creeks begin to flow into a valley. Archaeologically, the Middletown Planning Area contains high densities of prehistoric sites and is considered an extremely sensitive area. While much of the area has not been surveyed and many sites are unknown, archaeological resource inventories are typically performed if cultural resources are thought to occur in the vicinity of a development project or encountered during project development.

HISTORICAL RESOURCES

There are a limited number of historic structures and locations within the Middletown Planning Area including within and near the town of Middletown. These include:

1. Presently at the southwest corner of State Highways 29 and 175 is a two story structure that is currently being used for a variety of retail and office uses on both floors. In 1870, John Berry constructed the first house at this site, which he turned into a hotel. Mr. Berry sold the house to Charles Young who razed the building and constructed a fourteen room hotel, which was called the Lake County House. This hotel burned in the fire of 1918. The Lake County House was once known as the most popular stopping place in Middletown and it also was the stage stop for tourists traveling from the Bay Area. It is unknown if the present building is the one that was rebuilt after the 1918 fire, but the current building's architectural details do not reflect the historic period when the original building was constructed. Acquiring a historical designation is doubtful.
2. On State Highway 175 just west of the downtown district of Middletown a single story building stands that is currently known as the P.A.C.K. Building where a small number of businesses are located. Its previous use was as a school house for Middletown area students. This building is not the original school house, which was constructed in approximately 1880, but a rebuilt structure constructed in the 1920s. The original schoolhouse was destroyed by the 1918 fire. The current structure has no exterior historical significance or architectural features as it has been highly modified and thus cannot be considered historic.
3. Two other buildings in Middletown with unknown historical significance are the Middletown Library, also known as the Chauncy Gibson house and the building close

to the northwest corner of State Highways 29 and 175 that was previously known as the old gymnasium. The Library is a historic structure with unique architecture. The old gymnasium appears to have undergone some recent facade improvements including new windows and french doors that have eliminated a good portion of the historical architectural elements of the structure.

4. The east side of State Highway 29 in the downtown Middletown area, at the southeast corner of State Highways 29 and 175 still has buildings that reflect the bygone days of the early 20th Century. The Boar's Breath restaurant and the multi-tenant building to the south, both two stories tall, exhibit facades that evoke an early 20th Century architecture with false fronts and ornate window and cornice details. Further to the south, on the east side of the State Highway, the buildings step down to one story in height and appear to be of less historical significance as one travels south.
5. The Harbin Hot Springs Resort can be found on Harbin Road, which is off of Big Canyon Road. This resort was founded in 1856 and gradually increased in size until it became one of Lake County's largest resorts. The original hotel was constructed in 1870. This hotel burned to the ground, as did two replacement hotels with the last replacement hotel being destroyed in 1960. Uses at the hot springs have ranged from a resort, a hunting lodge, a boxing camp and a free form university. Most of the buildings currently on the site were built in the early 1900s. Current use of the hot springs is as a non-profit retreat and workshop center. A survey would be required to determine which structures would be considered historic and to what level of historical and architectural significance.
6. The Lillie Langtry House is a historic resource off of Butts Canyon Road. In 1888, Ms. Langtry purchased the estate and surrounding vineyards from the original builder, David Hudson. Mrs. Langtry processed the grapes in the vineyard into some of Lake County's first wines. Ms. Langtry maintained the residence and winery until 1906.
7. The Stone House, known as the oldest house in Lake County, is located in the gated community of Hidden Valley Lake and is recognized as a California Historical Landmark. Its history starts in 1850 when settler George Rock built a log cabin near where the Stone House would eventually be built. Mr. Rock abandoned the log cabin the next year. The Stone House was built in 1853 by Captain R. Steele and Robert Sterling. Robert Sterling's wife was the first white woman to live in the territory. In 1860 the Stone House was converted to a store and by 1867 the store was converted to a Post Office within the newly formed village of Guenoc. This Post Office was moved to Middletown in 1880 along with most of the village of Guenoc. The current use of the Stone House is as a museum.
8. The 1890 Sanborn Map for the Middletown area indicates many single family dwellings located in close proximity to downtown Middletown that could be considered historic, if still in existence. An informal survey of the Middletown area did find a few single-family residences that still exhibit unique architectural elements, such as Craftsman, Queen Anne and Bungalow styles that could be considered historic, but until a formal windshield survey is done, historical significance for the majority of structures in Middletown and the surrounding area will not be realized.

In addition to the above noted historical structures still standing, there are a number of other sites in the Middletown area that have historical significance which include:

California Historical Landmarks

- St. Helena Toll Road and Bull Trail, Middletown

California Points of Historical Interest

- Community Methodist Church, Middletown
- Middletown Motel, Middletown

Lake County Historical Society Historical Markers

- Emigrant Road, near Middletown
- Guenoc Grange, near Middletown
- Town of Guenoc, near Middletown
- Butts Canyon Road, near Middletown
- Great Western Mine, near Middletown
- Methodist Church, Middletown
- Morin Ranch, Middletown

The Lake County Heritage Commission can be contacted for more information on the above noted historical sites in the Middletown area.

Middletown and the surrounding countryside have had a rich and varied past with Native American occupations followed by white settlers and tourist-oriented businesses and then the more recent development of the geothermal steam fields in the Mayacamas Mountains for electrical energy production. Middletown’s historical past should not be forgotten, but should be preserved as much as possible to remind residents and visitors of the Middletown area’s past contributions.

Objective

3.6.1 Protect and preserve archaeological and historical resources throughout the Planning Area for the long-term benefit of residents, tourists, and future generations.

Policies

3.6.1a Prior to approval of discretionary projects within areas of known sensitivity to archaeological resources, local Native American representatives shall be consulted concerning potential impacts to cultural resources.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
<p>Local Native American representatives should be included in preliminary project reviews. Their comments should be solicited early in the project review process.</p> <p>Whenever possible, identified historical and unique archaeological resources as defined by Section 15064.5 of the California Environmental Quality Act, should be avoided through project design. Protection of the site by the most recently recognized accepted means should be employed. Inventories will ensure that all cultural resources are identified, and that artifacts are not destroyed by project activities.</p>	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Continuous

3.6.1b The County shall assist in efforts to identify and protect historic structures and sites by working with economic development interests, citizens' groups, the Heritage Commission, local Native American tribes, archaeologists, and other researchers in preparing plans and grant applications for the protection of historic buildings and cultural sites.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
<p>Require appropriate studies if projects could impact unique or significant historical or cultural resources. When archaeological or historical resources are found, effective mitigation measures shall be enforced.</p>	Community Development Department, State Office of Historic Preservation, State Office of Planning & Research, County Heritage Commission & Local Tribes	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

3.6.1c The County should pursue funding and grant monies which could be used to further the goals and implement the historic preservation policies of this Area Plan.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Unknown
<p>Consult with State offices, write grant proposals. Apply to the State of California to become a Certified Local Government (CLG)</p>	Community Development Department, Planning Division, State of California	Funding Source	General Fund, Portion of Building Permit Fees
		Priority	Medium
		Timeframe	2008-2010

Objective

3.6.2 To encourage owners of historic resources to preserve or upgrade historic properties by improving their economic viability.

Policies

- 3.6.2a** The County should investigate incentives for single family residential restoration such as tax relief for designated landmarks or districts and inform owners of historic properties of available incentives.
- 3.6.2b** The County should investigate and publicize the use of various federal, state, local and private funding sources and economic mechanisms available to support historic resource preservation.
- 3.6.2c** The County should encourage the continuation and appropriate expansion of federal and state programs that provide tax and other incentives for the rehabilitation of historically or architecturally significant structures.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Low
The County should establish criteria to evaluate alternatives in cases where owners of designated historic properties assert economic hardship, as well as establishing guidelines to assist the County in such determinations	Community Development Department, Planning Division,	Funding Source	General Fund
		Priority	Medium
		Timeframe	2008-2010

3.7 OPEN SPACE & RECREATION

Open space and scenic resources are one of Lake County's greatest assets that contribute to its overall rural character, tourism base and protection of valuable natural resources.

SCENIC RESOURCES

Scenic resources in the area include forested ridges, grasslands and rolling hills, agricultural landscapes, impressive views of Mt. St. Helena, the Callayomi and Coyote Valleys and the riparian vegetation associated with St. Helena Creek. The historic character of Middletown and other historic areas can also be viewed as a scenic resource. Scenic views and corridors make major contributions to the quality of life enjoyed by the residents of Lake County. The development of community pride, the enhancement of property values and the protection of aesthetically pleasing open spaces are all ways in which scenic corridors are valuable to County residents and reflect their preference for a rural lifestyle. In order to maintain the quality of life and the rural character of the Planning Area, scenic resources should be preserved and enhanced.

A viewshed is defined as, "the area within view from a defined observation point, road or corridor from land or water". Billboards, overhead power lines, poorly maintained structures or un-screened mining operations can spoil views. The value and continued enjoyment of scenery is dependent upon the knowledge that views and viewsheds can change over time. Unregulated development can diminish this resource. Commercial design standards that promote the community's identity are needed. Design guidelines can preserve or enhance the scenic quality of a commercial area. This is particularly effective when the area is only partially built up and there is an opportunity to change the overall visual impression of the area through consistency, vi-

sual screening and roadway setbacks. To maintain the quality of viewsheds, off-site commercial signs and billboards should be prohibited in designated scenic corridors.

General Plan policies encourage the protection and enhancement of Lake County's scenic highways and resources in order to promote the County's recreation-based economy, and provide scenic value to both residents and visitors alike. The Planning Area has many natural scenic qualities that include Mt. St. Helena, mountainous landscapes, agricultural and pastoral settings, and riparian and wetland areas. Some scenic resources are also critical resource areas, such as Robert Louis Stevenson State Park and areas along Butts Canyon Road. Enhancement and protection of these corridors ensures that the tourist experience is a positive one, and consequently, provides support for the tourist-related activities of the County's economy.

Development on steep slopes, which is visible from great distances such as on hillsides adjacent to Highway 29, has the potential to be aesthetically unpleasing. This plan zones and designates those properties Rural Residential and Rural Lands to encourage low-density development of these areas that will not result in substantial grading or visually unappealing development. Possible additional impacts of the development of steep lands, including erosion and sediment infiltration to Clear Lake, are discussed earlier in this Chapter and in the Public Safety section in Chapter 4 of this plan.

Another cherished viewshed is the view of the night sky. This quality can be protected through the enforcement of commercial and residential design standards. The Zoning Ordinance regulates glare by requiring all exterior lighting to be hooded, shielded or opaque and all light to remain on the site of its origin.³⁴

Section 34.2 of the Lake County Zoning Ordinance states that when applying the "SC" Scenic Corridor Combining District, at least two of the following characteristics should be present:

- Varied topographical features including uniquely shaped rocks, dominant hills, mountains or canyons.
- Vegetative features including significant stands of trees, colorful variety of wildflowers or plants.
- Water features including views of Clear Lake, creeks, streams or waterfalls.
- Pastoral features such as farms, pastures, vineyards or orchards.
- Historical buildings or districts which characterize period architecture or are indicative of past lifestyles.
- Provide convenient visual access from a state highway, county roadway, bikeway or trail.
- Allow features to remain in view of the traveling public for a reasonable length of time for lasting views or impressions.

The Lake County General Plan identifies Highway 29 as a potential scenic highway from the intersection of Highway 20 at Upper Lake south to the Napa County line. The portion traversing the Planning Area offers views of the surrounding mountains and rolling hills. This scenic viewshed encompasses the ridge lines east and west of the route including Mt. St. Helena, the Callayomi and Coyote Valleys and the riparian vegetation associated with St. Helena Creek. In addition to natural features, the cultural landscape includes agricultural activities such as grazing lands, walnut orchards and vineyards which provide scenic vistas for the traveling public. Highway 29 is a gateway to Lake County from the Bay Area, and is consequently a critical scenic resource.

Highway 29 is also eligible for California Scenic Highway status through the California Department of Transportation (Caltrans). The intent of the California Scenic Highway Program is to protect and enhance California's natural scenic beauty and to protect the social and economic values provided by the State's scenic resources.³⁵ In order for a highway to be officially designated as a state scenic highway, the local jurisdiction must first adopt a scenic corridor protection program. A corridor protection

³⁴ Lake County Zoning Ordinance (2003) 41-2.

³⁵ California Streets and Highways Code Section 260.

program must encourage quality development that does not degrade the scenic value of the corridor. According to Caltrans, a properly enforced program can:³⁶

- Disallow land uses such as junkyards, dumps, rendering plants and gravel pits that may detract from the scenic nature of the highway.
- Mitigate uses that detract from scenic values by proper siting, landscaping or screening. Prohibit billboards and regulate on-site signs so that they do not detract from scenic views.
- Make development more compatible with the environment by requiring building siting, height, colors and materials that are harmonious with the surroundings.
- Regulate grading to prevent erosion and cause minimal alteration of existing contours, and preserve important vegetative features along the highway.
- Protect the hillsides by allowing only low density development on steep slopes and along ridge lines.
- Prevent the need for noise barriers (sound walls) by requiring a minimum setback for residential development adjacent to a scenic highway.

After adoption of a scenic corridor protection program, the County must apply to Caltrans for scenic highway approval. If accepted, Caltrans provides documentation and signage that the highway has been designated as a Scenic Highway. Many, if not all, of the goals of the scenic corridor protection program can be accomplished through the design standards and zoning of this plan. If state Scenic Highway designation is desired, though, the scenic corridor protection program must be adopted separately from this area plan.

The General Plan identifies the following roads within the Planning Area as potential to become designated scenic highways or routes:

- State Route 175 from the community of Middletown to the western edge of the Planning Area. This scenic viewshed affords the traveling public views of open grazing lands with valley oaks, ridgelines and views of native vegetation and agricultural activities such as vineyards. From the western edge of the Planning Area looking east one can view the Callayomi Valley.
- Butts Canyon Road from its intersection with State Route 29 to the Napa County line. This County route provides views of a large valley with agricultural settings, farm houses, Detert Reservoir and ridgelines to the north and south. Two natural areas exist along the route - the Oak Savannah and the Oak Pine woodland.
- Big Canyon Road from the community of Middletown to the northern edge of the Planning Area. This County route provides views of rural and pastoral settings as one begins a climb heading northbound along Putah Creek and Big Canyon Creek. At higher elevations one can see the Callayomi Valley and Mt. St. Helena in the background.

The following areas should also be considered open space corridors of significance:

- Route 29 from the Napa County line to the Horne Winery.
- Route 29 from the "mansion" (20650 S. Hwy 29) to Spruce Grove Road, excluding commercial and industrial zones.
- Route 175 from the South Lake County Fire District headquarters to Anderson Springs Road.
- Butts Canyon Road from the Middletown Cemetery to the County Line.

RECREATION

The County Park System includes two facilities in the Planning Area: Middletown Pool/Tennis Park and the Middletown Trailside Nature Preserve. Middletown Pool/Tennis includes a public

³⁶ California Department of Transportation Website, California Scenic Highway Program (2005).

pool, tennis courts, a playground and picnic area on one acre along Big Canyon Road. Trailside Park Nature Preserve is a 107 acre passive recreation area on Dry Creek Road in Middletown. The park was acquired with a State grant under the California Wildlife Coastal and Parkland Conservation Act. The purpose of the legislation is to provide wildlife habitat, riparian areas and recreational benefits. The grant requires that the property be preserved in its natural state with minimal improvements. County improvements include a parking area, restrooms, picnic areas and 1.6 miles of trails for non-motorized use by horses, bicycles and pedestrians. Dogs are also allowed. The area is forested with mixed hardwoods such as oak, madrone, pine and manzanita. The park is also the site of "Art in the Park", which is a cooperative project with the Lake County Arts Council established by the Board of Supervisors in 2002. From May through mid October "eco-art" sculptures are displayed along the park trails, and according to Arts Council, the exhibit attracted 1,500 visitors in 2007.

Other recreation opportunities in Middletown include Central Park, located on Central Park Avenue, owned by the Middletown Central Park Association. An equestrian facility, the Middletown Senior Center and the Middletown Lions Club building are located on the Central Park premises. Middletown Unified School District provides baseball diamonds and football fields available to the public. The County has donated 11 acres to the school district to develop additional active recreational facilities.

Hidden Valley Lake Subdivision has recreational facilities for use by its residents and guests, which include horse stables, a lake for swimming and boating, tennis facilities, a clubhouse with meeting rooms, a campground and RV park as well as park and open space areas. An eighteen-hole golf course, restaurant and clubhouse are open to the public. The Anderson Springs Subdivision has a swimming area for its residents. The Planning Area also contains a few private resorts and campgrounds such as Harbin Hot Springs.

There are two potential recreational areas located along Putah Creek at the confluence of Big Canyon Creek. Although located on private property, these areas may be prime locations for development of passive, low-intensity use regional park facilities. The Big Canyon Road site is also significant in terms of its riparian habitat. Although they are on private land, as the need for water-oriented recreational facilities increases, these two sites, or sites in the general area, should be recommended to become parks. There are additional properties between Hartmann Road and Putah Creek in the Hidden Valley Lake that have limited development potential due to sensitive riparian habitat and flooding problems. As development occurs in the area, park facilities along Putah Creek should be required for new development projects that include these properties (see Coyote Valley Special Study Area).

Additionally there are extensive state and federal lands in or surrounding the Planning Area including Boggs Mountain State Preserve on Cobb Mountain, Robert Louis Stevenson State Park on Mt. St. Helena and large tracts of Bureau of Land Management (BLM) public lands. Portions of the Planning Area are part of loop trail systems running through these public lands, including: Big Canyon Loop (35 miles), Middletown/Pope Valley Loop (55 miles) and Tri-County Century (101 miles). These trails have difficult terrain and are used primarily by bicyclists.

The community highly values recreational opportunities. New residential developments should include park areas, where appropriate. All available grant assistance should be utilized to create new parks. Quimby Act³⁷ funds should be used for parks and facilities. Multi-agency cooperation should be sought with hiking, biking and equestrian usage in mind. Connections and future routes should implement the adopted bikeway plans. Hiking, bicycling and equestrian trails should be developed along scenic roads where they can be safely provided without adversely increasing public health and safety needs. Annual events that draw tourists to the area should be encouraged.

³⁷ Cities and counties have been authorized since the passage of the 1975 Quimby Act (California Government Code §66477) to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements.

The County should look into acquiring property that will provide for active recreational opportunities like soccer, softball, tennis, basketball and possibly a skate park. Another option would be for the County to enter into a Memorandum of Understanding (MOU) with the Middletown Unified School District to help fund and maintain these types of facilities on school district property. This type of MOU is common practice in many communities because it provides recreation facilities for the school’s use during school hours and also makes them available to the general public during non school hours, and avoids costly duplication of construction and maintenance costs.

The Konocti Regional Trails Plan under development should include recommendations for additional trails within the Planning Area, particularly those that expand on the existing loops and that include a loop between Middletown and Hidden Valley Lake. Following watercourses is recommended, and providing access to Putah Creek should be prioritized. A walking trail is also desired along St. Helena Creek in Middletown to encourage both tourists and locals to walk through town. The trail should run from Butts Canyon Road or Wardlaw Bridge to the intersection with Highway 29 south of town. Trail development should include safety lighting, benches or seating areas, protection of the waterway and riparian corridor and connections to downtown services where possible. Trail entrances should be well marked from major roadways.

Objective

3.7.1 Provide residents and visitors with opportunities to experience the county’s scenic settings and corridors, parks and recreational opportunities as bicyclists, motorists, hikers and equestrians.

Policies

3.7.1a Support development of improved and additional safe access for hikers, cyclists and equestrians on existing state and federal lands. Provide safe access to existing and new parks for hikers, cyclists and equestrians.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Develop trails and roadways consistent with the County Bikeway Plan and the Konocti Regional Trails Plan for hiking, bicycling and riding.	Department of Public Works	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

3.7.1b Support equestrian activities in the Planning Area. Any new land use regulations should not be more restrictive to horse ownership/stewardship in the greater Middletown area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Any new zoning or regulation should not be more restrictive to horse ownership/stewardship in the greater Middletown area. Require equestrian amenities on new development projects when feasible. Encourage the use of alternate road design standards to accommodate equestrian use.	Community Development Department Department of Public Works	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

3.7.1c Develop and distribute information about trail systems for information signs, kiosks or visitor centers.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Annual Expenditure
The County should consider funding a Visitor's Center in the Middletown Planning Area, and should consider pursuing a joint use agreement with Calpine for their Visitor's center.	Lake County Marketing & Economic Dev. Department	Funding Source	General Fund/Grants
		Priority	Moderate
		Timeframe	Long-Term

Objective

3.7.2 Protect and enhance scenic resources, promote a visually appealing environment and maintain the rural character of the Planning Area.

Policies

3.7.2a Protect the natural scenery along scenic highways and roads from new development that would diminish the aesthetic value of the scenic corridor.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Rezone areas on scenic roadways "SC" (Scenic combining district).The County should consider developing additional guidelines and standards within the Zoning Ordinance for all new developments within designated scenic districts. The County should consider amending the Scenic Combining district to prohibit billboard signage on commercial properties.	Community Development Department, Planning Commission, Board of Supervisors	Funding Source	None
		Priority	Moderate
		Timeframe	Short-term

3.7.2b Encourage preservation of open areas within the communities to retain a rural character and promote low intensities of development in areas separating communities.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Utilized the planned development process to cluster development and provide adequate open space or areas. Maintain lower density on large parcels located between Community areas.	Community Development Department	Funding Source	Application Fees
		Priority	High
		Timeframe	Continuous

3.7.2c Limit aesthetically unpleasing development on steep, highly visible slopes and on top of prominent peaks and hilltops.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Designate steep, highly visible slopes Rural Lands. Develop ridgeline policies and implement through the Zoning Ordinance.	Community Development Department, Planning Commission, Board of Supervisors	Funding Source	None
		Priority	High
		Timeframe	Continuous

3.7.2d Scenic and visual enhancement of Middletown’s major streets should be promoted, consistent with the design guidelines of the Middletown Special Study Area. Street tree planting, sizing of signs and undergrounding of utilities should be considered where feasible.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Require new commercial development to install street trees in accordance with an adopted streetscape plan. The County should work with PG & E and form an underground utilities district along Calistoga Street and Main Street in Middletown.	Community Development Department Board of Supervisors	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

3.7.2e Appropriate visual screening and highway setbacks shall be secured for industrial and service commercial uses. The use of native vegetation shall be promoted during development review of industrial and service commercial projects.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Develop & enforce design review guidelines for all commercial development. Require visual screening, setbacks, and encourage the use of drought resistant and indigenous vegetation.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

3.7.2f Strip commercial development shall be discouraged because of its negative impact to scenic resources and negative economic impacts.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Develop & enforce design review guidelines for all commercial development. Require visual screening, setbacks, and encourage the use of drought resistant and indigenous vegetation.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

Objective

3.7.3 Protect night skies from light pollution.

Policies

3.7.3a Promote the use of lighting that enhances visibility, convenience and public safety without the nuisance associated with glare and light pollution.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Include detailed lighting standards when developing Design Guidelines for the Planning Area. Lighting standards should follow dark sky principles to prohibit unnecessary and intrusive light trespass glare.	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	One-Time

Objective

3.7.4 Maintain and improve existing parks and expand park acreage in the Planning Area.

Policies

3.7.4a Park facilities should be promoted that complement protection of riparian and other important wildlife habitat while providing for the area's recreation needs.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Unknown
The County shall continue to seek funding sources for the acquisition, development and maintenance of new parks. Research using the Urban Stream Restoration Program from the California Department of Water Resources to restore, enhance and protect riparian areas.	Public Services Department, Board of Supervisors	Funding Source	Grants
		Priority	High
		Timeframe	Continuous

3.7.4b Encourage landowners to create easements along waterways or across lands that would connect existing and proposed trails.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Develop incentives for use by land-owners that would encourage dedication of trails.	Community Development Department, Board of Supervisors, Planning Commission	Funding Source	None
		Priority	High
		Timeframe	Short term

3.7.4c Coordinate with the Department of Public Services and the Konocti Regional Trails steering committee to integrate the trails needs of the Middletown Area into the master plan.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Establish a Middletown contact person with the Department of Public Services/Konocti Regional Trails Steering Committee.	Community Development Department, Board of Supervisors, Public Services	Funding Source	None
		Priority	High
		Timeframe	Short term

3.7.4d Preserve open space and increase recreation areas by developing a park lands acquisition program.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Unknown
Develop a park lands acquisition program that includes a combination of one or more of the following: impact fees for new home starts, special assessment districts and/or county service areas to fund acquisition of open space and dedication of easements on important rural lands.	Public Services Department, Board of Supervisors	Funding Source	Unknown
		Priority	Moderate
		Timeframe	Continuous

3.7.4e Create a streamside walking path along St. Helena Creek from the Perry's Deli area to the Butts Canyon Road Bridge.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Unknown
Provide input on trail development for the Konocti Regional Trails Plan and follow implementation measures outlined in the Plan. Consider creation of a Middletown area trails plan that focuses on specific trail development in the area. Obtain trail easements through purchase or donation.	Board of Supervisors, Public Services	Funding Source	Various
		Priority	Moderate
		Timeframe	Continuous

3.7.4f Develop an outdoor recreation site at the confluence of Dry and St. Helena Creeks on property owned by the water district at the Big Canyon Bridge.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Unknown
<p>Provide input on recreation site development for the Konocti Regional Trails Plan and follow implementation measures outlined in the Plan.</p> <p>Consider creation of a Middletown area trails plan that focuses on specific trail development in the area.</p>	<p>Board of Supervisors, Special Districts, Public Services</p>	<p>Funding Source</p>	<p>Various</p>
		<p>Priority</p>	<p>Moderate</p>
		<p>Timeframe</p>	<p>Medium</p>

- 4.1 LAND
- 4.2 WATER
- 4.3 FIRE, LAW ENFORCEMENT &
EMERGENCY MANAGEMENT
- 4.4 AIR QUALITY
- 4.5 NOISE

4

PUBLIC SAFETY

MIDDLETOWN FIRE STATION

Source: Dave Miinch



4.0 PUBLIC SAFETY

The Public Safety section covers potential threats to human health and safety such as landslides, floods, fires, air and water quality. Lake County is particularly susceptible to wildland fires, slope instability and flooding. The community is proud of the fact that it has relatively low crime, and is both a clean and safe place to live. However, the community has expressed the need for a higher law enforcement presence, increased fire and emergency medical services and an improvement in response times.

4.1 LAND

Soils and slope conditions in the Planning Area vary widely in their potential for land uses. Geologic hazards include slope instability and landslides, expansive soils, liquefaction, volcanism and seismic activity.

SLOPE INSTABILITY

Slope instability and failure (landslides) in steeper areas are a major geologic hazard in the Planning Area. The southeastern, southern and western sections exhibit the greatest degree of instability with evidence of landslides found in the Mayacamas Mountains which rise toward the crests of Mt. St. Helena and Cobb Mountain.

Slope failure may be quick and at high velocities or very slow with changes only noticeable over a period of years. Slope instability and landslides often result directly from over saturation during heavy rains, but can also be triggered by events occurring prior to this saturation period. Construction, grading and excavation activities can result in slope failure and contribute to erosion without the proper incorporation of mitigation measures. The Lake County Grading Ordinance sets standards and procedures for the protection of slopes during and after soil disturbance activities. The County should continue to actively pursue illegal grading violations in an effort to reduce public safety risks resulting from these earth moving activities which can result in soil instability. Earthquakes can also trigger landslides and other types of slope failures. During and immediately following an earthquake, considerable fracturing of earth materials can take place in hillside areas. When these materials later become saturated during heavy rainfall, additional slides and mudflows can also occur. Slope instability can be further aggravated by wildfires. Summer fires void an area of vegetation which holds the soil on hillsides. Heavy winter rains then often result in mudflows and landslides.

The potential for ground failure in the Middletown Planning Area is not well documented, but the presence of landslides in sloping areas suggests that such events occurred during seismic events or during wet seasons. Known active faults in the region are capable of generating groundshaking which could affect development within the Middletown Planning Area.

The easternmost portion of the area is fragmented by several faults, most of which are considered potentially active. The westernmost portion of the Planning Area experiences a considerable amount of seismic activity which is generally not intense and less than magnitude 3 on the Richter scale. The potential for a major earthquake in the Middletown Planning Area, is moderate to high.

Geologic studies are often required in areas of high landslide potential or geologic instability since development in these areas could jeopardize health and safety. The use of building envelopes in future subdivisions is a means to assure proper siting of development within the subdivision.

Lands with slopes averaging 30 percent or more are not suitable for significant levels of development due to the risk of ground failure, the difficulty in providing infrastructure in rugged terrain, the risk of wildfires and the increased risk of erosion. Development should be limited in these areas and commercial development on these steep slopes should be discouraged. The slopes within the Planning Area are shown in Figure 4-1.

EXPANSIVE SOILS

Unstable soils are also found in the form of expansive soils, which expand during wet periods and shrink when they dry. Structures built on expansive soils may sustain extensive damage as the soil exerts pressure during the wet expansion period and then shrinks away from the structure as it dries, reducing the stabilizing support. Additionally, where expansive soils occur on slopes, the soils are subject to soil creep. In areas of soil creep there is slow, permanent deformation and downhill movement of earth material.¹ Expansive soils should be accounted for during construction to prevent structural damage.

LIQUEFACTION

Liquefaction is a process in which unconsolidated water-saturated sediments behave like a fluid, usually as a result of seismic ground shaking. The potential for liquefaction is greatest in alluvial valleys and other areas underlain by relatively recent alluvium that contains saturated silt, sand or gravel where the water table is near the surface. Any development proposals in these areas should be evaluated for potential liquefaction hazards.

VOLCANISM

Although Mt. St. Helena is not a volcano, it was formed by volcanic activity in the past. The Clear Lake volcanic field has experienced a complex and cyclic eruptive history. Mount Konocti is currently the largest volcanic feature in the field and stands 4,299 feet high. Mount Konocti is the most recently active volcano in the County, although there are numerous smaller volcanic centers around it. The volcanic field has eruptive units that can be grouped into four major episodes of activity, the first around 2.1 million years ago and the most recent about 10,000 years ago. Geologic evidence suggests that the episodes were approximately 150,000 to 200,000 years apart, and were largely non-explosive.² The Clear Lake magmatic system is not extinct, as evidenced by the presence of hot springs, fumaroles (gas vents) and long-period seismicity, all of which suggest active status.³ Many scientists believe that a large magma body about 14 kilometers in diameter lies some 7 kilometers below the surface in the Clear Lake volcanic area.⁴ It is believed that this magma chamber provides the heat source for the Geysers, the world's largest producing geothermal field, which lies partially within the Planning Area.⁵ Although the USGS does not monitor volcanic activity in Lake County, the southern half of the County

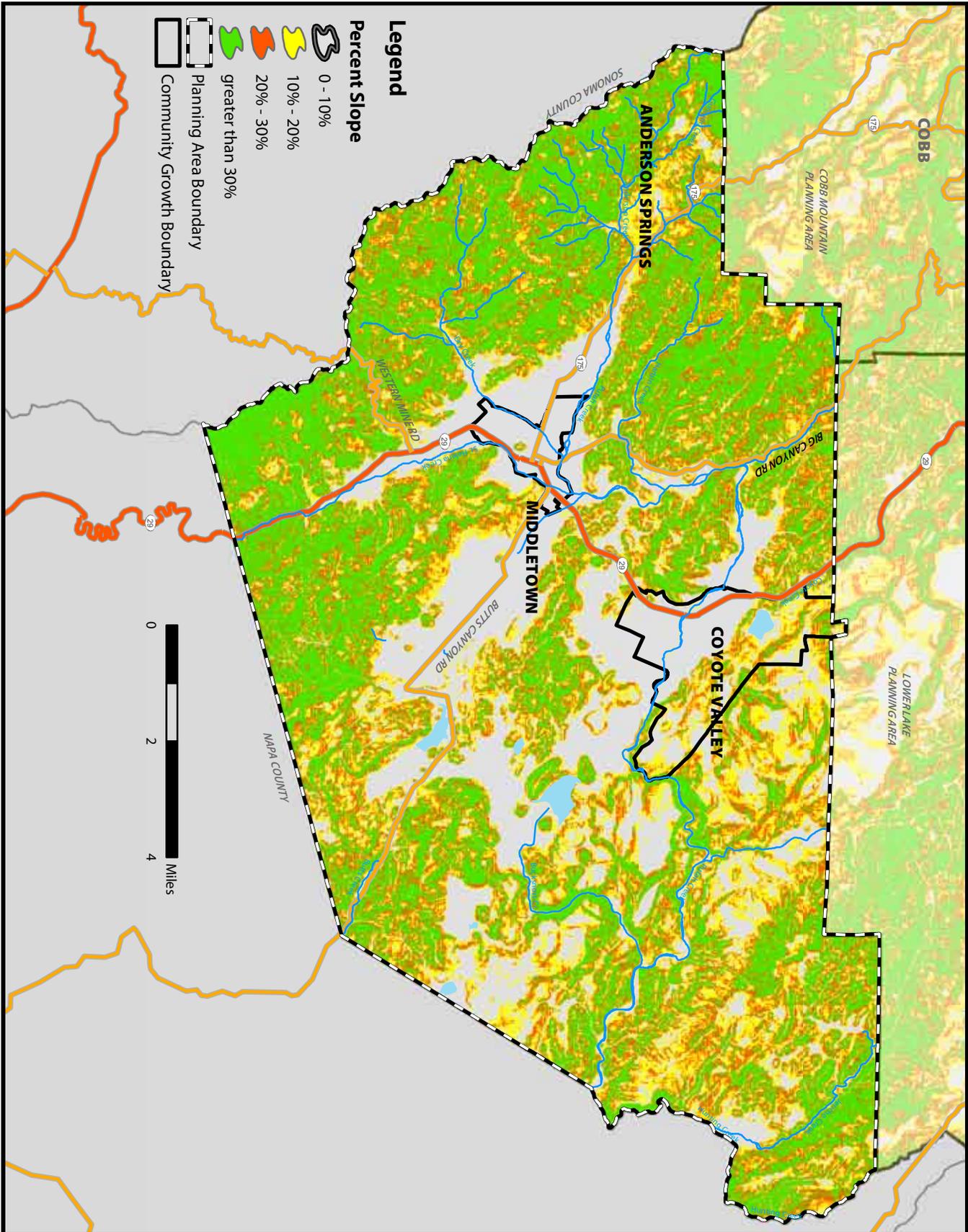
1 Slosson and Associates in cooperation with Sociotechnical Systems, Geologic and Seismic Technical Background Report for Seismic Safety Element and Geologic Hazards portion of Safety Element, General Plan, Lake County, California (1976).

2 Wood and Kienle, with contribution by Julie M. Donnelly-Nolan, *Volcanoes of North America: United States and Canada* (Cambridge University Press: 1990) 226-229, 354.

3 Wright and Pierson, *Living With Volcanoes*, The U.S. Geological Survey's Volcano Hazards Program, USGS Circular 1073 (1992).

4 Wood and Kienle, 226-229, 354.

5 Smithsonian Institution Website, *Global Volcanism Program* (2004).



- Legend**
- 0 - 10%
 - 10% - 20%
 - 20% - 30%
 - greater than 30%
 - Planning Area Boundary
 - Community Growth Boundary



PERCENT SLOPE
FIGURE 4-1



is one of sixteen areas in California identified as the most probable areas for future volcanic eruptions.⁶ However, it is likely that residents will have adequate warning prior to any future volcanic episodes, such as increased seismicity and the visible release of gases. Based on the geologic evidence of the episodic nature of the Clear Lake volcanic field and the recency of volcanic activity, it does not appear necessary to be greatly concerned with potential volcanic hazards in the time frame of this plan.

SEISMIC ACTIVITY

The Planning Area lies in a tectonically active, complex geologic setting within the San Andreas transform fault system in the northern Coast Ranges of California.⁷ Known active faults in the region capable of generating groundshaking which could affect development within the Middletown Planning Area are the San Andreas, Healdsburg-Rodgers Creek, Konocti Bay, Porter Creek, Mt. Jackson, Big Sulphur Creek, Mercuryville, Geysers Peak and Mayacama Faults. Potentially active faults located within the Planning Area that could produce ground shaking are the Callayomi and Childers Peak Faults.

The State of California and the USGS have monitored seismic activity in Lake County for the last 25 years. Geologists believe that earthquakes are the result of the release of accumulated strain energy by rupture, and the resulting movement along faults. The direct effects of this movement include ground shaking and possible displacement or rupture of the ground surface along the trace of the fault. Other results of seismic activity include landslides due to slope failure, liquefaction, seiche and fire due to damaged utility lines.

There are no records of major earthquakes centered within the County, and only four large earthquakes have been instrumentally recorded in the County. The most significant structural damage resulted from earthquakes centered outside of the County. The San Francisco Earthquake of 1906 severely shook Lake County, especially in areas of unconsolidated alluvium in the City of Lakeport and town of Upper Lake. Areas of consolidated rock experienced less shaking with no building damage.⁸ At the time there was not much development in the alluvial valleys of the south county, and little damage was recorded. Buildings constructed after 1964 are required to meet earthquake safety codes to reduce potential seismic impacts, but older structures built with un-reinforced masonry such as those in downtown Middletown have a high risk of earthquake damage. Guidance and assistance should be provided to retrofit these buildings without damaging historic values.

The Geysers area is seismically active and experiences frequent “micro-seismic events”, which are small quakes below 3.0 on the Richter scale. Evidence now indicates a relationship between micro-seismic activity and geothermal production in the Geysers. This activity is one cause of structural damage to foundations and walls over the years to older buildings in the Anderson Springs area. Although the area is naturally seismically active, concerns have been raised that the withdrawal and infusion of water into the steamfield reservoirs may increase the size or frequency of these events. The USGS monitoring system records all seismic events and the Lake County Seismic Monitoring Action Committee (SMAC) reviews these records regularly to determine whether there appears to be increased activity or changing trends. The subject of induced seismicity is addressed in the Geothermal Resource element of the General Plan.

6 Chesterman, C.W., *Volcanism in California*: California Division of Mines and Geology, California

7 *Geology*, v. 24, n. 8 (1971) 139-147.

8 Wood and Kienle, 226-229, 354.

Objective

4.1.1 Minimize the loss of life and property due to earthquakes, landslides and other geologic hazards.

Policies

4.1.1a Require site specific soils analysis of lands identified as having high shrink-swell characteristics before development is allowed to determine which soils can adequately support structures and that foundations are designed to withstand expansive soils.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Require soil/site analysis on sites prone to geologic hazards such as shrink-swell potential, landslide risk or other geologic hazards. Enforce existing regulations and where appropriate establish new regulations related to site preparation and building construction that will protect life and property from seismic and geologic hazards.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

4.1.1b Provide property owners with information to assist them in addressing their risks from landslides.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Maintain a mapped database of parcels within potential landslide risk areas.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

4.1.1d Land division and commercial development should be strongly discouraged on lands with slopes averaging 30 percent or more, in landslide areas and areas of unstable slopes and soils as designated by the State Department of Mines and Geology and the United States Geological Survey.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Require appropriate studies for land division and commercial development of land with slopes averaging 30 percent or more, or in known areas prone to landslides and liquefaction. Require studies consistent with the Alquist-Priolo Fault Zoning Act. Areas with slopes averaging over 30% that are not already developed should be zoned and designated Rural Residential or Rural Lands in order to direct higher density development to areas that will be safer for the public. Geotechnical studies prepared by engineering geologists or other qualified professionals shall be required for development projects in areas determined to have existing or potential landslide or seismic hazards. Such studies shall provide sufficient information to determine the extent of any landslide or seismic hazard and recommend mitigation.	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Continuous

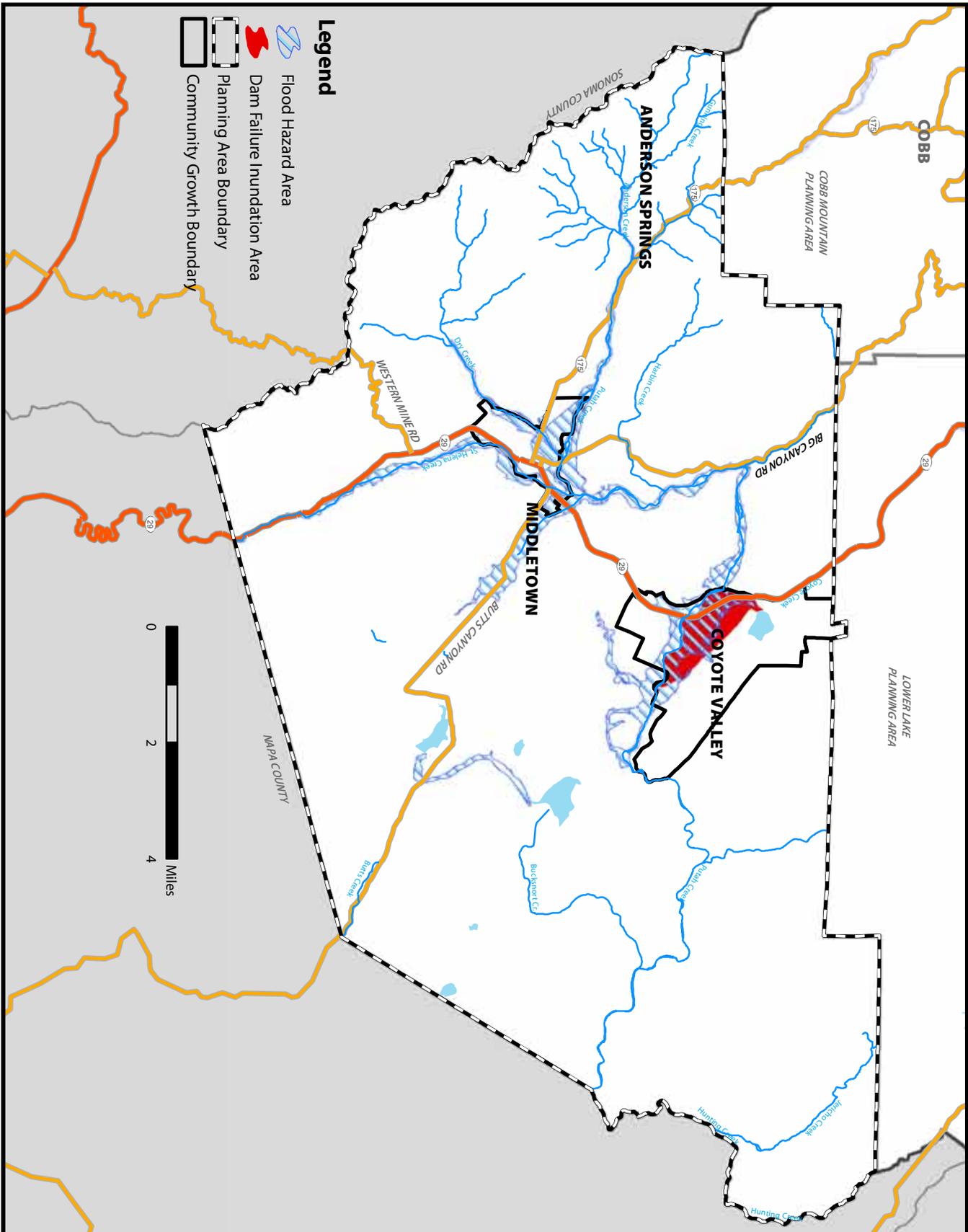
4.1.1e Reduce potential seismic impacts for structures considered to be high risk, including: older structures and un-reinforced masonry type buildings.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Provide guidance and assistance to owners of at risk buildings to aid in retrofit activities without damaging historical values. Continue to inventory dangerous un-reinforced masonry buildings and establish a risk reduction program, including the posting of risks to the public in these identified buildings.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

4.2 WATER

FLOODING

The 100-year floodplain maps are part of the Federal Insurance Administration’s Flood Insurance Study for Lake County. The purpose of the study was to designate areas located in floodways and floodway fringes. These areas are subject to inundation during a flood event that has a 1% probability of occurrence each year. Structures located within floodways and floodway fringes are subject to the requirements of the National Flood Insurance Program (NFIP). The NFIP requires that all mortgaged structures located in these areas maintain flood insurance. New construction and substantial improvements in flood zones must be constructed to standards that reduce the risk of future flood damage.



**FLOOD HAZARD
FIGURE 4-2**



Potential flooding along St. Helena, Putah, Anderson and Dry Creeks is an important concern in the Middletown Planning Area. Substantial development encroaches into areas designated as a 100-year floodplain, particularly in the area of the Hidden Valley Lake subdivision, the community of Middletown and in the Butts Canyon area. Most of this development occurred prior to current regulations for development within the 100-year floodplain. This development is considered to be legal-nonconforming, but not conforming with today’s standards. Current building codes require new residential structures to be constructed with the lowest floor level at least one foot above the 100-year base flood elevation. This requirement also applies to residential replacements and substantial repairs and additions to existing structures.

Appropriate setbacks from areas that flood as well as drainage mitigation measures should be included in all new development proposals. The Lake County General Plan calls for restrictions on development within designated floodway and floodway fringe areas and recommend the following guidelines:

- Critical facilities (those facilities that should be open and accessible during emergencies) should not be permitted.
- Passive recreational activities (those requiring no development or non-intensive development, such as hiking, horseback riding and picnicking) are permissible.
- New development and divisions of land, especially residential subdivisions, shall be developed to minimize flood risk to structures, risk to infrastructure, and ensure safe access during flood conditions.
- The County shall impose stringent controls on approvals of septic systems where there is a substantial likelihood of infiltration of floodwater into the systems, and/or the discharge from the systems into floodwaters.

All buildings and utilities must be designed to conform to the County Floodplain Management Ordinance (Chapter 25 of the Lake County Municipal Code) and the County Storm Water Management Ordinance (Chapter 29 of the Lake County Municipal Code).

DAM INUNDATION

A section of the Hidden Valley Lake Subdivision and areas along Putah Creek are subject to potential inundation if the Coyote Creek Dam catastrophically fails. The affected inundation area stretches from the Coyote Creek dam spillway to Highway 29 and southeasterly to the Coyote Creek channel, which discharges into Putah Creek. The potential affected area of the subdivision includes that entire portion of the valley north of Highway 29 and south of Hidden Valley Road and Mountain Meadow Road. It is possible that a portion of the water might flow down Coyote Creek, and then continue southwesterly across Highway 29 more directly into Putah Creek. Future development in this hazard area should be analyzed against any evacuation plans on file for the area. Projects that pose harm to property and humans should be denied. The potential dam inundation area is shown in Figure 4-2.

UNDERGROUND FUEL TANKS

If not properly maintained, underground fuel tanks can harm human health and the environment by leaking or allowing spills or overflows into the soil, groundwater or surface water. The California Water Quality Control Board keeps a list of the locations of underground fuel tanks. The Lake County Environmental Health Division has local responsibility of monitoring these

underground tanks for leaks and organizing appropriate clean-up if a spill is detected. Approximately 10 of these sites are located in the Planning Area. The County should continue to monitor these underground fuel sites on a regular basis and contact appropriate state agencies immediately if a leak is suspected.

Objective:

4.2.1 Minimize the loss of life and property due to flooding.

Policies

4.2.1a Provide appropriate land use planning so as to minimize the risks of flooding, particularly in designated floodplains.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Retain and enforce Floodway-Fringe and Floodway overlay zones that restrict development in the floodplain and floodway	Community Development Department, Department of Public Works & FEMA	Funding Source	None
		Priority	High
		Timeframe	Continuous

Objective

4.2.2 Protect, maintain and improve the potable water quality in the Middletown Planning Area for the long-term benefit of its residents.

Policies

4.2.2a Regulate land uses in flood prone areas and allow development in those areas only with appropriate mitigation measures.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Adhere to existing Floodplain Management Ordinance and Uniform Building Code requirements. Require new development to include measures to prevent increased flooding, run-off and offset any increase in peak run-off rates. Require any new land division in flood zones to connect to public sewer.	Community Development Department, Department of Public Works & FEMA	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

4.2.2b Proposed developments that involve riparian areas, wetlands and wet meadows subject to possible local flooding or seasonal inundation shall include appropriate setbacks from such wet areas.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Require additional setbacks from wetlands, riparian areas and floodways that provide adequate protection for buildings and occupants.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

4.2.2c Update the comprehensive master plan for flood control management in the Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Unknown
The County should support efforts to update the master drainage plan for Middletown.	Department of Public Works	Funding Source	General Fund/grants
		Priority	Moderate
		Timeframe	One-Time

4.2.2d Monitor underground fuel storage tanks in flood-prone areas.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Minor
Check underground tanks for leakage on a regular basis.	Environmental Health	Funding Source	General Fund
		Priority	High
		Timeframe	Continuous

4.3 FIRE, LAW ENFORCEMENT & EMERGENCY MGMT.

Increased travel time for emergency fire equipment and law enforcement typically results from steep, winding roads. There is also limited egress during natural disasters and public emergencies. Private roads and driveways often have locked gates that hinder the ability of emergency services to access remote areas. The local fire districts and CALFIRE promote the use of Knox Boxes on gates that are kept locked, with keys available to the appropriate fire district and CALFIRE. To improve public safety, new development proposals must incorporate looped road systems with multiple access points and bridges with adequate structural strength to support emergency response equipment.

A new fire and emergency training tower was recently installed on the Middletown fire station property. This allows fire, law enforcement and emergency medical technicians to train in-county and to meet their annual licensing requirements without traveling long distances out of county.

The General Plan, specifically the Public Facilities & Services and Health & Safety Elements, contain goals and policies addressing fire, law enforcement, hazardous materials and emergency management countywide. Other sections of this Area Plan contain development policies that address access (Section 5.3: Networks) and site design (Chapter 6: Special Study Areas & Chapter 7: Design Guidelines) which include methods of reducing public safety risks.

FIRE

The South Lake County Fire Protection District (SLCFD) operates in cooperation with the California Department of Forestry (CALFIRE) from the Middletown fire station on Highway 175 just west of downtown. The California Department of Forestry's (CALFIRE) State Responsibility Area covers the entire Planning Area and the SLCFD district covers over 200 square miles including the entire Middletown Planning Area, a portion of the Cobb Mountain Planning Area and 17 square miles in the Lower Lake Planning Area. The SLCFD provides emergency medical service throughout its district. The main station in Middletown is manned 24 hours per day by two fire department personnel. There also two full-time paid stations in Cobb and Hidden Valley Lake. These stations are further supported by volunteers from the South Lake Fire Safe Council. Air tankers responding to this portion of Lake County are located at the Sonoma County Airport in Santa Rosa. The availability of air tankers to assist in fire suppression efforts is limited to declared fire seasons only.

Fire is a significant safety concern countywide, and there have been several major fires in the Planning Area. Five blocks of the original downtown Middletown burned down in 1918. There were two fires in the 1960s, one of which burned 52,000 acres between Mt. St. Helena and Santa Rosa, and the Middletown dump fire which burned 15,000 acres. In 1985, the Hidden Valley Lake fire, which left many residents of that subdivision homeless, occurred when much of the California Department of Forestry's fire fighting apparatus was out of the County on other fires. The largest recent fire, Geysers Fire, occurred in September of 2004. The Geysers Fire started near Socrates Mine Road off Highway 175 and burned over 12,000 acres in Lake and Sonoma Counties. The fire started near one of the geothermal power plants. It spread south and west through steep, dry and brushy terrain into Sonoma County threatening homes, vineyards and power plants. Due to the efforts of 2,600 firefighters, none of the power plants or vineyards were destroyed. Four homes were lost and property damage was limited.

Fire hazard increases with steep topography, as steep slopes cause fires to burn faster. Limiting residential density in areas with steep terrain will lessen the exposure of people to wildland fires and reduce the risk of increased human activity that can lead to the start of a fire. The majority of the existing subdivisions in the Planning Area are bounded by dense vegetation, increasing the chance of fires spreading quickly. Fuel breaks are encouraged around existing development. The area's declared fire season generally occurs from July 1 through October 15 following normal rainfall years.

With the exception of the Callayomi, Guenoc, Coyote and Long Valleys, the Middletown Planning Area is classified as a very high fire hazard area due to its dryness, vegetation, and rough terrain. Figure 4-3 shows the Fire Hazard Zones. The "ISO" fire insurance rating consists of an evaluation of equipment, access, structures and available water supply for a fire district. The ISO rating scale ranges from 1 to 9 and is used as a basis for fire insurance rates. Fire insurance ratings for the communities of Middletown and Hidden Valley Lake are 6 with the remaining rural areas rated at 9.

Access from the Anderson Springs Subdivision to Highway 175 is a concern since there is essentially one roadway in and out of the subdivision.

As additional people move into the Middletown Planning Area, more emergency and fire protection services will be needed. According to the South Lake County Fire District, structural fires have been on the decline in recent years while the need for emergency services has been increasing. The decline in structural fires can be attributed to public awareness and updated building codes. Brush fires in wildland areas are a constant threat in rural areas. As population

growth in the area continues, fire districts must improve facilities and equipment to continue providing efficient and effective service. In addition to providing all necessary on-site fire safety improvements, new development will continue to be subject to fire mitigation fees collected by the local fire protection districts. These fees help to offset the cost of obtaining new equipment. County Ordinance Number 2114, adopted in October of 1992, established the Lake County Capital Fire Facility and Equipment Plan and authorizes collection of these fees. The SLCFD and CALFIRE provide recommendations on all subdivisions of land, as well as other development projects, based on the Fire Safe Regulations.

Planning for more effective fire protection in communities and wildland areas involves integrating local circulation patterns, vegetation management, building code requirements and water storage. The communities of Middletown, Hidden Valley Lake and Anderson Springs have adequate water for domestic and structural fire protection. In these developed areas, water availability for fire protection purposes requires additional storage and higher flows and pipeline pressures than that needed for domestic uses. The location of water mains, fire hydrant spacing, and development of looped circulation systems all contribute to increasing the level of fire safety in developed areas.

Development projects should be designed to include adequate road access of fire equipment as well as adequate water supply, building construction, vegetation clearance, fuel breaks, and greenbelts for cost-effective fire prevention and protection. On-site water storage can include ponds, lakes, tanks or wells where water is reserved for fire protection.

Wildland fire hazards generally do not prohibit development, yet they do require that development meet safety standards commensurate with the degree of risk. In planning for wildland fire protection, adequate access and circulation, vegetation management and water availability must all be integrated into the project design. In August 2009 the Board of Supervisors adopted the Lake County Community Wildfire Protection Plan. This plan is aimed at reducing risks and hazards from wildfire while exercising due care of natural resources. The plan includes the development and implementation of fire protection and fuel hazard reduction programs and activities.

The State of California has adopted minimum fire safety standards, known as Fire Safe Regulations (Public Resources Code 4290) that are administered by CAL FIRE within its State Responsibility Areas (SRA). All development applications, including residential building permits and land divisions, within the SRA must be reviewed by CAL FIRE for compliance with the Fire Safe Regulations prior to issuance of County permits or entitlements. Additionally, Lake County development standards for new land divisions address site access, road widths, bridges, hydrant placement and water availability that meet or exceed State standards.

The Fire Safe Regulations require all-weather surfaces capable of supporting a 40,000-pound load for roads and driveways. The regulations also include on-site water storage requirements in areas that do not have community water systems and hydrants. On-site water storage includes tanks, ponds or pools where water is accessible for fire protection purposes. CAL FIRE and the local fire districts require that water storage systems for new developments be provided with gated valves that allow tapping with fire hoses. CAL FIRE, local fire districts and the Lake County Subdivision Ordinance require the establishment and maintenance of fuel breaks. CAL FIRE and local fire districts additionally encourage the reduction of fuel loading.

Enforcement of the Uniform Building and Fire Codes on new and existing structures will also reduce potential fire hazard. Many of these suggestions are listed in the Fire Safe Guides (California Division of Forestry and U.S. Forest Service, 1980) which were adopted by the South Lake County Fire Protection District.

LAW ENFORCEMENT

The Lake County Sheriff’s Department has State mandated responsibilities which include: the operation of county jails, providing bailiffs for the court system, all criminal investigations and chief process server for the County. The Sheriff also serves as the Lake County Coroner. In addition to these State mandated responsibilities, the Sheriff also provides patrol services and, in conjunction and cooperation with the State Highway Patrol, responds to law enforcement emergencies and road accidents. Although patrol services are not mandated by the State, the department considers this to be its top priority for public safety in Lake County. The Sheriff’s Department is funded directly by taxpayers. Despite the financial burdens imposed by the multiple mandates on the department, 80% of its sworn deputy sheriffs are assigned to patrol and enforcement countywide. Six officers (one sergeant and five deputies) are on roving patrol, or approximately one officer per 10,000 people.

Good land use planning can encourage the growth of civic pride, community spirit and physical safety, all of which combine to reduce the burden of patrol and enforcement. Community spirit and a willingness to get involved can reduce violent crime by as much as 40%.⁹ The incorporation of mixed-use developments where residents living near commercial establishments have the effect of deterring some forms of crime simply by having people in the area when businesses are not in operation. Vacant, poorly maintained properties and the lack of windows on the street imply that nobody is watching and nobody cares. Infill development, community gardens, shared courtyards and pocket parks can also have a positive influence on reducing crime. Traffic calming measures designed to reduce speeds and control access in residential neighborhoods has been shown to reduce the number and severity of vehicle related accidents. Creating more non-motorized access and pedestrian amenities, such as benches, plazas and walkways improves the sense of community and encourages more personal interaction, which in turn increases motivation to protect the community. Many of these policies are included in Chapter 5: Community Development section. Additional smart growth principles are also supported by the General Plan.

HAZARDOUS MATERIALS

Hazardous materials are monitored and controlled by a number of county, state and federal agencies, including local fire districts, the County Environmental Health Division, the Air Quality Management District and the state and federal Environmental Protection Agencies (EPA’s). The department of Public Services and South Lake County Refuse sponsor annual round-up days for household chemicals.

Businesses that use hazardous materials need to have emergency management plans. There are no Superfund clean-up sites within the Planning Area. Superfund is the federal government’s program, through the Environmental Protection Agency, to clean up the nation’s uncontrolled hazardous waste sites. The Geothermal Inc. waste landfill on Butts Canyon Road contains no hazardous wastes and has been closed under the supervision of the Regional Water Quality Control Board, Sacramento Valley Region.

⁹ Local Government Commission Center for Livable Communities brochure, “Land Use Planning for Safe, Crime-Free Neighborhoods.” Additional references listed in the publication.

PUBLIC EMERGENCIES

A public emergency is defined as a widespread event that overwhelms local response capabilities, such as severe floods, earthquakes and other major disasters. The Office of Emergency Services (OES) is operated by the Sheriff’s Department, which would establish a command center to implement the County Emergency Operation Plan (EOP) as outlined in the Public Safety element of the General Plan after such an emergency. County personnel and vehicles would be placed on-call to the Department to assist the public and dispatch emergency personnel, equipment, supplies and information bulletins. The EOP complies with the Standardized Emergency Management System (SEMS) that integrates local, state and federal management plans, computers systems and rescue equipment, and it includes an emergency evacuation plan should the need arise. New development plans must consider emergency ingress and egress, access for rescue response and must not conflict with the County EOP.

Objective

4.3.1 Minimize loss of life, bodily injury and property damage from structural fires, wildland fires, medical emergencies and public emergencies.

Policies

4.3.1a Coordinate land use planning with needed services, personnel and facilities for fire departments, law enforcement, medical emergencies and public emergencies.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Encourage inter-agency cooperation to develop emergency plans.	Community Development Department, Public Services Dept., CALFIRE & local fire districts	Funding Source	None
		Priority	High
		Timeframe	Long-term

4.3.1b Continue to support and assist in the implementation of adopted emergency preparedness plans and regulations.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Provide support of local agencies in implementing measures associated with the Lake County Community Wildfire Protection Plan. Encourage inter-agency cooperation in the implementing regulations outlined in the Wildland Interface Code and Fire Safe Standards.	Community Development Department, Public Services Department, CALFIRE & local fire districts	Funding Source	None
		Priority	High
		Timeframe	Long-term

4.3.1c Maintain an aggressive fire prevention program.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Encourage inter-agency cooperation to develop emergency plans. Support local fire safe council programs to provide information and services such as volunteer fire firefighters and mobile chippers for vegetative debris from clearing.	Community Development Department, Public Services Department, CAL FIRE & local fire districts	Funding Source	None
		Priority	High
		Timeframe	Long-term

4.3.1d Residential development in high and very high fire hazard areas shall meet the following fire protection standards unless adequate fire suppression facilities are already available:

- Adequate fuel breaks and fuel reduction shall be created and maintained.
- Adequate water storage shall be provided and maintained.
- Residential access roads shall not exceed slopes that allow safe passage by fully loaded fire equipment, and shall be maintained. Roads and driveways shall meet CAL FIRE standards and be either looped or double-access to provide escape routes in the event of wildland fire emergencies.
- Development shall be clustered where appropriate to take advantage of fuel breaks and improved access to reduce fire danger.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Use the most recent criteria from CAL FIRE & local fire protection districts in conditions of approval for new development. Adherence to CAL FIRE Fire Safe Regulations and the Lake County Subdivision Ordinance. Require fuel breaks, fuel reduction, water storage tanks, roads & driveways accessible to heavy fire trucks, multiple access roads & encourage clustering of development in appropriate areas. Green belts are encouraged. Continue to require review by CAL FIRE & local fire protection districts prior to permit issuance.	Community Development Department, CALFIRE & local fire protection districts	Funding Source	None
		Priority	High
		Timeframe	Continuous

4.3.1e Homeowners and homeowner’s associations are encouraged to work with CAL FIRE, local fire protection districts, the Lake County Sheriff and adjacent property owners to establish and maintain programs for annual vegetation clearing and fuel breaks around the existing subdivisions in efforts to reduce fuel loading.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Require fuel breaks, fuel reduction, water storage tanks, roads & driveways accessible to heavy fire trucks & encourage clustering of development in appropriate areas for new development. Encourage existing developments to establish fuel maintenance programs. Encourage homeowner cooperation with local associations, fire districts and CALFIRE to annually clear vegetation. Enforce codes for annual clearing.	Community Development Department, CAL FIRE & local fire protection districts	Funding Source	None
		Priority	High
		Timeframe	Continuous

4.3.1f Improve community involvement to reduce law enforcement needs and support the use of new technology and creative staffing solutions to reduce response times.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Encourage and support efforts by local citizens to form neighborhood watch programs. County shall seek funding sources to fund and staff a sub-station within the Planning Area	Sheriff's Department	Funding Source	None
		Priority	High
		Timeframe	Long-term

4.3.1g Require that locked gates on private roads be accessible to emergency personnel.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Property owners should install "Knox Boxes" on locked gates and provide keys to fire personnel.	Local & State Fire Agencies	Funding Source	None
		Priority	High
		Timeframe	Long-term

4.4 AIR QUALITY

Air pollution is defined as any air contaminant that is present in the atmosphere in sufficient quantities to be harmful or injurious to the public welfare, health of human, plant or animal life, or property. Some pollutants can have severely damaging effects on health and property.

Lake County has consistently been rated as having the best air quality in the State. It is a valuable resource that should be maintained. The Lake County Air Basin is in attainment with both state and federal air quality standards, and the air is relatively low in pollutants in comparison with much of the state. The Lake County Air Quality Management District (AQMD) applies air pollution regulations to all major stationary pollution sources and monitors air quality. Air resources should be protected by careful regulation of air emissions from various sources to maintain the high air quality enjoyed in the County.

The Lake County Air Basin lies entirely within the Coast Range Mountains and constitutes one of the major inter-mountain basins of the region. Isolated valleys can prevent the dispersion of trapped pollutants during inversion periods. Inversion is an atmospheric condition where a layer of cold air is trapped near the ground by an overlying layer of warm air. The warm air prevents the cooler air from rising and dispersing any accumulated pollutants. Instead, the contaminated air is spread horizontally, exacerbating the situation. Combined with the natural air current effects of the surrounding hills and mountains, the Callayomi Valley, including the community of Middletown, is subject to localized poor air dispersion during portions of the year. Inversions trap pollutants carried into the Callayomi Valley from remote industrial sources as well as stagnating the locally generated pollutants.

Residential, commercial, agricultural, industrial and recreational development is expected to increase in the future. Higher concentrations of particulates (PM-10), carbon monoxide, hydrocarbons, oxides, and ozone are expected from localized development. The healthful impacts of the additional air quality burden are a major concern.

According to the Lake County Air Quality Management District, open residential burning in the Planning Area is the primary source of localized fire hazards and nuisance smoke. Large, prescribed veg-

etation management and agricultural burns also have the potential to impact large areas if not carefully conducted and managed. Additionally, the clearing of subdivision lots often involves the burning of vegetation. Chipping of vegetative materials should be encouraged in both residential development and agricultural operations.

Agricultural operations are a major source of particulate air pollution in Lake County. Dust from agricultural tillage, burning, the use of fertilizers and chemical sprays, unpaved driveways and roads and other related agricultural activities can conflict with residential uses. There are ways to reduce this air pollution, such as changing the alignment of furrows and timing burns in relation to wind directions and wind speed. Separation between conflicting land uses is also critical for public safety. The use of buffers between incompatible uses to minimize disturbance to agricultural uses from urban or suburban uses should be required of new development.

An air pollutant and known cancer causing agent (when inhaled) is natural asbestos, which is found in some forms of serpentine.¹⁰ Serpentine is a major rock-forming mineral that is a constituent in many metamorphic and weathered igneous rocks and serpentine soils are common throughout the entire Planning Area. Where soils contain more than 0.25% asbestos, a serpentine dust mitigation plan should be required for approval by the Air Quality Management District prior to construction or earth movement (See Chapter 3 for additional information on Serpentine Soils).

Emissions associated with geothermal development include hydrogen sulfide, a toxic gas known for its characteristic “rotten egg” odor, hydrocarbons, carbon dioxide, and varying amounts of light and heavy metals found in the geothermal steam. In Anderson Springs, seasonally poor meteorological conditions which occur during the late summer and fall months have resulted in exceedances of the Ambient Air Quality Standard (AAQS) for hydrogen sulfide. The standard (0.03 parts per million, ppm) is based on a determination of an odor nuisance to a large portion of the population. Complaint records indicate 0.008 ppm will result in citizen concern. Limited monitoring has also shown that the PM-10 standard has been exceeded. Contributing sources of PM-10 are residential wood smoke, engine exhaust, unpaved roads and natural geothermal venting in the area.

The Lake County General Plan contains goals and policies “to reduce the generation of air pollutants and promote non-polluting activities to minimize impacts to human health and the economy of the county.” [Goal HS-3] Policies include point monitoring, use of Best Available Air Pollutions Control Technologies, reducing vehicle miles by locating housing near jobs and retail services, clustered, mixed-use and transit oriented development, paving of roadways and many other policies.

Objective

4.4.1 Minimize air pollution emissions and maintain clear visibility for the area’s viewsheds.

Policies

4.4.1a Aggregate mining particulate control measures should be encouraged especially in areas adjacent to existing or approved residential development.

¹⁰ Wolfram Research Website, Asbestos Information (2005).

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Review all mining applications for adherence to local and state air quality standards. Require annual monitoring of new sites for compliance with air quality standards.	Air Quality Management District, Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

4.4.1b Land use patterns that reduce air quality problems related to local geography, terrain and air flow patterns shall be promoted. New development that adjoins conflicting existing uses shall establish and maintain site-specific buffer zones to reduce air quality impacts.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Require buffer zones for new development adjoining conflicting existing uses. Buffer zones shall be site-specific, taking into account air flow patterns. Promote higher density infill development within community boundaries as well as transit oriented, mixed use and cluster development linking jobs, services and entertainment with housing.	Community Development Department & Lake County Agricultural Commissioner	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

4.4.1c Alternatives to open burning of vegetative waste such as chipping or composting should be promoted.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Printing costs
Distribute education material on alternatives to open burning for green waste disposal. Continue to fund chipping programs whenever possible.	Community Development Department & Lake County Air Quality Management District	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

4.4.1d Reduce air quality impacts related to release of asbestos related materials during disturbance of serpentine soil areas.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Printing costs
Prior to the allowance of construction or grading activities in areas known to contain or located near identified serpentine soil regions a serpentine soil dust mitigation plan should be prepared and submitted to the Lake County Air Quality Management District for review and approval.	Community Development Department & Lake County Air Quality Management District	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

4.5 NOISE

The Middletown Planning Area encompasses a diverse range of land uses including noise sensitive resort, recreational and residential uses. Noise can be simply defined as any unwanted sound which annoys or disturbs humans or which causes or tends to cause an adverse psychological or physiological effect on humans. Since the perception of noise is subjective, the setting in which the sound is generated is a critical factor. Because the Planning Area is sparsely populated, sound from other than natural sources may be considered as intrusive noise by much of the population.

Standards for ambient noise in Lake County and policies for noise abatement and land use compatibility are found in Chapter 8 of the General Plan. These policies are designed to protect residents of the County from harmful noise levels. They limit new commercial, industrial and other noise generating uses from being located adjacent to residential uses and sensitive receptors without acoustic analysis and noise mitigation measures. The General Plan further states that sensitive receptors include, but are not limited to, schools, health care facilities and libraries. In the rural Middletown Planning Area there are a number of resorts, retreats, outdoor recreation areas. These areas tend to host outdoor activities in the summer months that can affect noise in the area. This can lead to potential conflict between resort uses and nearby residences. During the review of special event and use permit applications, particular attention should be paid to the proposed locations of outdoor events and their possible impact to surrounding areas.

The County has developed standards for maximum sound emissions averaged over a 24-hour period (Ldn). The residential noise standard is 55 dBA with a 10 dBA reduction applicable between the hours of 10:00 PM and 7:00 AM. This is a minimum performance standard which can be modified by permit conditions for projects near identified sensitive resource areas. Best Available Control Technology (BACT) is normally applied to manage geothermal-related noise generation.

Since much of the Planning Area is mountainous, undeveloped and sparsely populated, sound levels under calm conditions can be extremely low. Measurements indicate the background decibel levels range between the high 20's to low 30's. Geothermal-related noise sources such as well drilling, construction and commercial truck traffic are primary noise sources. Thus the difference between background and permitted noise levels may be very noticeable and in many cases result in complaints even though levels are within the legal limits. Typical agricultural practices are exempt from County noise policies in rural and agricultural lands. New development proposed in or adjacent to these areas must be made aware of the County's Right to Farm Ordinance prior to the issuance of permits for new construction.

Techniques for noise reduction include installation of high efficiency "hospital or residential grade" mufflers on stationary engines, acoustic barriers, limits to operating schedules, containment of equipment within acoustically treated structures or blankets, use of natural barriers for equipment placement, specially designed steam muffler devices and a review of operating procedures. Under certain conditions, the control of objectionable noise is not practical due to conflicting requirements primarily those related to safety. A primary contributor to excess noise levels in urban and high density residential areas are exterior heating, ventilation and air-conditioning (HVAC) units. HVAC systems should be selected for low decibel output and located or muffled as necessary to achieve acceptable noise levels.

Objective

4.5.1 Protect the general public from unnecessary and harmful noise levels and provide extra protection from noise-sensitive receptors.

Policies

4.5.2a New multi-family residential subdivisions proposed within the 55 and above dBA contours along Highway 29 shall be required to complete acoustical analysis and utilize noise mitigating construction techniques adequate to meet general plan noise standards.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Require new residential developments to undergo acoustical analyses. Mitigate noise impacts through location of development, earthen berms, etc.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

4.5.2b Noise-generating uses adjacent to residences, parks, schools, health care facilities and similar uses shall comply with the county's noise compatibility criteria set forth in the general plan and the zoning ordinance.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Evaluate new noise-generating uses using the criteria set forth in the general plan. Review and modify the design and location of noise-generating mechanical equipment to reduce conflicts.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

4.5.2c Require buffer zones between incompatible land uses to minimize noise conflicts.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Require lower densities and building envelopes to separate sensitive receptors from noise sources.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Long-term

4.5.2d The County shall review the locations of new development proposals for proximity to mines and quarries and for potential noise conflicts.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Apply policies of the ARMP to new developments proposed near gravel or aggregate resources.	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Continuous

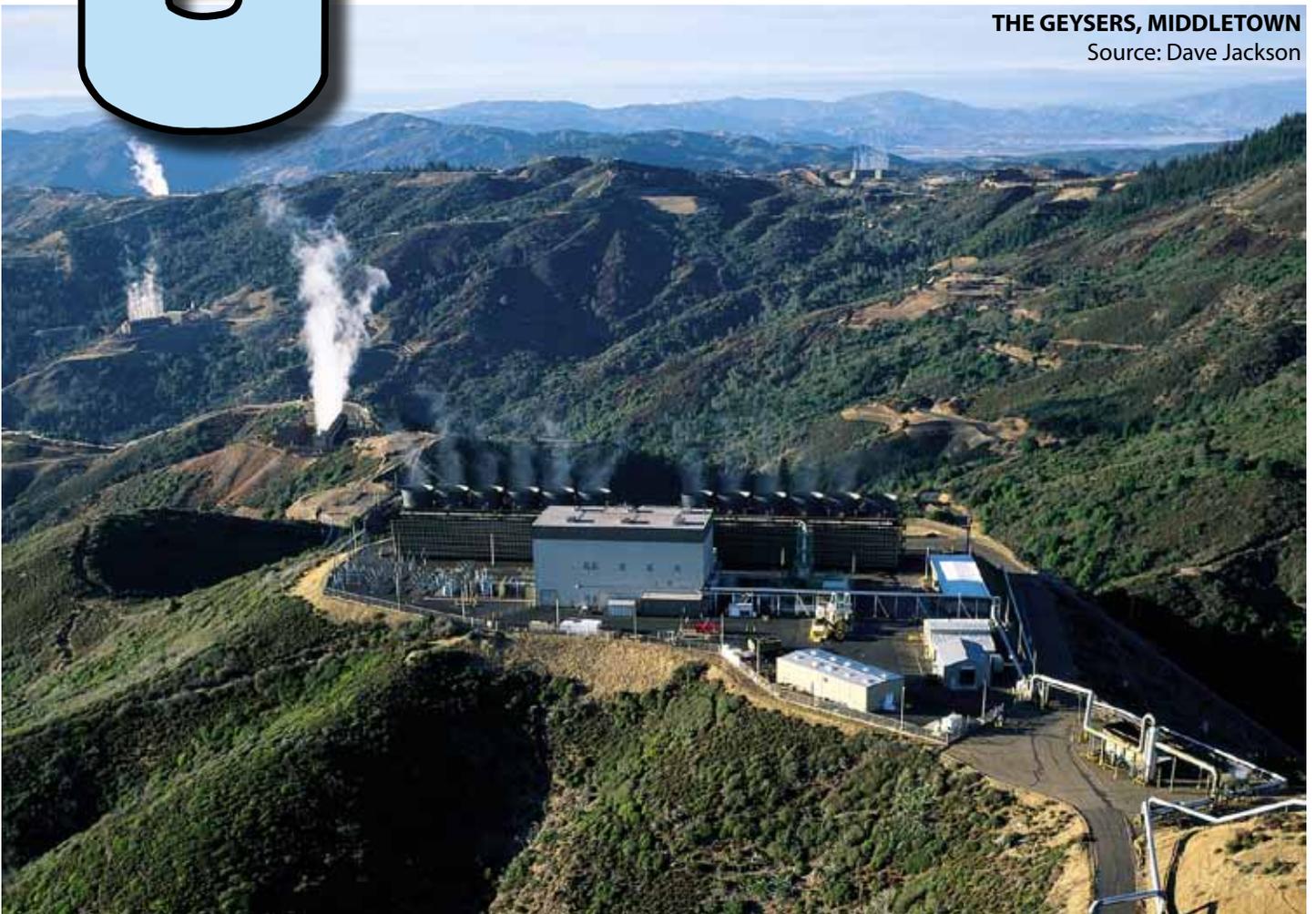
- 5.1 ECONOMY
- 5.2 HOUSING
- 5.3 NETWORKS
- 5.4 PUBLIC SERVICES & UTILITIES
- 5.5 LAND USE & ZONING

COMMUNITY DEVELOPMENT

5

THE GEYSERS, MIDDLETOWN

Source: Dave Jackson



5.0 COMMUNITY DEVELOPMENT

The Community Development section discusses economic development, housing, infrastructure networks, public services and land use. The objectives and policies will help to guide future development and planning programs within the Middletown Planning Area. These objectives and policies should be utilized in conjunction with applicable policies found in Sections 3 and 4 of this plan, as well as those of the Lake County General Plan.

5.1 ECONOMY

The goal of this chapter is to address the challenges and opportunities of economic development in the Middletown Planning Area and integrate new development into the existing communities in such a way that it will strengthen the strong sense of community and small-town rural atmosphere that is cherished by residents. A high level of community participation is desired to help implement a balanced and diverse mix of manufacturing, residential, tourism, and agriculturally beneficial economic development. The County should prepare and implement an overall economic development strategy for the Planning Area that emphasizes advantages associated with the downtown centers, geothermal, agriculture and tourism industries and the area’s natural features.

Figure 5-1 Employment Characteristics

MIDDLETOWN PLANNING AREA						
Employment Characteristics of People 16 years of age and over						
	Middletown CDP	Hidden Valley Lake CDP	Middletown Planning Area	County	California	United States
Population (16 years and older)	848	2,782	4,559	45,977	25,596,144	217,168,077
In labor force	516	1,524	2,307	23,062	15,977,879	138,820,935
% in labor force	60.8%	54.8%	50.6%	50.2%	62.4%	63.9%
Commuting to work	418	1,368	2,247	19,886	14,525,322	128,279,228
% in labor force commuting	81.0%	89.8%	97.4%	86.2%	90.9%	92.4%
Mean travel time to work (minutes)	36.9	44.6	38.0	29.1	27.7	25.5
Median household income (dollars)	\$35,278	\$48,262	\$43,979	\$29,627	\$47,493	\$41,994

Source: 2000 Census, United States Census Bureau. The Middletown Planning Area is defined as Census Tract 13 in this study.

The Planning Area can best be described as rural, with most residents clustered within the communities of Middletown and Coyote Valley. Calpine – The Geysers, a geothermal energy production company, is the largest single employer in the Planning Area with approximately 350 full-time staff and contract employees residing in Lake County; primarily in Middletown, Hidden Valley Lake, Cobb and Kelseyville. Since the late 1970’s, much of the economic growth in the Middletown Planning Area has been due to in-migration by geothermal employees. The household income figures are significantly higher in the Planning Area than the remainder of Lake County. Income figures in Coyote Valley/Hidden Valley Lake are over 40% higher than County averages. The reason for higher incomes in the area are not higher paying jobs in the south county area, but a large number residents who commute to Sonoma County, Napa County and other Bay Area workplaces. According to the 2000 Census over 27% of Lake

age economic activity by being “walkable” and thoughtfully designed. The County should work with local business owners, business associations and others to develop financial assistance programs that encourage and offset design improvements. Additionally, “formula” or “franchise” business structures, signs and box stores that detract from the established theme should be required to develop in a way that is consistent with the Design Guidelines and local scale and character. Land use decisions in this plan strive to provide sufficient areas for new and expanded commercial developments while trying to focus development in established commercial areas.

One of the difficult tasks in economic development activities in rural areas is attracting economic activity and growth while preserving a small town identity and character. A coordinated economic development strategy for the area provides the best chance for success. A draft “Strategic Economic Development Area Plan” was prepared for the Coyote Valley area in 2000. This study provides some value, but was never completed or adopted and covers only a portion of the Planning Area. Perhaps the best approach is to develop an action plan for attracting desired economic activities and resolving the Middletown Area’s economic development problems. In order to take full advantage of its economic opportunities, the Planning Area should focus on improving its appeal as a destination.

Active community participation, particularly through implementation of the design standards in Chapter 6 and 7, can help create and expand existing local retail and service facilities with consistent themes. This will help strengthen town centers and bolster the local economy by enhancing community identity and increasing local shopping opportunities. Additionally, coordinating efforts between the community, the Lake County Marketing and Economic Development Department, the Community Development Department and potential developers to locate their business to the area will provide cohesive marketing. The Board of Supervisors established the Middletown Area Town Hall (MATH) which is a municipal advisory council serving the residents in Middletown, Cobb, Anderson Springs, Coyote Valley, Hidden Valley, and Long Valley. Input and review of new projects should be solicited from MATH and the Middletown Merchants association. These coordinated efforts could help foster the economic vitality of the Planning Area.

The community and County should research the opportunities available for encouraging and supporting small business start-ups and entrepreneurship through business incubator programs. These types of small businesses support the vision and ideals of “cottage industries” and rural character that Planning Area constituents have determined as desirable. Programs such as the Local Area Business Outreach program, which is administered through the Department of Labor, offer a number of information, marketing, and support services that are often vital for the vibrancy of small businesses. The Lake County Chamber of Commerce is evolving from an organization that has focused primarily on the Lakeport area. The County and community should continue to support and encourage the Lake County Chamber into working more intimately with the Middletown Planning Area.

GEOTHERMAL

The importance of the geothermal industry to Lake County and the Middletown Planning Area cannot be understated. The geothermal companies provide millions of dollars in annual tax revenues and royalties, and employees spend money in the local economy. However, there are a number of environmental challenges with the power plants and future expansion and development. The County needs to maintain a positive relationship with the geothermal industry and work closely to find a balance between protecting the industry as an economic “engine” and proper environmental mitigation. See the Geothermal Resources section in Chapter 3.5 for additional information.

TOURISM

Some of the Planning Area's attractions include Hidden Valley Lake Golf Course and Country Club, Crazy Creek Gliderport, Trailside Park & Eco-Arts, Harbin Hot Springs, wine tasting rooms at Langtry Estate and Beaver Creek vineyards and Twin Pines Casino and Hotel. The Middletown Days annual equestrian event is a popular local festival. Other nearby attractions include: Rob Roy Golf Course, Cobb Mountain recreation areas, Robert Louis Stevenson State Park on the Sonoma/Lake County-line, camping and outdoor recreation opportunities for fishing, hunting, hiking, bicycling, horseback riding. There is a nationwide growth in popularity of agricultural, cultural and environmental tourism. The Planning Area is uniquely situated to attract visitors as they travel between the Napa County area and Clear Lake. The towns of Middletown and Coyote Valley should capitalize on developing tourist related amenities that are on, or easily accessed from the Highway 29 corridor. Additional entertainment venues, events and lodging units that serve a wide range of visitors should be encouraged. A number of Lake County's historic resorts are in the Middletown and surrounding area. Restoration of existing resorts should be encouraged as a tourist destination and to support the historic theme and character of the Middletown area.

AGRICULTURE

Agriculture is a vital component of the County's economy and quality of life and has the potential to provide entertainment venues, events and lodging facilities. The community has identified the need to make agriculture more financially viable as a high priority. A wide range of agricultural tourism uses should be encouraged and supported to strengthen the agricultural sector. Marketing programs, similar to the farm trails program in Sonoma County, which is designed to promote Lake County agricultural products and agri-tourism venues to both residents and markets outside of Lake County should be explored. Farms that offer visitors a chance to purchase local products, harvest their own produce or provide cooking and history demonstrations can benefit the local economy. Farmer's markets selling locally processed value-added agricultural products, such as jams, wines, oils and other packaged products could increase agricultural revenues.

There are a range of possibilities of developing "value-added" products in agricultural production areas. An example of this is a winery and/or tasting room on grape producing land. A cheese plant associated with a dairy operation would provide a value-added product. These types of businesses create unique revenue streams for existing agricultural producers and support the tourism industry. The continued establishment of wineries and tasting rooms associated with existing vineyards would bring more tourists to the area and provide a source of employment. Wineries can also provide a venue for special events and lodging for community groups and tourists. The County should establish criteria allowing for the development of agricultural tourism activities on sites in agricultural production, so long as the tourism related uses are compatible with and do not present significant impacts to on-going agricultural operations on adjacent lands.

PUBLIC SERVICES

Adequate public services and facilities are an essential component of a healthy and vibrant commercial area. The demand for public facilities and services will be increased as the County creates and expands commercial development. The Planning Area currently lacks a County

owned visitor's center or other accommodations that include public restrooms and tourist or recreational information. The Calpine Corporation maintains a Visitor's Center on the south end of Middletown which is a beautiful facility focused on geothermal resources. Calpine has been willing, in discussions with community members and County staff, to offer expanded use of the center for County information. Formal discussions with Calpine and the County should be initiated to see if a mutually acceptable agreement could be reached. A shared use center could alleviate a large amount of the costs associated with establishing a County Visitor's Center in the Middletown Area. Currently the Calpine center has poor visibility from Highway 29. Directional signage should be installed that directs travelers to the Visitor's Center. In cooperation with Calpine, the County should support the expansion of services and hours.

The future siting of a downtown park and library in Middletown will provide public restrooms. To accommodate traffic, facilitate local shopping, and provide a safe and comfortable means to travel, bicycle and vehicular circulation improvements are necessary in Middletown. The County should partner with Caltrans to implement traffic calming measures and improved pedestrian and bicycle access along State Highways 29 and 175. Due to a perceived lack of parking options in Middletown, a comprehensive parking plan and the "P" parking combining district should be added to commercial town center areas to plan for alternative parking options.

The Coyote Valley area currently has no "town center". (See Chapter 6.2 for more information) As this vision develops, the community and County staff should work together to develop adequate public facilities and infrastructure. Due to Lake County's distance and difficulty of travel from major population and economic centers, and lack of commercial air or rail transportation systems, the development of an airport should be encouraged to increase the transportation options, especially in the Planning Area. Lampson Field, near Lakeport, is the County's primary airport, but is nearly 25 air miles from either Middletown or Coyote Valley.

CODE ENFORCEMENT

A particular issue of concern to the citizens residing within the Middletown Planning Area revolves around the enforcement of local ordinances and codes involving property maintenance and community appearance. This includes residential, vacant and commercial lands. The Lake County Code Enforcement Division of the Community Development Department is responsible for the investigation, management and abatement of citizen complaints. Citizen complaints involve but are not limited to the following types of violations and nuisances: abandoned vehicles, open and outdoor storage, illegal dumping, illegal land uses, and signage. The goal of the Code Enforcement Division is to resolve violations with property owners through voluntary compliance; however, the Division does have the ability to levy fines through Notices of Violation and is able to abate violations through action and approval of the Lake County Board of Supervisors.

A majority of violations in residential neighborhoods are related to the disorderly appearance of properties. A common residential violation is the open and outdoor storage of items. These items often include inoperable vehicles, scrap metal and wood, and garbage. Another common type of violation involves substandard structures and building without permits. A majority of the older housing tends to be small and thus a large number of violations occur as residents conduct repairs and construct additions to residences and accessory structures without permits.

The County should also continue to provide code enforcement services that protect the cultural and historic value of existing places and buildings. (General Plan Policy LU-7.17). This should include demolition of hazardous and unsafe structures, elimination of open and outdoor storage of items and the removal of overgrown vegetation. Continued and consistent enforcement will assist in the attraction

and retention of businesses in the Planning Area.

Objective

5.1.1 Encourage comprehensive economic development that includes a high level of community participation to the long range benefit of the Planning Area with a balanced and diverse mix of commercial, manufacturing, residential, tourism and agriculture.

Policies

5.1.1 a Economic development proposals should involve a high level of community participation.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
The County shall continue to solicit input and review of new projects from the MATH and Middletown Merchants Association. The County should prepare and implement an overall economic development strategy for the Middletown Planning Area that emphasizes advantages associated with the geothermal, agriculture and tourism industries, the area's natural setting.	Administrative Department, Marketing Division Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

Objective

5.1.2 Encourage development of well-designed retail and service uses that attract both tourists and local patrons and which are conveniently located to serve residential areas. [GP Goal LU-4]

Policies

5.1.2a Centrally located businesses and services shall be encouraged in locations that conveniently serve residential areas and foster and support the revitalization or creation of town centers.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Community Commercial land use designation and zoning shall be established in areas central to the existing communities. The localized themes and design guidelines of this plan shall support the revitalization or creation of town centers. Encourage adaptive reuse of existing underutilized facilities. Survey and rank existing property both public and private to determine available inventory.	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Immediate

5.1.2b Commercial development shall be consistent with the guidelines of this plan to provide attractive and compatible development, complimentary in theme to existing development.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Develop and adopt design guidelines consistent with the policies of the Area Plan that enhance the visual character of the area and that compliment existing development. Establish a Design Review Committee with local representation that will respect and enhance the areas' small town rural character and natural environment. Enforce commercial design standards through the design review process.	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Immediate

5.1.2c "Formula" or "franchise" business structures, signs and box stores within the Planning Area that detract from the small-town rural character shall be generally discouraged unless architecture and signage are made compatible with local themes.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
The County should amend the Zoning Ordinance to provide limitations on formula stores and signage, requiring all new development to follow local architectural design criteria.	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.1.2 d Support continued enforcement of County Zoning Codes and further refine abatement programs for code violations.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Staffing
The County should continue to fund code enforcement programs and regularly provide direction to the Community Development Department regarding enforcement priorities.	Community Development Department, Board of Supervisors	Funding Source	General Fund
		Priority	High
		Timeframe	Continuous

Objective

5.1.3 To increase availability of public services and facilities such as parking lots, restrooms, parks, county offices and visitors centers, especially in the downtown commercial areas.

Policies

5.1.3a A full service visitor’s center should be located in Middletown.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Operating
The County should support expansion of services and hours of operation of the existing visitor’s center through staffing or marketing funding, in cooperation with Calpine. Install directional signage on major roads directing travelers to the visitor’s center.	Lake County Marketing & Economic Development Division	Funding Source	TOT Taxes
		Priority	Moderate
		Timeframe	Continuous

5.1.3b Plan for and develop well located, tourist-friendly public restrooms in the downtown commercial areas of Middletown and Coyote Valley.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Const. & Main.
Site future parks or libraries within or adjacent to the downtown commercial areas that provide conveniently located public restrooms.	Public Services Department Board of Supervisors	Funding Source	TOT Taxes
		Priority	High
		Timeframe	Short-term

5.1.3c The County should encourage the development of an airport in the South County to support further commercial and industrial growth and increase transportation options.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
The County should consider its options for encouraging the development of a “South County” airport and business park, which could potentially include a fly-in residential subdivision as a component. An integrated, multi-faceted project would likely be more economically feasible to develop. Support from the County could include appropriate zoning and land use designations.	Community Development Department, Marketing and Economic Development Division, Board of Supervisors	Funding Source	Unknown
		Priority	High
		Timeframe	Long-term

5.1.3d Pedestrian, bicycle and vehicular circulation should be improved in downtown commercial areas to facilitate local shopping.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Staffing
Partner with Caltrans to implement vehicular traffic calming measures and improved pedestrian and bicycle access along State Highways 29 and 175.	Department of Public Works	Funding Source	General Fund; Grants
		Priority	High
		Timeframe	Continuous
Develop a comprehensive commercial parking plan for the Planning Area and add the "P" Parking combining district to the base zoning districts in the Middletown town center to provide for alternative parking options.	Community Development Department, Department of Public Works	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.1.3e The County shall, through its marketing program, continue to develop community gateway and visitor service signs and services.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Small
Install and maintain new highway and pedestrian signs identifying community gateways, visitor services and local attractions. Continue and improve visitor services in Middletown.	Administrative Department, Marketing Division, Caltrans Community Development Department	Funding Source	TOT
		Priority	High
		Timeframe	Continuous

Objective

5.1.4 Encourage commercial development and community enhancement projects aimed at drawing tourists and special events to the Planning Area.

Policies

5.1.4a Support the creation and expansion of commercial facilities and events that provide services to and attract tourists to the area, where appropriate.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Staffing
Support the development of commercially zoned parcels in a way that maximizes their use. Provide for necessary permits for special events, where appropriate.	Community Development Department & Redevelopment Agency	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous
Continue to enforce the use of commercially zoned properties for transient uses. Hotels, and motels and RV parks in the Planning Area should not be used as permanent living facilities.	Community Development Department & Tax Collector	Funding Source	Staffing
		Priority	High
		Timeframe	Continuous

5.1.4b Make agriculture more economically viable by encouraging the development of value-added agricultural industries that support tourism and maintaining sites in agricultural production, as long as the agricultural tourism uses do not negatively impact on-going agricultural operations on adjacent lands.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Staffing
Support the development of wineries and other agri-tourism related uses. Develop revisions to the Zoning Ordinance to allow farm-stay development on appropriate agricultural sites. Provide for necessary permits for special events, where appropriate. Develop a self-guided tour guidebook, motor coach tour itineraries, farm trail maps and similar guides for tourists. Implement a park lands acquisition program and the establishment of pedestrian, bicycle and equestrian paths and amenities.	Community Development Department, Agricultural Commissioner & Farm Bureau Administrative Department, Marketing Division, Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.1.4c Encourage development of additional lodging units to serve a range of visitors from camping, family oriented motels, luxury resorts and a conference center.

Objective

5.1.5 Encourage comprehensive economic development efforts for the long-term benefit of the Planning Area aimed at increasing local employment opportunities

Policies

5.1.5a Strengthen commercial town centers within the communities of Middletown and Coyote Valley in order to bolster the local economy, enhance community identity and increase local shopping opportunities.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Staffing
The County shall encourage a mixture of land uses to promote diversification of the local economy.	Marketing and Economic Development Dept., Community Development Dept.	Funding Source	Redevelopment, General Fund
		Priority	High
		Timeframe	Continuous

5.1.5b Priority should be given to providing service and employment opportunities locally.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Staffing
Coordinate efforts with the County Marketing and Economic Development Department, Community Development Services, and potential developers to locate their businesses to the area. Provide workforce training and business incubation opportunities to help foster the employment and economic vitality of the Planning Area.	Community Development Marketing and Economic Development Departments, Local Business Outreach Programs	Funding Source	General Fund
		Priority	High
		Timeframe	Continuous

5.1.5c Increase local employment opportunities in order to provide an adequate number of jobs to support the local population.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
The County should take all steps possible to encourage the development of a large business park subdivision that has access to public sewer and water. Research and encourage business development and business incubator projects in the area.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.2 HOUSING

The Lake County Housing Element sets overall housing goals, policies and programs for five-year time periods. State planning law requires counties and cities to revise and update their housing elements every five years. A “Regional Housing Needs Allocation” (RHNA) prepared by the Lake County – City Area Planning Council is incorporated into the Lake County Housing Element. This plan identifies housing needs for the unincorporated areas of the County. The Housing Element also contains a Housing Market Analysis, and sections on Housing Needs, Housing Development Potential and Housing Programs. The Element outlines a five-year action plan with goals, objectives, policies, implementation strategies and projected time frames. The next required update of the Lake County Housing Element will be in 2010. State law requires that Lake County address the following statewide housing goals:

- To assist in the development of housing for all income groups, particularly low and moderate income households.
- To provide adequate and sufficient sites for the development of all types of housing, particularly multi-family rentals, housing for the homeless and farm labor quarters.
- To conserve and improve the existing housing supply.
- To remove local government constraints to housing maintenance, improvement and development.
- To promote fair housing opportunities for all citizens regardless of age, sex, race, religion and/or disability.

The 2008 Lake County General Plan sets additional policies that support jobs/housing balance, mixed use development and build-out at maximum density for the zoning district. It encourages: linkages between the jobs and housing, income and housing affordability and encourages the location of housing

near basic services. Furthermore the General Plan requires that zoning provide for an adequate of supply of land to accommodate farm worker housing. These policies are consistent with the new Sustainable Communities Strategy Law adopted by the State of California in October 2008. This state law also encourages transit oriented development, a balanced mix of housing for all income levels, mixed use developments, and most importantly, it links the Regional Housing Needs Assessment (RHNA) to state transportation funding. Policies affecting the Planning Area include directives that transit priority projects contain at least 50% residential use, have a minimum density of 20 units per acre and a commercial floor-area ratio of up to .75. It is also recommended that they exceed energy efficiency standards and provide one of the following: (1) 5 acres of open space, (2) 20% moderate income housing, (3) 10% low income housing or (4) 5% very low income housing. The theory is that as density increases in core community areas, low cost housing and public transit become more economically feasible and available and reduce traffic and air quality impacts of development.

The Department of Housing and Urban Development (HUD) defines low income as 80% or less of the county median income. However, because HUD also establishes a minimum subsistence income level for the entire state, two-thirds of Lake County's households are classified as low income. Area plans need to include suitable sites and provide appropriate zoning and land use densities to assist in meeting these projected housing needs.

The Lake County Housing Element lists specific sites that are designated for medium to high density housing suitable for development of low income units. The necessary infrastructure to support development of high density housing (up to twenty units per acre), including public transit, water and sewage disposal is very limited in the Planning Area. Seven parcels totaling 7.5 acres were identified as suitable for low income housing. The average typical yield would be 55 units of low to moderate income housing if the sites are developed at maximum density. Infill within community boundaries and maximum density development on lots that already have services in place should be encouraged prior to creating new subdivisions. Additionally, the programs outlined in the Housing Element of the General Plan should be utilized to improve overall housing conditions and stock.

Infill development should maintain or enhance the positive qualities of the surrounding neighborhoods. Parcel sizes larger than the minimum size established for the land use classification may be required in order to maintain compatibility with adjoining land uses. Housing is encouraged in downtown commercial areas. Residential in-fill development is further discussed in this chapter under the Land Use and Zoning Plan, Section 5.5.

Mixed use development is a concept where living areas are provided above or adjacent to commercial and light industrial uses. Depending on the location and site design, the residential use may be placed above, behind or in front of the commercial, which may include a wide variety of uses such as retail shops, professional offices, restaurants, cottage industries, craft and woodworking shops, artist studios and so on. This is a tool to locate housing near jobs, which reduces traffic, improves air quality and creates a more vibrant commercial area with a full-time community presence.

The year 2000 census data shows that approximately 6,200 people lived in the Planning Area. The largest existing subdivisions in the Planning Area are Hidden Valley Lake (3,350 lots) and Anderson Springs (200 lots). There are some smaller subdivisions of 20-50 units in Middletown. While there is a significant senior population in Hidden Valley Lake and Anderson Springs, none of these subdivisions include provisions for low income housing, and a large number of the units are second homes. Low to moderate income housing within the Middletown Planning Area consists mainly of residential second units and granny units, one senior and low income

rental complex near the Middletown High School on Big Canyon Road, and one apartment complex on Highway 175 at Santa Clara Road in Middletown.

Figure 5-3 Population and Housing Characteristics

MIDDLETOWN PLANNING AREA						
Population and Housing Characteristics						
	Middletown CDP	Hidden Valley Lake CDP	Middletown Planning Area	County	California	United States
Total Housing Units	427	1,595	2,660	32,528	12,214,549	115,904,641
Occupied	392	1,411	2,274	23,974	11,502,870	105,480,101
Vacant	35	184	386	8,554	711,679	10,424,540
Vacant Housing Units for SRO Use	16	98	224	5,479	236,857	2,298,919
% of Vacant Units	8.2%	11.5%	14.5%	26.3%	5.8%	9.0%
% of Vacant Units for SRO Use	45.7%	53.3%	58.0%	64.1%	33.3%	22.1%
% of Total Units for SRO Use	3.7%	6.1%	8.4%	16.8%	1.9%	2.0%
Vacant Housing not for SRO Use	19	86	162	3,075	474,822	8,125,621
% of Vacant Units not for SRO Use	4.4%	5.4%	6.1%	9.5%	3.9%	7.0%
Housing Unit occupied by						
Owner	227	1,175	1,722	16,914	5,527,618	55,212,108
Renter	165	236	552	7,060	4,921,581	35,199,502
% Owner Occupied	57.9%	83.3%	75.7%	70.6%	48.1%	52.3%
Median Age of Housing (yrs.)	48	21	27	43	30	31
Average Household Size	2.56	2.67	2.6	2.39	2.87	2.59
Total Population	1,020	3,777	6,050	58,309	33,871,648	281,421,906

Source: 2000 Census, United States Census Bureau. SRO Use is Seasonal, Recreational or Occasional Use as defined by the US Census Bureau. The Middletown Planning Area is defined as Census Tract 13 in this study

FUTURE HOUSING NEEDS

Middletown

The 2000 U.S. Census shows Middletown's population at 1,020 in 427 dwelling units. As of January 2007, the current estimated population of Middletown was 1,326, (See Figure 5-3) based on a rate of 2.39 persons per dwelling unit (DU), which is the average household population for Lake County. Based on building permit records, the average annual growth rate within the community area between 2000 and 2007 was 3.8% when including the 50 unit Middletown Manor apartments which were construct-

ed in 2001. The average annual growth rate for single family home development during the same period was 2.5%. A projection of a moderate to high growth rate is appropriate for the 20-year growth needs within Community Areas because it provides for a “cushion” or margin of error in determining the amount of land needed to accommodate long-term needs. Growth rates are cyclical, being influenced largely by market conditions, and not all large vacant or underutilized parcels are available for sale to developers.

In planning for an average 2% annual growth rate for the Middletown Community Boundary, the year 2030 population estimate would be 1,949, an increase in 618 people compared to the year 2006. This translates to 761 dwelling units, or 241 more dwellings than existed in 2006, based on the current household size of 2.56. The Middletown Community Area Boundary should contain adequate lands to accommodate this expected increase.

Coyote Valley

As of November 2006, the total existing dwelling count within Coyote Valley was 2,441. The household population is believed to be higher than the countywide average of 2.39 persons per dwelling unit. As of 2008 the population in Coyote Valley is approximately 6,000.

The major population center in Coyote Valley is the Hidden Valley Lake Subdivision (HVL). HVL consists of 3,350 lots. The Homeowner’s Association (HOA) indicated that 2,270 of these lots were developed as of November 2006, and there were 890 vacant lots. The HOA and Community Services District (CSD) estimated that between 600 and 800 of these vacant lots are “buildable” by current standards, depending on sewage disposal capacities. To provide a margin of error, housing needs calculations have been based on the lower estimate of 600 usable lots remaining in this subdivision.

As of November 2006, the Hidden Valley Ranchos, which are not a part of the Hidden Valley Lake Homeowner’s Association, consisted of 131 parcels with dwellings, and 42 vacant parcels. There were 16 additional dwellings and 8 vacant parcels north of this subdivision and 24 existing dwellings to the south and west that are within the Community Area of Coyote Valley.

The total estimated housing capacity within the Coyote Valley Growth Boundary is 4,525 dwellings. This estimate assumes that the larger vacant and underutilized parcels within the community boundary will eventually be developed consistent with the Low Density Residential land use designation and average 3 dwellings per acre. It is typical for parcels located within the boundary to be developed at this density. This figure also includes all of the existing dwellings, and the vacant, buildable lots within the existing subdivisions. The total development potential remaining in the Coyote Valley Community Growth Boundary is estimated as 2,084 dwellings based on the existing land use and zoning designations and projects recently approved or proposed.

Based on a 2% annual population growth the population within the Coyote Valley Community Growth Boundary is expected to reach 8,055 people by the year 2030, representing an increase in 2,553 residents compared to 2006. It is estimated that this translates into the need for an additional 956 dwelling units based on the average household size of 2.67.

Anderson Springs

There are 195 single-family residential housing units and cabins in the Anderson Springs Subdivision. The subdivision has a year-round population of 500 people with a season maximum of 1,000 residents¹. A Planning Department survey (August 1986) revealed that approximately

¹ Anderson Springs Water District, 2008

27% of the housing stock is in need of rehabilitation¹. A Planning Department real estate survey (Fall 1986) showed that the majority of residents purchasing houses in the Anderson Springs Subdivision intended to reside there year-round.

Objective

5.2.1 Plan for affordable and logical residential growth that implements the policies of the General Plan and balances housing with jobs and growth needs while maintaining a small town, rural atmosphere.

Policies

5.2.1a Large new development projects should contain components of affordable housing and development of independent senior housing and assisted living facilities should be encouraged.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Continue to encourage the use of density bonuses for senior, assisted living, low and very low income housing in large, future residential projects. Inform developers of the benefits of density bonuses in pre-application conferences.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.2.1b Medium and high density residential developments that are compatible with the neighborhood character shall be encouraged in locations close to services with adequate sewer and water facilities, within community boundary areas.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Utilize the "R2" zoning district and the Medium Density Residential land use designation and the "R3" zoning district and High Density Residential land use designation for appropriate sites within community boundaries. Discourage developments that can not be adequately sustained by existing infrastructure.	Community Development Department, Planning Commission, Board of Supervisors	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.2.1c Mixed use development with commercial and residential components should be encouraged in the community business districts when adequate infrastructure is available or can be made available.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Establish a mixed use combining district to overlay downtown commercial areas where found to be appropriate.	Community Development Dept., Planning Commission, Board of Supervisors	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.2.1d Infill development shall maintain or enhance the positive qualities of the surrounding neighborhoods. Parcel sizes larger than the minimum size established for the land use classification may be required in order to maintain compatibility with surrounding lot sizes. Alternatively, the “PDR”, Planned Development Residential process may be considered to allow for clustered residential developments that provide for trails, parks, and open space buffers in exchange for reduced lot sizes.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Review of future infill projects during the permitting process should include a detailed review of surrounding development to ensure that the infill project fits the neighborhood character. The planned development process should be utilized when small lots or open space are desired to blend with existing development.	Community Development Department, Planning Commission, Board of Supervisors	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.2.1e Develop housing in a manner that complements the small town community identity and incorporates quality design consistent with the rural character of the Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Encourage good design that incorporates characteristics found in older neighborhoods and avoids ‘cookie-cutter’ approaches to subdivision by developing minimum design guidelines applicable to new subdivision development.	Community Development Department, Planning Commission	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.2.1f Residential uses in mixed-use areas should have reduced parking requirements where it can be demonstrated that shared residential and commercial parking will not result in an unacceptable impact on parking in the public right-of-way or on off-street parking lots.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
During the development and site design process, reduced parking standards should be supported for mixed-use developments. The parking standards of the Lake County Zoning Ordinance should be evaluated and amended.	Community Development Department, Planning Commission, Board of Supervisors	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.2.1g Applicants for new residential subdivisions of 10 or more units should be encouraged to provide at least 10 percent of the units available as affordable housing. The County should develop incentives for affordable housing to further encourage its development.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
<p>The County should encourage developers to incorporate affordable housing into new residential subdivisions.</p> <p>The county should consider the development of incentive programs to facilitate the development of affordable housing with new developments.</p>	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.3 NETWORKS

Planning for circulation, transportation and utility infrastructure must be correlated with the land use patterns of the General Plan and Area Plan. This consistency is necessary so that a rational relationship between land uses and the capacity, location and circulation characteristics of roads is assured as an area develops over time.

Circulation in the Middletown Planning Area is highly dependent upon highway transportation. Movement of people and goods is confined to the network of state highways, county roads, and private roads that serve the area. There are few pedestrian, bicycle and equestrian improvements in the area. Public and private transit systems are available on a limited basis. The Planning Area lacks navigable waterways for the transport of goods and there are no public airports.

STREETS AND HIGHWAYS

Roadways have the dual function of allowing for general circulation and providing property access. While high and constant speeds are desirable for circulation mobility, low speeds are more desirable for property access. Traditionally, roadways have focused primarily on the movement of vehicles while providing pedestrian facilities as an after thought.

Highways, streets and roads are classified functionally as either arterials, collectors or local facilities. Higher classified streets and roads are designed to carry greater volumes of traffic and provide for a broader range of service needs.

Functional Classification

Functional classification of roadways is useful in the development of new road construction projects and in establishing road maintenance priorities. Highways, roads and streets are classified based on their functionality:

- Arterials (Principal or Minor): In California, Arterials primarily link cities and towns both within and outside the state.
- Collectors (Rural Major or Rural Minor): Collector roads provide access between Local streets and Arterials. Rural Minor Collectors link smaller urban areas and other places of interest that are not served by the Arterial system. As their name implies, Rural Minor Collectors collect traffic from the Local Streets and distribute it to the Arterial system or to the smaller urban areas that they directly serve. Rural Major Collectors provide circulation between neighborhoods.
- Local Roads and Streets: Local roads and streets primarily provide traffic movement within communities and are generally low speed, low volume roads. Traffic movement is of secondary importance on the Local system.

Traffic movement should be provided in increasing levels of efficiency – Arterials should be the most

efficient at moving traffic and Local Roads should be the least efficient in order to provide safe property access.

Arterials

Middletown and Coyote Valley are served directly by only one major arterial highway. State Route 29 provides north/south access to Middletown from Calistoga to the south and Lower Lake to the north. State Route 175, is a minor arterial that links Middletown and Anderson Springs to the Cobb Mountain area to the northwest.

In the community of Middletown, State Route 29 assumes the local name of Calistoga Street. It is a Federal Aid Primary route, making it eligible for Federal and State funding for improvements. State Route 175 is known as Main Street in downtown Middletown. Both highways are eligible to be designated as State Scenic Highways. Locally, the portions of both highways located outside of the community business districts are designated scenic through the use of the "SC", Scenic Combining district. The "SC" Combining District provides viewshed protection for scenic vistas visible from designated roadways.

Collectors

There are two major collectors in the Planning Area. Butts Canyon Road joins State Route 29 north of the Middletown business district and connects to Napa County to the south. Hartmann Road connects Hidden Valley Lake subdivision to Route 29. Both Butts Canyon Road and State Route 175 are components of the Federal Aid Secondary (F.A.S.) system. These roads are eligible for Federal funds for improvements as secondary facilities.

There are number of rural minor collector roads in the Planning Area. Big Canyon Road, which provides access to several South County resorts, joins Main Street (State Route 175) west of Calistoga Street via Barnes Street and joins State Route 29 via Wardlaw Street near Middletown High School. Dry Creek Cutoff connects Dry Creek Road to Highway 29. During summer low water flows, the road also connects to Highway 175 north of Calistoga Street. Santa Clara Road connects State Route 175 to State Route 29 south of downtown. Spruce Grove Road Extension and the southern loop of Spruce Grove Road connect to State Route 29 near Hidden Valley Lake subdivision. Socrates Mine Road just north of the Planning Area connects some rural residences and the Geysers geothermal wells and plants to State Route 175 just north of Anderson Springs. It also serves as an alternate emergency access route in case of wildland fires or severe storm conditions. These minor collectors as well as the remaining streets in Middletown are county roads and are funded from local sources.

Rural, Local and Private Roads

Most of the other roadways in the Middletown Planning Area are rural and local county maintained roads, funded from local sources. The principal exceptions are the internal road systems within subdivisions, including Hidden Valley Lake and Anderson Springs. The internal roadways within these subdivisions are funded by the landowners within the subdivision through homeowners associations, private road maintenance agreements or County Zones of Benefit. The Hidden Valley Lake Homeowners Association funds road improvements and maintenance through association fees and special road assessments on each lot. Roads within a County Zone of Benefit are maintained by the County, but owners of parcels within the zone are assessed for the maintenance fees.

Western Mine Road, south of Middletown, is a route into Sonoma County, but is inadequately

improved and serves only light levels of traffic. There is local support for improving and paving this road for better use as an alternate access route in and out of the area.

Table 5-4 Functional Road Classification

FUNCTION	NUMBER	NAME	LIMITS
Principal Arterial	SR 29	State Highway 29 Calistoga Road	Spruce Grove Road (Hidden Valley Lake) to Napa County Line
Minor Arterial	SR 175	State Highway 175 Main Street	Highway 29 (Middletown) to Socrates Mine Road (Cobb)
Major Collector	CR 101	Butts Canyon Road	Highway 29 (Middletown) to Napa County Line
	CR 104	Hartmann Road	Highway 29 to Stinson Road (Hidden Valley Lake)
Rural Minor Collector	CR 107	Big Canyon Road	Barnes Street to Harbin Springs Road (Middletown)
	CR113	Dry Creek Cutoff	Highway 29 to Dry Creek Road (Middletown).
	CR 117G	Santa Clara Road	Highway 175 to Highway 29 (Middletown).
Rural Minor Collector	CR	Socrates Mine Road	Highway 175 to Road 8025
		Spruce Grove Road	Highway 29 (Middletown) to Highway 29 (Lower Lake)
		Western Mine Road	Highway 175 to County Line

Note: All other roads not listed are Functionally Classified as Rural or Local.

Traffic Volumes

The Lake County Department of Public Works and the California Department of Transportation (Caltrans) monitor traffic volumes at various locations throughout the Planning Area. The State highway system accommodates the bulk of traffic movements in the Middletown Planning Area. Traffic in Lake County has been shown to fluctuate significantly by season. Peak Average Daily Trips (ADT) on certain segments of the State system sometimes increase by 30 percent or more above annual average volumes in the summer months. July typically experiences the heaviest traffic flow in Lake County due to the influx of tourists to the area.

The highest volumes recorded on county roads in the Planning Area were on Hartmann and Spruce Grove Roads. This road provides access to the Hidden Valley Lake subdivision. Butts Canyon Road also shows significant use. This facility is a through route into Napa County. Although lower volumes are experienced on other minor collector roads such as Santa Clara, Dry Creek and Wardlaw, the impacts may be greater on narrower roads which are not improved to carry these volumes.

Level of Service

Level of service is a quantitative measure of the conditions on a highway that is based on travel time for through movements along the road. Conditions such as road configuration, traffic volume, speed, safety, convenience, comfort and economy are considered. Level of service is rated from a high of "A" to a low of "F". Levels "A" and "B" represent excellent to very good service, "C" and "D" represent good to adequate service, and "E" and "F" represent poor to very poor service. A roadway designed for a certain level of service often operates at different levels throughout the day.

In recent years, commuter trips have resulted in increased traffic impacts on Highway 29. As traffic volumes increase, concerns have increased about the ability of the highway system in the Planning Area to meet existing and projected needs. There are two traffic signals in the Planning Area at the junction of Highway 29 with Highway 175 and with Wardlaw Street/Big Canyon Road in Middletown. Caltrans has noted that intersection improvements are needed for the vicinity and intersection of Highway 29 and Hartmann Road. It is also likely that intersection improvements will be needed for the intersection of Butts Canyon Road and Highway 29 within the time span of this planning document. This intersection experiences congestion and inadequate levels of service at peak hours. All county roads in the Planning Area operate at a "C" level of service or better.² A variety of adverse effects occur when the level of service is decreased in an area. Residential areas, businesses, and schools adjacent to the impacted routes would experience the greatest effects. Unless corrected, operating speeds decline, waiting time for gaps to enter or cross traffic lanes increase, turning movements become increasingly hazardous, and pedestrian and non-motorized safety also decline. Both Caltrans and Department of Public Works use level of service calculations in determining and prioritizing transportation projects.

Future Growth

Road improvement and maintenance are significant issues in the Planning Area. Growth in the area will increase traffic volume and put demands on the existing road system. Updates to the Lake Countywide Needs Survey and Regional Transportation Plan are currently in the process. The impact of new development on existing roads should be considered during this review process. The Countywide Roadway Needs Study (December 2000) addresses expected traffic increases through the year 2020. A revised model of the California Department of Finance population projections were utilized in determining future average daily traffic on County roads, which contemplates a 2020 Lake County population of 85,100.

The Lake County/City Area Planning Council (APC) is the Regional Transportation Planning Agency (RTPA) for the Lake County Regions. The APC is an essential component for planning, prioritizing and funding transportation projects in Lake County. The essential duties of the RTPA is to ensure appropriate local transportation choices are made with the ¼ cent of State sales tax monies and the administration of the local State Transportation Improvement Program (STIP). The STIP is a five-year list of transportation projects which is approved by the California Transportation Commission (CTC). The APC is a primary stakeholder in transportation matters within the Planning Area and the entire county.

The largest single factor affecting roadway improvements in the Planning Area and Lake County as a whole is the back log of deferred maintenance and rehabilitation projects. The main issue is the lack of available funding. Most funding sources strictly prohibit the use of funds

² Dow & Associates. Lake County Regional Transportation Plan (October 2005), page 22. Confirm these figures.

for rehabilitation related projects forcing funding to be generated at the local level. Deferred maintenance comes at the price of costlier rehabilitation needs in the future.

State Highway System

The California Department of Transportation (Caltrans) is the responsible government agency for the California State Highway systems. Within the Planning Area this includes State Highway 29 and State Highway 175. In planning for improvement related projects Caltrans develops growth, based in part on Department of Finance projections, to plan for the impact of population increases on the state highway system. Caltrans has determined that State Routes 29 and 175 are currently operating within the desired level of service (LOS) established for these facilities. The LOS denotes the ability of a roadway to handle peak hour traffic demand. The desired LOS for State Route 29 was established as "C" and for State Route 175 the desired LOS has been established at "D". Currently, Caltrans has placed a moratorium on new direct access to State Route 29 through the Middletown area which may inhibit future development if alternate site access cannot be developed.

Caltrans typically has the sole responsibility for maintenance and improvements to the highway system, but has a cooperative role in the development of improvement projects. The county should continue to work cooperatively with the state to assess safety and aesthetic needs on the highways, including providing for signage, appropriate speeds, pedestrian improvements, traffic calming and beautification measures. The Roadway Needs Study completed in 2000 identified several needed improvement projects at intersections between state highways and county roads. The intersections are listed below:

- Dry Creek Cutoff at Highway 29, Middletown
- Butts Canyon Road at Highway 29, Middletown

In addition to the intersections identified by the Roadway Needs Study the Middletown Area Plan Advisory Committee noted the following intersection trouble spots:

- Hartmann Road at State Highway 29, Coyote Valley.
- Access to the Callayomi Park Subdivision at Highway 175, Middletown. (Located on the north side of Highway 175 between downtown Middletown and the Dry Creek Cutoff.)
- Spruce Grove Road at State Highway 29, Coyote Valley.
- Spruce Grove Road Extension at State Highway 29, Hidden Valley Lake. (Avoid direct access of future development projects to State Highway 29.)
- Anderson Springs Road at Highway 175, Middletown. (Impaired site distance.)
- Congestion at and around the intersection of State Route 29 and State Route 175 and the capacity of State Route 175 and State Route 29 to accommodate future traffic in the downtown Middletown area.

Prior to the construction of improvements, for the above listed intersections, further traffic analysis and study will need to be conducted for each individual site. A wide assortment of intersection improvements should be considered with the ultimate priority focused on improving safety for both pedestrian and motor vehicles. Potential improvements include: turn lane channelization, sight distance improvement, intersection widening, traffic signalization, roundabouts and other appropriate circulation improvement methods. The County should work closely with Caltrans to ensure that intersection improvements will benefit circulation for both state and county maintained roadways.

County Road System

Lake County's unincorporated areas include approximately 610 miles of County maintained roads. The paved roads were inspected in 2008 as a result of the Pavement Management System. Pavement conditions were surveyed and Pavement Condition Index (PCI) calculations formulated. The average PCI

for the county is 32 on a 100-point scale. Only 12.1% of the County's pavement area is in the "good" or "excellent" condition category, while approximately three fourths of the pavement area falls in "poor" or below. The County has a budget of approximately \$300,000 per year for road maintenance. At this level of funding, it is estimated the County road network will continue to deteriorate to a PCI of 12 by 2017 and the deferred maintenance backlog will increase to \$588 million.³

As a means of dealing with the backlog of deferred maintenance the County should investigate alternative road surfacing concepts. One example is pervious paving alternatives. Pervious road surfaces are benefiting from ongoing research and are becoming more viable. Pervious surfaces include, but are not limited to, pavers, pervious asphalt and pervious concrete. They are generally not suited for high volume areas or uses which have moderate to steep slopes. They do show substantial benefit in storm water management, decreased runoff volume, decreased pollutant runoff, increase in underground aquifer regeneration, and if installed properly, an increase in longevity and lower maintenance costs. These types of surfaces could be a viable option for county roads (particularly in urbanized areas), local streets, sidewalks, parking areas, etc. Pervious or permeable paving systems tend to cost 20-25% more for installation than a traditionally paved system. The money saved in needed conventional storm water management systems often more than offsets the extra cost. The long-term maintenance and replacement savings make pervious systems financially feasible. The majority of the county soil types are generally considered suitable for a well drained sub-surface needed in these applications.

The Middletown Area Plan Advisory Committee identified the following county maintained road segments as priorities for future improvement:

- The need for improved east-west access between Santa Clara Road and State Route 29. Central Park Road should receive initial priority for upgrading to current local road standards in this area to complete the basic circulation pattern in this area.
- The northeast area, which lies north of State Route 175 and between Dry Creek and Big Canyon Road, will be lightly impacted by growth. Other than properties adjacent to Big Canyon Road, the area will develop in low density. No new collector streets are envisioned for this area, although the extension of Santa Clara Road (as a local road) to the north and terminating at Big Canyon Road may be desirable. Extension of Wardlaw Street to an intersection at Santa Clara (extended) may also be desirable in the future, but development patterns will ultimately dictate the manner in which local access is provided in this area.
- Putah Lane and Grange Road will serve an industrial and commercial area west of State Route 29. As development occurs, both facilities should be brought up to County standards for local roads. Depending on intensity, consideration should be given to linking the two roads to create a frontage road and eliminating one access point (possibly the existing Putah Lane intersection) to State Route 29. Extension further north to Spruce Road Extension may also be desirable in the future.
- St. Helena Creek Road (used as a cutoff between Butts Canyon and Highway 29 at Wardlaw) has an unsafe access at Butts Canyon Road. The right-of-way should be acquired by the county, and the road improved to carry existing and future volumes. Also, the historic bridge across the creek is unsafe.
- Dry Creek Cutoff at Dry Creek is only passable during low flows. The development of Dry Creek Cutoff Road as a collector to State Route 175 would facilitate local circulation.
- Socrates Mine Road has poor site distance for truck traffic.
- A number of bridges on public roadways are in need of repair or replacement including St. Helena Creek at Wardlaw and Hildebrandt Road at Highway 29.

³ Nichols Consulting Engineers, Pavement Management Program Update Executive Summary (June 2008), pages 4-6.

- A number of local streets in downtown Middletown are in need of maintenance and repair.

Comprehensive Transportation Planning

The State Highway 29 corridor has an extra added importance for the Middletown Planning Area as it represents the only roadway linkage between the communities of Middletown and Coyote Valley. The Middletown Planning Area is experiencing escalating traffic impacts as a result of demographic changes and population growth in Northern California. As Caltrans has improved the level of service (moving heavier volumes of traffic more quickly and smoothly) on Highway 29, the traffic impact on the south county communities has increased. This has led to some unintended consequences, especially to the downtown Middletown area. There is street parking, but it is dangerous to park because the travel lanes are too close to the parked cars. There are crosswalks, but through traffic is moving quickly and does not stop for pedestrians. The fast-moving traffic also adversely impacts businesses and economic development.

The State Highway 29 corridor through the Planning Area is only effective in the movement of motorized vehicles and does not lend itself to being safe for bicycles, equestrian riding or pedestrians. Additionally, State Highway 29 is Middletown's main thoroughfare doubles as Calistoga Street and runs through the middle of town. It is easy to discern that the typical needs of a highway directly conflict with the multitude of transportation needs of a downtown center. A solution being studied involves the idea of "Complete Streets." "Complete Streets" refer to creating or restructuring our streets to ensure equal access to all forms of transportation (vehicles, pedestrians, cyclists, children, and the disabled). Some common features that are utilized in Complete Streets that aid in traffic calming include sidewalks, rumble strips, accent paving, landscaping, bulb-outs, medians and street trees. The result is considered safer and more effective transportation systems that encourage healthier lifestyles and help to ease environmental woes associated with congestion.

The "Complete Streets" concept also coincides with smart growth principles and the growing emphasis on creating a more "walkable community." A "walkable community" is one where it is easy and safe to walk to goods and services (i.e., grocery stores, post offices, health clinics, etc.). Walkable communities encourage pedestrian activity, expand transportation options, and have safe and inviting streets that serve people with different ranges of mobility. Both of these concepts are essential to the development of viable community centers. Assembly Bill 1358 was passed into law in 2008 and requires local jurisdictions to incorporate Complete Streets policies into community plans. Caltrans issued Deputy Directive 64 which requires Complete Streets concepts to be considered for all projects, including highways. Complete Streets and other similar concepts should be utilized for every step of the transportation planning process but should specifically be considered for the creation of pedestrian access in downtown Middletown and assist in providing a linkage for bicyclists, equestrian riders and pedestrians between the communities of Middletown and Coyote Valley.

Objective

- 5.3.1 Development of safe and adequate public access for motor vehicles, bicycles, equestrians and pedestrians shall be encouraged for the orderly growth and development of the Middletown Planning Area.**

Policies

5.3.1a Construction of improvements to intersections that warrant improvements in order to serve additional development shall be required as a condition of new commercial or residential development approvals having an impact upon traffic flows. Projects found to impact intersections that are close to reaching warrants for improvements shall be required to contribute pro-rata shares toward future improvement costs.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
New development projects that impact existing roadways shall be required to make improvements or pay a proportionate share to an improvement fund maintained by the County Department of Public Works. Developers installing improvements that are of benefit to future development on the roadway shall be eligible for pro-rata reimbursements from those future developments.	Community Development Department, Department of Public Works, Caltrans	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.3.1b Future encroachments onto highways and collector roads from private properties should be discouraged when other access is possible. New collector streets shall be designed to minimize direct residential and commercial access in an effort to reduce “traffic friction” along collector street alignments. Use of non-access strips and frontage streets shall be considered for subdivisions when new collector streets are required.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
New development proposals shall be required to eliminate direct site access to impacted roadways to the greatest extent feasible.	Community Development Department, Department of Public Works	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.3.1c Encourage the creation of zones of benefit within the existing Community Service Area for road maintenance and improvements.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Support creation of new CSDs and benefit zones for new developments and existing residential neighborhoods that experience inadequate road maintenance.	Community Development Department, Department of Public Works	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.3.1d Existing County roads and bridges should be upgraded where possible.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
The County should develop an appropriate street design plan for secondary streets serving commercial development in Middletown. The design should accommodate angled parking and pedestrian improvements, and should consider redesign for one-way streets. Future commercial development should be required to construct frontage improvements based on the street design plan.	Department of Public Works Board of Supervisors	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.3.1e Encourage the investigation and use of permeable surface systems for county maintained roads, parking lots, sidewalks, curbs, etc.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Use "green infrastructure" and permeable paving systems in new government initiated projects whenever possible.	Department of Public Works	Funding Source	Grants & Matching Funds
		Priority	Moderate
		Timeframe	Continuous

5.3.1f Future development of property situated west of Middletown High School on Big Canyon Road should investigate the possibility of extending Santa Clara Road up from the South and tie it into Big Canyon Road.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Future development proposals should incorporate the extension of Santa Clara Road north to tie into Big Canyon Road as an alternative route to Wardlaw Street as a means of reducing traffic impacts associated with Middletown High School.	Department of Public Works & Community Development Department	Funding Source	Grants & Matching Funds
		Priority	Moderate
		Timeframe	Continuous

Objective

5.3.2 Develop parking and pedestrian amenities that improve the aesthetics and safety of the downtown areas and encourage walkability, day and night.

Policies

5.3.2a Encourage installation of outdoor amenities such as shade trees, public benches, interesting lighting, outdoor sculpture, hanging flower baskets, flower beds, and awnings for shade and rain protection.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
The County shall work with the community to develop downtown streetscape plans that enhances the desirable features of community commercial areas. The plans shall be implemented through the design review process for new commercial development.	Community Development Department, Department of Public Works	Funding Source	Various
		Priority	Moderate
		Timeframe	Continuous

5.3.2b Improve parking, walkways, bicycle facilities and multi-use trails and provide for periodic reviews of the circulation plan during the planning period.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
The County shall work with the community to develop a master trails plan for the Planning Area.	Community Development Department, Department of Public Works	Funding Source	Various
		Priority	Moderate
		Timeframe	Continuous

TRANSIT AND PARKING

For many years, public transportation in Lake County consisted of demand-responsive services in the cities of Lakeport and Clearlake and a countywide system for the elderly and handicapped. The public system was complemented in the private sector by limited bus service, a taxi service in the City of Clearlake, and a transit service for the developmentally disabled. In January of 1995, an extensive effort to provide improved and expanded transit services to citizens of Lake County began. In September 1995, the Area Planning Council approved a new transit plan based on this effort. New and expanded transit services became available on July 1, 1996.

The Lake Transit Authority contracts with a private transportation provider to provide service to the County. Services provided include dial-a-ride and fixed/flex route service. All of the buses are equipped with wheelchair lifts and bicycle racks. Lake Transit operates two bus routes that serve the Planning Area as of 2009. Route 2 operates along Highway 175 between Middletown and Kit’s Corner. There are four northbound and four southbound schedules each day, Monday through Friday. Schedules facilitate commute travel between Middletown and Lakeport. Mid-day schedules serve shopping, medical, and other trip purposes.

Lake Transit Route 3 operates five southbound and six northbound schedules each day, Monday through Saturday along Highways 53 and 29. Two of the southbound schedules operate from Clearlake to Deer Park via Calistoga and St. Helena in Napa County and connects with the Vine Bus System in Calistoga. While Route 3 is designed primarily as an intercity bus service, it offers wheelchair accessible buses, and provides schedules that facilitate commuters to Napa County.

Each year the transit authority is required to conduct an assessment of unmet needs that can reasonably be met. Necessary changes determined by the assessment should be incorporated into the Transit Authority’s long-range plans. Transit funds are limited and improvements are implemented incrementally as funding becomes available. The County should consider pub-

lic transit needs during the review of large development proposals to ensure that minors and other transit-dependent segments of the population are adequately served.

Caltrans owns a park-and-ride facility located on Highway 29 between Lake and Bush Streets. Both facilities are expected to be underutilized in the foreseeable future, and Caltrans is open to the possibility of shared or overflow parking for adjacent uses. The Highway 175 lot is disused and in poor repair. The property on Highway 29 is not yet developed, but Caltrans plans to install the parking lot in the immediate future. Once the Highway 29 park-and-ride is installed, Caltrans will consider declaring the Highway 175 facility as excess property, which would make it available for sale and purchase. The Fire Department would like to acquire the land for district uses, and the County has expressed some interest in the property for public parking.

Objective

5.3.3 Improve access to public transportation.

Policies

5.3.3a Consider transit access and compatibility during the review and approval process for commercial and residential development in the Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Develop criteria for residential and commercial development related to transit compatibility within the Planning Area.	Community Development Dept., Lake Transit Authority, Dept. of Public Works	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.3.3b Encourage bus stops near population centers in the Planning Area to facilitate public transit use.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Support development of transit services within the Planning Area. Encourage Lake Transit Authority to build bus stops/shelters and place signs.	Community Development Department, Lake Transit Authority & Department of Public Works	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.3.3c Conversion and improvement of the Caltrans park and ride facility on Highway 175 to a public parking lot should be actively pursued by means of acquisition, joint use agreements or other methods available.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
The County shall work with Caltrans in an attempt to secure the park and ride lot for use as a public parking lot as a way to reduce on-site parking requirements for future commercial development nearby.	Community Development Department, Department of Public Works	Funding Source	None
		Priority	High
		Timeframe	Continuous

BICYCLE AND PEDESTRIAN

The California Streets and Highways Code establishes the following three categories of bike-ways based on the needs and the physical conditions of the right-of-ways:

- Class I Bikeway – Bike Path or Bike Trail: These facilities provide a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorists minimized. The state standard for minimum paved width of a two-way bike path is eight feet.
- Class II Bikeway – Bike Lane: A restricted right-of-way for the exclusive use of bicycles with vehicle parking and cross flow by pedestrians and motorists permitted. Bike lanes are normally striped within paved areas of highways and are one-directional with a minimum standard width of five feet.
- Class III Bikeway – Bike Route: A route for bicyclists designated by signs or other markings and shared with pedestrians and motorists. Bike routes are typically designated to provide linkages to the Bikeway systems where Class I or II Bikeways cannot be provided.

The following County maintained Class III bikeways are existing or are proposed in the Middletown Planning Area:

- Along Hartmann Road from State Route 29 to Hidden Valley Lake Subdivision.
- Butts Canyon Road from State Route 29 to the Napa County line.
- In downtown Middletown from St. Helena Creek Road to Wardlaw and along Wardlaw to Big Canyon Road.
- The Big Canyon Road bikeways connect the Wardlaw route to State Route 175 and continue for 12.8 miles on Big Canyon to Seigler Canyon Road
- A 2.25 mile bikeway on Harbin Springs Road connects to the Big Canyon route.
- Along Central Park and Santa Clara Roads between State Routes 29 and 175 connecting to Pine Street and Stewart forming a loop back to State Route 175.

The creation of bicycle facilities in the County was first made possible on a broad scale through Proposition 116. Today, there are several revenue sources for bike and pedestrian facilities, many administered by the Lake County/City Area Planning Council. SAFETEA-LU (Safe, Accountable, Flexible, and Efficient Transportation Equity Act - Legacy for Users) provides Transportation Enhancement funds for safety-related improvements. The Safe Routes to School Program was enacted in 1999 to provide grants for planning, design and construction of infrastructure that will substantially improve walking and bicycling routes to schools. If new county roads are built or upgraded, pedestrian and bicycle needs should be considered. Pedestrian improvements should be required as a condition of new residential and commercial development. Multipurpose trails would also be helpful in the development of the tourism industry. Trails should be encouraged in scenic areas. Pedestrian improvements should be required as a condition of new residential and commercial development. Trails should be encouraged in scenic areas and along watercourses.

Few pedestrian improvements have been formally provided along road rights-of-way in Lake County. Most roads were constructed for motor vehicles with little or no consideration for non-motorized traffic. Additionally, most of the older subdivisions lack sidewalks and pedestrians and bicyclists must share travel-ways with motor vehicles. In some cases, physical obstructions such as fences and walls have also been established within some rights-of-way. The County should make an effort to create shoulders on existing roadways sufficient to enhance pedestrian and bicycle use in the Planning Area. The County and the community should work with Caltrans to improve safety, traffic control & signage along Highway 29 and Highway 175 in order to increase vehicle and pedestrian safety.

Sidewalks can promote a neighborhood quality by giving definition to the street. By giving the appearance of a narrow street, they can help to slow down vehicle traffic. Streets with sidewalks, especially near public facilities, should be designed to accommodate on-street parking. Continuous sidewalks should be installed where they are lacking in residential areas and adjacent to properties zoned for local or community commercial uses. Installation of crosswalks is also an important pedestrian safety measure, particularly near or in commercial areas, and other high use corridors such as school routes, near county parks, and near senior and other community centers. Raised sidewalks may not be appropriate in all residential developments, and some people consider that installing sidewalks in older subdivisions has the potential of altering the rural character of the area. The installation of sidewalks and existing subdivisions is dependent upon the size of the lots, the width of the improved streets, the width of the right-of-way, existing and needed drainage improvements and the amount of traffic.

The Planning Area has a long history of equestrian use. There are number of stables, boarding facilities and horse ranches. Middletown Days, which emphasizes equestrian activities, is the major annual event in the Planning Area. Equestrian use could potentially be a key component of future economic development that would differentiate the area from other tourist destinations. Traditionally, trails have been used between Middletown and Hidden Valley Lake along highway crossings, local roads and private lands. Typically these informal trails follow waterways through undeveloped, agricultural and open space lands. The portions of these routes on roadways and at road crossings are becoming increasingly unsafe as traffic volumes grow. Portions of the trails are being closed off by landowners and new development, primarily to inhibit all terrain vehicle access. Continuous, safe public access trails for residents and visitors are desired with a loop system connecting Middletown to Hidden Valley Lake and linking to trails in recreation areas such as Bureau of Land Management (BLM) lands, Robert Lewis Stevenson State Park and Cobb Mountain. The County should make an effort to create shoulders on existing roadways sufficient to enhance pedestrian, bicycle and equestrian use in the Planning Area.

Objective

5.3.4 Develop circulation patterns that are consistent with the rural character of the Planning Area and support a pedestrian friendly, walkable downtown Middletown and Town Center area in the Coyote Valley Community Growth Boundary.

Policies

5.3.4a An integrated multi-use trails system should be developed along the following segments:

1. Adjacent to St. Helena, Putah & Dry Creeks.
2. Central Park to Trailside Park
3. Trailside Park to Anderson Springs
4. Hidden Valley Lake Subdivision to Middletown following creeks and streams to the greatest extent possible.
5. Putah Creek in the vicinity of Hartmann Road and the Hidden Valley Lake Subdivision and Ranchos.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Require future subdivisions along these segments to develop on-site sections of the multi-use pathways and offer them for dedication.	Community Development Dept., Dept. of Public Works, Planning Commission, Board of Supervisors	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.3.4b Development of bicycle and pedestrian paths within the Community Areas should be promoted as well as a multi-use path connecting Coyote Valley with Middletown. Class II bicycle lanes and multi-use paths shall be encouraged on new collector and arterial streets. Bicycle and multi-use trails shall also be encouraged in scenic areas and along waterways.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
The County shall seek community input in the location and development of multi-use trails within the Planning Area. The County should work with the local communities to develop a master trails plan for the Planning Area. Future subdivision developments along approved trail routes should be required to construct on-site trail segments as conditions of approval.	Community Development Department, Department of Public Works	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.3.4c Provide a safe network for pedestrian and bicycle facilities. Develop bikeway facilities in accordance with the Lake County Regional Bikeway Plan. Separate facilities should be provided where conditions warrant.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
Develop bikeway & biking facilities in accordance with the Lake County Regional Bikeway Plan. Require all new collector & arterial streets to include pedestrian & bicycle facilities when conditions warrant. Require circulation plans that provide for a mix of automobile, bike & pedestrian traffic.	Community Development Department & Department of Public Works	Funding Source	Grants, matching funds
		Priority	Moderate
		Timeframe	Continuous

5.3.4d Detached sidewalks, street trees and connections to trail systems shall be encouraged when feasible in the downtown Middletown and Coyote Valley Town Center areas.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
Encourage Caltrans and the Department of Public Works to construct sidewalks along existing routes identified. Use different colored asphalt/different paving pattern to define "downtown center" areas.	Community Development Department & Department of Public Works	Funding Source	Grants, matching funds
		Priority	Moderate
		Timeframe	Continuous

5.3.4g Alternative travel lanes or sidewalks should be incorporated into new residential and commercial development.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
Require adequate pedestrian facilities to be a part of the design of new developments.	Community Development Department & Department of Public Works	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.3.4h Develop a "Complete Streets" Best Practices program

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Training Costs
Adopt a county "Complete Streets" policy Re-write design manuals Create new data collection procedures	Community Development Department, Redevelopment Agency, Dept. of Public Works	Funding Source	None
		Priority	Low
		Timeframe	Continuous

5.4 PUBLIC SERVICES & UTILITIES

Public services and utilities provide transport of water, wastewater, solid waste, emergency response and law enforcement services. Private utilities carry water and communications within the Planning Area. Facilities and services may be sited in all land use classifications with approval of a major use permit, to ensure due consideration for area-specific issues.

Utilities can be private, for profit under Public Utility Commission (PUC) control, or private non-profit without PUC control. Many utility companies provide water, telephone, electricity, cable TV and solid waste collection. The availability and delivery of public services is a vital component in the consideration of growth and long-range development patterns in the Middletown Planning Area.

The ability to provide adequate services is an essential component to accommodating expected growth throughout the Middletown Planning Area. Public services provided by Lake County, various special service districts and private utilities are described below. A general assessment of long-range public services and/or private utilities needed to accommodate forecasted population growth is provided in this section.

SERVICE SYSTEMS

The Planning Area faces many of the same challenges as the rest of Lake County related to the delivery of infrastructure and community services. The County has limited abilities to provide public facilities and services. This is particularly true with delivery of domestic water and treatment of wastewater. As the population increases, the need for water for household use and fire protection increases. Large parcels, distance between developed areas and terrain all contribute to increased costs associated with development of public water and sewer systems for the area.

Future water supplies are a major consideration in the planning process. The availability of utilities and public services are frequently limiting factors for new development, and projects requiring extension of services beyond existing district boundaries or spheres of influence must be analyzed for their growth inducing impacts on communities. New development requiring expansion of water and sewer infrastructure needs to perform capacity analysis studies and install any infrastructure necessary to accommodate the development. Increases in service district boundaries onto properties outside the district are subject to the approval of the Local Agency Formation Commission (LAFCO), an agency made up of local government representatives that ensures the integrity of city and special district boundaries. Any expansion beyond the sphere of influence of the district is subject to further environmental review of potential impacts, and specifically must address growth inducing impacts through the LAFCO review process.

Significant new development projects should be required to connect to existing services or to develop self contained utility service systems that do not rely on individual wells or sewage disposal systems. Future development should also be encouraged to include conservation measures for water and energy. Wastewater reuse, installation sustainable power sources, and the use of plants adapted to the natural environment for screening and landscaping should all be encouraged.

Water & Wastewater Services

Domestic and agricultural irrigation water in the community of Middletown is provided by the Callayomi County Water District, in Coyote Valley by the Hidden Valley Lake Community Service District and in Anderson Springs by the Anderson Springs Community Service District. Domestic water in the remainder of the Planning Area is provided by private wells, small mutual water companies, and in a few limited cases, surface water extractions. Small community and private water systems regulated by the State Health Department in the Middletown Planning Area include: Harbin Hot Springs, Anderson Springs, Four Springs, Lazy S Mobilehome Park, the Beaver Creek Vineyards, Mirabel Springs and Sawdust Trails.

Sewer service is provided to the community of Middletown by the Lake County Sanitation District and to Coyote Valley by the Hidden Valley Lake Community Service District. The remainder of the area relies on individual on-site disposal systems for the treatment and disposal of wastewater. Installation of new systems is subject to review and approval by the Lake County Environmental Health Division. On-site systems must be designed to meet the optimal carrying capacity of the individual site's soils, slopes and water table conditions. While lots with site conditions that are inadequate to support septic systems previously were undevelopable, relatively new technology and regulations permit installation of engineered systems that are self contained and not reliant on site conditions. Many previously undevelopable lots can now be developed using these systems.

Callayomi County Water District

The Callayomi County Water District (CCWD) supplies water to 359 active customers, with 91 reserved connections within the district boundary. Service is provided to residential, commercial, and agriculture uses, and to the Middletown Rancheria and Twin Pines Casino and Hotel. The property at the northeast corner of the intersection of Butts Canyon Road and Highway 29 was recently annexed into the district.

The CCWD's water source consists of groundwater from three wells, one leased well on the Diamond D Ranch and two District owned wells on Big Canyon Road. CCWD's water storage system consists of two tanks with a capacity of 625,000 gallons, which just meets the needs of the existing customers. The District's Master Plan calls for replacement of one 125,000 gallon tank with a 450,000 gallon tank on Rabbit Hill in 2010.

CCWD operates a water treatment plant with a filtration system and carbon filter with transmission lines from the wells to the treatment facility at the corner of Brennan and Stewart Streets. The District has the water rights to supply properties within its district boundaries, but will require additional wells, storage and treatment facilities as lots are built-out in the community.

Lake County Sanitation District

The Lake County Sanitation District (LACOSAN) operates and maintains the Middletown Wastewater Collection System and Treatment Plant which services the community of Middletown and the Harbin Springs Resort. The plant began operation in April 1992. The existing plant consists of a facultative pond system and a spray irrigation system that may be used as a back-up disposal. The facility discharges to the Southeast Geysers Effluent Pipeline, (SEGEP), where it is injected into the Geysers steamfield for power production, or to a 240 acre-foot backup storage pond when SEGEP is unavailable. Based on existing and anticipated population growth, the wastewater treatment facility is undergoing modification and phased capacity improvements. Funding, including grants and loans, is being sought from State and Federal agencies for the improvements, and is further supported by expansion fees for new development.

The County has undertaken an ambitious wastewater reuse program. The Geysers are one of the only steam fields that produce electricity in the world. Studies have shown that the injection of treated effluent increases steam flows from the power generation facilities. Treated effluent is pumped to the Geysers from Middletown, Clearlake, Lower Lake, North Lakeport and the Northshore communities. The Full Circle project is a long-range sewerage plan that proposes to construct an additional pipeline from Lakeport and Kelseyville that will carry treated effluent along Highway 29 to the existing pipeline south of Lower Lake before making the final trip to the Geysers.

Hidden Valley Lake Community Service District

The Hidden Valley Lake Community Service District (HVL-CSD) was providing 2,437 water service connections and 1,430 sewer connections in 2008 to the in Hidden Valley Lake Subdivision and some commercial parcels in the surrounding area along Coyote Valley and Hartmann Roads including the golf course and clubhouse, Coyote Valley School (water only), Hardester's Market and Coyote Valley Plaza. The District currently has approximately 300,000 linear feet of piping, four potable water booster pump stations, seven storage tanks, three ground wells, a chlorine contact basin, seven sewage booster pump stations and one wastewater treatment plant. All wastewater is recycled and used for golf course irrigation.

The District has prepared the Coyote Valley Concept Infrastructure Plan (December 2007, which assesses the entire Coyote Valley for potential annexation into the District. Annexation of parcels into

the service district and expansion of the sphere of influence within the Coyote Valley Community Boundary Area are supported, as is service to the Crazy Creek property, located between the communities of Middletown and Hidden Valley Lake on the east side of State Highway 29, to support commercial/industrial development and limited residential development consistent with policies of the Lake County General Plan.

Anderson Springs Community Services District

The Anderson Springs Community Services District (ASCSD) serves the Anderson Springs Subdivision, which is located approximately five miles northwest of Middletown off State Route 175. The ASCSD provides domestic water service to 195 residences in the Anderson Springs Subdivision, and has 24 reserved connections. While previously the subdivision consisted primarily of seasonal, second homes, at present 70% of the households are permanently occupied and 30% are seasonally occupied. Nonetheless, the population increases in the summer from approximately 550 year round residents up to 1,000 or more at peak season. The source of the District’s water is from perennial springs located on public lands (BLM) on Cobb Mountain, well above the geothermal steam fields and private septic systems. It is a fully enclosed system with water piped down 12,000 feet to a 150,000 gallon tank sited in the community. The water quality is excellent and is tested monthly by a certified laboratory. The recreational creek water is tested quarterly by a certified laboratory and the Lake County Environmental Health Division annually. The water lines and all other infrastructure were replaced in 1984, and there are no known problems with the water quality or adequacy of service. Although there have been allegations that the creek and groundwater can be contaminated from failing septic systems and geothermal operations, the domestic water supply is excellent. There are no private wells in the subdivision, and there are no water diversions from the creek for domestic water.

The Anderson Springs subdivision currently has private septic systems for sewage disposal. There have been numerous septic failures in recent years, largely due to inadequate and/or aging systems. Environmental Health Division requirements for new systems, such as the 100-foot setbacks from creeks, had precluded development of new systems on most of the remaining vacant lots within the subdivision. However, the Lake County Environmental Health Division now permits engineered septic systems, which can be designed for some of these lots. It has long been a goal to extend public sewer to Anderson Springs due to failures from older septic systems and the difficulty of engineering new systems. As of late 2008, the Lake County Sanitation District (LACOSAN) had requested proposals to determine the feasibility of connecting this subdivision to LACOSAN services.⁴

Objective

5.4.1 Ensure that new development does not exceed public water and sewer service capacity.

Policies

5.4.1a Upgrade substandard domestic water systems to ensure adequate fire flows and backup power sources.

⁴ LACOSAN, Anderson Springs Wastewater Collection System Project PDR Collection System Alternative Evaluation—Water Works Engineers—December 14, 2009.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Unknown
Pursue state and federal funding sources to help upgrade publicly managed community water systems in the area. Encouraged County service areas or other similar public financing mechanisms when engineering studies support upgrading of local water systems.	Special Districts, Board of Supervisors	Funding Source	Grants, Fees
		Priority	Moderate
		Timeframe	Long-term

5.4.1b Require new residential subdivisions to provide adequate water for domestic and fire flow purposes and encourage developers to utilize existing nearby water systems.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Require water supply information prior to project approval. Require connection to public water system if available. Hydrologic studies may be required to ensure that projects will not have a significant effect on regional water quality and quantity.	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.4.1c Any development requiring landscaping shall be encouraged to incorporate the use of native plants, fire resistant or drought resistant plants.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Water supply shall be considered in the review of all aspects of new development proposals.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.4.1d Development proposals shall be carefully reviewed to ensure that sewage capacity is adequate and that developments can be adequately served or improved to accommodate the development.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
New development proposals shall be required to provide proof that waste disposal will be adequate and consistent with all applicable regulations. Larger developments within existing sewer districts shall be required to provide capacity analysis studies and install necessary infrastructure, or pay a proportionate share of future infrastructure needs, to serve the development.	Community Development Department, Environmental Health Division, LACOSAN, HVL-CSD	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.4.1e The density of new residential subdivisions shall take into account the impacts of full build out on water supply, fire protection and maintaining adequate area-wide water quality.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
New development shall be required to submit proof of adequate water supply. Capacity analysis studies and/or hydrologic studies may be required to ensure that the project will not have a significant effect on regional water quality and quantity.	Community Development Department, Callayomi County Water District, HVL-CSD, Environmental Health Division	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.4.1g Encourage the implementation of a variety of “graywater” systems to recycle wastewater and thereby create additional wastewater treatment capacity.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
The County should develop and adopt a county-wide “graywater” ordinance.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Short-term

Objective

5.4.2 Protect surface and ground water resources so that all residents, both now and in the future, have reasonable assurances that an adequate quantity and quality of water exists.

Policies

5.4.2a Identify areas with a high water table for required connection to public sewer systems prior to approving additional discretionary projects.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	Unknown
The County should survey areas known to have a high water table, and prioritize these areas for connection to public sewer.	Community Development Department, Water Resources Div., Env. Health	Funding Source	General Fund, Grants
		Priority	Moderate
		Timeframe	Long-term

5.4.2b The use of permeable surfaces for driveways and sidewalks shall be encouraged to increase groundwater recharge and reduce runoff.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
The County shall develop incentives for use of permeable materials for driveway and sidewalk surfaces.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.4.2c Continue to develop, manage and enforce water conservation programs and other similar smart water usage practices in the Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Encourage the use of tools and technology designed at reducing water usage and recognizing excessive water issues (e.g. detecting and fixing running toilets and leaky faucets.) Continue to educate the general public and enforce provisions of the County Water Conservation (Ord. #2291) Adopt a Countywide Drought Contingency Plan.	Lake County Special District & Hidden Valley Lake Community Service District	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

STORMWATER DRAINAGE

Adequate drainage is an important factor in the health and safety of a community. Much of the Middletown Planning Area is without gutters or storm drains. Among the issues identified by the Citizen’s Advisory Committee were: ponding along roadways, the lack of paved roads with sufficient curbs, gutters and sidewalks in portions of Middletown, localized flooding throughout the Planning Area and increases in localized flooding created by new development within the floodplain.

Valley bottom areas such as Long and Coyote Valleys, which have seasonally high water tables, generally have poor drainage. In addition, there are other localized drainage problems within the Middletown Planning Area. Localized drainage problems include areas that surround Dry Creek and St. Helena Creek in the residential area north of Highway 175, downtown west of Santa Clara Avenue, along Highway 29 and Big Canyon Road north of Butts Canyon, south along Butts Canyon Road, and across Highway 29 from the Hidden Valley Lake Subdivision. Improved storm drains or gutters in Middletown exist along Calistoga Street, Bush Street, Wardlaw Street, and Big Canyon Road.

As the communities grow, improvements will have to be constructed along with new street facilities associated with housing and commercial development projects. New drainage facilities should be constructed in accordance with applicable standards and acceptable design practices to accommodate the full build-out of proposed land uses within the drainage basin affected by new development.

The cost of implementation of all of the recommendations of the Middletown Master Drainage Plan was estimated at \$2.74 million in 1996. The County does not have the financial means to implement these improvements, nor is it likely that voters would approve a special tax and/or assessment to implement these improvements. New development in Middletown can implement some of these recommendations; however, much of the development is too small in scale to implement major offsite stormwater improvements required by the master plan. Construction of portions of the system by private developers may help solve some of localized problems and limit impacts of new development, but they cannot fully address drainage problems unless the entire system were to be constructed.

Implementing all of the storm drainage recommendations in the Hidden Valley Lake Master Storm Drainage Plan was estimated at \$4.31 million in 2000. This cost estimate does not include major work that would be required to certify the levee and remove the 100 year floodplain designation from the Mountain Meadow South area of the Hidden Valley Lake Subdivision, Unit No. 5. A majority of these fa-

ilities referenced in the Hidden Valley Lake Master Storm Drainage Plan consist of storm drains that are a part of the Hidden Valley Subdivision road system. Funding for these facilities would have to come from the home owners. It is not clear where a source of funding for major improvements along Coyote and Gallagher Creeks would originate.

Infill development in areas where there are not adequate facilities may exacerbate already insufficient drainage. New drainage facilities should be required to be designed and constructed in accordance with the Lake County Hydrology Standards first adopted in June, 1999. The standards require facilities to be designed for a 10-year event if the drainage area is less than one square mile, a 25-year event if the drainage area is between one and four square miles and a 100 year event for drainage areas greater than four square miles. Exceptions include arterial and collector roads which have a minimum 25-year design standard and facilities crossing drainages within FEMA mapped 100-year floodplains that are designed for 100-year events.

Storm water drainage controls within the Planning Area are disconnected and in many cases does not exist. The current storm drainage infrastructure is inadequate to meet peak storm flows in many areas. Infill development in areas where there are not adequate facilities may exacerbate already insufficient drainage. All new development should provide drainage improvements not only within the development, but also contribute a pro-rata share to any necessary off-site improvements to facilitate area-wide drainage improvements. Improvements such as curbs, gutters and sidewalks should be used when they do not detract from the function and efficiency of the overall drainage system and in accordance with Lake County Code.

In addition to improving stormwater drainage, the County should continue to make efforts towards reducing the amount of pollution resulting from stormwater runoff. The County should continue to comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) As authorized by the Clean Water Act, the NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. The County of Lake, City of Lakeport and City of Clearlake have joined together as co-permittees to form the Lake County Clean Water Program (Program). The Program's Stormwater Management Plan (SWMP) is a joint project of these agencies. The Lake County Clean Water Program and Stormwater Management Plan is structured to accomplish meeting, and in many areas exceeding, all applicable State and Federal regulations related to stormwater management and pollution.

There are many new technologies in stormwater management. These improvements are recognized as "green infrastructure". One of the most common elements is permeable paving surfaces, used for parking areas, roads and sidewalks. Pavers are often used, but permeable asphalt and concrete are also now available. This allows storm water to filter into the ground and recharge underground aquifers instead of becoming runoff. These surfaces are best coupled with "rain gardens" or islands in parking areas and along streets which allow runoff into the vegetation that can then be filtered and dispersed rather than running along curbs. They are constructed below the grade of the sidewalk, street, or parking area or are constructed normally except they have regular curb-cuts which allow the runoff to enter the island. A comprehensive plan is effective in controlling, conserving and recycling storm water.

Objective

5.4.3 Ensure the provision and management of adequate stormwater facilities in a safe and environmentally sensitive manner.

Policies

5.4.3a Require curbs and gutters for new development within Community Growth Boundaries to direct storm drainage when they are consistent with the overall drainage system.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Require curb and gutter on new development in Planning Area where appropriate for proposed density and use. Give priority to areas adjacent to existing improvements.	Community Development Department, DPW	Funding Source	Grants, state and federal funds
		Priority	Moderate
		Timeframe	Continuous

5.4.3b Require development projects that would result in off-site drainage impacts to mitigate project related impacts completely.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Include conditions with new project approvals that mitigate drainage impacts through construction of improvements and/or payment of pro-rata share of costs. Require projects that impact off-site drainage facilities to improve drainage facilities and or pay pro-rata share.	Community Development Department, Water Resources Div.	Funding Source	Developer Fees
		Priority	Moderate
		Timeframe	Continuous

5.4.3c Give highest priority for drainage facility improvements to areas subject to localized flooding.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
The County should develop priority list of areas in Planning Area with the worst flooding potential.	DPW, CDD	Funding Source	None
		Priority	High
		Timeframe	Immediate

5.4.3d Encourage the use of “green infrastructure” practices as a way to reduce off-site drainage impacts from new construction, where appropriate.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Support alternative drainage systems that utilize permeable paving surfaces, on-site water retention, bioswales, rain gardens, etc.	Community Development Department & Water Resources	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.4.3e Reduce the inflow of stormwater drainage into sewer cleanouts and other similar mechanisms that have the ability to inundate the local sewer collection system.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on County Budget	None
Engage in community outreach programs which educate the public about effects of stormwater drainage into the local sewer collection system. Active enforcement and penalties for violator’s purposely directing stormwater into sewer cleanouts. Identify and require the repair of private residential broken sewer laterals.	Lake County Special Districts & Hidden Valley Lake Community Service District	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

SOLID WASTE DISPOSAL

South Lake Refuse provides curbside pickup of solid waste, yard waste and single stream recycling to most parts of the Planning Area. There is one landfill in the County, located east of the city limits of Clearlake managed by Lake County Public Services Department and contracted to South Lake Refuse. This landfill facility accepts disposal company and self-hauled solid waste materials as well as recyclables. Recyclable materials are compacted and bundled onsite before they are hauled to a material recovery facility in Napa County. The landfill site is projected to have landfill capacity through the year 2019 assuming a growth rate of 2% countywide. South Lake Refuse provides curbside pickup of solid waste, yard waste and single stream recycling to most parts of the Planning Area.

The California Integrated Waste Management Board is responsible for the enforcement of Public Resources Code Section 41780 which requires the county to divert 50% of all solid waste from landfills through source reduction, recycling and composting materials. As of 2008, Lake County has approximately a 40% diversion rate. In order to best facilitate the achievement of this 50% diversion rate the County should promote further diversion of solid waste through an educational program designed to encourage local residents of waste reduction methods including recycling and composting.

There is a problem in the Planning Area with illegal junk yards, abandoned vehicles and waste dumping on remote property and roadways. The community feels that part of the problem could be solved by locating a transfer station in the Planning Area, but the majority of the problem will need to be solved by diligent code enforcement action, which is actively supported by the community.

Improper disposal of yard waste, primarily unauthorized open burning, also occurs in the Planning Area. Desirable options and alternatives would include composting or chipping and spreading. Community green waste disposal locations, locally organized portable chipper programs and other solutions are encouraged, especially during weed control season

Objective

5.4.4 Ensure the continued availability of safe and efficient disposal or recycling of solid wastes.

Policies

5.4.4a Encourage compliance with and enforcement of County codes for open and outdoor storage, abandoned vehicle abatement and illegal dumping.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Enforce compliance with County codes to abate illegal open and outdoor storage. Continue the abandoned vehicle abatement program. Support clean-up efforts by private property owners to remove illegal dump sites on their properties, and assist them in obtaining grant funding when available, especially when hazardous materials may be involved.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.4.4b Support yard waste recycling and disposal programs.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Minor
The County should continue to provide support materials and distribute information about chipping, composting and other alternatives to dumping or burning. The County should continue to support funding for community chipping or portable chipping programs.	AQMD, Public Services Community organizations and fire safe counsels.	Funding Source	General Fund
		Priority	Moderate
		Timeframe	Continuous

5.4.4c Encourage the expansion of curbside service to include the entire Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
The County should encourage the South Lake Refuse Company to expand its services within the Planning Area.	Public Services Department, South Lake County Refuse	Funding Source	Unknown
		Priority	Moderate
		Timeframe	Medium

COMMUNICATIONS

Telephone service is available throughout Lake County and the Middletown Planning Area. Once dominated by Pacific Bell and AT&T, telephone service is now available from numerous providers. There are a number of telecommunications towers throughout the county, including a tower in Middletown southeast of the intersection of Butts Canyon and Highway 29, and another facility northeast of Spruce Grove Road and Highway 29. These provide only limited cell phone coverage to the area. Co-location by other servers is encouraged on existing towers, as stated in the Lake County Wireless Telecommunications Ordinance. Additional towers or relay stations that increase the reception area should be supported on sites that are well camouflaged and located away from residences. Cable television and high speed internet service are not available outside of Hidden Valley Subdivision and Middletown. Internet nodes and wireless services should be supported. While Lake County Television provides local

television broadcasts, it is only available to cable television subscribers.

There is a lack of local news information in the South County. Local television news is not available to many parts of the Planning Area, and the Middletown Times Star newspaper is only published weekly. Printed news is available from the Clearlake Observer and the Record Bee in Lakeport. An on-line newspaper, Lake County News (lakeconews.com), consistently covers news events throughout the County. Local news and emergency broadcasting is available on four radio stations: 1270 AM (KXBX), 98.3 FM (KXBX), 99.5 FM (KNTI) and 105.9 FM (KQPM).

ENERGY SYSTEMS

Electricity in Lake County is supplied from the statewide electrical grid. Some of this energy is provided by geothermal energy created at the Geysers. Power companies are constantly improving local delivery systems, and they respond quickly to power outages in the Planning Area. There are only a few developable sites that are outside the state power grid. At this time there are no anticipated problems with availability of electricity to serve future development. Natural gas is not available in Lake County, and most homes and businesses utilize onsite propane storage tanks as an additional fuel source. There are a small but growing number of private solar arrays, and occasionally wind turbines, as additional power sources.

Public utility easements that provide for the installation of utility lines are contained in the rights-of-way of public roads and highways and lot line boundaries of newer construction. The need for infrastructure often outweighs many other concerns. Although it is not a preferred alternative, scenic roads may be developed with above ground utility lines where undergrounding is unfeasible, even though this may detract from the scenic quality of the area.

Objective

5.4.5 Ensure the orderly development of communication and energy systems in order to increase economic competitiveness, maintain an informed citizenry, and improve personal convenience for both residences and businesses.

Policies

5.4.5a Provide reliable and cost effective telecommunications services within the Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Work with service providers to ensure that residents and businesses have adequate quality and cost competitive access to telecommunication services, including broadband internet service.	Community Development Department, Administration Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.4.5b Encourage the use of renewable energy devices and systems in both existing and new developments.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Promote the use of renewable energy systems such as solar, wind and geothermal (private use) and other similar sources for residential, commercial and industrial uses.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

AIRPORTS

There are no public airports within the Middletown Planning Area, although there is a recreational gliderport and hot-air balloon launch facility at Crazy Creek between Middletown and Hidden Valley Lake on the east side of State Highway 29, where small aircraft could land. There has been interest in the past to develop a public airport in the southern portion of the County. Airports provide ideal locations for commercial and industrial development, provide access to air transportation when natural disasters strike, and also provide convenient access for tourists and owners of private aircraft. An airport would likely encourage tourism by providing additional access to the area. The nearest airports are Lampson Field between Lakeport and Kelseyville, and the airport in Angwin in Napa County. Lampson Field is a general aviation airport and the sole public use airport in Lake County. The Lake County Public Works Department oversees the operation, maintenance and improvements to the Airport. Lampson Field is located approximately 3 miles south of Lakeport. The airport runway, designated Runway 10-28, is 3,600 feet long and 60 feet wide with an 85-foot displaced threshold at the east end. The runway is lighted. Private fuel service, a restaurant as well as small aircraft and general aviation services are available at the airport.

Airport operations are governed by a local Airport Land Use Commission (ALUC) and the Federal Aviation Administration (FAA). The FAA conducted a study of potential airport sites in Lake County in the 1980s. Two sites were surveyed in the area: Butts Canyon Road to the south of its intersection with State Route 29 and the Crazy Creek Gliderport property. The siting of public airports requires a large, unobstructed approach area at each end of the runway. Low density development is recommended surrounding an airport facility since the greatest danger of airplane crashes is on approach and take-off. The General Plan supports investigation and construction of a public airport serving the Planning Area.

Objective

5.4.6 To support development of an airport within the Planning Area.

Policies

5.4.6a Support further investigation and funding sources for an airport in the Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Potentially Major
Encourage further study and identification of funding sources for the development of an airport in the South County.	Community Development Department, Department of Public Works, ALUC, FAA	Funding Source	Grants, General Fund
		Priority	Moderate
		Timeframe	One Time

MILITARY INSTALLATIONS

There is a federal mandate that local planning documents consider military stations and future plans for military operations within the sphere of influence of the Planning Area. There are no military bases in the Planning Area, although the U.S. Coast Guard owns a property east of Coyote Valley. The U.S. Coast Guard LORAN station accessed from Grange Road in the Coyote Valley was closed after 33 years of service on May 21, 2010. Prior to its use by the Coast Guard it was used as an Army listening post in the 1950's.

LORAN-C or Long Range Aids to Navigation was originally a radio navigation service for U.S. coastal waters. It was later expanded to include complete coverage of the continental U.S. as well as most of Alaska. Twenty-four U.S. LORAN-C stations work in concert with Canadian and Russian stations to provide coverage in Canadian waters and the Bering Sea.

Advances in technology have allowed greater automation of the LORAN-C operations and allowed the Coast Guard to centralize its control of these locations to two sites. LORAN technology has been superseded by the more sophisticated GPS and related satellite navigation systems. The US Coast Guard terminated all LORAN-C signals on February 4, 2010, however, five stations in the chain will continue operating temporarily due to agreements with Canada and the Russian Federation.⁵

The LORAN property will pass to the United States Governmental Services Administration who is in charge of dispensing with government owned properties. The Lake County Administration Office has been working with the Federal Government regarding a possible plan to transfer a large portion of the site to the County.

PARKS & RECREATIONAL FACILITIES

The Department of Public Services is responsible for the operation and maintenance of County facilities, which include 45 County buildings and approximately 23 park and recreation facilities, including 1700 acres on Mt. Konocti. County parks are mainly funded by County general funds, geothermal revenues, state and federal grants, and park fees (also known as Quimby fees) paid for by new subdivisions.

The County operates two facilities within the Planning Area: the Middletown Pool/Tennis Park which includes a community swimming pool, playground and a tennis court on one acre of land at Wardlaw Street and Big Canyon Road; and Trailside Park which is a 107 acre passive recreation area on Dry Creek Road in Middletown. Trailside Park was acquired with a State grant under the California Wildlife Coastal and Parkland Conservation Act. The purpose of the legislation is to provide wildlife habitat, riparian areas and recreational benefits. The grant requires

⁵ Lake County News, May 22, 2010

that the property be preserved in its natural state with minimal improvements. County improvements include a parking area, restrooms, picnic areas and 1.6 miles of trails for non-motorized use by horses, bicycles and pedestrians. Dogs are also allowed. The park is also the site of "Art in the Park", which is a cooperative project with the Lake County Arts Council established by the Board of Supervisors in 2002. From May through mid October "eco-art" sculptures are displayed along the park trails, and according to Arts Council, the exhibit attracted 1,500 visitors in 2007.

Central Park, located on Central Park Avenue, is owned by the Middletown Central Park Association. An equestrian facility, the Middletown Senior Center and the Middletown Lions Club building are located on the Central Park premises. The County has given the Middletown Unified School District 11 acres of land for active recreational facilities, and the school district operates baseball diamonds and football fields.

The Anderson Springs Subdivision has a clubhouse and swimming area for its residents. In Hidden Valley Lake, the eighteen-hole golf course, clubhouse and camping facilities are open to the public. The homeowner's association has private recreational facilities for use by its residents and guests that include riding stables, swimming and boating on the lake, tennis courts, park and open space areas and a clubhouse facility with meeting rooms. In addition to the aforementioned public facilities, the Planning Area contains several resorts including Harbin Hot Springs, which is the largest remaining resort in the region centered around natural hot springs.

Population growth in the community of Middletown will warrant the need for developing an improved community park within the town. The National Recreation and Park Association standards recommend that 2.5 acres of park be developed for every 1,000 residents. Based on these standards the community of Middletown currently should have 3 acres of community parks but has approximately 108 acres.

The County should look into acquiring property that will provide for development of new parks and trails and active recreational opportunities like soccer, softball, tennis, basketball and possibly a skate park. The Department of Public Services is not in a position to take on new maintenance responsibilities. Alternate funding sources should be sought for acquisition, construction and maintenance of new parks.

For the past year, a stakeholders group together with the Lake County Department of Public Services, has been developing the concept of the Konocti Regional Trails (KRT) system in conjunction with a technical assistance grant from the National Park Service, River Trails and Conservation Assistance (NPS RTCA) program. The land-based trails would provide hikers with scenic views of Clear Lake, Mt. Konocti, vineyards, low-lying valleys, small communities and distant wilderness areas. Wherever possible, plans are to use low-impact existing trails, utility easements, fire roads or fire breaks located on public lands, or on private lands of voluntary property owners. The County approved an agreement in 2009 with Alta Planning & Design to organize and seek community input in the development of the KRT plan. Alta will compile existing and proposed trail information into the county GIS mapping database, work with community volunteers to assess proposed trails segments, develop a signage plan and design guidelines, and ultimately compile a proposed master trails and implementation plan. This plan is scheduled to be completed in the spring of 2010. Following the completion of this plan, the Middletown area should push forward with the development of a local trails plan aimed at creating local trails and linking them with the larger Konocti Regional Trails system.

Objective

5.4.7 Upgrade and expand parks and recreation facilities to encourage more public use and enhance recreational opportunities.

Policies

5.4.7a Ensure that the development of parks and recreation facilities are coordinated to match the rate of future growth in the Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Review future subdivision applications for consistency with parks planning and require large developments to construct and maintain parks within said development. County should support efforts by the County to establish areas that will provide for active recreational opportunities.	Public Services Department Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.4.7b Capital improvement plans and programs should be encouraged as a means of coordinating the improvement, maintenance and acquisition of parks and recreation facilities in the Middletown Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
The County should seek all available assistance grants for parks, open space & facilities.	Public Services Department & State grant funding agencies	Funding Source	Grants & Matching Funds
		Priority	Moderate
		Timeframe	Continuous

5.4.7c Federal and state park land, park facility and open space assistance grants should be applied for as needed for park development and maintenance.

Implementation Programs/Strategies	Responsible Agencies	Impact on Budget	None
Utilize grant sources to fund park land, park facilities, and open spaces. Develop parks within sensitive natural areas for open space preservation.	Public Services Department Redevelopment Agency Administration/ Finance Department	Funding Source	Grants
		Priority	High
		Timeframe	Continuous

5.4.7d Encourage development of new trails, and enhance existing public access trails whenever feasible.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
<p>The County should work with the local community to develop a master trails plan for the Planning Area.</p> <p>The County should require, through the entitlement process that new development provide access easements for public trails on sites identified within the master trail plan.</p> <p>The County should support inclusion of trails within the Planning Area as part of the Konocti Regional Trails Plan under development</p>	<p>Community Development Dept., Dept. of Public Works, Public Services Dept., Marketing Division</p>	Funding Source	Subdivision fees, state and federal grants, TOT funds
		Priority	Moderate
		Timeframe	Continuous

EDUCATION

The Middletown Unified School District serves the majority of the Planning Area except for a sparsely populated area along the northwest border of the Planning Area that is served by Konocti Unified School District.

Figure 5-5 Middletown Unified School District Facilities & Enrollment

School	Approximate # of Students	Permanent Classrooms
Cobb Elementary	200	7
Minnie Cannon Elementary, Middletown	170	9
Coyote Valley Elementary, Hidden Valley Lake	550	14
Middletown Middle School	325	5
Middletown High School	540	21
Loconomi Alternative School	70	n/a
TOTAL	1,855	56

Source: Middletown Unified School District, 2006

Permanent facilities are already overcrowded, and the District currently is using 36 portable classrooms between the six schools. The school has, or is in the process of acquiring, land to expand the elementary schools in Middletown and Hidden Valley Lake. Based on current projections, a 2% annual population growth would increase the school population by approximately 400 students (or 2,260 total) by 2018. The District will require more land and permanent classrooms within the next 10 years, and feels that a new high school needs to be constructed that can accommodate 850 students with room for expansion of up to 1,400. School districts receive funds based on the square footage of new building construction. If growth pressures were to increase to levels experienced in the late 1990s, school needs could increase dramatically. Sizable new commercial and residential development projects will need to work with the school district to determine if school impacts require the donation of land or infrastructure necessary to serve the increased population.

There are no higher education facilities in the Planning Area. There are satellite campuses for Yuba Community College in Clearlake and for Mendocino Community College in Lakeport. The limited availability of higher education countywide leads to a reduction in the potential for a larger and more

educated local work force. Proximity to higher education facilities and advanced degrees per capita are among the factors that attract new business centers and high-tech facilities. Formation of a Lake County Community College District or other college facility with a campus in the Planning Area would likely improve the business climate, increase the skilled workforce and lead to the creation of more jobs.

Objective

5.4.8 The School Districts should be encouraged to continue to plan for future growth.

Policies

5.4.8a The County should work with the Middletown Unified School District to plan for future growth, as needed.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Work with the Middletown Unified School District to ensure that adequate area and infrastructure is available for future expansion. Solicit comments from the School District on residential development proposals.	Community Development Department & Middletown Unified School District	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

5.4.8b Support efforts to establish higher education facilities in the Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
The County shall encourage and support the development of a university within the Planning Area.	Board of Supervisors	Funding Source	None
		Priority	Low
		Timeframe	Continuous

CEMETERIES

The Planning Area is served by the Middletown Cemetery District, a County Cemetery for those persons who own property or live within the District. The District consists of 8 acres of land and anticipates this will be adequate for many years to come. It is dependant on tax revenues and sales. It is not served by the Callayomi County Water District, or the Middletown Sewer District. It is anticipated that the District will be able to provide service over the long term.

LIGHTING & UTILITIES

Street lighting in the community of Middletown is provided by the Middletown Lighting District, a County Special District. The District includes 218.55 acres and services the central portion of the community. Funding for the District comes from a portion of local property taxes as well as a benefit assessment fee. The County pays for electricity and Pacific Gas and Electric Company provides maintenance of the District’s lighting system. It is the intention of the District to install attractive street lamps along Calistoga Street in the near future. Expansion of the lighting system can occur through annexation to the existing District or by creation of a new assessment

district. Large development projects within the community that are not currently within the District should be annexed.

LIBRARIES & MUSEUMS

Lake County provides and maintains four regional libraries. The Middletown Library, also known as the Chauncey Gibson House, is located on Calistoga Street and serves the community of Middletown and the surrounding area. County library facilities are also located in Lakeport, Upper Lake and Clearlake. There have been plans to construct a new and larger library in Middletown, and the County acquired property for this purpose across from the school on Big Canyon Road for the purpose of forming a joint use agreement with the school. Since this has proven to be infeasible, the County is currently in the process of selling or trading property with the Middletown Unified School District. The County hopes to locate the new library on Main Street, and the school intends to use the land set aside for the library to expand its elementary school.

The Hidden Valley Lake Homeowners Associations maintains the Stone House, considered to be the oldest home in Lake County. It is open to the public by appointment only.

The County of Lake is home to two historic museums featuring local history, Native American and early pioneer artifacts. Both museums are operated by the Department of Public Services and are open Wednesday through Saturday. The Courthouse Museum is located in downtown Lakeport, between Library Park and the county courthouse. The museum offers the following:

- Pomo Baskets and other Native American artifacts
- Geologic History of Clear Lake
- Gem and Mineral Display
- Pioneer artifacts
- Restored Courtroom
- Research Library and Photograph Collection

The Schoolhouse Museum is located on Main Street just east of downtown Lower Lake and offers the following:

- Pioneer artifacts
- Rock and Mineral display
- Restored Schoolroom
- Victorian Parlor
- Resource Library
- Cultural Events and Art Shows in the Weaver Auditorium

HEALTH CARE

Redbud Hospital District provides services to an extensive area in southeastern Lake County, including all of the Middletown Planning Area. The District's hospital is located in the City of Clearlake approximately 15 miles from Middletown. The hospital is a 40-bed facility and provides the following services: acute care, emergency treatment, intensive care, physical therapy, respiratory therapy, X-ray, nuclear medicine, pharmacy, and laboratory. Additional services which may be added in the future include outpatient clinic, cardiac rehabilitation unit and diabetic screening. Many area residents use hospital facilities in the Napa Valley and Santa Rosa. Sutter Lakeside Hospital is also available in Lakeport.

The community feels there is a need for additional medical, dental and other health services, and new facilities should be encouraged to locate in the Planning Area, especially in the Coyote Valley Town Center where there is both space and infrastructure to accommodate a large facility. In 2008 some medical offices associated with Redbud Hospital were opened within the Coyote Valley Plaza.

VISITOR SERVICES

County sponsored visitor and information services are operated through the Marketing Division. There is a visitor service center in the Calpine Visitor Center in Middletown, currently funded by Calpine, but augmented by County funding from time to time. It is open Wednesday through Sunday and provides tourist information, maps, brochures and other literature free of charge.

The County has begun to install information kiosks and signs in or near downtown areas to direct highway travelers to community areas and provide information about local points of interest. An information sign is planned for downtown Middletown showing local wildlife and a map to local attractions. There is a need for updated community gateway signs and for more community information signs on arterial roads directing visitors to downtown areas and points of interest.

5.5 LAND USE AND ZONING PLANS

This section contains a description of the land use designations proposed by the Area Plan and a summary of the recommendations by land use type. Special zoning recommendations are also discussed. Some sites have been temporarily zoned with a zoning classification that allows lower density or intensity of development than the general plan land use designation. This has been done to implement future planned developments on these sites, and the temporary, or transition zoning support interim uses of the land. Regardless of the transitional zoning on a handful of properties, the general plan land use designations reflect the goals of a 20-year plan. Proposals to amend the land use designations to increase density must meet certain requirements, such as proper soils, infrastructure availability, buffer areas from agricultural operations and other critical resources while not promoting spot zoning. Also, densities higher than five acres per dwelling typically need to occur within Community Growth Boundaries.

This plan generally seeks to locate land uses adjacent to one another that are compatible, related, mutually supportive, and similar in the amount of traffic they generate and types of transportation facilities they need. In some cases, though, existing land use or circulation patterns, the timing of development on properties with different owners, environmental constraints or other factors prevent new land use patterns from providing a gradation of uses to ensure compatibility and thus necessitate the use of other tools. One of the most commonly used and effective means of minimizing conflicts between potentially incompatible land uses is to provide a buffer zone between the uses. The exact dimensions and characteristics of buffer zones and allowed uses are site-specific or project-specific and are determined through the review process. Buffer zones should be reserved and guaranteed in perpetuity through conservation easements, deed restrictions or similar mechanisms, with the developer providing any necessary funding.

SUMMARY BY LAND USE

Figure 5-6 Acreage of Existing and Proposed General Plan Designations

Land Uses	Existing	Proposed
Resource Conservation	3,563	16,997
Agriculture	9,753	6,736
Rural Lands	56,232	59,197
Rural Residential	7,493	5,796
Suburban Residential Reserve	766	1,062
Low Density Residential	1,677	1,635
Medium Density Residential	29	27
High Density Residential	17	21
Local Commercial	52	47
Community Commercial	95	152
Resort Commercial	1,118	1,170
Service Commercial	68	94
Industrial	67	181
Public Facilities	20	1,053
Public Lands	13,211	0
Total	94,161	94,168

Figure 5-7 Acreage of Existing and Proposed Zoning Designations

Zoning	Existing	Proposed
Open Space	13,636	14,161
Agriculture	7,464	4,673
Agriculture Preserve	3,657	3,659
Timber Preserve	3,060	3,053
Rural Lands	54,897	57,825
Rural Residential	7,397	6,565
Suburban Residential	759	863
Single Family Residential	1,685	1,665
Two Family Residential	26	27
Multi Family Residential	10	21
Planned Development Residential	77	10
Local Commercial	16	44
Community Commercial	91	120
Resort Commercial	146	220
Commercial/Manufacturing	9	0
Service Commercial	42	100
Highway Commercial	25	6
Planned Development Commercial	1,072	970
Heavy Industrial	0	184
Total	94,069	94,166

COMMERCIAL

The “C2”, Community Commercial zoning district allows a wide range of commercial uses, from hotels to medical clinics to automobile sales. Most of downtown Middletown along Calistoga Street and one-block back on the east side of town and a couple blocks on the west side of town on the south side of State Highway 175 is zoned “C2”. In addition, the property along the north side of Hartmann Road between Highway 29 and Coyote Valley Road in Coyote Valley is zoned “C2”. The focus of commercial development should be concentrated within designated town centers of Middletown and Coyote Valley. The Special Study Areas contained in Chapter 6 of this Area Plan address future commercial development and the specialized needs of these individual communities.

Sites with heavy commercial and manufacturing/industrial zoning are located south of Middletown along Highway 29, and south of the Hidden Valley Lake subdivision in the areas of Spruce Road Extension and Borman Lane. The sites along Spruce Road Extension and Borman Lane are limited in the types of uses that could be developed due to lack of public sewer. The County should support efforts to extend sewer to these areas.

Another site that should be considered for development of an industrial or business park is the Crazy Creek property located between Coyote Valley and Middletown. This 500 acre property has public sewer and water available to it, is located away from existing residential development, and has access off of Grange Road.

Resort commercial development and “CR” zoning is located in various places through-out the Planning Area. The Lake County General Plan allows this zoning district to be located within, and outside of Community Growth Boundaries, since flexibility is needed for resorts to be developed where unique geographic attributes are found. Further resort development should be strongly supported by the County as a means to provide local jobs and create additional attractions for tourists.

The County should partner with the private sector in providing workforce training programs and business incubation opportunities to help foster employment and the economic vitality of the Planning Area.

Objective

5.5.1 Encourage orderly growth and development within the Planning Area by higher intensity development within the identified Community Growth Boundaries. The land use map shall designate sufficient lands to accommodate a balance of land uses subject to environmental and public service constraints.

Policies

5.5.1a Commercial development shall be consistent with the design guidelines of this plan to provide attractive and compatible development, complimentary in theme to existing desirable architecture within the Middletown and Coyote Valley Community Boundaries.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Staffing
The County should work with the local business leaders to develop commercial design standards that enhance the visual character of the area and that complement existing development.	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.5.1b Cost/benefit analysis for major developments should be required to determine the fiscal impact of projects on public services and other community infrastructure.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Staffing
Consider requiring cost/benefit analysis on major developments to identify impacts on public services and infrastructure as part of project review.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous
Develop incentives for infill developments.	Community Development, Marketing & Economic Development Dept.	Funding Source	General Fund, Grants
		Priority	Moderate
		Timeframe	Continuous

5.5.1c Off-site outdoor advertising (Billboards) should be prohibited in the Middletown Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Staffing
<p>The County should not approve new billboard signs in the Middletown Planning Area.</p> <p>The County should amend the Zoning Ordinance to prohibit billboard signs.</p> <p>The County should develop a program to phase out and remove existing billboard signs in the Planning Area.</p>	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Medium

5.5.1d The property situated between St. Helena Creek, State Highway 29 and Middletown High School that is zoned "RR" and designated Community Commercial on the General Plan Land Use Map may be developed in the future through the planned development process.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
<p>Amend general plan map to provide option for the development of future community commercial uses at this site.</p> <p>Future commercial uses should be developed through the planned development process and aim to compliment downtown Middletown rather than detract from existing commercial uses in the downtown core.</p> <p>Future development of this site should include pedestrian features that link this area to downtown Middletown.</p>	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Continuous

RESIDENTIAL

The Middletown Area Plan in conjunction with the 2008 General Plan establishes Community Growth Boundaries as a specific measure to identify appropriate areas for future residential development and minimize sprawl type development. One of the purposes of Community Growth Boundaries is to protect natural resources outside the boundaries, such as wetland and water recharge areas and lands suitable for agriculture, which are valuable to sustainable development and the quality of life in the Planning Area. Another purpose of Community Growth Boundaries is to direct development away from natural hazard areas, including geologic and wildfire hazards. These boundaries are also designed to include suitable areas where smart growth principles can be readily implemented. For the most part, the Community Growth Boundaries coincide with existing development patterns where public water and sewer and other essential infrastructure are currently available.

A considerable amount of future growth can be accommodated as infill development within the established subdivisions and Community Growth Boundaries. Infill development should be encouraged whenever possible to reduce pressure of extending public services and to reduce human interface with natural hazards including wildfire, erosion and landslides.

Development outside of the Community Growth Boundaries should be at lower densities which are compatible and harmonious with nature. Proposed minor land divisions should protect environmentally sensitive areas such as oak woodlands and waterways through the use of designated building envelopes or the use of non-buildable areas. Where appropriate the “B5” zoning combining district should be allowed to encourage the clustering of smaller developable parcels for better access and sharing of services while at the same time freezing the remaining larger areas from future development. This has the added benefit of reducing development costs for roads and other infrastructure.

Continued effort should be made to promote the construction of affordable housing within the Planning Area. The County provides incentives in a number of different ways including density bonuses, planned development zoning providing flexible standards encouraging innovative design, and smart growth principles encouraging mixed commercial and residential projects within the community centers. The County should assist in the pursuit of available federal, state and local funds to assist in the development of needed affordable and low-income housing. County policies should discourage the clustering of low-income housing projects, but instead balance them with other types of development. The Middletown Area Plan has designated suitable amounts of High and Medium Density Residential lands and has attempted to locate them near commercial centers and major transportation corridors where better access to employment and services may be obtained. The Lake County Housing Element also contains a comprehensive listing of vacant and underutilized residential parcels within the county.

Objective

5.5.2 Ensure that amendments to land use designations are in the overall best public interest of the community.

Policy

5.5.2a Evaluate proposals to amend the Planning Area land use maps that increases the acreage of land designated rural residential, suburban residential reserve, and low density residential by the following criteria:

- Adequate water with suitable quality must be available and capable of being provided for each potential parcel.
- Soils must be suitable for on-site waste disposal systems.
- Adequate access, fire fuel breaks, water storage or equivalent measures for rural fire protection must be provided.
- Adequate access must be available or proposed to safely accommodate the potential increase in traffic without adversely impacting the existing circulation system.
- Proposals must not adversely affect adjacent land uses.
- The proposal must not impact a significant or unique natural resource.
- The supply of existing parcels with the same designation as that proposed should be insufficient to accommodate projected growth in the Planning Area through the 20-year planning period.
- Proposals to change to rural residential, suburban residential reserve or low density residential should provide a logical buffer between suburban densities and agricultural or more remote rural, or incompatible land uses.
- The area should be adjacent to existing land designated with the same land use classification as proposed and should not result in a "spot" designation or be incompatible with residential densities in the vicinity.
- Areas with average cross slopes exceeding 30% should not be considered for land use designation changes to suburban residential reserve or low density residential. Areas proposed to be designated rural residential with average cross slopes exceeding 30% should incorporate the use of minimum lot size of 10 acres or more.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Carefully review any proposed changes to the General Plan land use maps. Use the above criteria in determining appropriateness of amendments to land use map.	Community Development Dept., Planning Commission, Board of Supervisors	Funding Source	None
		Priority	High
		Timeframe	Continuous

Objective

5.5.3 Encourage orderly growth and development within the Planning Area by focusing higher intensity development within the Community Growth Boundaries. The land use map shall designate sufficient lands to accommodate a balance of land uses subject to environmental and public service constraints.

Policy

5.5.3a Residential projects should only be supported when there is adequate infrastructure to accommodate the development and proposed developments are consistent with the character of existing development in the vicinity.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Encourage clustering of development within the community areas for more efficient land utilization, slope avoidance and maintenance of safe distances between people, wildlife and wildland fire hazards. Support utilization of the “PDR” zoning district on sites where buffers and open space are desirable.	Community Development Dept., Planning Commission, Board of Supervisors	Funding Source	None
		Priority	Low
		Timeframe	Continuous

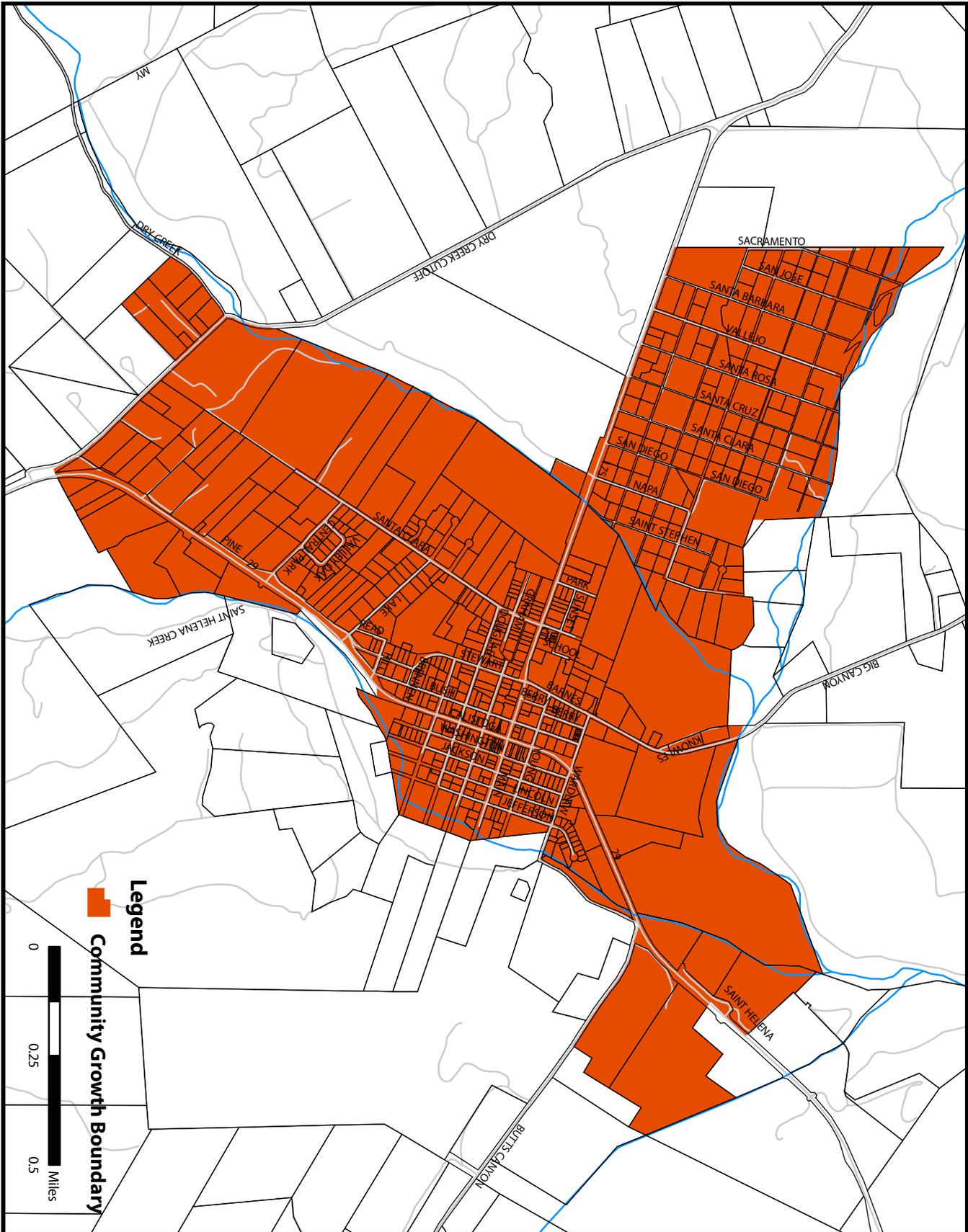
5.5.3b Work closely with potential developers to guide projects to locations that are adequate with regard to land use compatibility and available infrastructure.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Continue to encourage potential developers to attend pre-development meetings and work closely with appropriate public agencies. Review zoning map for conflicts between residential, commercial, and agricultural land uses. In-fill development should be encouraged whenever possible to reduce pressure of extending public services.	Community Development Department	Funding Source	None
		Priority	Low
		Timeframe	Long term

5.5.3c Development outside of Community Growth Boundaries should be at lower densities which are compatible and harmonious with their natural surroundings.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Proposed minor land divisions should protect environmentally sensitive areas such as oak woodlands and waterways through the use of designated building envelopes or the use of non-buildable areas. Where appropriate the “B5” zoning combining district should be utilized to encourage clustering of development on smaller parcels aimed at reducing development impacts on the natural surroundings.	Community Development Department	Funding Source	None
		Priority	Low
		Timeframe	Long term

5.5.3 d Pursuant to General Plan policy LU-2.7, if additional residential lands are needed to meet the growing population needs of the Middletown community within the 20-year life span of this Area Plan, expansion should first be directed to occur on the approximately 104-acre property located west of Dry Creek and east of the County park, between Highway 175 and Dry Creek Cutoff.



MIDDLETOWN

FIGURE 5-8



Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Once 85% of the available land within the existing Community Growth Boundary has been developed, or it can be demonstrated that sufficient land is not available for development to meet the growing population needs of Middletown in accordance with General Plan policy LU-2.7, this site has been identified as the logical location for expansion of the Boundary. Expansion of a Community Growth Boundary shall require approval of a general plan amendment application.	Community Development Department	Funding Source	None
		Priority	Low (Based on Need)
		Timeframe	Long term

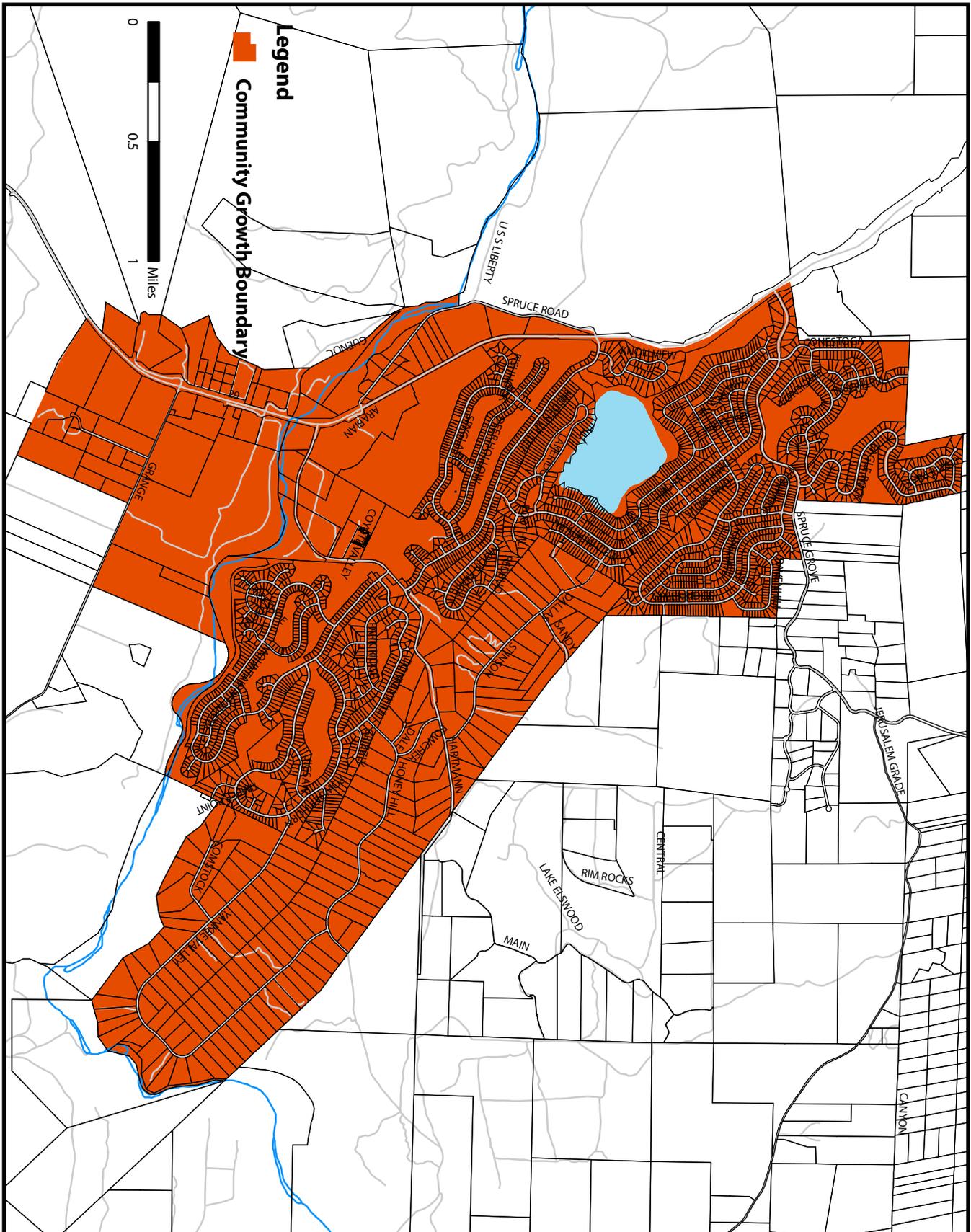
5.5.3e Continued effort should be made to promote the construction of affordable housing within the Planning Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
The County should assist in the pursuit of available federal, state and local funds to assist in the development of needed affordable and low-income housing.	Community Development Department	Funding Source	None
		Priority	Low
		Timeframe	Long term

5.5.3f The property at the northeast corner of Highway 29 & Butts Canyon Road shall be designated Suburban Residential Reserve and shall be developed at a maximum density of 2 du/acre.

5.5.3g The Arabian Horse Ranch Area is located west of the Hidden Valley Lake Subdivision. Although agricultural soils are present on the site, the site is not, and has recently not been in crop production but has been uses as an equestrian facility. Furthermore, the site is surrounded by existing, proposed or planned single-family residential, public and commercial land uses. Future development of the site should be permitted as Suburban Residential densities with a Community Commercial component as long as the following requirements are met:

1. If development is proposed at an overall density greater than one (1) unit per acre, preparation of an EIR shall automatically required for the project.
2. The development shall be well-planned, utilizing the development criteria of the "PDR" and/or "PDC" zoning districts.
3. The development shall be designated around the concepts of traditional walkable communities with integrated, functional open space and community commercial services.
4. Any lots that are proposed adjacent to the Hidden Valley Lake Subdivision shall be designed with average lot widths similar to (or greater than) the abutting HVL lots' average widths.
5. Adequate sewer and water capacity and public services shall be available.
6. An effective buffer of maintained open space shall follow Highway 29.



COYOTE VALLEY

FIGURE 5-9



7. Access to the property shall be consistent with the Circulation Policies of the Middletown Area Plan.
8. Any commercial development shall occur at the southern end of the property beginning at Highway 29, moving east to be contiguous with the school and shopping area of Coyote Valley, thus creating a commercial town center which would be walkable within itself and Hidden Valley communities as well as any other subdivision in the area.

AGRICULTURE & RURAL AREAS

Agricultural uses such as vineyards are thriving in many sections of the Planning Area. However, pressure to convert agricultural lands into small ranchettes is felt by more and more property owners each year. New residential development proposals should be discouraged in areas with prime agricultural soils. With the exception of allowable resort, support commercial uses, agricultural industry, and farmworker housing, non-agricultural development should be directed to appropriate areas within the Community Growth boundaries of the Planning Area. The 2008 Lake County General Plan states that land within the designated Primary Agricultural Areas, which is land designated with an Agriculture land use designation, is not to be divided into units too small to economically support a viable agricultural operation. Further, rural development should be allowed only if the area is able to support water and waste disposal needs, access, slope characteristics, protection of sensitive natural resources and the site's susceptibility to natural hazards. Development in rural or agricultural areas should be clustered onto portions of the site that are best suited to accommodate the development.

Buffer areas that separate urban uses from agricultural uses should be encouraged, where feasible. Noise from machinery, dust, the use of fertilizers and chemical sprays, and other related agricultural activities could create a nuisance for nearby residential uses. Buffers also minimize disturbance to agricultural uses from urban or suburban uses, including trespassing by residents and domestic animals. Projects proposed adjacent to incompatible uses should include site-specific buffer areas. These buffer areas can provide fuel breaks for fire safety, wildlife corridors, or some other beneficial use, dependent upon the site, the project and the environmental issues involved. In addition to the objective and policy below, the Lake County General Plan includes an Agricultural Resources Element with numerous policies aimed at protecting and enhancing agricultural viability.

Objective

5.5.4 To promote development of agricultural uses and support the continued viability of Lake County's agricultural economy.

Policy

5.5.4a Development adjacent to incompatible uses shall be designed to provide a buffer in the form of a setback of sufficient distance to avoid land use conflicts between the agricultural use and the non-agricultural use. Such setback or buffer areas shall be established by recorded easement or other instrument that reserves it in perpetuity.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Require permanent buffer zones between incompatible uses. In order to ensure the preservation of buffer zones the County should encourage the recordation of buffer easements, the dedication of said easements to non-profit organizations or other similar method which guarantees the maintenance of the buffer area.	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Continuous

5.5.4b Preserve areas containing prime agricultural soils or demonstrating unique characteristics that allow for viable economic opportunities for the agricultural industry.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Review California Farmlands of Importance Mapping and U.S.G.S. soil survey report for Lake County in considering requests to change the land use designation to or from agricultural. Discourage the parcelization of agricultural lands into units too small to economically support viable agricultural operations.	Community Development Dept., Planning Commission & Board of Supervisors	Funding Source	None
		Priority	Moderate
		Timeframe	Long term

OPEN SPACE

Land under conservation easement and land owned by Federal, State or County government is zoned "O", Open Space.

Objective

5.5.5 To enhance and protect the recreational opportunities for the future residents and visitors of Lake County.

Policy

5.5.5a Areas acquired by the County should be preserved for recreational purposes and protected from intrusive development.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Rezone future parks to "O" Open Space upon purchase of the property.	Community Development Department	Funding Source	General Fund
		Priority	Moderate
		Timeframe	Continuous

- 5.5.5b** Update and revise the Lake County Zoning Ordinance to include provisions and language which allow uses consistent with typical uses associated with common areas owned and managed by Homeowners Associations.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Update the "O" Open Space Zoning District to include provisions which allow typical uses associated with lands owned and managed by Homeowners Associations.	Community Development Department	Funding Source	None
		Priority	Moderate
		Timeframe	Short-term

SPECIAL ZONING RECOMMENDATIONS

The Middletown Area Plan contains two categories of special zoning recommendations: (1) parcels inconsistent with their zoning and (2) combining districts.

Parcels Inconsistent with Zoning

Where practical, parcels within the Planning Area that contain land uses inconsistent with the existing zoning, are recommended to be changed to be consistent with their actual land use.

There are two sites in the Planning Area which have zoning that is inconsistent with the general plan land use designation. The first property concerns is approximately 300 acres located east of Highway 29 between Putah Creek and Grange Road in Coyote Valley. This property is located on the edge of the Coyote Valley Community Growth Boundary and has a General Plan designation of Low Density Residential with Agricultural zoning. This area currently has access to public water and sewer through the Hidden Valley Lakes Community Service District. The reasoning behind this inconsistency in land use designations is to provide lands that have the potential to be developed at higher densities within the life span of this Area Plan. However, at this time adequate land is currently available to meet the residential demand for the first half of this area plan's twenty year life span through the continued infill development of residential lots within the Hidden Valley Lakes subdivision. Thus the Agriculture zoning designation will allow the continuance of agricultural activities at this site but also acts as a place holder on lands that may be considered for residential development in 10 to 15 years time. Future residential projects in this area should be required to be developed through the Planned Development process.

The second area concerns an approximately 60 acre site situated between St. Helena Creek, State Highway 29 and Middletown High School. The property is zoned "RR" Rural Residential, but approximately 30 acres of the site has been designated as Community Commercial on the General Plan land use map. The community supports the concept of a commercial town square development at this site. However, the community feels that it is vital that any future commercial development at this site incorporate elements into its use and design that would facilitate its integration with, rather than detract from the existing historic downtown area. Future commercial uses should be developed through the planned development process. Special attention should be given to the development of pedestrian features that link this area to downtown Middletown. It is also recommended that areas of this property located within the 100-year flood plain be considered for the development of recreational ball fields and a creek-side trail available to the general public. (See Policy 5.5.1d).

Combining Districts

The Lake County Zoning Ordinance allows specialized zoning districts to be superimposed on base zoning districts. These overlay zoning districts, which are called combining districts, act to protect specific resources or prevent conflicts with potential safety hazards. The following is a brief discussion of combining districts found in the Middletown Planning Area.

Scenic Corridors

General Plan policies encourage the protection and enhancement of Lake County’s scenic highways and resources. The major purpose of this objective is to promote the county’s recreation-based economy and provide a high level of scenic quality to residents and visitors alike. State Highways 29 and 175, and Butts Canyon Road are designated “SC”, Scenic to protect their scenic qualities.

An additional method of preserving or enhancing the scenic quality of an area is to adopt design review guidelines. This is particularly effective when the area is only partially built up and there is an opportunity to change the overall visual impression of the area through consistency, uniformity of future structures, visual screening and roadway setbacks. Billboards, overhead power lines, poorly maintained structures or unscreened mining operations can spoil views. Section 6 of this plan includes design guidelines for the commercial areas within Middletown and Coyote Valley. Figure 5-10 illustrates the areas designated with Scenic Corridors.

Design Review Combining District

The purpose of the Design Review or “DR” Combining District is to insure aesthetic compatibility between uses, protect and enhance property values, protect scenic corridors, and promote community character through the use community design manuals. Section 7 of this plan includes design guidelines for the community areas of Middletown and Coyote Valley. This combining district should be applied in the town centers and for commercial properties along the highway corridors. The adoption of community design standards in conjunction with the incorporation of this combining district will aid in:

- Establishing individual identities for each of the communities
- Improving the physical appearances of the downtown areas
- Eliminating blight and fostering economic well-being
- Reestablishing community pride

Parking Combining District

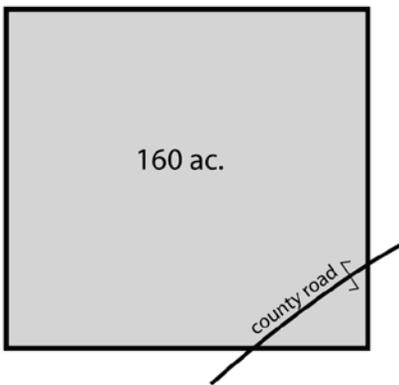
The purpose of this combining district is to provide alternative parking standards in established commercial area such as downtown Middletown and the Coyote Valley Town Center. The Special Study Areas for Middletown and Coyote Valley, in Chapter 6, discuss the need for the development of a comprehensive parking plan to encourage shoppers to park their vehicle once and tour the community centers on foot. The provisions in this combining district assist in providing developers viable options for providing parking on small commercial properties.

B-5 Combining District—cluster development

This combining district provides for specified minimum lot sizes, promotes open space, and protects sensitive resources by clustering development, usually along an existing roadway. All uses of land in this combining district must also conform with the regulations of the base zoning district. This district is utilized primarily in rural areas prone to extreme fire hazard, steep slopes and/or limited access for fire and emergency response. Figure 5-11 provides a visual representation of the B-5 combining district.

Figure 5-11 – B5 Combining District

EXISTING PARCEL:



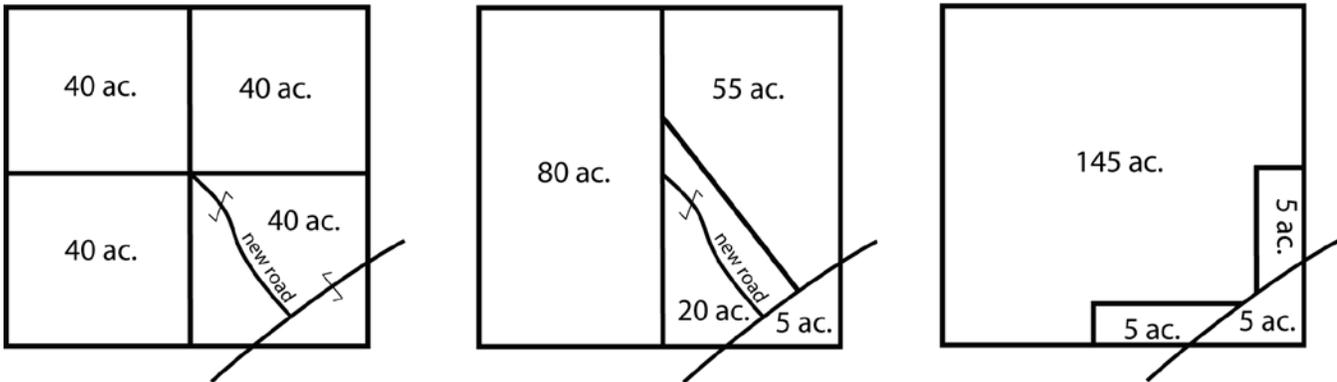
CRITERIA FOR TABLE 20 (ZONING ORDINANCE)

- 160 ac.
- 22% slope
- "high" fire risk
- landslide risk

TOTAL: 38 ac./ dwelling
 160 ac./38 ac. density = 4 lots maximum density

This example assumes RL zoning with a min. 20 ac. parcel size
 (RR zoning would allow smaller land divisions)

POSSIBLE LAND DIVISIONS:



NOTE: B5 allows 5 ac. parcels as long as the maximum density is not exceeded
 No further subdivision is permitted.

Waterway Combining District

The purpose of the Waterway Combining district is to preserve, protect and restore significant riparian systems, streams and woodland habitats; protect the public health and safety by minimizing dangers due to floods and earth slides. Significant portions of St. Helena, Dry, Putah, Harbin, and Anderson Creeks are placed in this district, as well as Upper and Lower Bohn Lakes, Amel Lake, and McCreary Lake.

Floodway Combining District

The purpose of this combining district is to regulate land uses for properties situated in floodways, and along creeks and streams to ensure an adequate open corridor to safeguard against the effects of bank erosion, channel shifts, increased runoff or other threats to life and property. This district also is

intended to prevent property damage and safeguard the health, safety and general welfare of people and property by allowing the passage of a one-hundred year flood event. Portions of Putah, St. Helena, Dry, Harbin, Big Canyon, and Anderson Creeks are placed in this combining district.

Floodway Fringe Combining District

The purpose of the Floodway Fringe combining district is to provide land use regulation for properties and their improvements situated in the floodplain to ensure protection from hazards and damage which may result from flood waters. Portions of the Callayomi Valley adjacent to Putah, St. Helena and Dry Creeks are placed in this combining district as well as other areas within Coyote and Long Valleys.

- 6.1 MIDDLETOWN
- 6.2 COYOTE VALLEY
- 6.3 LANGTRY/GUENOC VALLEY

SPECIAL STUDY AREAS

6

LANGTRY VINEYARDS
Source: Cate Young



6.0 SPECIAL STUDY AREAS

6.1 SPECIAL STUDY AREA NO. 1: MIDDLETOWN

Middletown was established as a community in 1871 with the opening of a post office. A majority of business enterprises moved from the nearby village of Guenoc after the business owners rightly assumed that Middletown would be a more prosperous location. Middletown serves as a commerce and service center for the surrounding communities of Hidden Valley and Anderson Springs, along with rural areas located to the south and east of Middletown. Similar to other communities in the Lake County area, Middletown features a State Highway (Highway 29) running through the downtown core of the community. State Highway 175 terminates at the intersection of Highway 29 in Middletown. These two major arterial roadways serve as a main conduit for residential commuter paths for Lake County residents along with being major ingress/egress routes for travelers to and through Lake County. The community of Middletown can serve as a destination for both groups. The downtown area of Middletown can be defined as running along the east and west sides of State Route 29 from approximately Wardlaw Street on the northern side of town to Callayomi Street on the southern side of town. Downtown Middletown should play an increasingly important role as a tourism/hospitality hub for the south county and expand its retail offerings for both Lake County residents and visitors alike.

With the recent completion of the expansion of the Twin Pine casino south of the community of Middletown, it can be expected that an increase in need for commercial services and possibly transient occupancy opportunities will occur because of an influx of visitors to the casino. Middletown could see a renewed interest in their community that should be recognized by the County as a catalyst for growth in the Planning Area.

Existing businesses in the Middletown downtown include a mix of establishments such as retail shops, a bar, restaurants, a small supermarket, small coffee shops and limited office uses. Fronting the east side of Highway 29 between Douglas and Callayomi streets is a block of parcels with a general plan designation of Community Commercial, that are currently undeveloped. The County purchased these properties in late 2009 and is developing them into a town square/community gathering place. Given the central location of these parcels in Middletown and being adjacent to the proposed new location of the County's new library, senior center and sheriff's office, the new square will act as an anchor for the south end of downtown Middletown. This project will also improve the viability of the community as whole and assist in attracting visitors and stop and enjoy Middletown. Surrounding zoning in this area is designated as Community Commercial which compliments the town square concept and the rest of downtown.

Other strategies for economic development should focus on the Middletown's strengths, including its small-town character and lifestyle, its compact pedestrian scale, and the affordable housing stock. Such strategies should recognize these assets while at the same time embrace opportunities for diversification. Freeing up the highly-visible street-level commercial spaces along Highway 29/Calistoga Street for small retailers, would create a solid identity for Middletown's downtown while also maximizing the amount of space dedicated to commercial activities around the downtown core. By creating more of a critical mass of diverse businesses – both retail and non-retail such as the proposed town square/public park area in the downtown could bring more foot traffic onto Highway 29/Calistoga Street and increase its desirability as a place to congregate, socialize, and spend money. Given Middletown's unique character, the town needs tailored economic development strategies that will help to ensure that new economic development fits within and maintains "small-town" character. Because of

the community's relatively remote location, the options for bringing new non-visitor-serving economic activities to Middletown are comparatively limited.

Any economic diversification strategy for Middletown must be based on the community's strengths which include:

- A compact pedestrian scale.
- An affordable housing stock relative to other locations in Lake County.
- The existing small-town lifestyle.

The underutilized sites in the downtown core area offer several good opportunities to intensify development without necessarily changing the area's overall character or scale. New office businesses can take advantage of the small-scale downtown by locating in existing mixed-use buildings.

Opportunities for expanding and maintaining a local economic presence in areas such as professional services, medical offices, and non-visitor oriented retail exist at the edge of the downtown, and as second story uses in multi story buildings located at the intersection of Highways 29 and 175.

While the downtown is intended to be the focus of commercial activity in Middletown, some opportunities exist for new or expanded commercial development outside of the downtown. There are additional limited commercial and office developments to the west of downtown and fronting along Highway 175. This additional location can possibly be expanded or updated architecturally to complement the downtown core.

Architecture of the downtown area is an eclectic mix of old and new. North of the State Highway 29 and 175 intersection, new construction is evident with few features tying them together with the overall historical architecture of downtown. South of the intersection of Highways 29 and 175 historic architecture can be observed, such as, multi-story buildings constructed of brick on the east and west sides of the Highway 29 and 175 intersection along with single-story false facade buildings and newer construction. The overall theme of the downtown area can be considered to have a western look to it, which should be maintained and encouraged. An overall design plan for the designated Middletown downtown area should be adopted. Chapter 7, Design Guidelines, outlines the design review process along with specific design parameters to be met by any downtown development proposals in Middletown.

Objective

6.1.1 Expand economic activity in Middletown that builds on the community's strengths and reinforces its small town character.

Policies

6.1.1a The Middletown downtown core area shall be reinforced as the commercial and cultural center of southern Lake County in support of tourism and the local economy. This should include enhancing public areas and amenities in the downtown area to make them more inviting and to improve their function and role as the focal point of the community.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
The County of Lake should purchase the five vacant parcels in Middletown and located at the corners of Highway 29/Main Street, Callayomi Street and Douglas Street and develop them with a town square/ community gathering place.	Marketing and Economic Development Department, Redevelopment Agency, Community Development Department	Funding Source	General Fund
		Priority	High
		Timeframe	2009-2010

6.1.1b The County should promote a balance between local and visitor-serving economic development and develop an economic development strategy to recruit new businesses to Middletown.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
The County should institute an advertising campaign to promote the economic advantages of establishing a business in downtown Middletown.	Marketing and Economic Development Department	Funding Source	General Fund
		Priority	Moderate
		Timeframe	Continuous

6.1.1c The County should work with the community to determine the feasibility of establishing a Redevelopment Area within the Middletown Community Boundary.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
The Redevelopment Agency should host public workshops to determine if there is interest in establishing a Redevelopment Area within the Middletown community.	Redevelopment Agency, Community Development Department	Funding Source	General Fund
		Priority	Moderate
		Timeframe	2010-2012

6.1.1d Small-scale neighborhood businesses serving commercial developments should be encouraged.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
The County should work with local developers to encourage the establish businesses with local interests.	Community Development Department, Marketing and Economic Development Department	Funding Source	General Fund
		Priority	Moderate
		Timeframe	Continuous

Objective

6.1.2 To encourage infill development where appropriate.

Policies

6.1.2a The County should work to encourage appropriate infill development throughout the downtown area of Middletown.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
Marketing of Middletown as a vibrant community with many business opportunities should be pursued by the County.	Community Development Department, Marketing and Economic Development Department	Funding Source	General Fund
		Priority	Moderate
		Timeframe	Continuous

6.1.2b The County should consider permit streamlining, fee waivers, and other means to facilitate infill development within the downtown Middletown core area and ease the application review process.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
The Community Development Department should adopt downtown specific regulations for the Middletown core that allow for flexibilities in the permitting process.	Community Development Department	Funding Source	General Fund
		Priority	Moderate
		Timeframe	Continuous

Objective

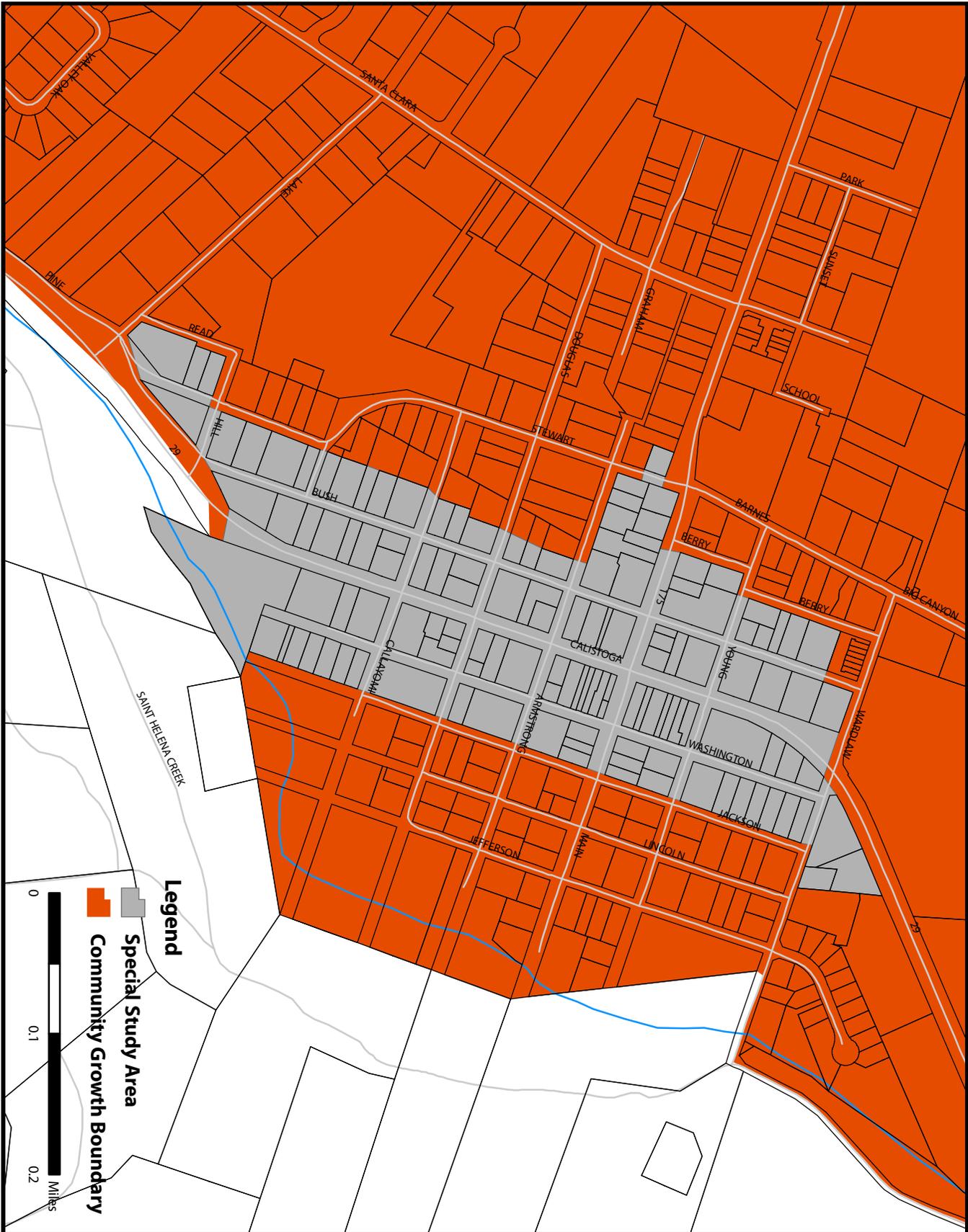
6.1.3 To maintain and continue to promote a vibrant, healthy, pedestrian- oriented downtown commercial district as the heart of the community.

Policies

6.1.3a Implement programs such as facade improvement programs and design review, which will maintain and enhance downtown Middletown’s historic character and commercial vitality and retain the small town character of the downtown area by maintaining and enhancing the historic character and design of buildings and the pedestrian scale and orientation of the downtown area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
The Community Development Department, Planning Division should adopt and implement commercial design standards for the downtown Middletown core area.	Community Development Department	Funding Source	General Fund
		Priority	Moderate
		Timeframe	2010

6.1.3c Endeavor to locate new entertainment and retail facilities in the downtown area through redevelopment, public/private partnerships and other development tools.



MIDDLETOWN - SPECIAL STUDY AREA
FIGURE 6-1



Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
The Community Development Department, Planning Division should identify existing buildings or sites that would be conducive to retail or entertainment business enterprises and market the identified parcels or buildings as such.	Community Development Department, Planning Division	Funding Source	General Fund
		Priority	Low
		Timeframe	Continuous

Objective

6.1.4 To improve the visibility of the community of Middletown and to create a cohesive and uniform look for signage in the downtown core.

Policies

6.1.4a Clearly define the points of entry to Middletown through use of distinctive signs, which are lighted and placed in a landscaped area, street lighting, and street trees.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
The Community Development Department, Planning Division, along with other county and state agencies, should construct identification signage that prominently identifies the north and south boundaries of the community when traveling along State Highway 29.	Community Development Department, Planning Division, Redevelopment Agency, Caltrans	Funding Source	General Fund
		Priority	Moderate
		Timeframe	2010

6.1.4b Develop a sign program exclusively for the downtown Middletown area with specifics on sign types, maximum size allowed, sign materials and location of signs. Signage should be of a uniform design in the downtown core of Middletown to improve the overall image of the area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
The Community Development Department, Planning Division should adopt a sign program for the downtown Middletown core that provides a guideline for new signage to follow. All new signage would be required to be reviewed to ascertain compliance with the guidelines	Community Development Department	Funding Source	General Fund
		Priority	Moderate
		Timeframe	2010

6.2 SPECIAL STUDY AREA NO. 2: COYOTE VALLEY

The Coyote Valley community includes the Hidden Valley Lake subdivision, the Ranchos, and surrounding commercial and rural lands. This Special Study Area focuses on the commercial areas which make up the Highway 29 corridor and the proposed "town center" located in the Coyote Valley Area shown on Figure 6-2. This Chapter defines the vision of future commercial development for the Coyote Valley Area.

In 2000, a survey of 671 area residents was completed by the Hidden Valley Lake Homeowner's Association. A citizen's advisory committee was created to develop a Coyote Valley/Hidden Valley Lake Strategic Economic Development Plan. The community survey and plan indicated the community favors slow and steady growth, development of additional commercial/retail shopping and services, medical facilities, shopping and restaurants. Major issues identified in the survey were inadequate transportation services and the lack of local employment opportunities, lodging units, restaurants, shopping and medical facilities. The Strategic Development Plan was never adopted but many of its elements have been incorporated into this Special Study Area. The Strategic Plan and Special Study Area seek to promote economic development while at the same time protecting the small town rural atmosphere valued by the community.

Hidden Valley Lake subdivision contains most of the residential development within Coyote Valley. The commercial area along Hartmann Road and Coyote Valley Road provides a geographically-central commercial center for this Study Area. High density/intensity commercial, industrial and residential development within Coyote Valley will be limited to those areas near the subdivision that can be connected to the Hidden Valley Lake Community Service District (HVL-CSD) for water and sewer service. Much of the area inside the service district sphere of influence is vacant or underdeveloped, and there is sufficient land for residential and commercial development. The Lake County General Plan contains policies for development outside of Community Growth Boundaries and includes policies for innovative resort or business park developments with components of subordinate residential development through the planned development process. The Crazy Creek Gliderport property, which is located outside of the Community Growth Boundary, is an ideal site for an innovative, planned development consistent with the General Plan policies.

RESIDENTIAL

Throughout the life of this Area Plan a vast majority of single-family residential needs can be met through continued development and infill on vacant lots within the Hidden Valley Lake Subdivision. Housing programs in the Planning Area should follow the applicable policies and programs of the Lake County Housing Element. Private non-profit housing organizations should be encouraged to develop affordable senior housing in and near the town center. Medium and high-density residential development in the town center, which are compatible with the neighborhood character, should be encouraged where adequate sewer and water facilities, are available.

COMMERCIAL

The lack of commercial/retail services in the area has led to the need of many residents to travel out of the Planning Area to obtain many of these needed services. The Planning Area is losing some monies to other areas including Sonoma and Napa counties and the City of Clearlake. This has several ill effects. First, and foremost, it leads to a leakage of local monies to businesses out of county. The creation of basic consumer services at the local level would strengthen the overall economic base of the

Planning Area. Additionally, the development of commercial services in the Coyote Valley area would reduce vehicle miles necessary by many residents to obtain these basic services.

Town Center

This Plan promotes the formation of a town center area along Hartmann Road between State Highway 29 and Coyote Valley Road that reflects the rural nature of the valley, and encourages development of commercial and service facilities primarily for the use of Coyote Valley residents. Potential commercial and service facilities to be considered should include a business park, local and highway commercial services an education or medical center and public spaces. Community halls and fraternal organizations should also be encouraged in this area. Retail commercial facilities should be promoted to locate in the town center as opposed to the Highway 29 corridor. Landscaping and building design should tie spaces together rather than give the feeling of moving from one strip development to the next. When compatible with commercial uses; residential, mixed-use and transit oriented types of development should be promoted in the town center. Chapter 7, Design Guidelines also includes many other suggestions and recommendations to consider in regards to commercial development in this Special Study Area.

The town center should be pedestrian friendly both functionally and aesthetically. The focus of design should be on the pedestrian first and motorized vehicles second. Signage should also be oriented to the pedestrian rather than automobiles. The community has also requested that the area be accessible for golf cart use on connecting public roads and trails because they are a common mode of transportation around the golf course and internal subdivision roadways. Street design along Hartmann Road, as well as internal circulation for commercial projects, should include traffic calming and pedestrian friendly amenities reducing points of conflict between pedestrians and motorized traffic. These amenities include, but are not limited to, sidewalks, crosswalks, curb bulb-outs and traffic safety signage and lighting.

A comprehensive parking plan should be developed for the town center that encourages a 'park once concept' allowing customers and patrons to park at one site and walk to multiple shop and store fronts. Strip mall type developments should be discouraged. Store fronts should be encouraged to locate near street frontages. Parking areas should be provided in centrally located areas behind or adjacent to shops. Parking areas should be heavily landscaped. Amendments to County Zoning regulations should be encouraged to allow developers better ease in creating shared parking agreements and establish public parking areas.

Further, the plan recommends the beautification of roadways, specifically Hartmann Road, in the town center. The primary principle of this beautification effort should focus on the visual enhancement of the public right-of-way and immediate surroundings. Street tree plantings, sign sizing requirements, and under-grounding of utilities should be encouraged. The Draft Coyote Valley/Hidden Valley Lake Strategic Economic Development Plan recommends the County consider the establishment of a Gateway combining district in order to better accomplish these tasks for Hartmann Road and other major streets in the Planning Area and the County.

Highway 29 Corridor

Larger commercial and industrial establishments should be encouraged to locate along the Highway 29 corridor in areas where public water and sewer are available. New heavy and industrial type commercial uses are encouraged to develop using the planned development pro-

cess. The small town rural character of the planning area should be preserved and new development should be encouraged to enhance the visual resources along the scenic corridor of Highway 29. Building design should include architectural themes and colors that promote a rural atmosphere. Large metal buildings should be avoided. Paved areas should be broken up with heavy landscaping that blends with the natural back drop of the valley. New development projects should include visual renderings so that the public can see how visual impacts to this scenic area will be mitigated.

New service oriented retail business should reflect the values and make-up of the existing communities and promote local employment opportunities. Business size should adequately reflect the needs of the community area. Large-box store type-developments and strip malls should be discouraged. Access directly off of Highway 29 should be limited. Developments should be encouraged to access off frontage roads such as Borman Lane and Spruce Grove Extension where possible.

OPEN SPACE/RECREATION

Much of the land between Hartmann Road and Putah Creek has little development potential due to the sensitive habitat, erosion and flood potential. According to the Open Space and Recreation section of the Area Plan, the County should consider acquisition or encourage offers of dedication of additional vacant land along the riparian corridor of Putah Creek in Coyote Valley. This area is currently privately owned, but it is used by the public for creek access. It is also used by all terrain vehicles (ATV's), which are causing erosion and sedimentation in the creek, habitat damage and a noise nuisance to local residents and businesses. Property owners should be encouraged to install barriers to motorized vehicle access whenever feasible. This area should be considered for an integrated walking trail plan and is uniquely situated to compliment Town Center development and enhanced street designs for Hartmann Road. This park area would assist in integrating the proposed Town Center Area with the State Highway 29 corridor and the residential area at the end of Hartmann Road.

The Hidden Valley Lake Homeowners Association has plans to enlarge its campground and recreational vehicle park along Gallagher Creek northwest of the intersection of Hartmann Road and Hidden Valley Lake Road. The association would also like to locate an association building outside the subdivision gates on Hartmann Road. These improvements may be supported by land use and zoning, but will require further study for any development involving steep slopes, flooding and potential impacts to Gallagher Creek.

Objective

6.2.1 Support the development of a concentrated, vibrant Town Center in Coyote Valley.

Policies

6.2.1a Develop a comprehensive parking plan for the town center.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
<p>Encourage the development of public parking lots throughout the town center to better facilitate pedestrian use and maximize the usability of parcels for commercial use.</p> <p>Develop a special fund paid into by new commercial development for the acquisition and establishment of public parking.</p> <p>Incorporate the use of the "P" Parking Combining district.</p> <p>Consider amending the Zoning Ordinance to allow developers better ease in creating shared parking agreements and establish public parking areas.</p>	Community Development Department, County Administration	Funding Source	Unknown
		Priority	High
		Timeframe	Continuous

6.2.1b Land use designations should promote an environment conducive to appropriate scaled retail and commercial services.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Implement land use designations that assist future developers in enhancing commercial opportunities.	Community Development Department	Funding Source	None
		Priority	High
		Timeframe	Immediate

6.2.1c Streetscape and building design should promote a pedestrian friendly environment.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
<p>Projects should be designed to include sidewalks, crosswalks, curb bulb outs and traffic safety signage and lighting and other pedestrian friendly amenities.</p> <p>The town center should be made accessible for golf cart use on connecting public roads and trails.</p> <p>Streetscape, building siting, signage and landscaping should be designed to create a pedestrian friendly atmosphere.</p>	Community Development Department, County Administration	Funding Source	Unknown
		Priority	High
		Timeframe	Continuous

6.2.1d Encourage the development of a community park and system of walking trails along Putah Creek south of Hartmann Road near the community town center.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	None
Encourage both public and private parties to assist in the development of a community park and system of walking trails along Putah Creek south of Hartmann Road near the town center.	Community Development Department	Funding Source	Unknown
		Priority	High
		Timeframe	Continuous

Objective

6.2.2 Focus heavy commercial and industrial uses in the Coyote Valley Community Growth Boundary along the Highway 29 corridor.

Policies

6.2.2a Encourage heavy commercial and industrial uses to locate along the Highway 29 corridor.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
Promote the creation of industrial parks and heavier commercial uses along State Highway 29 where access to public water and sewer can be made available.	Community Development Department	Funding Source	N/A
		Priority	Moderate
		Timeframe	Continuous

6.2.2b Require new commercial and industrial uses along the Highway 29 corridor to preserve the natural rural setting of the Coyote Valley Area.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
<p>New development projects should be required to submit detailed landscaping and building elevation plans which mitigate impacts to the natural viewshed.</p> <p>Colors and building types should aim to blend and complement natural surroundings.</p> <p>Parking areas should be heavily landscaped with vegetation which enhances the natural surrounding and disguises paved areas.</p>	Community Development Department	Funding Source	N/A
		Priority	Moderate
		Timeframe	Continuous

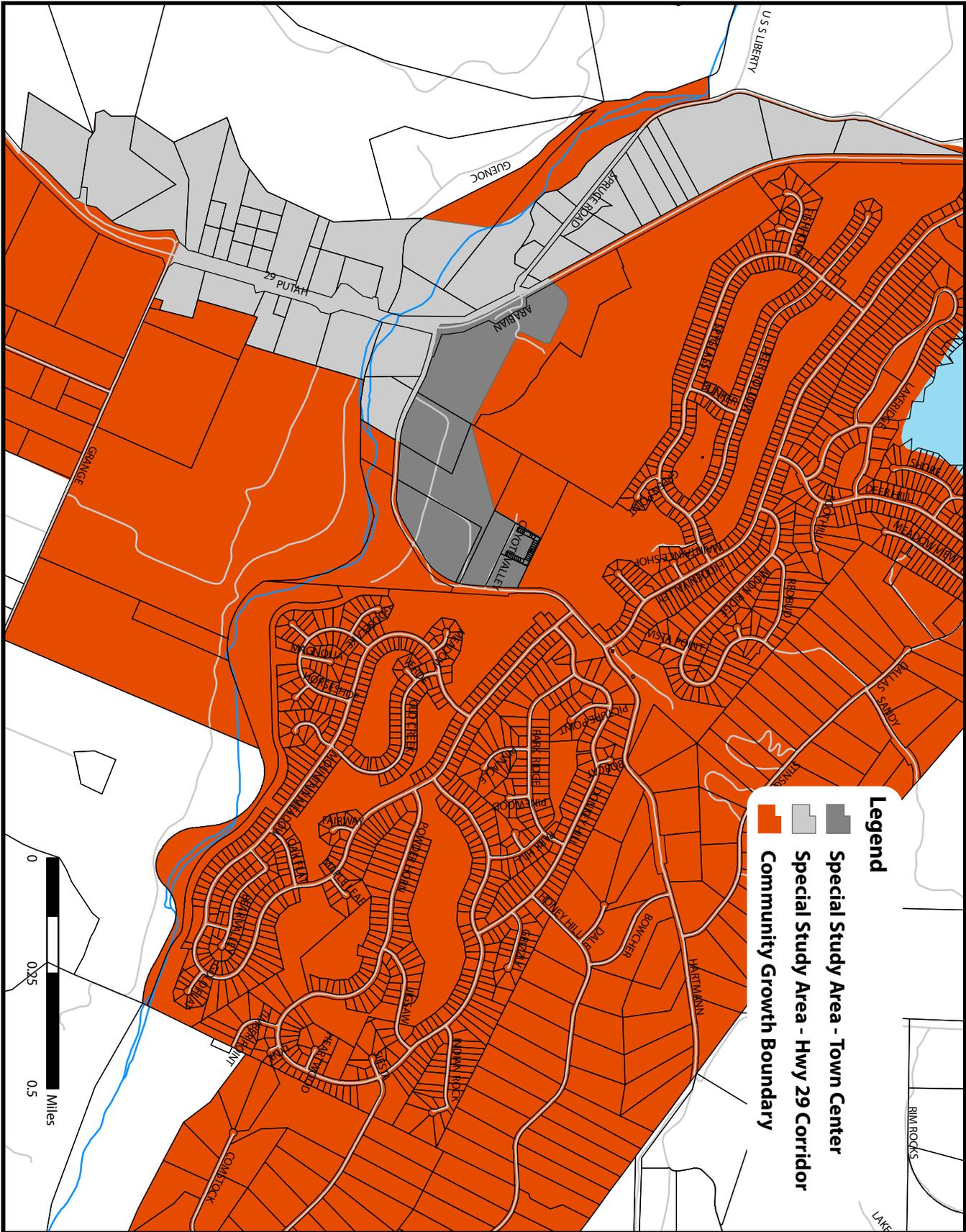
Objective

6.2.3 Encourage mix of commercial services and high density residential uses to create a vibrant town center.

Policies

- 6.2.3a** Allow a mix of high density residential uses above commercial store fronts and adjacent to commercial areas in the town center.

Implementation Programs/Strategies	Responsible Agency/Agencies	Impact on Budget	Unknown
Encourage compatible residential uses above storefronts. Encourage senior housing developments and assisted living developments near the town center and available public transportation services.	Community Development Department	Funding Source	Unknown
		Priority	Moderate
		Timeframe	Continuous



- Legend**
- Community Growth Boundary
 - Special Study Area - Town Center
 - Special Study Area - Hwy 29 Corridor

COYOTE VALLEY - SPECIAL STUDY AREA
FIGURE 6-2



6.3 SPECIAL STUDY AREA NO. 3: LANGTRY/GUENOC

This Special Study Area includes the lands comprising Langtry Farms, LLC and Guenoc Winery, Inc. located southeast of Middletown along Butts Canyon Road and about 15 miles north of Calistoga in the Guenoc Valley. Figure 6-3 is a map of this Special Study Area. It defines the vision for future development of the 16,000-acre Langtry property in more detail with a goal of allowing the flexibility to create an economically diverse job base, innovative resort/residential communities, agritourism opportunities and resort-related uses while at the same time protecting significant agricultural lands, open space and natural resources of the area.

GUENOC VALLEY EXISTING CONDITIONS

Guenoc Valley is a small inland valley of about 1,200 acres within a 23,000 acre property, extending from the south end of Lake County into northern Napa County. It is comprised of an alluvial fan isolated from surrounding areas by rocky ridges. The geographical location affects the climate. Guenoc Valley receives approximately 45 inches to 50 inches of rain per year compared to Middletown which receives approximately 60 inches per year. Guenoc Valley also experiences slightly greater seasonal temperature extremes, and fog is generally less severe than in Middletown.

These geographical features distinguish the area viticulturally. Guenoc Valley American Viticultural Area (AVA) was the first American Viticultural Area designation granted to a single winery. The wine appellation is defined by the rocky ridge surrounding it and is entirely contained within the boundaries of Lake County. The Langtry vineyards sit generally at 1,000 feet elevation. These vineyards are the first in the area to be harvested, as extremely hot days are common and over-ripening is a concern. The area also has very cool nights, preserving acidity and producing rich wines with elegant structure.

As of 2009, there was approximately 340 acres of vines within Langtry. The winery works with Sauvignon Blanc and Chardonnay, as well as Petite Syrah from the estate vineyards. Petite Syrah is the leading red grape in the appellation, followed by Cabernet Sauvignon, Merlot, Petit Verdot, Cabernet Franc and Malbec. Among whites, Langtry grows chardonnay, Sauvignon Blanc, Marsanne and Viognier. Langtry also has the distinction of having some of the oldest vines in California. A Syrah vine remains at the Tephra Ridge Vineyard which dates back to the 1880s.

Langtry is unique to the Middletown area and Lake County, being the largest single private assemblage of land in the County (approximately 16,000 acres, or roughly 25 square miles), and is set in an area of outstanding natural beauty. Established by the world famous actress Lillie Langtry a century ago, the ranch, vineyard, and winery uses function as a balance of conservation/agricultural uses with agricultural-based businesses. The site also functions as a tourist destination, attracting visitors to the area. The site is characterized by rolling hills, oak woodlands, open spaces and meadows. It is comprised of prime agricultural land within some valleys, areas of moderate to high slope and areas of gentle terrain that may be conducive to further development. The site is presently improved with a large winery, vineyards, outbuildings, several reservoirs and an 18-hole championship golf course.

FUTURE DEVELOPMENT

The concept for future development of Langtry is to utilize the property for a wide range of interconnected and mutually beneficial land uses that ultimately support long-term agricultural

operations and development, ranching and expanded winery uses, and businesses related to the golf course and resort commercial operations and supporting residential development.

New uses should create jobs for local residents and bring expanded economic development opportunities to the Planning Area while reducing any potentially significant traffic and air quality impacts. A true mix of land uses should be represented, including:

- Expanded agricultural operations. This will include a focused effort on agricultural-based tourism and a diversified crop base.
- Continued ranchland operations, including development of equestrian activities.
- Long-term protection of the significant natural resource values of the property.
- Expansion of wine production operations.
- Golf course and other outdoor recreational activities.
- Expansion of the visitor accommodations at the site, migrating towards a resort commercial use.
- Residential uses that will support the full range of proposed uses.

Future uses should be guided by the formal Planned Development process with the County, and will need to be designed to maintain consistency with adopted plans and ordinances, notably those goals in the General Plan and Area Plan that tie jobs to housing, promote sustainability and Smart Growth practices and emphasize the importance of agriculture and open space resources. The Lake County Economic Development Plan further identifies a need for more tourist destinations, agritourism activities, lodging units and luxury accommodations in the South County. The following objectives and concepts should be used to guide future development on the Langtry property, which is uniquely positioned to become a major tourist destination in the South County and one of the key agriculturally oriented destination resorts on the North Coast.

Agriculture

Further expansion of winery operations is anticipated, including increased processing, production, bottling, warehousing and distribution uses. Future agricultural land uses on the property should contribute to the expansion of ranchland, production and winery operations. The goal of enhancing, expanding and developing the agricultural and vineyard uses is to ensure the continuation and viability of agricultural operations, and invigoration of the local economy. Agricultural operations should be designed to protect scenic views, make use of natural contours and practice sustainable use of water and other natural resources.

Lands designated for agricultural purposes, when developed or expanded, should be developed with agricultural uses and compatible agritourism uses. Future agritourism uses should be compatible with existing agricultural use in the area and not adversely impact agricultural operations. Agritourism land uses should provide visitors with a visually pleasing setting, and include options for "hands on" agricultural experiences. Marketing of products grown or derived from Lake County and Guenoc Valley should be a priority.

Commercial

Commercial resort uses should act to successfully diversify the agricultural operations and promote economic development of the property and employment base in the Middletown and surrounding South County area. As part of this vision, the estate is expected to expand its winery production and market commercial uses related to agriculture.

Any commercial resort use should be designed, built and operated such that it will attract visitors, and promote multi-day stopovers in the County. Further, any commercial resort use should fulfill and

comply with policies that promote Lake County economic development and the economic development of Langtry agricultural lands. Future hotel and resort uses should be high quality developments and may be designed for a variety of travelers from family lodgings to luxury resorts, with an emphasis on upscale resort uses.

Future resort/retreat related uses should be tied to the breadth of recreational opportunities at the site, including the working ranchlands, sightseeing, wine tasting and golfing. They may be mixed-use in nature, which incorporate visitor-serving uses and secondary retail and subordinate residential uses consistent with policies of the General Plan. Resorts should seek to utilize products that are locally grown or derived from Lake County products. The following resort uses: and other resort uses that are similar in nature should be considered:-

- Continued operation of existing guest accommodations in concert with golf course operations and agricultural uses
- Boutique resort
- High-end resort and/or retreat center
- Bed and breakfast inns
- Active adult resort
- Accessory, subordinate residential uses needed to support resort development may be considered, consistent with policies of the Lake County General Plan.

Applications for new agricultural related commercial uses should include a marketing and sales program promoting agricultural products grown or derived from Lake County and Guenoc Valley to visitors and Lake County businesses. Commercial uses should be encouraged to carry merchandise from Guenoc Valley such as produce and wines, as well as other local products. Retail establishments should be primarily visitor oriented.

Residential

Future residential development should complement the agricultural and resort operations through implementation of appropriate design guidelines, site planning, creation of public gathering spaces and similar measures. Full service, walkable communities with mixed-income, mixed housing-types and energy-efficient developments are encouraged. Clustering of residential density, beyond what is allowed by the current land use designations and configuration without clustering, should only be considered if it is designed and scaled to be a subordinate use to a primary resort development, consistent with resort and business park development policies of the Lake County General Plan.

Based upon density calculated on a parcel by parcel basis, the combined residential development potential of this approximately 16,000 acre Langtry property is more or less 800 dwelling units. The General Plan supports innovative and creative residential projects that allow the transfer and clustering of residential density from areas with known constraints to areas that are more suitable for development. This allows lands with prime agricultural soil or areas with known natural constraints (serpentine soil, wetlands, watercourses, steep slopes, etc.) to be preserved. The land use mapping for this area acts as a guide which allows the future development of up to roughly 800 dwelling units from the approximately 16,000 acre property to be concentrated into smaller areas which are more appropriate for residential development. Remaining undeveloped areas will be preserved from further development by being rezoned to "BF" Frozen. One possible scenario would be all 800 units clustered in one or a few concentrated sites with the remaining undeveloped portions of the property being preserved and protected from further development.

The 800 dwelling unit figure is based upon the Land Use and Zoning maps adopted with the Middletown Area Plan, and as modified by slope calculations prepared by Community Development Department staff and as consistent with the 2008 Lake County General Plan. Slope calculations based on regulations outlined in the Rural Residential and Rural Lands Zoning Districts determined a total density of approximately 450 dwelling units. These calculations are based on density modifications for landslide hazard, fire hazard, etc. These adjustments can be removed from the equation and based solely on slope if the development is clustered in areas which are not at risk, or are mitigated for, landslide hazard, high fire hazard, distance to a fire station, etc. The 800 total dwelling units are based on the development being clustered in areas which are not at risk for the mentioned natural hazards. More detailed slope calculations and geotechnical reports prepared by the applicant could provide some change to the total number of dwelling units. Land use mapping will act as a place holder and can be revised in the future with a more specific project proposal through the Planned Development process.

Future residential units developed on the property would provide critical economic support to the planned resort and commercial development, winery, vineyards and ranchlands, golf course and other recreational uses onsite. These commercial, agricultural, and recreational uses would drive jobs creation necessary to improve the jobs/housing imbalance that currently exists in the Planning Area, provided that the number of dwellings is limited, and less than is needed to accommodate the number of jobs created by the project. Future residential development at this site should occur through the Planned Development process. Development clustering is promoted for this Special Study Area with remaining undeveloped areas being presented through policies outlined in the Lake County General Plan and as implemented in the Lake County Zoning Ordinance.

If it is found that the jobs creation at Langtry outpaces the local available housing stock within the Middletown Planning Area, employee and market rate housing should also be considered for the property. Employee-based housing developments should provide a mix of housing types that will also extend affordability to employees/homebuyers.

The general objective for residential uses on site is for development in accordance with smart growth principles, including but not limited to:

- Walkable communities
- Creating community identity
- Preserving open space and agricultural land
- Providing a range of housing opportunities
- Employing compact building design.
- Supporting on-site resort commercial and agricultural uses.
- Clustering new residential development should be considered to preserve significant agricultural operations, support sustainable growth patterns, reduce impacts to hillside terrain, natural resources, traffic and air-quality and to retain the natural landscape that primarily defines the property.
- Determination of appropriate residential densities will be based on consistency with underlying General Plan goals and policies and considered as part of a Planned Development process by the County.

Farm Architecture

This section addresses and guides the future architectural styles and themes of development on the Langtry property. Future development should capture, enhance, and evoke an overall "farm architecture." Existing development already has strong farm architectural themes, including the historic Langtry residence, the hunting lodge, offices, barns and other structures. These structures are attractive to the observer because of their attention to detail, intricacy and understated elegance that is based on the natural setting of the Guenoc Valley and historic agricultural uses on the Langtry property. Fu-

ture development should continue this expression through the use of designs that provide a visually appealing palate of textures, shading and intricacy of design that are complementary to each other and the “farm architecture” theme established on the Langtry property. Architectural guidelines and design pattern books should be developed and incorporated into any Planned Development application submittal to the County.

Recreation

Recreational pursuits should primarily be comprised of outdoor pursuits that complement and enhance the natural setting. Langtry is in a position to become a get-away destination that offers visitors the opportunity to relax, play, and enjoy life by experiencing the surrounding natural environment. The following principles should guide recreation opportunities on the Langtry property:

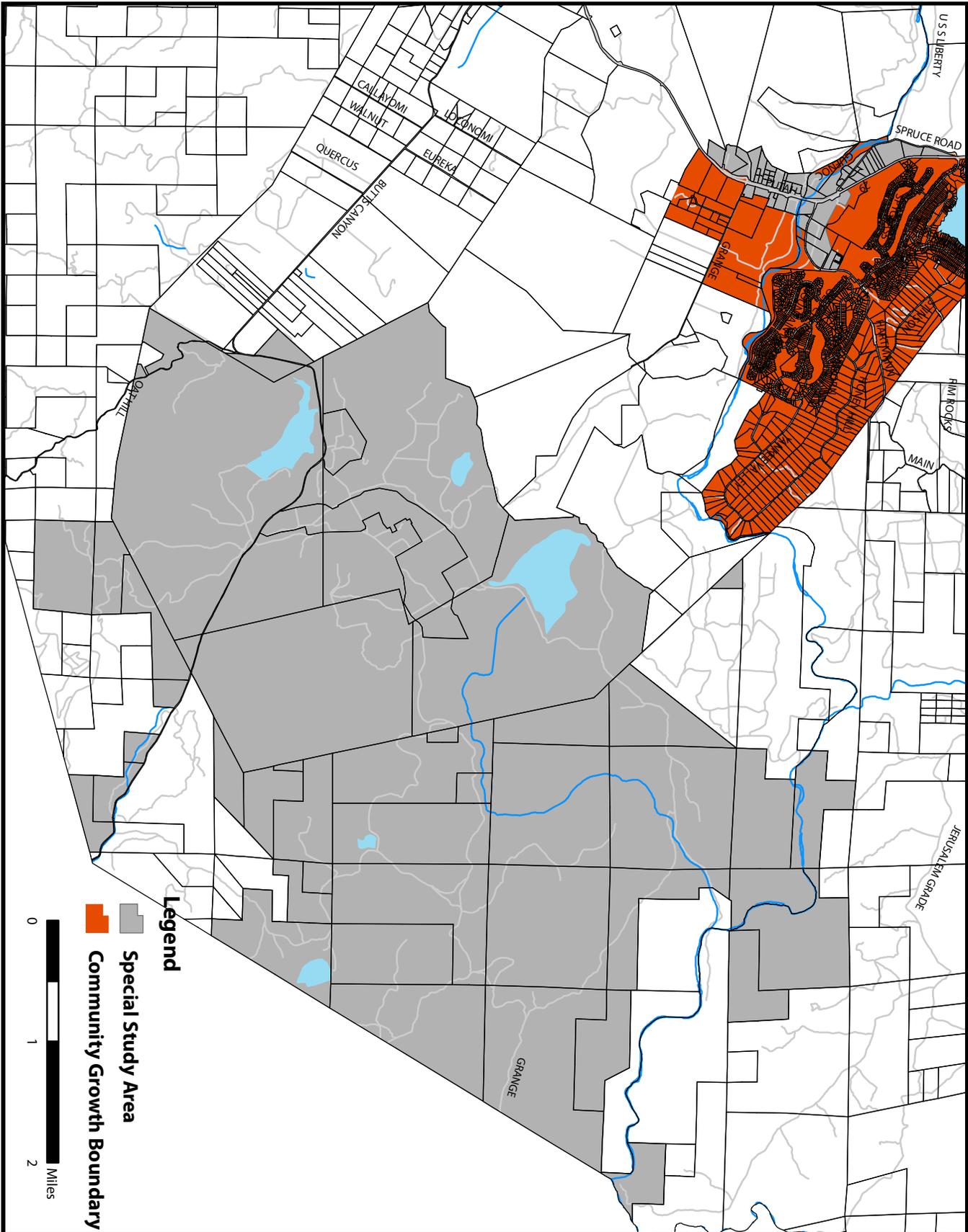
- Langtry should continue to promote agricultural, winery and ranchland uses, along with golfing, as an attraction for wine industry customers and visitors alike.
- Langtry should provide opportunities for hunting and fishing on its ranchlands, consistent with County policies and the appropriate regulations of the California Fish and Game Code.
- Langtry should utilize, promote and enhance new and existing trails for diverse user experiences, including, but not limited to, nature viewing, hiking, and equestrian opportunities.
- Langtry should create trail linkages with other uses on the property, particularly to the winery, guest accommodations/resort areas, and ranch center buildings.
- Langtry should implement special recreational events, including winemaking, horseback riding, birding, hunting and related programs. This should also include use of the golf course and club house for specified community events, consistent with County approvals.

Natural Resources Conservation

Future development at the site should take measures to protect water quality and supply, as well as other natural resources. Any development of the site should employ resource conservation techniques, including site planning, building design and infrastructure planning, that protects the surrounding natural environment. Accordingly, any future development should avoid creation of significant impacts upon environmentally sensitive areas such as streams, lakes, woodlands, vineyards, key viewsheds, and important plant and wildlife habitats.

Land Use

There are three existing land use designations applicable to Langtry: Rural Lands, Rural Residential, and Agriculture. As stated previously, the maximum existing overall residential density of the 16,000 acre Langtry property is approximately 800 units. If developed with residences in the future, the site should be developed through the planned development process to limit impacts on agriculture, traffic, open space and air quality. Any future increase in overall density should only be considered if it is necessary to support tourist related development, consistent with General Plan policies, and in such cases the residential development would need to be subordinate to a primary commercial development. Under these circumstances, amendments to the General Plan land use and zoning designations may be considered in order to facilitate appropriate, substantial resort development. Density transfers from one parcel to another within the Langtry property should be encouraged as part of planned development residential projects if they facilitate clustered residential development and preserve viable agricultural and ranchlands in perpetuity. Development should be clustered in areas of mitigated risk for natural hazards.



LANGTRY/GUENOC - SPECIAL STUDY AREA
FIGURE 6-3



Future development will be guided by the Planned Development process in which all aspects of a project will be reviewed based on consistency with the goals and objectives of this section for development of the Guenoc Valley. Any sale or transfer of that property owned by Langtry Farms, LLC; Lilly’s Reach, LLC; Branching Oaks, LLC; Jackpot Point, LLC; North Dam, LLC; Magoon Estate Limited or Guenoc Winery, Inc. and as shown on Figure 6-3 (Langtry/Guenoc Special Study Area map) shall require an adjustment of the allowed maximum residential density. The sale of property shall result in the transfer of the proportionate density to the new owner.

Objective

6.3.1 Retain and expand agricultural uses and promote agricultural products and agricultural tourism.

Policy

- 6.3.1a The County should continue to support efforts by Langtry to expand and diversify its agricultural base, and proposals that result in value added agricultural opportunities should be encouraged and supported.
- 6.3.1b The County shall consider developing an Agricultural Planned Development zoning district which accommodates wine country style development with lodging components.

Objective

6.3.2 Future development should be high quality and low-impact planned development that includes mixed uses complementary to agricultural operations in the Guenoc Valley.

Policies

- 6.3.2a Residential development should be limited to the density presently allowed by the Land Use Map for the Langtry property. Density transfers between legal parcels of record may be appropriate through the Planned Development process to encourage clustering of residential development and preservation of agricultural resources and open space. Any increase in overall residential density should only be considered if such additional development were deemed necessary to support a major resort development, and were designed and scaled to be subordinate to the resort.
- 6.3.2b A mixed-use destination resort with connectivity to Langtry’s history and agricultural uses, while capitalizing on its varied recreational opportunities, should be encouraged and supported.
- 6.3.2c Future commercial and/or residential development proposal applications shall be processed through the “PD”, Planned Development process. Only innovative, diverse projects founded in smart growth principles should be considered.

7.1 COMMERCIAL DEVELOPMENT

7.2 MIDDLETOWN AREA

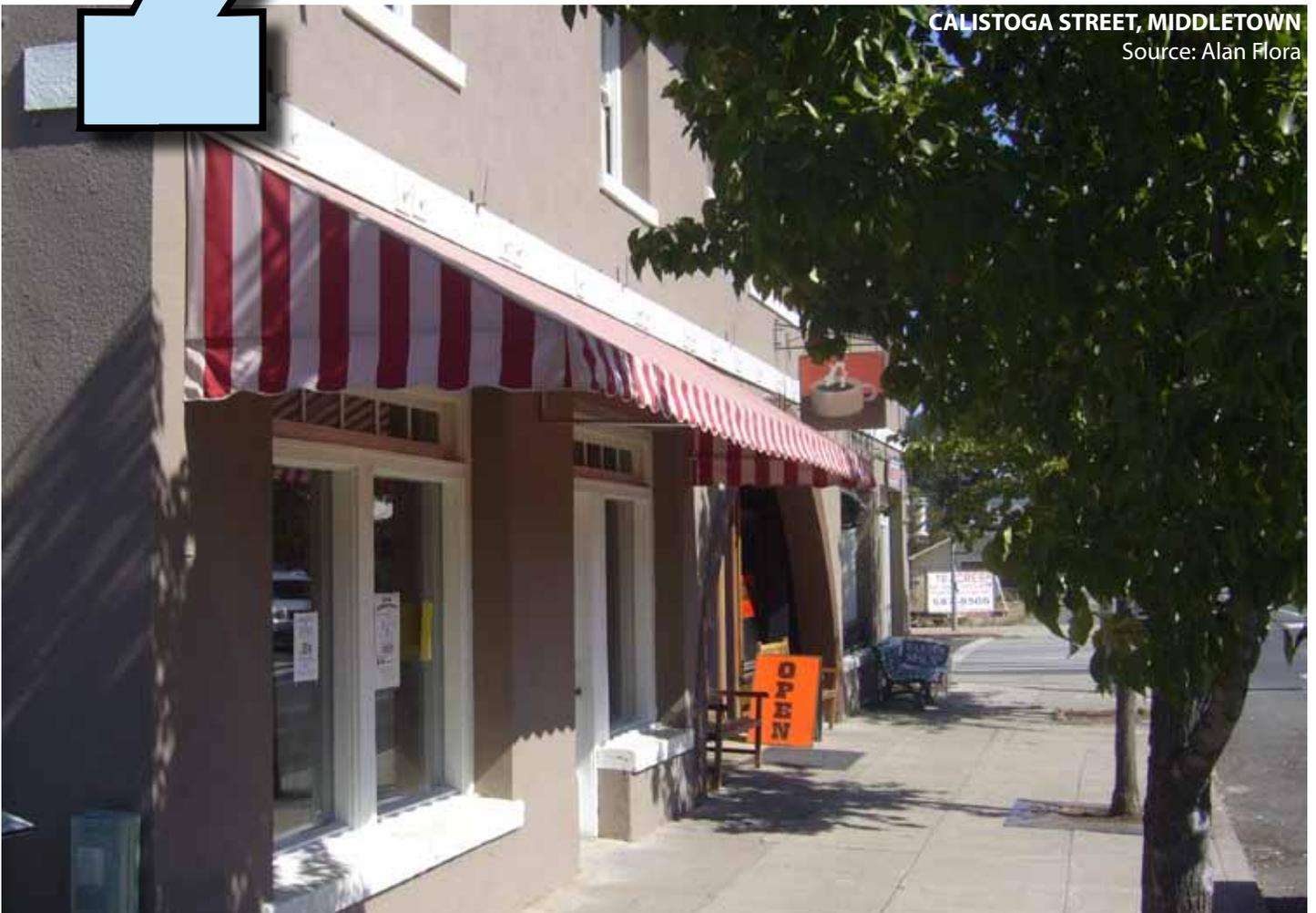
7.3 COYOTE VALLEY

COMMERCIAL DESIGN GUIDELINES



CALISTOGA STREET, MIDDLETOWN

Source: Alan Flora



7.0 DESIGN GUIDELINES

This chapter should be utilized as a guide for development within the Middletown Community Area with an emphasis on establishing community identity. It is divided into two main categories; guidelines for commercial development within the Community Growth Boundaries of Middletown and Coyote Valley.

Design guidelines are a series of recommendations which will help each community retain its uniqueness and discourage incompatible construction. Guidelines will not, by themselves guarantee good design. An important goal of these Design Guidelines is to present positive solutions to design problems that developers may encounter. These guidelines should be viewed as a starting point for new construction or replacement buildings.

The 2008 General Plan update includes several individual policies focused on design. The outlined goal (Goal LU-7) is *"To preserve Lake County communities' character and scale, including their design heritage and historic character."* The Guidelines developed and outlined below have been created to implement the applicable policies in the Design section, specifically those of Historic Preservation, Contextual and Compatible Design, Distinctive Neighborhoods, Streetscape Continuity, Pedestrian and Bicycle-Friendly Streets (Complete Streets), Screening, Parking Location, etc. The public input compiled through the General Plan Update process and Middletown Area Plan Update have conceptualized and focused the communities' desires into this set of Guidelines.

7.1 COMMERCIAL DEVELOPMENT

OVERVIEW

The Middletown Planning Area is the gateway to Lake County from the Napa Valley and the greater Bay Area. Travelers descending the St. Helena Grade pass into the scenic Callayomi Valley before entering Middletown. Consequently, it is important that development provide a positive initial impression which complements the natural setting and predominately rural character of the area. Not only does this create a good aesthetic impression on travelers, but a well designed community increases community pride and economic viability.

Attractive buildings and landscaping reflect the values of a community, enhance its visual character, attract business activity and reinforce community pride. Retail and tourist trade in a community such as Middletown can be greatly enhanced by the projection of a positive community image to the traveler.

Typical problems such as "strip commercial" development, sign clutter, unscreened parking lots, deteriorated buildings, and unimaginative, stark building designs are alleviated by the design review process and guidelines for all commercial and industrial projects in the Middletown Planning Area.

Middletown and Coyote Valley can be expected to welcome well-designed projects, and County staff is ready to assist developers and builders in making them successful. This handbook was prepared to assist community members and builders with the design review process.

THE REVIEW PROCESS

The design review process is intended for commercial and industrial development located in community centers, along scenic transportation routes or where aesthetic standards are deemed desirable by

a developer or a substantial segment of the local population. These Design Guidelines are specifically drafted to address the General Plan and zoning issues identified during the preparation of the Middletown Area Plan.

Before drawing detailed plans, the developers or designers may wish to discuss their ideas with representatives of various County departments. While such a meeting is optional, Planning Department staff encourage having a pre-development meeting, especially on larger projects. Early consultation is also recommended to help explain the permitting process and hopefully avoid unnecessary delays and expenses. For example, projects involving interior or minor alterations often do not require design review.

Design review is only applicable on lands zoned to include the design review combining district or as a result of a use permit requirement for a specific commercial, industrial, apartment or condominium project.

BASIC DESIGN PRINCIPLES

The design principles listed below should be consulted for general direction in planning new construction or renovations in all commercial zones and other districts requiring Design Review. These Principles should be used when considering the acceptability of unique proposals that vary from Specific Guidelines in one of the sections below.

- Projects should possess a “village” scale and character which is sensitive to the scale and livability of the adjacent residential areas.
- Commercial buildings should be designed with a small scale massing and complexity that is appropriate to the context of the transportation system of the area. The Local and Community Commercial zones should be oriented for low speed automobile traffic and a pedestrian nature.
- Street front functionality and visual continuity should be maintained, and all projects should be sympathetic in form, scale, and height to adjacent structures. Uniform front setbacks should be maintained as much as possible to create the ideal pedestrian corridor.
- Landscaping should be used to soften the appearance of buildings and to integrate new construction into the overall commercial/ residential neighborhood. Where space is inadequate for in-ground planting, use container or sidewalk plantings.
- The physical and visual impact of parking lots should be minimized.
- Structures over one-story should be designed to minimize their visual bulk, and to relate to the visual scale of pedestrians.
- Multi-tenant developments should be designed to emphasize an overall sense of project and place, rather than the prominence of individual tenants.

7.2 MIDDLETOWN DESIGN GUIDELINES

The growth of commercial services in the downtown center of Middletown is expected and encouraged to continue over time. The community has developed a unique character and ambiance over more than a century of existence. The community's residential and commercial structures, combined with the natural setting of topography and landscape, have defined an overall character which is cherished by its residents and recognized by its visitors. The established character reflects a "western-style" design theme that has been continued intermittently through the years. A majority of development in the town's center will take the form of infill on vacant properties or replacement of existing structures. The current "core" of the downtown area has been defined as the blocks facing Highway 29/Calistoga Street from Wardlaw Street, south to Callayomi Street. The design principles should be applied to all commercial and industrial areas, but particularly to the downtown. The following design guidelines are a series of recommendations which are aimed at helping Middletown retain its uniqueness and discourage incompatible construction. The following elements are written to help the commercial areas with new infill, renovation and replacement projects.

These guidelines contain a statement of community expectations to assist property and business owners in understanding the commercial development features which assist in defining the overall ambiance and sense of place that contribute to the livability and continued economic vitality of Middletown. The guidelines are intended to establish a balance that preserves and enhances Middletown's uniqueness and livability while supporting the economic vitality that provides resources for community services. These design guidelines will be used by Planning Staff, the Planning Commission, and Middletown Design Review Board in evaluating changes to existing properties and new construction.

APPLICABILITY

These guidelines are applicable to all types of permits including sign permits, building permits and architecture and site improvements.

PURPOSE

The guidelines contained in this document are intended to accomplish the following:

- Provide guidance to property owners and their design professionals in planning and designing new buildings and remodeling existing structures.
- Provide a greater degree of project review and approval predictability.
- Ensure that new development reinforces and supports the special qualities of downtown Middletown.
- Establish a high level of design quality.
- Maintain a building scale that is consistent with downtown Middletown's small scale image.
- Provide information to allow for the adaptation of corporate and franchise designs to the unique character of Middletown.
- Reinforce the special qualities of Middletown's visual character, including the western style.
- Protect property owner investments by discouraging inappropriate adjacent development.
- Enhance the economic vitality of Middletown through quality design.
- Streamline the development review process by more clearly communicating community expectations to property owners and developers.
- Provide visual continuity along street frontages.

- Encourage signage which is in scale and harmony with the architecture and character of Middletown.

DESIGN GUIDELINES

Building/Site Design

1. Design to maintain and reinforce the unique scale and character of Middletown

- Design with respect for nearby historic buildings and unique neighborhoods of Middletown.
- Avoid design consisting largely of boxes with applied design elements.
- Avoid canvas or vinyl “awning architecture” where large awnings dominate the building frontages (see photo).
- Provide varied building and parapet heights except in locations where flat parapets are common.
- Place awnings and canopies at elevations that relate to the scale of pedestrians and provide a sense of shelter. Use awning appropriate to the building style.
- Break façade segments into modules that reflect those common along nearby building frontages. For facades along streets that include a number of single-family residences, break larger building elements into modules which are sympathetic to the smaller scale of those houses.



2. Orient building fronts toward primary corridors.

- Building frontages should be focused toward the main roadway/sidewalk.
- Parking should be avoided between building fronts and roadways.
- Sidewalks or other pedestrian improvements should be added along all street frontages.
- Emphasis should be placed on creating a safe, accessible pedestrian environment and a “town center” style of commercial area as opposed to “strip mall” style commercial areas.



The photo on the left is an example of the recommended “town center” style development. The second photo shows a “strip mall” style development. The strip mall incorporates many elements of recommended design, but the side design still fails to create a pedestrian-oriented atmosphere.

3. Break larger building facades into smaller segments

- Treat commercial street-facing facades which exceed fifty feet in length as though they were constructed no wider than fifty feet.
- For projects located on corner lots, special attention should be given to the following:
 - Breaking building forms into modules that are similar to those seen in residential neighborhoods.
 - Providing landscaping and landscape elements (e.g., fencing) that would be consistent with those

used in neighboring areas (particularly residential areas).

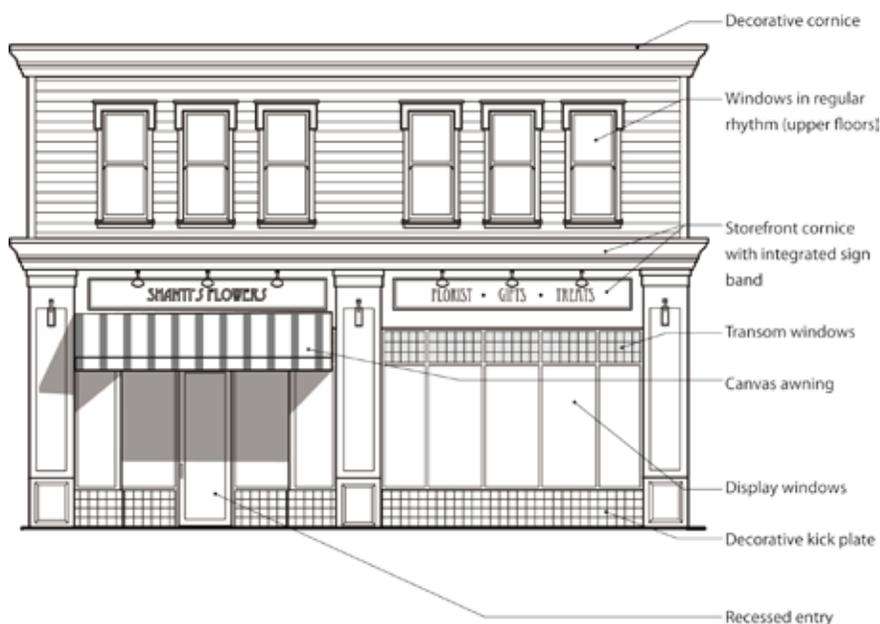
- Screening any parking areas with low walls and landscaping.

4. Avoid visually bulky buildings

- Provide horizontal wall plane changes along street frontages and areas easily viewed from residential properties to provide some building articulation.
- Inset windows as much as possible from wall faces to provide some visual depth to facades. Where interior uses make this difficult, provide exterior trim around windows to achieve some façade depth.
- For any structure over two stories in height, set back upper floors by a minimum of fifteen feet from the lower floor facades to minimize scale and bulk changes that would stand out significantly from the norm along the adjacent streetscape.
- Use a mix of materials that have a smaller scale (e.g., stone, brick, wood siding, and shingles). Avoid concrete block and metal siding or panels.



Street facade scaling example



Building design example

5. Provide a unified design around all sides of buildings

- Maintain continuity of design, materials, color, form and architectural detail for all elevations of a building that are visible from public areas or adjacent residences.
- Where continuity of design is difficult to achieve, substantial landscaping should be provided to screen the area.

6. Avoid blank walls and service areas which are visible from adjacent streets and projects

- Orient buildings to avoid blank walls and service areas which are visible to the public.
- When blank walls are unavoidable, add pilasters, trellises, and/or lattices along with landscaping to make facades more attractive.

7. Utilize solid building forms with “punched” window openings

- Avoid ribbon windows and other types of large window areas.
- Limit the amount of typical commercial storefront treatment in favor of smaller window openings.

8. Provide architectural elements, detailing an ornament to add richness and variety to building facades

- Design with a scale consistent with neighboring character, particularly when neighboring residential uses.

9. Provide a richness of architectural façade depth and detail

- Express columns and beams on the buildings exterior.
- Provide a number of façade layers (e.g., front of columns or pilasters, wall plan, window frame, window glass).
- Finish wall tops with overhangs, projecting cornices, and column caps that provide a strong visual terminus to the structure.
- Use applied and integrated design elements (e.g., exposed rafter tails on sloped roofs, cornice moldings, applied medallions).

10. Utilize high quality building materials and details

- The use of exposed concrete block is strongly discouraged in favor of wood, stucco, stone or brick.
- Avoid plywood wall facings.
- Avoid plastic or reflective metal materials and finishes.

11. Utilize colors that are appropriate to the use and the surrounding area

- Muted tones are generally preferred with stronger accent colors limited to smaller areas of trim. Thoughtful consideration should be given to the selection of color hues. Consider muted tones of blues, yellows, tans, grays and other hues rather than selecting non-distinctive beiges and browns.
- In most cases, a range of analogous or complementary colors is preferred over painting all wall surfaces with the same paint color and shade.
- Strong building colors that are used for branding or advertising purposes may not be approved.
- Uses which might make a case for stronger colors will be evaluated on a case-by-case based on the design and the context of surrounding buildings and uses.
- Creativity and individual identity are encouraged as long as the colors and style does not

detract from the surrounding area as a whole.

12. Maintain a high degree of transparency at all window areas

- Avoid dark or highly reflective glazing.

13. Respect the privacy of neighboring residents

- Avoid windows which would provide views into residential private yard spaces.
- Keep window sizes smaller on facades facing residences where windows can be seen to minimize lighting intrusion
- Provide shielding for any exterior lighting visible from neighboring residential uses.

Pedestrian Corridor

1. Enhance front sidewalk and plaza paving

- The use of brick banding along with concrete is encouraged for the commercial street sidewalks.
- A change of pattern and/or material for paved areas within the front setback is strongly encouraged to set them apart from the sidewalks.
- Where paved plaza areas or outdoor dining areas are located adjacent to sidewalks, provide a positive separation between the two with landscaping, walls and/or raised planters.
- A “western-style” boardwalk or concrete faux boardwalk could be supported in the downtown area in appropriate locations.

2. Encourage porches/awnings which utilize a “western-style” theme and stretch from the building front to the street edge of the sidewalk

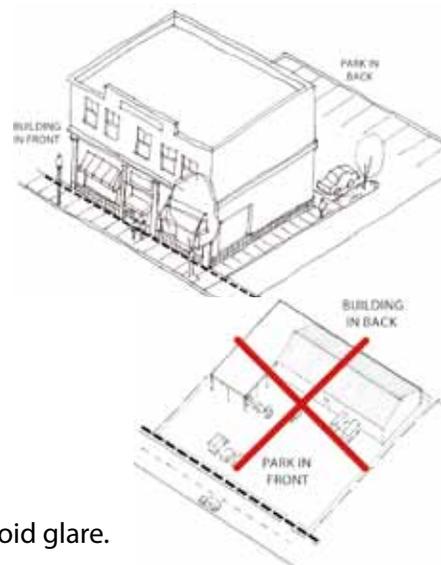
3. Pedestrian amenities are encouraged in front setback areas.

- Benches
- Planters and other landscaping
- Trash receptacles
- Street Trees

Parking

1. Place parking behind buildings whenever possible

- If placement behind buildings is not possible or practical, the preferred parking placement is adjacent to the structures in order to maintain the presence of active uses and greatest density along the street frontage (particularly Calistoga St./ Highway 29).
- If the only possible parking location is between the buildings, parking along frontages should be screened and landscaped.
- For any parking which fronts along a public street, provide low walls or hedges along with landscaping to soften the impact of the parking lot on the pedestrian experience.



2. Minimize the visual impact of parking lot lighting

- Limit light pole height to decrease light pollution.
- Use luminaries with shielding to direct light downward and avoid glare.

3. Subordinate parking to the buildings

- Avoid parking lots in locations that interrupt retail and/or structural continuity near front property lines.
- Divide larger parking areas into smaller segments with blocks of landscaping.
- Provide low walls and landscaping at parking lot edges adjacent to public streets.

4. Restricted parking lots should be discouraged

- Business should be encouraged to allow open or shared parking in lots to promote a “park once” environment which allows customers to park and utilize the walkability of the area and visit other businesses.



Landscaping

1. All projects should be well landscaped

- Landscaping should relate to existing landscape treatments along the adjacent street fronts.
- Smaller landscaping (e.g., planter pots, window boxes) are used often within the downtown to create a smaller, pedestrian scale and should be included within commercial projects whenever possible.
- Landscaping should have form and substance to define edges and paths, to provide visual focal points and to buffer less desirable views (e.g., less finished facades facing public ways or residences.)

2. Provide substantial landscaping along street frontages (particularly Calistoga St./Highway 29).

- Avoid large amounts of paving between structures and the street sidewalk. If there is a substantial setback, and the area is not used for outdoor dining, over 50% of the front setback should be devoted to green landscaping.
- Flowering annual plants are strongly encouraged.

3. Provide greater landscape buffering adjacent to residential parcels.

- Trees and other landscaping should be used increasingly as the density changes from Community Commercial to Local Commercial and then to Residential Districts as a way to soften the noise and activity of the more intense uses.

Peripherals (solar panels, mechanical equipment, etc.)

1. Provide visual buffering of on-site utility elements

- Locate transformers, valves and similar elements where they will be least visible from the public rights-of-way. If not possible, these elements should be placed underground or, at a minimum, screened from view with walls and landscaping that relate to the remainder of the project.
- Utilize landscaping and/or walls to screen transformers and other utility elements if they must be located in close proximity to the public right-of-way.
- Applicants will be required to submit a site plan at the time of submittal for review and approval to show the location, type and size, including height, of all utility elements to be located on the parcel.

2. Integrate the screening for all trash and service areas into the design of the buildings.

- Avoid walls that appear to be tacked onto the main structure in favor of walls that integrate the service walls into the overall design of the building complex.
- Match wall materials to that of the building.
- Where screen walls are prominently visible, provide additional detail appropriate to the design of the main structure (e.g., wall caps similar to those on a primary structure).
- In many cases, the use of a lattice work with dense, flowering vines may be used. In those cases, a lesser building material (e.g., concrete block) may be used if the lattice work will provide a strong texture while the landscaping is growing to maturity, and if it can be demonstrated that the landscaping selected will provide a green screening of the walls within two years of installation.

3. Screen all roof equipment

- All roof equipment must be screened to minimize its visual impact on views from public rights-of-way.
- Locate equipment in recessed roof wells or hide equipment behind parapet walls so that it cannot be seen.
- Roof screens should be constructed from materials as similar to the building walls as possible, and should be designed to appear as an architecturally integrated part of the building rather than an added-on element.
 - In cases where mechanical wells or parapets of sufficient height to screen equipment are not possible, equipment should be clustered and placed as far as possible from building edges. The visible equipment should be painted a color that will blend the equipment visually with the backdrop (e.g., pale blue for objects seen against the sky.)
 - Submit a roof plan at the time of submittal for review and approval. The plan should show the location, type and size, including height, of all roof mounted equipment. The application elevation and section drawings should show the location and size of all roof mounted equipment.

4. Solar Panels

- Seek to minimize any negative visual impacts on downtown character. A less than optimal efficiency slope for the panels may be required to minimize their visual impact if such a condition would not decrease the efficiency of the panels by more than 20%. Alternatively, other visually neutral methods to achieve similar energy efficiencies may be required (e.g., insulation, efficient windows, solar screening of windows, energy efficient HVAC systems, etc.).
- Hide solar panels, if possible, or integrate panels into the architectural forms and character of the building if it is not possible to hide them.
- Avoid a “tacked on” look.
- Operable windows are encouraged in recognition of the area’s temperate climate and the typically small scale of commercial structures.

SIGNAGE GUIDELINES

1. Prohibited signage types

- Lighted signs that flash on and off, fluctuate or appear to move.
- Moving signs that rotate or move in any fashion except barber poles.
- Attraction Boards and Movable Letter signs (except for churches, cinemas, performing arts facilities or similar uses that have frequently changing events or showings).
- Off-site signs.
- Electronic signs.
- Projected light signs which are flashed or projected onto walls or other structures by means of a

- projector or other device.
- Roof-mounted signs (except where other types of signage cannot be effectively used).
- Billboards.
- Cloth, paper or fabric signs hung from the building or placed in windows except for temporary signs allowed under the Zoning Ordinance.
- Any signs not specifically allowed by the Zoning Ordinance.

2. Avoid excessive wording and advertising messages

- Signs are most effective when their messages can be grasped quickly. Too many words or images compete for attention and reduce the readability of the sign.

3. Use no more than two letter font types per sign

- The primary purpose of a sign is to quickly convey information to passing pedestrians and motorists. More than two letter styles make readability more difficult. A simple logo with an additional type style may also be considered.

4. Keep the size of letters and graphics in proportion to overall sign area

- Text and graphics are difficult to read if they crowd the borders of the sign. Smaller letters with space around them will have more impact than larger letters with limited space around them.
- Generally limit the width and height of lettering and graphics to 85% of the overall sign width and 65% of the height of the sign area. Information, such as graphic logos, may be closer to borders if a significant amount of background is provided for the sign as a whole. A good rule of thumb is to limit the amount of sign information to no more than 50-55% of the overall sign area.

5. Use high quality materials

- Appropriate materials include finished wood, metal, and for projecting banner signs, woven fabric. Plastic sign materials and signs painted directly onto building surfaces should not be allowed.
- The sign materials and design should be related to those of the building on which it is mounted, and all sign edges must be cleanly defined and finished.

6. Use simple and symmetrical sign shapes

- Geometric shapes such as rectangles, squares, circles, ovals and triangles are visually stable shapes which help focus attention on the sign message. These should be used in most cases. Combinations of geometric shapes will also generally produce a good sign shape.

7. Relate sign colors to building colors

- Select wall sign colors to blend with the building and storefront colors. Select from color ranges which are analogous and complementary to them.
- Corporate branding colors will be considered, but will not be automatically approved if they are considered out of place with the building or the surrounding environment. The use of tone-down colors in the same hue family may be required in place of brighter standard corporate colors.

TYPES OF SIGNAGE

Wall Signs

Wall signs are panels or individual letters mounted flat against and parallel to a building wall or roof fascia.

1. Limit sign information

- Generally, limit sign information to the business name. Graphic logos, date of building construction, address, and other elements may be allowed at the discretion of the Design Review Board.

2. Place signs within a clean *Signable Area*

- The *Signable Area* should:
 - Be relatively flat
 - Not contain doors or windows
 - Not include projecting molding or trim
 - Be in reasonable proportion to the overall façade (The *Signable Area* should not exceed 15% of the building façade)
- If a building does not have a good location for a wall sign, use other allowed types such as an awning, window or projecting signs.



3. Use Sign materials which project slightly from the face of the building

- Use either individually applied letters to the face of the wall, or apply sign letters to a board or panel mounted on the face.
- Avoid painted signs directly on wall surfaces.

4. Provide sign illumination appropriate to the area

- Interior illuminated can signs which include multiple letters within a single sign enclosure will not be allowed for any wall sign
- Interior illuminated individual letters may be used.
- Exterior illumination with shielded spot lights can be used for wall signs
- Neon wall signs may be allowed, but will be evaluated on a case-by-case basis.
- All sign and sign lighting raceways and electrical connections should be concealed.

Awning Signs

Awning signs consist of letters and graphics applied directly to the face or valance of awnings. Awning signs are often used effectively in combination with window signs.

1. Place signs for easy visibility

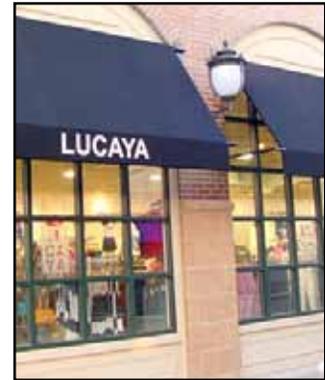
- Apply signs to awning front valences (i.e., the flat vertical surface of awnings) or to sloped awning faces with a slope of at least 2 to 1.

2. Limit the signage information on awnings

- Since awning signs will often be viewed from passing vehicles, the amount of information which can be effectively conveyed is limited. Keeping sign text short will allow viewers to better comprehend and remember the message.
 - Generally limit awning signs to the business name, business logo, services or type of business (e.g., French

Cuisine), and/or the business address number.

- Limit the size of logos or text placed on awning sloped faces to a maximum of 15% of the sloped surface areas.
- Limit sign width on awning valences to a maximum of 85% of the awning width. Limit the letter height to a maximum of 80% of the valance height.



3. Avoid interior illuminated awnings

- Backlight awnings that make the entire awning a large sign should not be allowed. Signage on the awning's sloped face may be illuminated by shielded and attractive directional spot lights

Window Signs

Window signs are primarily oriented to passing pedestrians, and are generally applied to the inside of display windows.

1. Limit the amount of signage used

- Window signs should be limited to a maximum of 25% of any individual window, and an aggregate area of no more than 10% of all ground floor windows on any building face.

2. Limit the size of the lettering

- The maximum height of letters should be 10 inches. Exceptions can be granted for the leading capital letter of text.

3. Consider the use of logos and creative sign type

- Graphic logos and images along with special text formats can add personality and interest to window signs.

4. Use high quality materials and application methods

- Limit window sign materials to the following:
 - Paint or vinyl film applied directly to the inside face of the window.
 - Tubular neon suspended behind the window glass
 - Wood or metal panels with applied lettering
 - Paper signs placed in windows are not allowed.



Projecting Signs

Projecting signs are relatively flat, two-sided solid panels attached to the brackets which are mounted perpendicular to the face of buildings and storefronts. They often include graphic images in addition to text, and express the unique personality of an individual business.

1. Use high quality materials

- Use wood, metal or non-glossy fabrics. Avoid plastics.

2. Limit the number and size of projecting signs

- Use no more than one projecting sign per business frontage.
- Limit the size of any projecting sign to five square feet.

- Project signs no more than 36 inches from the building face, and provide at least 6 inches between the inside edge of the sign and the building.

3. Relate the design of projecting signs and supports to the character of the building

- Simple round or square horizontal supports with capped ends, painted black or white are generally acceptable. However, more decorative approaches may be desirable when appropriate to the sign and/or architectural character of the building.



4. Position Projecting signs to complement the building's architectural details

- Locate solid panel signs below the first floor ceiling line, or no more than 14 feet above the sidewalk, whichever is less. Provide at least 9 feet from the bottom of projecting signs to the ground in pedestrian areas and 14 feet in areas with vehicular traffic.

5. Provide sign lighting only with shielded spotlights

- Utilize high quality fixtures such as cylinder spots or decorative fixtures. Avoid expose standard spot and flood bulbs.
- Design light supports to complement the design of the sign and building façade.

Hanging Signs

Hanging signs are relatively flat panels, generally two-sided, which are similar to projecting signs, but are smaller and suspended below awnings, bay windows, balconies, and similar projections. They are intended primarily for business identification to pedestrians passing on the sidewalk. They are commonly used as a type of western-style signage.

1. Use high quality materials

- Use wood or metal and avoid shiny plastic or fabric. Finish all exposed edges. Suspend signs with metal rods, small scale chain, cable or hooks.

2. Limit the number and size of hanging signs

- Use no more than one hanging sign per business. Limit the maximum sign size to 3 square feet. Mount signs to provide a minimum of 9 feet clearance between the sign and the sidewalk.

3. Orient hanging signs to pedestrian traffic

- Mount signs under awnings, bay windows or other projections with their orientation perpendicular to the building face so that they will be visible to pedestrians passing on the sidewalk. If multiple hanging signs are placed along a business frontage, they should all be mounted with their bottom edge the same distance above the sidewalk, and should be of similar size and shape.



Plaque Signs

Plaque signs are pedestrian-oriented flat panels mounted to wall surfaces near the entry to a business. They include signs that identify a specific business, directory signs for multiple businesses, and menu boxed for restaurants.

1. Limit the location and size of plaque signs

- Locate signs on wall surfaces adjacent to tenant entries or entry passageways to off-street courtyards. Signs identifying a single business should be limited to an area of 4 square feet. Directory signs for the identification of multiple second floor or courtyard tenants may be larger, but no more than 8 square feet.



2. Use plaque signs for the display of restaurant menus

- A restaurant district is enhanced when a variety of restaurants share the area and customers are able to walk from one to the next to compare menus and prices. Attractive menu signs or boxes should not exceed 6 square feet in area and should have internal indirect lighting (e.g., bulbs located in the frame to cast direct light over the menu surface) or direct lighting using decorative fixtures.

Ground Signs

Primary Ground Signs are low signs that assist motorists in finding business along auto-oriented streets where businesses are separated from the street front by parking or large landscaped setbacks. Informational and Directional Ground Signs are smaller signs that assist motorists in safely existing from moving traffic lanes to on-site uses in projects with multiple lanes.

1. Ground Signs are not generally encouraged in the Downtown Middletown Area, but may be considered on a case-by-case basis.

2. Limit the information on each sign

- Ground signs should generally be limited to the following information:
 - Project or primary business identification name and/or logo.
 - Address number (strongly encouraged)
- Multi-tenant ground signs are strongly discouraged. However, the display of up to three tenants may be considered for small ground signs so long as the sign and background color is common throughout, and the type style and logo colors of each tenant are the same.
- The inclusion of services and products offered should not be included on ground signs.



3. Locate signs for easy visibility from passing vehicles

- Locate signs within 10 feet of the front property line
- Avoid blocking any vehicular or pedestrian sight lines which might result in safety problems.

4. Limit the number, type and size of ground signs

- Only one project or tenant identification sign is allowed for each development parcel street frontage.
- The height and sign area per face for Primary Ground Signs should be appropriate to the surrounding environment.
- Directional Signs are limited to a maximum area of 6 square feet, and only allowed on arterial streets. One per entrance or exit will be allowed.

5. Lighting

- Lighting for ground signs must be by direct spotlight illumination from fixtures mounted either at the top of the sign or on the ground below the sign. Fixtures must be shielded to avoid direct view of the bulbs.

6. Material

- All ground signs, including price signs for service stations, should be constructed of matte finish non-reflective materials.

Freestanding Signs

Freestanding signs are ground-mounted signs that emphasize business brand identity.

1. Use Limitations

- Freestanding signs should be strongly discouraged in the Downtown Middletown area

Billboard Signs

Billboard signs are freestanding, outdoor advertising signs that are larger than 32 sq. ft.

1. Use Limitations

- Billboard signs should not be allowed in the Middletown Planning Area.
- Existing Billboard signs in the Planning Area should not be approved for Use Permit extensions.

Flag Signs

Flags, pennants, banners, streamers and similar signs are temporary advertising devices used to designate special events or vehicle entry/pedestrian entry.

1. Use Limitations

- Should not be allowed as permanent signage (with the exception of the American flag and other related flags as described in the Lake County Zoning Ordinance).
- Appropriate for designation of vehicle or pedestrian entryways for wineries and other similar uses during special events.

2. Material

- All flags, pennants, banners, streamers, etc. should be constructed of matte finish and non-reflective materials.

7.3 COYOTE VALLEY DESIGN GUIDELINES

Coyote Valley has developed without a concentrated downtown commercial area. A number of “strip mall” type developments have been created, but have failed to create a centralized business district. The Coyote Valley Special Study Area attempts to address this deficiency. A large tract of land north of Hartman Road and from Highway 29 to Hardester’s Market on Coyote Valley Road has been zoned Community Commercial. The intent behind this land use decision is to encourage a future concentrated town center in this area. The plan would ideally include a new street north of Hartman Road that serves as the primary frontage for the town center. The commercial and industrial development that stretches along Highway 29 should be encouraged to create a walkable corridor along the highway. These concepts are further described in Chapter 6 Special Study Areas.

The current commercial areas in Coyote Valley and in Hidden Valley Lake subdivision contain some common design themes, but are not similar enough to form a consistent style. These guidelines are tools to create and maintain a consistent design style that is unique to the area. The similar themes are pitched roofs with wide, sweeping eaves; large windows; large canopy trees providing a rural shaded atmosphere; and a variety of color tones ranging from burnt reds to muted greens to soft tans. The guidelines are intended to establish a balance that preserves and enhances Coyote Valley’s uniqueness and livability while supporting the economic vitality that provides resources for community services. These design guidelines will be used by Planning Staff, the Planning Commission, and Coyote Valley Design Review Board in evaluating changes to existing properties and new construction.

APPLICABILITY

These guidelines are applicable to all types of permits including sign permits, building permits and architecture and site improvements.

PURPOSE

The guidelines contained in this document are intended to accomplish the following:

- Provide guidance to property owners and their design professionals in planning and designing new buildings and remodeling existing structures.
- Provide a greater degree of project review and approval predictability.
- Ensure that new development reinforces and supports the special qualities of Coyote Valley.
- Establish a high level of design quality.
- Maintain a building scale that is consistent with Coyote Valley’s rural image.
- Provide information to allow for the adaptation of corporate and franchise designs to the unique character of Coyote Valley.
- Reinforce the special qualities of Coyote Valley’s visual character.
- Protect property owner investments by discouraging inappropriate adjacent development.
- Enhance the economic vitality of Coyote Valley through quality design.
- Streamline the development review process by more clearly communicating community expectations to property owners and developers.
- Provide visual continuity along street frontages.

- Encourage signage which is in scale and harmony with the architecture and character of Coyote Valley.

DESIGN GUIDELINES

Building/Site Design

1. Design to maintain and reinforce the unique scale and character of Coyote Valley

- Design with respect for the rural character and unique neighborhoods of Coyote Valley.
- Avoid design with consists largely of boxes with applied design elements
- Avoid canvas or vinyl “awning architecture” where large awnings dominate the building frontages (see photo).
- Provide varied building and parapet heights except in locations where flat parapets are common.
- Place awnings and canopies at elevations that relate to the scale of pedestrians and provide a sense of shelter. Use awning appropriate to the building style.
- Break façade segments into modules that reflect those common along nearby building frontages. For facades along streets that are closely related to nearby residences, break larger building elements into modules what are sympathetic to the smaller scale of those houses.
- Encourage pitched roofs with large overhangs to create a relaxed, “prairie-style” character.



2. Orient building fronts toward primary corridors.

- Building frontages should be focused toward the main roadway/sidewalk
- Parking should not be allowed between building fronts and roadways
- Sidewalks or other pedestrian improvements should be added along all street frontages
- Emphasis should be placed on creating a safe accessible pedestrian environment and a “town center” style of commercial area as opposed to “strip mall” style commercial areas.



The photo on the left is an example of the recommended “town center” style development. The second photo shows a “strip mall” style development. The strip mall incorporates many elements of recommended design, but the side design still fails to create a pedestrian-oriented atmosphere.

3. Break larger building facades into smaller segments

- Treat commercial street-facing facades which exceed fifty feet in length as though they were constructed no wider than fifty feet.
- For projects located on corner lots, special attention should be given to the following:
 - Breaking building forms into modules that are similar to those in the residential neighborhoods.

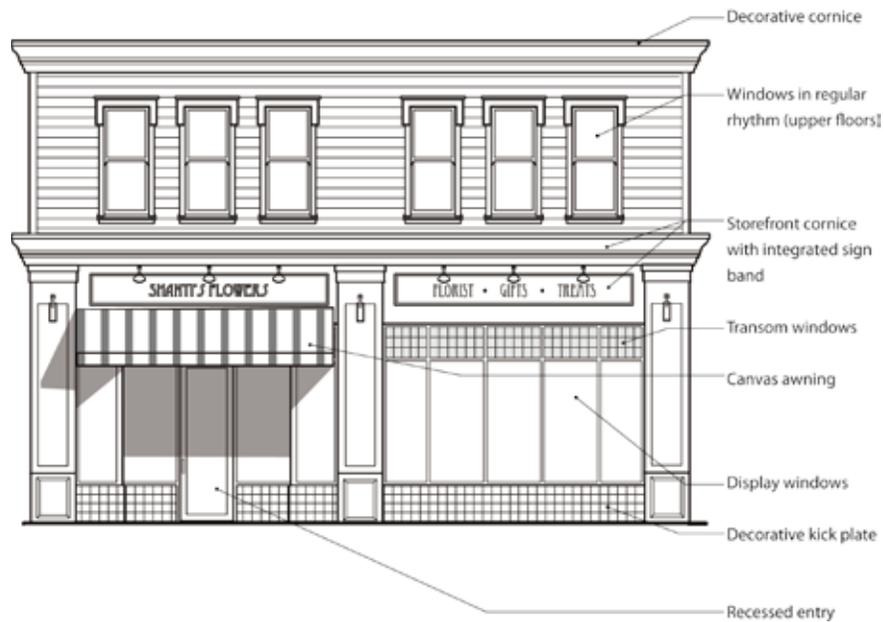
- Providing landscaping and landscape elements (e.g., fencing) that would be consistent with those used in neighboring areas (particularly residential areas).
- Screening any parking areas with low walls and landscaping.

4. Avoid visually bulky buildings

- Provide horizontal wall plane changes along street frontages and areas easily viewed from residential properties to provide some building articulation.
- Inset windows as much as possible from wall faces to provide some visual depth to facades. Where interior uses make this difficult, provide exterior trim around windows to achieve some façade depth.
- For any structure over two stories in height, set back upper floors by a minimum of fifteen feet from the lower floor facades to minimize scale and bulk changes that would stand out significantly from the norm along the adjacent streetscape.
- Use a mix of materials that have a smaller scale (e.g., stone, brick, wood siding, and shingles). Avoid concrete block and metal siding or panels.



Street facade scaling example



Building design example

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- Where continuity of design is difficult to achieve, substantial landscaping should be provided to screen the area.

6. Avoid blank walls and service areas which are visible from adjacent streets and projects

- Orient buildings to avoid blank walls and service areas which are visible.
- When blank walls are unavoidable, add pilasters, trellises, and/or lattices along with landscaping to make facades more attractive.

7. Utilize solid building forms with “punched” window openings

- Avoid ribbon windows and other types of large window areas.
- Limit the amount of typical commercial storefront treatment in favor of smaller window openings.

8. Provide architectural elements, detailing and ornament to add richness and variety to building facades

- Design with a scale consistent with neighboring character, particularly when neighboring residential uses.

9. Provide a richness of architectural façade depth and detail

- Express columns and beams on the buildings exterior.
- Provide a number of façade layers (e.g., front of columns or pilasters, wall plan, window frame, window glass).
- Finish wall tops with overhangs, projecting cornices, and column caps that provide a strong visual terminus to the structure.
- Use applied and integrated design elements (e.g., exposed rafter tails on sloped roofs, cornice moldings, applied medallions).

10. Utilize high quality building materials and details

- The use of exposed concrete block is strongly discouraged in favor of wood, stucco, stone or brick. Use of “dry stack” stone similar to the existing structure on Coyote Valley Road, and as shown to the right, should be encouraged.
- Avoid plywood wall facings.
- Avoid plastic or reflective metal materials and finishes.

11. Utilize colors that are appropriate to the use and the surrounding area

- Muted tones are generally preferred with stronger accent colors limited to smaller areas of trim. Thoughtful consideration should be given to the selection of color hues. Consider muted tones of reds, greens, tans, grays and other hues rather than selecting non-distinctive beiges and browns.
- In most cases, a range of analogous or complementary colors is preferred over painting all wall surfaces with the same paint color and shade.
- Strong building colors that are used for branding or advertising purposes may not be approved.
- Uses which might make a case for stronger colors will be evaluated on a case-by-case based on the design and the context of surrounding buildings and uses.
- Creativity and individual identity are encouraged as long as the colors and style does not detract from the surrounding area as a whole.

12. Maintain a high degree of transparency at all window areas

- Avoid dark or highly reflective glazing.

13. Respect the privacy of neighboring residents

- Avoid windows which would provide views into residential private yard spaces.
- Keep window sizes smaller on facades facing residences where windows can be seen to minimize lighting intrusion
- Provide shielding for any exterior lighting visible from neighboring residential uses.

Pedestrian Corridor

1. Enhance front sidewalk and plaza paving

- The use of brick banding along with concrete is encouraged for the commercial street sidewalks.
- A change of pattern and/or material for paved areas within the front setback is strongly encouraged to set them apart from the sidewalks.
- Where paved plaza areas or outdoor dining areas are located adjacent to sidewalks, provide a positive separation between the two with landscaping, walls and/or raised planters.
- A “western-style” boardwalk or concrete faux boardwalk should be encouraged in the downtown area if applicable.

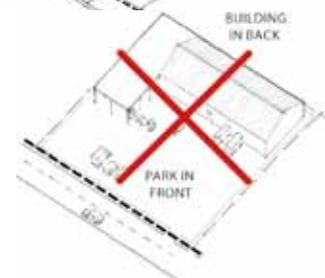
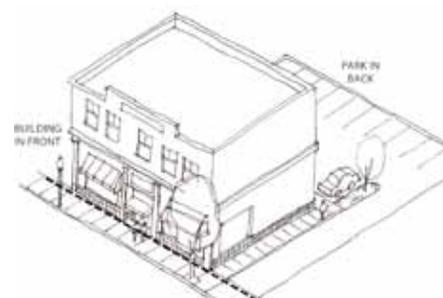
2. Pedestrian amenities are encouraged in front setback areas.

- Benches
- Planters and other landscaping (the growth of large canopy trees should be encouraged to accentuate a rural, prairie style, particularly in developments not facing a primary street frontage.)
- Trash receptacles
- Street Trees

Parking

1. Place parking behind buildings whenever possible

- If placement behind buildings is not possible or practical, the preferred parking placement is adjacent to the structures in order to maintain the presence of active uses and greatest density along the primary street frontage.
- If the only possible parking location is between the buildings, parking along frontages should be screened and landscaped.
- For any parking which fronts along a public street, provide low walls or hedges along with landscaping to soften the impact of the parking lot on the pedestrian experience.



2. Minimize the visual impact of parking lot lighting

- Limit light pole height to decrease light pollution.
- Use luminaries with shielding to direct light downward and avoid glare.

3. Subordinate parking to the buildings

- Avoid parking lots in locations that interrupt retail and/or structural continuity near front property lines.
- Divide larger parking areas into smaller segments with blocks of landscaping.
- Provide low walls and landscaping at parking lot edges adjacent to public streets.



4. Restricted parking lots should be discouraged

- Business should be encouraged to allow open or shared parking in lots to promote a “park once” environment which allows customers to park and utilize the walkability of the area and visit other businesses.

Landscaping

1. All projects should be well landscaped

- Landscaping should relate to existing landscape treatments along the adjacent street fronts.
- Smaller landscaping (e.g., planter pots, window boxes) are used often within the downtown to create a smaller, pedestrian scale and should be included within commercial projects whenever possible.
- Landscaping should have form and substance to define edges and paths, to provide visual focal points and to buffer less desirable views (e.g., less finished facades facing public ways or residences.)

2. Provide substantial landscaping along street frontages (particularly Highway 29 and any future developed streets north of Hartman Road).

- Avoid large amounts of paving between structures and the street sidewalk. If there is a substantial setback, and the area is not used for outdoor dining, over 50% of the front setback should be devoted to green landscaping.
- Flowering annual plants are strongly encouraged.

3. Provide greater landscape buffering adjacent to residential parcels.

- Trees and other landscaping should be used increasingly as the density changes from Community Commercial to Local Commercial and then to Residential Districts as a way to soften the noise and activity of the more intense uses.

Peripherals (solar panels, mechanical equipment, etc.)

1. Provide visual buffering of on-site utility elements

- Locate transformers, valves and similar elements where they will be least visible from the public rights-of-way. If not possible, these elements should be placed underground or, at a minimum, screened from view with walls and landscaping that relate to the remainder of the project.
- Utilize landscaping and/or walls to screen transformers and other utility elements if they must be located in close proximity to the public right-of-way.
- Applicants will be required to submit a site plan at the time of submittal for review and approval to show the location, type and size, including height, of all utility elements to be located on the parcel.

2. Integrate the screening for all trash and service areas into the design of the buildings

- Avoid walls that appear to be tacked onto the main structure in favor of walls that integrate the service walls into the overall design of the building complex.

- Match wall materials to that of the building.
- Where screen walls are prominently visible, provide additional detail appropriate to the design of the main structure (e.g., wall caps similar to those on a primary structure).
- In many cases, the use of a lattice work with dense, flowering vines may be used. In those cases, a lesser building material (e.g., concrete block) may be used if the lattice work will provide a strong texture while the landscaping is growing to maturity, and if it can be demonstrated that the landscaping selected will provide a green screening of the walls within two years of installation.

3. Screen all roof equipment

- All roof equipment must be screened to minimize its visual impact on views from public rights-of-way.
- Locate equipment in recessed roof wells or hide equipment behind parapet walls so that it cannot be seen.
- Roof screens should be constructed from materials as similar to the building walls as possible, and should be designed to appear as an architecturally integrated part of the building rather than an added-on element.
 - In cases where mechanical wells or parapets of sufficient height to screen equipment are not possible, equipment should be clustered and placed as far as possible from building edges. The visible equipment should be painted a color that will blend the equipment visually with the backdrop (e.g., pale blue for objects seen against the sky.)
 - Submit a roof plan at the time of submittal for review and approval. The plan should show the location, type and size, including height, of all roof mounted equipment. The application elevation and section drawings should show the location and size of all roof mounted equipment.

4. Solar Panels

- Seek to minimize any negative visual impacts on downtown character. A less than optimal efficiency slope for the panels may be required to minimize their visual impact if such a condition would not decrease the efficiency of the panels by more than 20%. Alternatively, other visually neutral methods to achieve similar energy efficiencies may be required (e.g., insulation, efficient windows, solar screening of windows, energy efficient HVAC systems, etc.).
- Hide solar panels, if possible, or integrate panels into the architectural forms and character of the building if it is not possible to hide them.
- Avoid a “tacked on” look.
- Operable windows are encouraged in recognition of the area’s temperate climate and the typically small scale of commercial structures.

SIGNAGE GUIDELINES

1. Prohibited signage types

- Lighted signs that flash on and off, fluctuate or appear to move.
- Moving signs that rotate or move in any fashion except barber poles
- Attraction Boards and Movable Letter signs (except for churches, cinemas, performing arts facilities or similar uses that have frequently changing events or showings)
- Off-site signs
- Electronic signs
- Projected light signs which are flashed or projected onto walls or other structures by means of a projector or other device
- Roof-mounted signs (except where other types of signage cannot be effectively used)

- Billboards
- Cloth, paper or fabric signs hung from the building or placed in windows except for temporary signs allowed under the Zoning Ordinance
- Any signs not specifically allowed by the Zoning Ordinance

2. Avoid excessive wording and advertising messages

- Signs are most effective when their messages can be grasped quickly. Too many words or images compete for attention and reduce the readability of the sign.

3. Use no more than two letter font types per sign

- The primary purpose of a sign is to quickly convey information to passing pedestrians and motorists. More than two letter styles make readability more difficult. A simple logo with an additional type style may also be considered.

4. Keep the size of letters and graphics in proportion to overall sign area

- Text and graphics are difficult to read if they crowd the borders of the sign. Smaller letters with space around them will have more impact than larger letters with limited space around them.
- Generally limit the width and height of lettering and graphics to 85% of the overall sign width and 65% of the height of the sign area. Information, such as graphic logos, may be closer to borders if a significant amount of background is provided for the sign as a whole. A good rule of thumb is to limit the amount of sign information to no more than 50-55% of the overall sign area.

5. Use high quality materials

- Appropriate materials include finished wood, metal, and for projecting banner signs, woven fabric. Plastic sign materials and signs painted directly onto building surfaces will not be allowed.
- The sign materials and design should be related to those of the building on which it is mounted, and all sign edges must be cleanly defined and finished.

6. Use simple and symmetrical sign shapes

- Geometric shapes such as rectangles, squares, circles, ovals and triangles are visually stable shapes which help focus attention on the sign message. These should be used in most cases. Combinations of geometric shapes will also generally produce a good sign shape.

7. Relate sign colors to building colors

- Select wall sign colors to blend with the building and storefront colors. Select from color ranges which are analogous and complementary to them.
- Corporate branding colors will be considered, but will not be automatically approved if they are considered out of place with the building or the surrounding environment. The use of tone-down colors in the same hue family may be required in place of brighter standard corporate colors.

TYPES OF SIGNAGE

Wall Signs

Wall signs are panels or individual letters mounted flat against and parallel to a building wall or roof fascia.

1. Limit sign information

- Generally, limit sign information to the business name. Graphic logos, date of building construction,

address, and other elements may be allowed at the discretion of the Design Review Board.

2. Place signs within a clean *Signable Area*

- The *Signable Area* should:
 - Be relatively flat
 - Not contain doors or windows
 - Not include projecting molding or trim
 - Be in reasonable proportion to the overall façade (The *Signable Area* should not exceed 15% of the building façade)
- If a building does not have a good location for a wall sign, use other allowed types such as an awning, window or projecting signs.



3. Use Sign materials which project slightly from the face of the building

- Use either individually applied letters to the face of the wall, or apply sign letters to a board or panel mounted on the face.
- Do not paint signs directly on wall surfaces.

4. Provide sign illumination appropriate to the area

- Interior illuminated can signs which include multiple letters within a single sign enclosure will not be allowed for any wall sign
- Interior illuminated individual letters may be used.
- Exterior illumination with shielded spot lights can be used for wall signs
- Neon wall signs may be allowed, but will be evaluated on a case-by-case basis.
- All sign and sign lighting raceways and electrical connections should be concealed.

Awning Signs

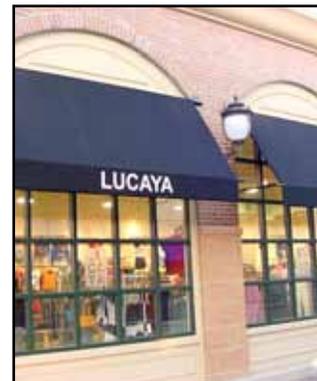
Awning signs consist of letters and graphics applied directly to the face or valance of awnings. Awning signs are often used effectively in combination with window signs.

1. Place signs for easy visibility

- Apply signs to awning front valences (i.e., the flat vertical surface of awnings) or to sloped awning faces with a slope of at least 2 to 1.

2. Limit the signage information on awnings

- Since awning signs will often be viewed from passing vehicles, the amount of information which can be effectively conveyed is limited. Keeping sign text short will allow viewers to better comprehend and remember the message.
 - Generally limit awning signs to the business name, business logo, services or type of business (e.g., French Cuisine), and/or the business address number.
 - Limit the size of logos or text placed on awning sloped faces to a maximum of 15% of the sloped surface areas.
 - Limit sign width on awning valences to a maximum of 85% of the awning width. Limit the letter height to a maximum of 80% of the valance height.



3. Avoid interior illuminated awnings

- Backlight awnings that make the entire awning a large sign will not be allowed. Signage on the awning's sloped face may be illuminated by shielded and attractive directional spot lights

Window Signs

Window signs are primarily oriented to passing pedestrians, and are generally applied to the inside of display windows.

1. Limit the amount of signage used

- Window signs should be limited to a maximum of 25% of any individual window, and an aggregate area of no more than 10% of all ground floor windows on any building face.

2. Limit the size of the lettering

- The maximum height of letters should be 10 inches. Exceptions can be granted for the leading capital letter of text.

3. Consider the use of logos and creative sign type

- Graphic logos and images along with special text formats can add personality and interest to window signs.

4. Use high quality materials and application methods

- Limit window sign materials to the following
 - Paint or vinyl film applied directly to the inside face of the window.
 - Tubular neon suspended behind the window glass
 - Wood or metal panels with applied lettering
 - Paper signs placed in windows are not allowed.



Projecting Signs

Projecting signs are relatively flat, two-sided solid panels attached to the brackets which are mounted perpendicular to the face of buildings and storefronts. They often include graphic images in addition to text, and express the unique personality of an individual business.

1. Use high quality materials

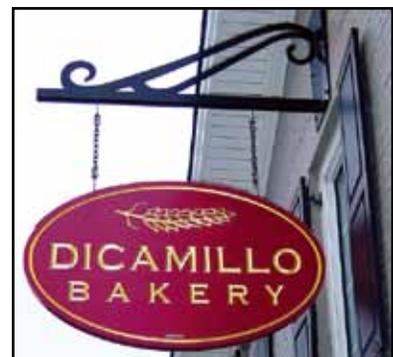
- Use wood, metal or non-glossy fabrics. Avoid plastics.

2. Limit the number and size of projecting signs

- Use no more than one projecting sign per business frontage.
- Limit the size of any projecting sign to five square feet.
- Project signs no more than 36 inches from the building face, and provide at least 6 inches between the inside edge of the sign and the building.

3. Relate the design of projecting signs and supports to the character of the building

- Simple round or square horizontal supports with capped ends, painted black or white are generally acceptable. However, more decorative approaches may be desirable when appropriate to the



sign and/or architectural character of the building.

4. Position Projecting signs to complement the building's architectural details

- Locate solid panel signs below the first floor ceiling line, or no more than 14 feet above the sidewalk, which ever is less. Provide at least 9 feet from the bottom of projecting signs to the ground in pedestrian areas and 14 feet in areas with vehicular traffic.

5. Provide sign lighting only with shielded spotlights

- Utilize high quality fixtures such as cylinder spots or decorative fixtures. Avoid expose standard spot and flood bulbs.
- Design light supports to complement the design of the sign and building façade.

Hanging Signs

Hanging signs are relatively flat panels, generally two-sided, which are similar to projecting signs, but are smaller and suspended below awnings, bay windows, balconies, and similar projections. They are intended primarily for business identification to pedestrians passing on the sidewalk. They are commonly used as a type of western-style signage.

1. Use high quality materials

- Use wood or metal and avoid shiny plastic or fabric. Finish all exposed edges. Suspend signs with metal rods, small scale chain, cable or hooks.

2. Limit the number and size of hanging signs

- Use no more than one hanging sign per business. Limit the maximum sign size to 3 square feet. Mount signs to provide a minimum of 9 feet clearance between the sign and the sidewalk.

3. Orient hanging signs to pedestrian traffic

- Mount signs under awnings, bay windows or other projections with their orientation perpendicular to the building face so that they will be visible to pedestrians passing on the sidewalk. If multiple hanging signs are placed along a business frontage, they should all be mounted with their bottom edge the same distance above the sidewalk, and should be of similar size and shape.



Plaque Signs

Plaque signs are pedestrian-oriented flat panels mounted to wall surfaces near the entry to a business. They include signs that identify a specific business, directory signs for multiple businesses, and menu boxed for restaurants.

1. Limit the location and size of plaque signs

- Locate signs on wall surfaces adjacent to tenant entries or entry passageways to off-street courtyards. Signs identifying a single business should be limited to an area of 4 square feet. Directory signs for the identification of multiple second floor or courtyard tenants may be larger, but no more than 8 square feet.



2. Use plaque signs for the display of restaurant menus

- A restaurant district is enhanced when a variety of restaurants share the area and customers are able to walk from one to the next to compare menus and prices. Attractive menu signs or boxes should not exceed 6 square feet in area and should have internal indirect lighting (e.g., bulbs located in the frame to cast direct light over the menu surface) or direct lighting using decorative fixtures.

Ground Signs

Primary Ground Signs are low signs that assist motorists in finding business along auto-oriented streets where businesses are separated from the street front by parking or large landscaped setbacks. Informational and Directional Ground Signs are smaller signs that assist motorists in safely existing from moving traffic lanes to on-site uses in projects with multiple lanes.

1. Ground Signs are not generally encouraged in the Downtown Coyote Valley Area, but may be considered on a case-by-case basis.

2. Limit the information on each sign

- Ground signs should generally be limited to the following information:
 - Project or primary business identification name and/or logo.
 - Address number (strongly encouraged)
- Multi-tenant ground signs are strongly discouraged. However, the display of up to three tenants may be considered for small ground signs so long as the sign and background color is common throughout, and the type style and logo colors of each tenant are the same.
- The inclusion of services and products offered should not be included on ground signs.



3. Locate signs for easy visibility from passing vehicles

- Locate signs within 10 feet of the front property line
- Avoid blocking any vehicular or pedestrian sight lines which might result in safety problems.

4. Limit the number, type and size of ground signs

- Only one project or tenant identification sign is allowed for each development parcel street frontage.
- The height and sign area per face for Primary Ground Signs should be appropriate to the surrounding environment.
- Directional Signs are limited to a maximum area of 6 square feet, and only allowed on arterial streets. One per entrance or exit will be allowed.

5. Lighting

- Lighting for ground signs must be by direct spotlight illumination from fixtures mounted either at the top of the sign or on the ground below the sign. Fixtures must be shielded to avoid direct view of the bulbs.

6. Material

- All ground signs, including price signs for service stations, should be constructed of matte finish non-reflective materials.

Freestanding Signs

Freestanding signs are ground-mounted signs that emphasize business brand identity.

1. Use Limitations

- Freestanding signs should be strongly discouraged in the Coyote Valley area

Billboard Signs

Billboard signs are freestanding, outdoor advertising signs that are larger than 32 sq. ft.

1. Use Limitations

- Billboard signs should not be allowed in the Middletown Planning Area.
- Existing Billboard signs in the Planning Area should not be approved for Use Permit extensions.

Flag Signs

Flags, pennants, banners, streamers and similar signs are temporary advertising devices used to designate special events or vehicle entry/pedestrian entry

1. Use Limitations

- Should not be allowed as permanent signage (with the exception of the American flag and other related flags as described in the Lake County Zoning Ordinance).
- Appropriate for designation of vehicle or pedestrian entryways for wineries and other similar uses during special events.

2. Material

- All flags, pennants, banners, streamers, etc. should be constructed of matte finish and non-reflective materials.