

CITY OF ORLAND



ORLAND

GENERAL PLAN



October 2010

CITY OF ORLAND GENERAL PLAN 2008- 2028

Prepared for:

CITY OF ORLAND
815 Fourth Street
Orland, CA 95963

Prepared by:



140 Independence Circle, Suite C
Chico, CA 95973
530-894-3469
Fax: 530-894-+6459
www.pmcworld.com

Adopted by Resolution:

ACKNOWLEDGEMENTS

1.0	INTRODUCTION.....	1.0-1
1.1	Scope and Role of the General Plan	1.0-1
1.2	Community Overview	1.0-2
1.3	Legal Basis and Requirements of the General Plan	1.0-5
1.4	City of Orland General Plan Overview.....	1.0-8
2.0	LAND USE.....	2.0-1
	Introduction	2.0-1
2.1	Land Use Goals, Policies, and Programs	2.0-12
2.2	Land Use Diagram and Designations	2.0-16
2.3	Special Planning Districts	2.0-22
3.0	CIRCULATION AND TRANSPORTATION	3.0-1
	Introduction	3.0-1
3.1	Goals, Policies and Programs	3.0-15
4.0	SAFETY AND SEISMIC SAFETY	4.0-1
	Introduction	4.0-1
4.1	Emergency Preparedness	4.0-2
4.2	Flood Hazard	4.0-3
4.3	Fire Protection	4.0-5
4.4	Other Emergency Services.....	4.0-9
4.6	Geologic Hazards.....	4.0-11
4.7	Hazardous Materials and Waste Management.....	4.0-15
4.8	Rail Related Hazards	4.0-16
4.9	Airport Related Hazards.....	4.0-17

Table of Contents

5.0	OPEN SPACE, CONSERVATION, & PUBLIC FACILITIES ELEMENT	5.0-1
	Introduction	5.0-1
5.1	Agriculture	5.0-2
5.2	Aggregate Mining	5.0-6
5.3	Biological Resources	5.0-7
5.4	Air Quality	5.0-11
5.5	Water Quality	5.0-14
5.6	Water Supply	5.0-17
5.7	Wastewater	5.0-18
5.8	Stormwater Drainage System	5.0-20
5.9	Recreation Resources	5.0-22
6.0	NOISE.....	6.0-1
	Introduction	6.0-1
6.1	Goals, Policies, and Programs	6.0-11
	HOUSING ELEMENT	7.0
	Previously Published under a Separate Cover	

LIST OF TABLES

Table 2-1 Population of Orland and Glenn County	2.0-7
Table 2-2 General Plan Population Projections for Orland, 2008-2028	2.0-8
Table 2-3 Orland Land Use Development Forecast	2.0-9
Table 2-4 Maximum Residential Growth at Buildout.....	2.0-11
Table 2-5 Maximum Commercial and Industrial Growth at Buildout.....	2.0-11
Table 2-6 General Plan/Zoning Compatibility	2.0-22
Table 3-1 Level of Service Definitions.....	3.0-6
Table 3-2 Evaluation Criteria for Two-Way Urban Roadways Daily Level of Service..	3.0-10
Table 3-3 Existing Roadway Volumes And Operating Levels Of Service	3.0-10
Table 4-1 Selected Physical and Engineering Properties of Soils in the Orland General Plan Area	4.0-12
Table 5-1 Population Projections for Orland	5.0-24
Table 6-1 Typical A-Weighted Sound Levels of Common Noise Sources	6.0-4
Table 6-2 Impact of Airport Noise on Land Use	6.0-7
Table 6-3 Noise Standards for New Uses Affected by Traffic and Railroad Noise	6.0-11
Table 6-4 Requirements for Acoustical Analyses Prepared in Orland	6.0-12
Table 6-5 Noise Standards for New Uses Affected by Non-Transportation Noise.....	6.0-13

LIST OF FIGURES

Figure 2-1 Orland Planning Boundaries	2.0-5
Figure 2-2 Land Use Diagram.....	2.0-17
Figure 2-3 Special Planning Districts.	2.0-23
Figure 3-1 Functional Classification.....	3.0-8
Figure 4-1 Dam Inundation Map	4.0-6
Figure 5-1 Public Facilities	5.0-25
Figure 6-1 Orland Haigh Field Airport Noise Contour Lines	6.0-10



Acknowledgements

CITY OF ORLAND

CITY OF ORLAND COUNCIL MEMBERS

Mayor	Bruce Roundy
Vice Mayor	Paul Barr
Councilmember	Wade Elliot
Councilmember	Reggie Olney
Councilmember	Jim Paschall

CITY OF ORLAND ELECTED OFFICIALS

City Clerk/	
Assistant City Manager	Angela Crook
City Treasurer	Pamela Otterson

CITY OF ORLAND STAFF

City Manager	Paul H. Poczobut Jr.
City Attorney	Thomas N. Andrews
Chief of Police	Bob Pasero
Director of Public Works	Jere Schmitke
Director of Community Services	Nancy Sailsbery
City Librarian	Marilyn Cochran
City Engineer	Ken Skillman
Finance Director	Daryl Brock
Fire Chief	Jerry Kraemer
Recreation Director	Garrett White
Building Inspector/Official	Terry Knox (Contract)

Acknowledgements

GENERAL PLAN UPDATE TEAM

PROJECT MANAGEMENT

Scott Friend, AICP, Project Manager
PMC

Nathan Anderson, Associate Planner
Dustin Granville, Assistant Planner
PMC

TRAFFIC ANALYSIS

Wayne Shijo, PE
KdAnderson Transportation Engineers

NOISE ANALYSIS

Paul Bollard, Principal
Bollard Acoustical Consulting, Inc.

1.0 INTRODUCTION

CHAPTER

1.0

Introduction



Carnegie Library on Third near Mill Street

1.1 SCOPE AND ROLE OF THE GENERAL PLAN

This General Plan, including its comprehensive goals, policies, and implementing actions, will serve to maintain and enhance the quality of life in the City of Orland. Often referred to as the local government “Constitution,” the General Plan is the single most important document a local government can adopt. The goals, policies, and implementation actions in this General Plan will govern decisions relating to land use, traffic circulation, housing, community design, conservation and open space, noise, safety, and community facilities. The document will serve to guide the City of Orland as it grows over the next 15 to 20 years.

In addition to the General Plan document, a Background Report was prepared, which includes a more detailed discussion of the City’s evolution, paying particular attention to where the City has been and how it has changed over the years. An Opportunities and Constraints Report was also prepared, which provides a summary of update and analysis of issues faced by the City in terms of growth and development over the next 15 to 20 years.

GENERAL PLAN UPDATE

In 2003, the City of Orland updated its General Plan through a comprehensive review of all elements. Previous to that, minor revisions to the General Plan had been made in

2000, with the original adoption of the Plan in 1974. Additionally, certain elements such as Land Use and Circulation were updated in 1991, 1993, and 1994.

The purpose of the 2008 General Plan Update is to review and revise the 2003 General Plan, in order to reflect upon changing conditions and issues, and to provide a direction for the future growth of the City in the next 15 to 20 years. Following an extended period of growth that occurred in Orland from 2002 to 2006, the City determined that the Plan required an update in order to ensure that it is achieving its long-term goals. The Orland General Plan is a comprehensive document that provides policies and guidelines for the future expansion and development of the community.

1.2 COMMUNITY OVERVIEW

COMMUNITY CHARACTER

The City of Orland is typical of an American small town. The small town atmosphere and friendliness of the population is seen as an asset by most Orland residents; with a 2008 population of 7,189, many of the residents know each other, and a number of residents have spent most or all of their lives in Orland.

The character of Orland is strongly rooted in the agricultural heritage of Glenn County, as well as being influenced by the major transportation corridors of Interstate 5 and State Route 32. More recently, growth and development, or the lack thereof, have been influenced by the City's relative proximity to the Chico Urban Area, which has both stimulated residential development and hindered commercial development in Orland.

Among the most attractive qualities of Orland are the quiet and safe environment, which has been lost in many larger cities, the affordability of the homes within the community, and parks and recreational facilities.

The close-knit sense of community in Orland is evident during the annual Fourth of July Picnic, the Glenn County Fair, the annual Fireman's Ball, and the Best of the West Exposition, along with a variety of holiday events and other occasions which draw the community together.

Orland is currently in a period of transition. Changing patterns of agricultural production and the loss of commercial and retail customers to Chico have taken a toll on local businesses. However, the City's realization that it must actively attract and support local business ventures could turn this trend into an increase in prosperity for the community.

Regardless of changes in economic opportunity in Orland, the qualities of a safe, quiet, friendly community continue to make Orland a desirable place for families and individuals seeking a peaceful place to live.

HISTORY

Orland is primarily a residential community that has maintained the small town character one might envision for such a community of fifty years past. Located in the northeast portion of Glenn County, the beginnings of the City were rooted in cattle ranching, which was established in the area by Granville P. Swift in the late 1840s. By the early 1870s, grain production in the area led the Central Pacific Railroad to lay track from Colusa County to Red Bluff. In 1878, the townsite of Orland was laid out by the Chamberlain brothers; two years later, the management of this townsite was taken over by the railroad. Stores and warehouses for local ranchers created residents for the new settlement, and in 1880, the census showed the population of Orland to be 292.

Local agriculture began to change in the 1890s, sparked by the irrigation of land with water pulled from Stony Creek. An irrigation district was formed in 1887, and the first land was irrigated in 1893. Unfortunately, the supply of water was not reliable enough for the irrigation project to be successful. Enough farmers were able to shift their efforts to dairying and orchard crops, which staved off the economic effects of the collapse of the international grain markets and the subsequent nationwide depression.

By the 1920s, Orland's population had reached 1,600, and the town had taken on a more settled appearance, with large and small commercial entities lining the streets of downtown Orland, which at this time were also beginning to be paved. This upturn in the fortunes of Orland were not to last, however, and the economic growth was strangled by crop failures and depressed agricultural prices. Though the entire Sacramento Valley was hit hard by the Depression of the 1930s, Orland suffered the largest drop in population – more than 25 percent.

Prosperity returned to Orland in the 1940s with increased agricultural production and a steadily climbing population, which topped 2,000 in 1950. Commercial buildings began to fill in empty lots on Fourth, Fifth, and Walker Streets. By the 1970s, Orland had a fairly



Building at Fifth and Walker Streets

thriving economy, with large department stores and local businesses sharing the income of the Orland population. Recently, however, the City of Orland has lost many commercial and retail establishments, and Orland residents often travel to Chico to purchase household items which are not available to them in Orland.

Currently, the Orland city boundary encompasses 1,875 acres. The City of Orland is different from most cities in California in that it has two spheres of influence. The Primary Sphere of Influence, determined by the Glenn County Local Area Formation Commission (LAFCo), is the sphere of influence most

commonly associated with most cities – the area where future expansion is most likely to occur. The Secondary Sphere of Influence has also been determined by LAFCo and

Chapter 1.0

identifies areas where the City has an interest in future development that may occur. Please refer to **Chapter 2.0, Land Use Element**, for a more detailed description of Orland's Planning Area.

Walker Street, the main thoroughfare of Orland, is lined by a mix of uses. Walker Street, the name of Highway 32 as it runs through the City, is lined by homesites and small businesses as it nears the City center. Interstate 5 (I-5) runs along the western border of the City and offers opportunities to attract travelers.

Recreational facilities in the City of Orland consist of approximately fifty-three (53) acres of dedicated parks and facilities. Orland's parks provide developed open space opportunities, as well as recreational amenities to include softball fields, baseball fields, soccer fields, basketball courts, horseshoe pits, lighted tennis courts, picnic tables, a children's playground, and a city swimming pool.

The City is in the process of building a new basketball gymnasium/recreation center at Lely Park and has received a grant and is working to complete a new soccer complex north of the high school. Additionally, there are approved entitlements in various stages of development that contain additional parkland for the residents of the City.

PHYSICAL DESCRIPTION AND LOCATION

The City of Orland is located in northeastern Glenn County, approximately 100 miles north of Sacramento, in a region that is dominated by agricultural land uses of orchards (almonds, walnuts, olives, peaches, and prunes) and dairy farms. Special climatic conditions allow orange groves to flourish in the Orland area – the northernmost citrus-growing area in the state. Fields of corn, wheat, rice, and beans surround the Orland community.

Orland is located on the Stony Creek Fan, and two major water features, Black Butte Reservoir and the Sacramento River, are located near the Orland Planning Area. Orland also overlies the 5,000 square mile Sacramento Valley Groundwater Basin, which contains abundant supplies of high-quality groundwater.

The climate of Orland is characterized by hot, dry summers and moist, mild winters. Mean monthly temperature exceeds 75 degrees from June through September, with more than a few days in excess of 100 degrees. The environmental conditions of Glenn County (part of the northern Sacramento Valley, which is bounded by the Coastal range to the west and the Sierra Nevada to the east) are conducive to potentially adverse air quality conditions. The basin area traps pollutants between the two mountain ranges, which are exacerbated by a temperature inversion layer that traps air at lower levels. The winter climate is a mild 50 degree mean monthly temperature from December through March. Night temperatures can occasionally drop below freezing. The frost-free annual growing period is about 280 days. The rainy seasons extends from October through April, with average rainfall of approximately 20 inches.

1.3 LEGAL BASIS AND REQUIREMENTS OF THE GENERAL PLAN

California state law requires that every city and county adopt a general plan to guide physical development of the land within the jurisdictions' boundaries. The plan acts as a "constitution" for the jurisdiction and establishes guidelines for land use and development. Since the general plan affects current and future generations, state law requires that the plan take a "long-term" perspective. Typically, general plans look 10 to 20 years into the future. This General Plan addresses planning for the City of Orland through the year 2028.

The law requires that the plan be comprehensive and that specific subjects or "elements" be addressed in the plan. The state-required elements include land use, circulation, housing, conservation, open space, noise, and safety. State law also allows the jurisdiction to include additional, or "optional," elements to address specific issues of concern, as well as combining required and optional elements as deemed appropriate.

REQUIREMENTS AND SCOPE OF THE GENERAL PLAN

A city's general plan may be described as its development constitution – the set of policies within which development regulations and decisions must fit. The general plan is a statement of the community's vision of its long-term or ultimate physical form.

State of California general plan law is a product of the legislative process. While the State mandates that each city and county have a general plan that addresses specific topics, Government Code Section 65301(a) allows a city to organize the elements in any manner chosen, as long as all topics are covered.

All elements, whether mandated or optional, have equal legal status. The general plan must be internally consistent, with no one element or section having precedence over another.

In addition to addressing the mandatory planning topics, the general plan must be:

Long-Range

The general plan is intended to be long-range to avoid incremental planning decisions which may eventually conflict with each other. This General Plan considers issues which may impact the community throughout the next two decades.

Comprehensive

The plan must coordinate all major components of the community's development, covering the entire incorporated area of the city, as well as any other land which bears relation to the city's planning. In addition, the plan must address the full range of issues associated with the city's physical development.

General

Because it is long-range and comprehensive, the plan must be general in nature. The plan's purpose is to serve as a broad framework for detailed public and private development proposals.

Internally Consistent

All parts of the plan (text, diagrams, and figures in all elements) must be fully integrated and not conflict with each other.

USE OF THE GENERAL PLAN

The City of Orland General Plan is intended to serve as a tool to assist decision makers in formulating and implementing community guidelines and programs. The Land Use Diagram (a drawing that shows the physical arrangement of community land uses) is supported by goals, policies, and programs designed to achieve a variety of results within the community. The Plan has four main purposes:

- 1) To enable the City Council, Staff, and City Commissions to reach agreement on long-range development goals and policies.
- 2) To provide a basis for judging whether specific private development proposals and public projects are in harmony with City goals and policies.
- 3) To allow other public agencies and private parties to design projects that are consistent with City policies, or to seek changes in those policies through the process of amending the General Plan.
- 4) To provide for agreement among different agencies for development in unincorporated portions of the Planning Area.

VERTICAL CONSISTENCY

The General Plan provides the basis for all of the City's regulations, policies, and programs that relate to issues addressed in the Plan. In addition to requiring that the plan be internally consistent, the State requires what may be called vertical consistency: "An action, program, or project is consistent with the General Plan if, considering all its aspects, it will further the objectives and policies of the General Plan and not obstruct their attainment." This rule clarifies that consistency does not require all subsequent City actions to be specifically anticipated by the General Plan. Because the Plan is both broad and long-range, there are many circumstances where future City action will be addressed only briefly in the Plan.

GENERAL PLAN SPECIAL STUDIES

The General Plan contains certain policies and programs which describe the need for further studies and plans. The preparation of these studies and plans is necessary to fully

implement the General Plan and the community's vision of the City of Orland over the next twenty years.

The General Plan by definition is a comprehensive and long-range guide to the City's physical, economic, and social development. It is expected that the actions set forth within the General Plan may be undertaken by the City at any time in the next twenty years. Therefore, it is impossible to establish a schedule or timeline for the preparation of these studies and plans. The City will undertake each action as it deems necessary and provided both staff and financial resources exist to complete each action.

Economic development is a guiding principle throughout the Orland General Plan. It is the City's intent that development and growth continue unimpeded within the Planning Area while various studies and plans are prepared. Unless health and safety issues arise, development consistent with the objectives, policies, and intent of the General Plan is encouraged.

CONSISTENCY BETWEEN THE GENERAL PLAN AND THE ZONING CODE

The zoning ordinance is an important tool for implementing the General Plan. Requirements for consistency between the General Plan and zoning can be broken down into three aspects:

Uses and Standards

The General Plan's land use classifications are not as specific as zoning ordinance classifications. For example, the General Plan has five different categories for residential use, while the zoning ordinance is likely to have more. Multiple zoning districts may be consistent with a single General Plan classification, as long as the densities and unit types allowed in each zoning district are also permitted in the relevant General Plan category.

Spatial Correlation

The Zoning Map should reflect the general pattern of land use depicted on the Plan Diagram. However, the two need not be identical. Boundaries of land uses classifications depicted on the Land Use Diagram are generalized; zoning boundaries may be more precise and parcel specific.

Timing

State law allows a "reasonable time" for reconciling any inconsistencies between the zoning ordinance and the General Plan.

General Plan Adoption and Amendments

Adoption of this General Plan is completed by resolution. The process for adopting this Plan includes hearings and presentations with the Planning Commission and/or the City Council, and final adoption is the responsibility of the City Council, as defined by California Government Code Section 65350, et. seq.

It may be necessary, from time to time, to amend this General Plan. Several factors suggest that periodic amendments to the General Plan can be beneficial to the community. To begin with, conditions will change over time. New technologies will evolve, land use patterns and traffic patterns might change, the socioeconomic characteristics of the community will continue to evolve, economic conditions will change, and new community values will be formed. Significant changes in any of these factors might necessitate a change in the Orland General Plan. Additionally, a General Plan for the entire community is, by its very nature, general. Looking at a specific parcel or area of the community allows for a greater level of detail and may provide additional information that contradicts the general policies and details of the Plan.

While most amendments may be in the form of land use changes, others will involve changes to the text of the Plan. All amendments must also be adopted by resolution and require public hearings by the Planning Commission and/or City Council and evaluation of the environmental impacts as required by the California Environmental Quality Act (CEQA). Consistent with State law (Government Code Section 65358), the City may only amend the General Plan four times per year. Amendments may be proposed and acted upon at any time during the year and one action may include multiple amendments.

1.4 CITY OF ORLAND GENERAL PLAN OVERVIEW

This General Plan is presented under six sections or elements which, in combination, address the required General Plan topics. The individual elements are discussed below.

Each of the General Plan elements contains a brief discussion of the legal requirements; goals, policies, and implementation programs to address required topics; and narrative text as necessary to provide understanding of the issues addressed. The following terms apply within this General Plan:

GOAL

An achievement toward which effort is directed. Goal statements are an ideal resolution of the issue under consideration.

POLICY

A specific statement in the form of text or diagram that provides a basis for making specific decisions in accordance with the General Plan.

IMPLEMENTATION PROGRAM

An action or procedure to carry out a General Plan policy. Implementation programs are specific actions which are readily quantifiable.

GENERAL PLAN ELEMENTS

While the topics which must be addressed within the General Plan are clearly specified, the organization of discussions is determined by each jurisdiction based upon the particular local conditions and issues of significance.

Following are descriptions of the elements of the Orland General Plan and discussions of the topics which are addressed within each element. In total, these elements address the most significant issues facing the City of Orland and satisfy the legal requirements of the General Plan as defined by State law.

1.0 Introduction

This introduction provides a brief overview of the City of Orland and its physical setting. The requirements and structure of general plans are reviewed and a description of the format of this General Plan is provided.

2.0 Land Use

The Land Use Element provides guidance for the physical form of the community. A Land Use Diagram identifies the existing and proposed land uses within the City. The Land Use Diagram is supported by descriptions of allowed uses and development densities for each land use designation. Additionally, the diagram identifies those areas where the City of Orland anticipates growth in the future, with the intent of avoiding incompatible land use changes by neighboring agencies and jurisdictions.

3.0 Circulation

The Circulation Element provides a framework to guide transportation planning throughout the City of Orland and its Planning Area. Within the Orland General Plan, the Circulation Element is coordinated and consistent with portions of the Land Use; Open Space, Conservation, & Public Facilities; and Safety elements which address topics directly related to circulation and transportation. Discussion topics include roadway networks, road improvement standards guidelines, road maintenance, pedestrian and bicycle circulation, railroad, and public transit.

4.0 Safety

The Safety Element provides guidance to reduce the potential risk of death, injuries, property damage, and the economic and social dislocation resulting from hazards such as fire, floods, earthquakes, landslides, and other hazards.

5.0 Open Space, Conservation, and Public Facilities

The Open Space, Conservation, & Public Facilities Element provides guidance for the conservation, development, and utilization of natural resources, including water and its hydraulic force, forests, soils, rivers and other waters, fisheries, wildlife, minerals, and other natural resources, including agricultural resources. This element also addresses the provision of parks and recreation facilities.

6.0 Noise

The Noise Element addresses noise-related issues within the community. Programs include protection of noise-sensitive uses (primarily residential or schools) from excessive noise levels, as well as measures to protect noise generators (industrial uses) from encroachment by noise-sensitive uses.

Housing Element

As mandated by the State of California, a Housing Element is required to be updated at least every five years and must be approved by the California Department of Housing and Community Development. The Housing Element includes a section on the Summary of Needs and Constraints, a Housing Program with goals and policies, and a background report highlighting demographics, resources, and a review of the accomplishments in implementing the previous Housing Element. The City of Orland Housing Element is currently up to date and has been completed as a separate process from the rest of the General Plan. It has been adopted by the City and approved by the State.

GENERAL PLAN IMPLEMENTATION

The City of Orland must meet a broad range of challenges and obligations with limited financial resources. Many of the programs described within this General Plan address situations which have evolved over a number of years and will not easily be resolved.

Since financial limitations are the primary constraint in addressing many of the issues which face the City, it is imperative that the City seek economically feasible strategies for implementing General Plan programs. Such strategies will include seeking funding assistance through state and federal grant programs. Some issues will be more easily resolved by working in conjunction with other local agencies to achieve mutual goals.

Addressing the broad range of obligations facing the City and meeting the challenges of planning quality growth will ensure that Orland will remain a viable community and a desirable place to live.

2.0 LAND USE ELEMENT

CHAPTER

2.0

Land Use Element



Retail buildings on Fourth Street, near Walker

INTRODUCTION

The Land Use Element establishes the framework for community development through a Land Use Diagram accompanied by goals, policies, and programs that will guide the City's physical form and growth over the next 15 to 20 years. The Land Use Diagram is an illustrative expression of the City's development priorities, land use policies, and General Plan priorities.

In addition to addressing the types and distribution of land uses, this chapter defines the densities and intensities of development throughout the City, for all land uses. This Land Use Element will serve to inform elected and appointed officials, City staff, and the public in guiding, managing, and coordinating land use decisions that will affect the future physical development and quality of life in the City of Orland.

LEGAL BASIS AND REQUIREMENTS

Government Code Section 65302(a) requires that the General Plan include:

A land use element which designates the proposed general distribution and general location and extent of all uses of the land including land for housing, business, industry, open space, including agriculture, natural resources,

recreation and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid disposal facilities, and other categories of public and private uses of land. The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan. The land use element shall identify areas covered by the plan which are subject to flooding and shall be reviewed annually with respect to those areas.

Through diagrams and text, this Element defines the distribution, density, and intensity of development of residential neighborhoods, commercial and employment districts, parks and other open spaces, and governmental and institutional uses of property in the City of Orland. This Element also contains the Land Use Diagram, which provides a graphic representation of land use distribution.

OVERVIEW

During the update of the General Plan, the City has paid particular attention to the “smart growth” principles being promoted throughout the country. The term “smart growth” is touted as the approach that can resolve problems related to urban sprawl, including loss of open space and farmland, growing traffic congestion, absence of a sense of place, poor-quality housing, crowded schools and air pollution resulting from auto dependence.

While there is no single definition of smart growth that everyone embraces, there are certain common elements. Typically, smart growth fosters development that revitalizes central cities and suburbs, supports and enhances public transit, and preserves open spaces and agricultural lands. Smart growth creates communities that are more livable by developing efficiently within the already built environment. Smart growth advocates argue that the problems of both the cities and the suburbs can be addressed through more infill development, more concentrated development and more redevelopment, especially in areas served by transit or close to major employment centers. The basic concept is to make more efficient use of existing infrastructure and previously developed land so that the need to accommodate growth through unfettered expansion of developed area is minimized.

The basic principles can be summarized as:

- Mix land uses such as residential and commercial, or professional office and high density residential.
- Create a range of housing opportunities and choices — these include both very low density and well-designed higher density housing developments.
- Create walkable neighborhoods — trails, open space, and other amenities help encourage pedestrian traffic.
- Foster distinctive neighborhoods, each with a strong sense of place—encourage good design for *all* projects, both residential and commercial.

- Preserve open space, farmland, natural beauty, and critical environmental areas—some areas of the community are not well suited to intensive development and should be preserved or avoided.
- Strengthen and direct development toward existing neighborhoods—infill and redevelopment make use of existing infrastructure and previously developed or disturbed property as an efficient means of providing for new development.
- Make development decisions predictable, fair and cost-effective—uncertainty in the development process can discourage developers and can significantly increase the cost of development.
- Encourage community and stakeholder cooperation in development decisions—regularly reviewing development procedures and developing guidelines publicly will ensure that every member of the community understands the development process.

Smart growth principles also encourage communities to meet the underlying demand for housing created by a statewide growth scenario by building to higher densities in selected areas, revitalizing depressed areas, preserving meaningful open space, and protecting environmentally sensitive areas. While many families continue to favor single-family homes on individual lots, smart growth recognizes that planning for growth should include planning for a wide range of housing types to suit the needs and income levels of Orland's increasingly diverse population.

LAND USE SETTING

Existing Land Uses

Orland is organized into several distinct areas, mainly due to the influence of transportation corridors. These areas include the downtown and its adjacent historic neighborhoods, corridor commercial development along both Highway 99W (Sixth Street) and East Walker Street (State Route 32), industrial development near the railroad tracks, and freeway-oriented commercial activities. Most of the older residential development is located in the eastern portion of the City, east of the railroad tracks. Newer residential development has occurred around the edges of the City, particularly in the northwest, northeast, and south.

Additional discussion of existing land uses may be found in **Chapter 2, Land Use**, of the background report that preceded this General Plan.

Planning Boundaries

Various boundaries affect the jurisdictional authority of the City of Orland. Within the city limits, the City has total land use and operational authority. Other boundaries are established to provide for the future expansion of the City. These include:

The Primary Sphere of Influence: This boundary includes lands surrounding the City where expansion is likely to occur in the near future.

The Secondary Sphere of Influence: This boundary identifies areas where the City has an interest in future development that may occur.

The Planning Area: This boundary identifies areas where the City has interests and concerns, and encompasses some areas that could be expected to annex and some that are not expected to annex.

The City has the ability to work with Glenn County to affect changes to proposed development within the Sphere of Influence, but has no direct land use authority outside of the city limits. Working with the Glenn Local Agency Formation Commission (Glenn LAFCo), the City can initiate rezoning and annexation of land within the Sphere of Influence, after demonstrating the ability to provide services. The City can also amend the Sphere of Influence through application to LAFCo.

Approximately 2.47 square miles of land were within the Orland city limits at the time of the previous General Plan Update in 2003. Since then the City has annexed approximately 295 acres of land. The current city limits encompass approximately 1,876 acres or 2.93 square miles.

The Planning Area has been adjusted to the south to County Road 21 and now includes Haigh Field and surrounding parcels. Additionally, the eastern Planning Area boundary south of Highway 32 was shifted further east to the Tehama-Colusa Canal, which acts as a physical boundary along the Highway 32 corridor.

City of Orland boundaries for these areas are depicted on **Figure 2-1**, Planning Boundaries.

Population and Demographics

As indicated in **Table 2-1**, the population of the City of Orland experienced substantial growth in the 1990s. From 1990 to 2000, the population of the City increased by 24.3 percent, an average annual increase of 2.2 percent. By comparison, the population of Glenn County increased by just 6.7 percent during the same time period.

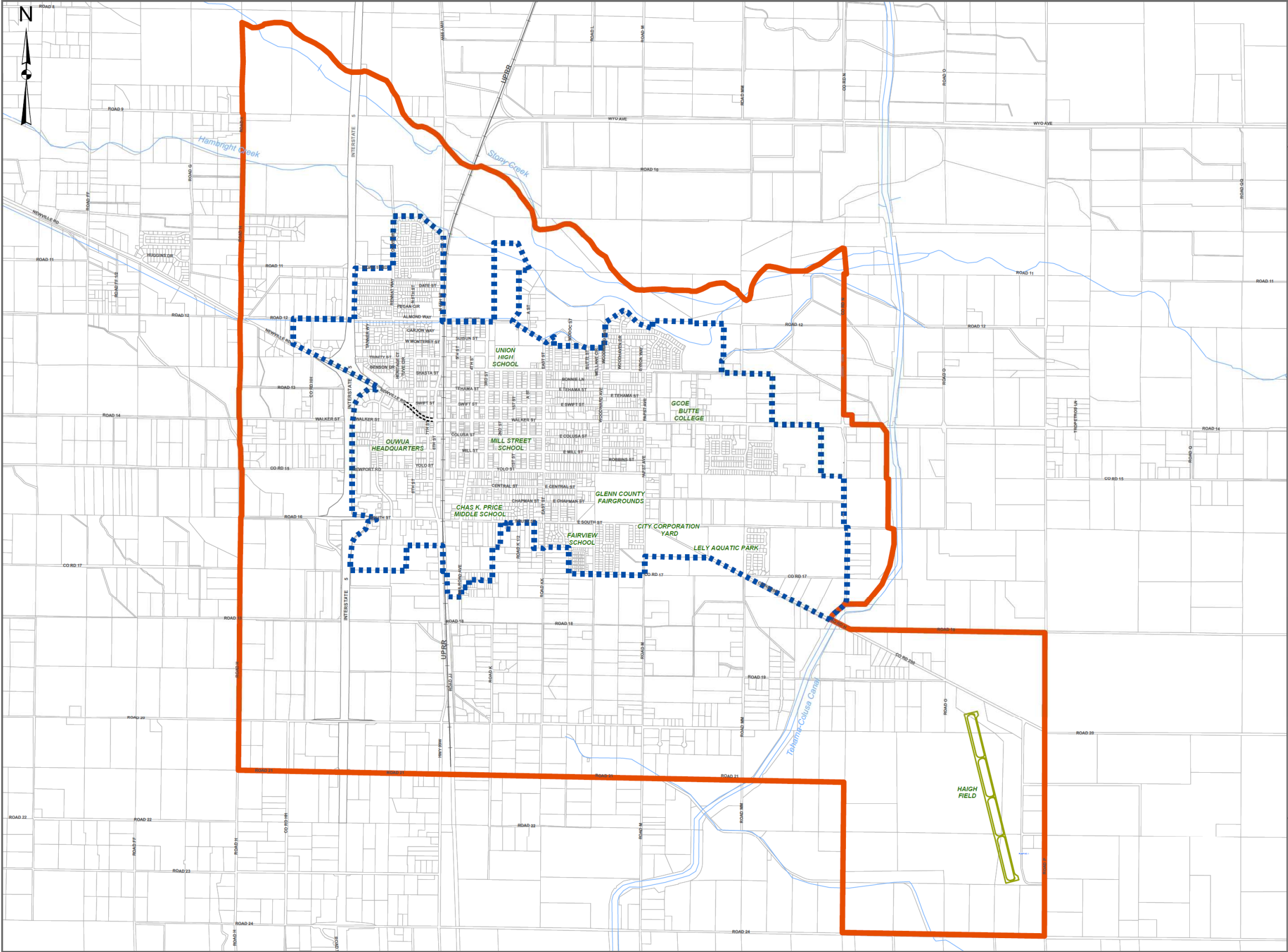


Figure 2-1

Orland Planning Boundaries

- Planning Area
- City Boundary

0 0.25 0.5 Miles



PMC

This page intentionally left blank.

Between 2000 and 2005, the City of Orland and Glenn County each grew by an average of 1.4 percent. In 2005 and 2006, the growth that had been affecting California began to appear locally, and the population of Orland grew 4.5 and 2.8 percent in those two years.

One factor in Orland's population growth may be its proximity to Chico, where jobs are available but housing is less affordable. Many Orland residents buy homes in Orland and commute to Chico for work.

TABLE 2-1
POPULATION OF ORLAND AND GLENN COUNTY

Year	Orland	Glenn County
1970	2,884	17,521
1975	3,290	19,200
1980	4,031	21,350
1985	4,580	22,750
1990	5,052	24,798
1995	5,599	26,337
2000	6,281	26,453
2005	6,692	28,271
2008	7,353	29,195

Sources: U.S. Census Bureau, California Department of Finance

Projected Population

Population projections for Orland were developed based upon historical population growth rates, as derived from figures in **Table 2-1**. Three growth rates were used to develop the population estimates. The "High" growth rate is a 2.6 percent average annual growth rate, which was the growth rate of the City's population from 1970 to 2000. The "Medium" rate is a 2.2 percent average growth rate, which was the growth rate of the City's population from 1990 to 2000, the most recent years for which data is available. The "Low" growth rate is a 1.8 percent average annual growth rate. This was an arbitrarily selected rate, which was obtained by subtracting the Medium rate from the High rate, then subtracting the difference from the Medium rate.

For the 2003 General Plan, the Census 2000 population of 6,281 was used as the baseline for the projections. The actual average annual growth rate was 2.1 percent between 2000 and 2008, falling just below the Medium projected growth rates. However, between the time of General Plan adoption in 2003 and 2008, the rate of growth was 2.8 percent. An average annual population increase of 2.8 percent above the High projection made in the existing General Plan. The population of Orland in January of 2008, as estimated by the California Department of Finance, was 7,353. The estimated 2008 population is used in **Table 2-2** below as the baseline for the projections over the General Plan 20-year period.

TABLE 2-2
GENERAL PLAN POPULATION PROJECTIONS FOR ORLAND, 2008–2028

Growth Rate	Orland Population				
	2008	2013	2018	2023	2028
High (2.6%)	7,353	8,360	9,505	10,806	12,286
Medium (2.2%)	7,353	8,198	9,141	10,191	11,363
Low (1.8 %)	7,353	8,039	8,789	9,609	10,506

Source: California Department of Finance, Demographic Research Unit, January 2008.

Projected Land Use Demands

Based on the population growth rate and assuming that the existing land use patterns will remain relatively constant over the time period encompassed by this General Plan, it is possible to estimate the amount of land needed to accommodate the population growth. **Table 2-3** illustrates the amount of land needed by the City to provide for the high estimate of population growth.

**TABLE 2-3
ORLAND LAND USE DEVELOPMENT FORECAST**

Land Use	Land Required (acres)				
	2008-2012	2013-2076	2018-2022	2023-2028	Total
All Residential					
High growth (2.6%)	75	86	97	111	369
Medium growth (2.2%)	64	70	79	89	302
Low growth (1.8%)	51	55	61	67	234
All Commercial					
High growth (2.6%)	13	15	17	19	64
Medium growth (2.2%)	11	12	13	15	51
Low growth (1.8%)	9	9	10	11	39
All Industrial					
High growth (2.6%)	15	17	19	22	73
Medium growth (2.2%)	12	14	15	17	58
Low growth (1.8%)	10	11	12	13	46
All Other					
High growth (2.6%)	62	71	81	92	306
Medium growth (2.2%)	52	58	64	72	246
Low growth (1.8%)	43	46	50	52	191
Total					
High growth (2.6%)	165	189	214	244	812
Medium growth (2.2%)	139	157	171	193	657
Low growth (1.8%)	113	121	133	143	510

Source: PMC

GENERAL PLAN BUILDOUT ESTIMATE

The General Plan establishes general uses and densities of land within the City. From the Land Use Diagram and the undeveloped acreages as presented in **Table 2-4**, it is possible to estimate the maximum number of new homes and population that could result from the General Plan.

Table 2-4, Maximum Residential Growth at Buildout, shows the calculated possible population from the 2003 General Plan, the additional acreage of undeveloped land in each undeveloped residential designation, the number of dwelling units possible, and possible population estimates. The population estimates are based on an assumption of 3.0 persons per single-family unit, 2.5 persons per medium density multi-family unit, and 2.0 persons per high density multi-family unit.

If Orland's residential land were built to its potential, with the density of each dwelling unit matching the persons per household as stated above, the total population could reach over 25,000 with over 22,000 of these people occupying single-family residences. Community design requirements, site-specific constraints and market factors often reduce the potential buildout well below the theoretical calculations.

Table 2-5, Maximum Commercial and Industrial Growth at Buildout, shows the potential buildout for commercial, industrial/light commercial, and heavy industrial uses for the Planning Area. The table identifies the existing acreages, 2003 General Plan possible square footages, and the total additional square footages possible under the current General Plan.

Under the 2003 General Plan, the City of Orland had 8,076,460 square feet available for commercial and industrial use. Under the 2008 update, there is an additional 7,034,940 square feet available, for a total of 15,111,400 square feet that is eligible for commercial and industrial development.

**TABLE 2-4
MAXIMUM RESIDENTIAL GROWTH AT BUILDOUT**

General Plan Designation	Possible Pop. under 2003 General Plan	Additional Developable Acres	Maximum Units per Acre	Additional Units	Population Per Unit	Additional Population	Total Possible Population
Residential, Low Density (R-L)	27,021	173	6	1,038	3.0	3,114	30,135
Residential, Medium Density (R-M)	1,367	-1	10	-10	2.5	-25	1,342
Residential, High Density (R-H)	1,976	42	25	1,050	2.0	2,100	4,076
Residential, Estate (R-E)	4,713	896	2	1,792	3.0	5,377	10,090
Mixed Use (MU)	-	29	15	435	2.0	870	870
Total	35,082	1,138		4,305		11,436	46,513

**TABLE 2-5
MAXIMUM COMMERCIAL AND INDUSTRIAL GROWTH AT BUILDOUT**

General Plan Designation	Possible under 2003 General Plan	Additional Developable Acres	FAR	Additional Square Footage	Total Additional Square Footage
Commercial - C	2,834,711	27	0.6	705,672	3,540,383
Light Industrial/Commercial - I-L/C	1,674,011	197	0.4	3,432,528	5,106,539
Heavy Industrial - I-H	3,567,738	95	0.7	2,896,740	6,464,478
Total	8,076,460	319		7,034,940	15,111,400

2.1 GOALS, POLICIES, AND PROGRAMS

Listed below are policies and programs that address major land use issues and concerns within Orland. Many of these issues may also be addressed in further detail within other elements of this General Plan.

GOAL 2.1: MAINTAIN AND PROMOTE THE QUALITIES THAT MAKE ORLAND A DESIRABLE COMMUNITY.

Policy 2.1.A: The City shall ensure that development projects and other improvements conform to an overall plan for the community and that consideration is given to the configuration of adjacent areas to be developed in the future.

Program 2.1.A.1: Prepare revisions to the Orland Municipal Code which organize and update existing resolutions and ordinances of the City to ensure consistency with the adopted General Plan.

Program 2.1.A.2: Upon completion of a revision to the Orland Municipal Code, the Planning Commission and/or City Council shall conduct a review of planning and development codes to identify sections that require clarification or additional detail, including but not limited to:

- *Revising Zoning Ordinance for consistency with the General Plan*
- *Provisions for mixed-use development in downtown*
- *Allowed uses in each zoning category*
- *Incorporation of Ag Buffer Guidelines*
- *Design requirements*

Program 2.1.A.3: Upon completion of Zoning Ordinance revisions, revise zoning designations of specific parcels as necessary to achieve consistency between the General Plan and zoning designations within the City.

Program 2.1.A.4: Ensure development complies with the adopted design review process and Design Guidelines for all development types.

Program 2.1.A.5: Confirm that development complies with the approved list of street trees for nonagricultural uses within the City.

Policy 2.1.B: Encourage the preservation and restoration of significant historic structures.

Program 2.1.B.1: Develop and enact programs for rehabilitation and repair of existing sound residential, commercial and industrial buildings.

Program 2.1.B.2: Pursue additional methods to remove or rehabilitate blighted and/or substandard buildings, including procedures for more effective enforcement of City Ordinances.

Policy 2.1.C: The City shall continue to build and maintain a positive working relationship with other governmental and responsible agencies.

Program 2.1.C.1: Work with the Orland Unit Water Users Association to implement the Application Procedures and Construction Guidelines for the Undergrounding of OUWUA Irrigation Canals within the City of Orland and seek long-term solutions to impediments to development posed by the current irrigation canal system.

GOAL 2.2: TO MAINTAIN A COMPACT URBAN FORM AND PRESERVE AGRICULTURAL LAND OUTSIDE OF THE CITY.

Policy 2.2.A: The City shall maintain defined boundaries and adequate buffers between agricultural land and urbanized areas, while giving developers flexibility in design at the urban edge.

Program 2.2.A.1: The City shall implement the Agricultural Buffer Guidelines where needed to ensure the protection of agricultural operations adjacent to future urban development along the city limits and when reviewing projects within the Sphere of Influence.

Policy 2.2.B: The City shall direct development toward existing neighborhoods by encouraging infill and redevelopment activity to enhance the efficiency of service provision.

Program 2.2.B.1: The City shall consider programs or policies which reduce fees and streamline development process for infill and redevelopment projects.

Program 2.2.B.2: Develop a comprehensive annexation program for annexation of lands outside the present city limits to allow for coordinated, long-term planning and to reduce approval of incompatible uses on unincorporated land adjacent to the City.

GOAL 2.3: CREATE AND MAINTAIN NEIGHBORHOODS THAT ENSURE A HIGH QUALITY OF LIFE IN ORLAND.

Policy 2.3.A: The City shall develop tools and controls that enable the City to guide residential growth, improvements and development.

Program 2.3.A.1: Following the adoption of the General Plan, the City shall develop and adopt subdivision design guidelines.

Program 2.3.A.2: Following the adoption of the General Plan, the City shall develop and adopt standards for the construction of multi-family housing.

Program 2.3.A.3: The City shall utilize site design (increased setbacks, modified lot sizes, unit type restrictions, etc.) techniques, landscaping and buffers to minimize land use incompatibilities between land uses.

Program 2.3.A.4: The City may allow Planned Development Zone Districts to modify standard development requirements consistent with the General Plan. Modifications to the Standard Zone District should occur only when current and future community benefit has been determined and the long-term impacts of the modification analyzed.

Policy 2.3.B: The City shall create walkable neighborhoods that incorporate trails, open space, and other amenities to help encourage pedestrian traffic and minimize the use of motor vehicles.

Program 2.3.B.1: Revise zoning codes and development standards to include provisions for pedestrian and non-motorized friendly features such as:

- Wide sidewalks and attractive streetscapes*
- Accessible and safe bike paths*
- Highly visible and safe street crossings and intersections*
- Highly connective street networks to accommodate alternate travel paths*
- Traffic-calming measures such as intersection bulbouts and textured paving materials*

Program 2.3.B.2: Revise Subdivision Codes to require pedestrian connections and opportunities for multi-use paths and amenities.

Program 2.3.B.3: Require the incorporation of pedestrian pass-throughs and connections, as appropriate, in developments using cul-de-sacs and non-through streets.

GOAL 2.4: PROMOTE THE EXPANSION AND RETENTION OF EXISTING COMMERCIAL ESTABLISHMENTS AND ENCOURAGE NEW COMMERCIAL DEVELOPMENT IN THE CITY.

Policy 2.4.A: The City shall actively promote Orland as a business-friendly and desirable place for new commercial and industrial uses.

Policy 2.4.B: The City shall actively work with existing commercial and industrial businesses to facilitate efforts to expand and enhance business in a manner that contributes to the high quality of life in Orland.

Program 2.4.B.1: Implement the Design Guidelines for Commercial and Industrial Development and the Administrative Site Plan Review Process, both adopted in 2007.

Program 2.4.B.2: When reviewing requests for commercial uses in residential neighborhoods, the City shall ensure that the integrity of the neighborhood is not compromised.

Policy 2.4.C: The City shall encourage businesses that bolster and fortify the downtown.

Program 2.4.C.1: Review zoning and land use regulations to identify and remove impediments to the establishment or expansion of downtown businesses.

Policy 2.4.D: The City shall evaluate and apply the guidelines adopted that provide for separate standards for each commercial area, including special planning areas, business parks, downtown, or other employment centers, that allow for a mixture of uses and development standards.

GOAL 2.5: PROMOTE ECONOMIC GROWTH IN THE CITY OF ORLAND THROUGH ATTRACTION AND RETENTION OF INDUSTRY IN ORDER TO ENHANCE EMPLOYMENT OPPORTUNITY AND MAXIMIZE THE AVAILABILITY OF GOODS AND SERVICES WITHIN THE COMMUNITY.

Policy 2.5.A: The City shall identify and promote suitable sites for development of industrial uses within the City.

Policy 2.5.B: The City shall discourage development which results in the potential for land use incompatibility. Specifically, avoid locating objectionable land uses within residential neighborhoods and protect areas designated for existing and future industrial uses from encroachment by sensitive (residential) uses.

Program 2.5.B.1: Periodically review the industrial and commercial land use designations to ensure that there is an adequate mix of parcel sizes, zoning and infrastructure to accommodate new development.

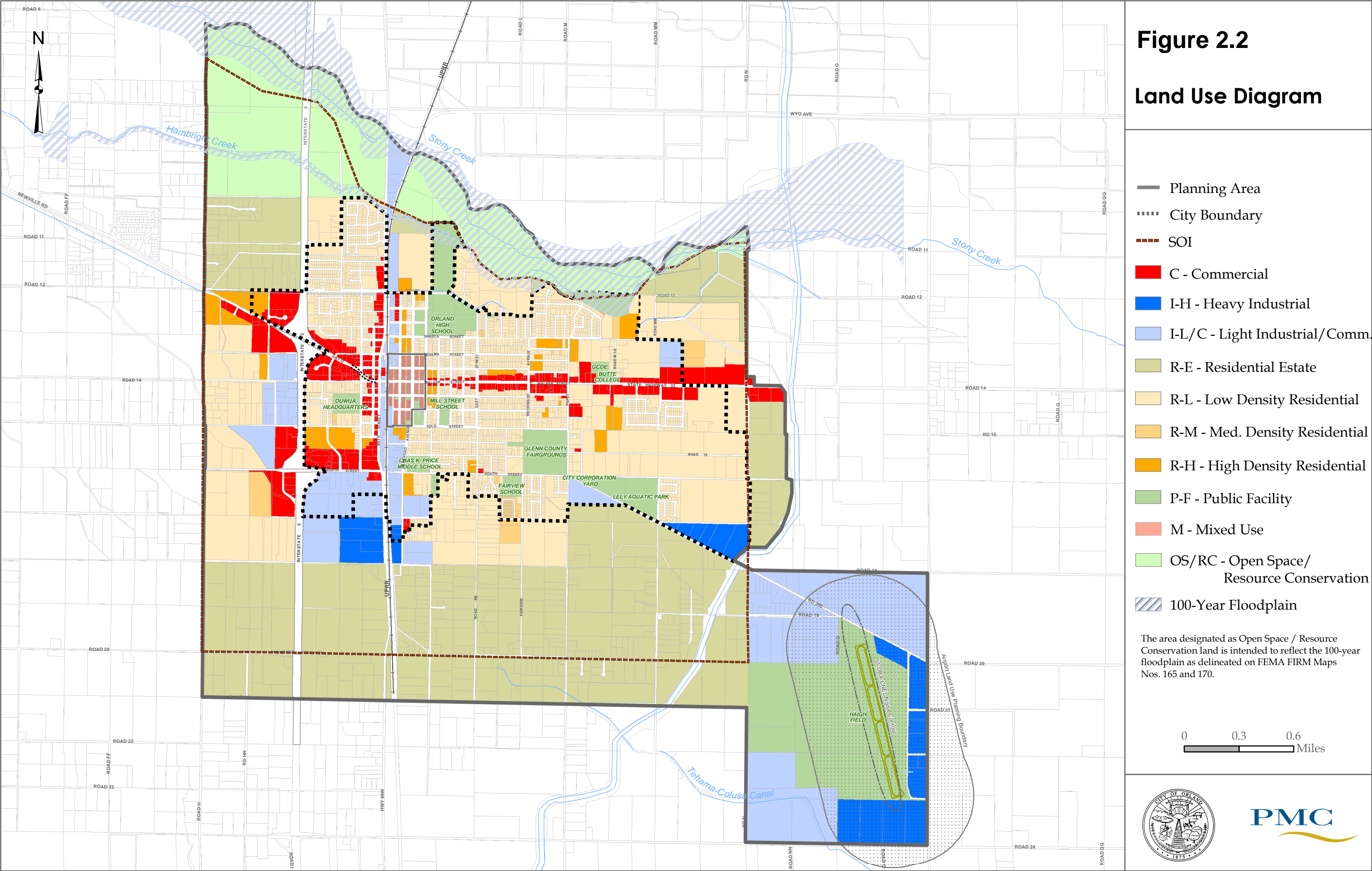
Program 2.5.B.2: Incorporate design buffers between potentially incompatible land uses and may restrict new land uses from compromising existing businesses from operations.

2.2 LAND USE DIAGRAM AND DESIGNATIONS

Land Use Diagram

The Land Use Diagram, **Figure 2-2**, depicts the allocation of land in and around the City for various land uses. The diagram is intended to (1) graphically define the land areas allocated for each land use designation; (2) present the land use plan for Orland in a form that can be understood by the general public as well as by people who wish to develop land; and (3) show the relationships of land use patterns in the City.

Figure 2.2
Land Use Diagram



This page intentionally left blank.

LAND USE DESIGNATIONS

Land use designations, intensity standards, and the General Plan holding capacity are described below. The General Plan Land Use Diagram depicts the distribution, location, and extent of the City's land uses.

Existing land uses have greatly influenced the distribution of uses within the Land Use Diagram. The goals and policies established within other General Plan elements have also guided the assignment of future land uses. A range of interests and physical conditions has been considered, and the Land Use Diagram and land use designations present a workable plan for achieving the City's goals.

Residential uses can vary widely in development intensity. Characteristics of intensity are the number of dwelling units per acre, the number of people per dwelling unit, and dwelling height and dwelling coverage per acre. These factors and others combine to create distinct living environments.

Residential Estates (R-E)

This designation was developed in response to public interest in accommodating higher priced homes at lower density while maintaining densities that could be served by the City water and wastewater system. This classification allows for development at a density of up to 2 units per acre and should average not less than 1 unit per acre to allow the adequate and efficient provision of public services. Population per acre is not expected to average more than 6 in this land use designation. Maximum coverage for all buildings in this designation should not exceed 30 percent. The dwelling types expected under this classification are single-family detached houses on individual lots.

Low Density Residential (R-L)

This classification allows for development at a density of up to 6 dwelling units per acre. Population per acre is not expected to average more than 18 in this land use designation. Maximum coverage for all buildings in this designation should not exceed 40 percent. Typical development in this designation includes single-family attached and detached homes, accessory structures, and occasionally churches, schools, parks and other governmental or quasi-governmental uses.

Medium Density Residential (R-M)

This residential classification allows for development at a density of up to 10 units per acre. Population per acre is not expected to average more than 25 in this land use designation. Maximum coverage for all buildings in this designation should not exceed 60 percent. This classification is intended to provide a variety of residential living environments, including single-family detached, duplex residences, and two-story triplex and four-plex dwellings.

High Density Residential (R-H)

This classification allows for development densities of up to 25 dwelling units per acre. Population per acre is not expected to average more than 60 in this land use designation. Maximum coverage for all buildings in this designation should not exceed 70 percent. This designation allows flexibility in housing types including single-family detached, zero lot line single-family, duplex, triplex, and four-plex units, townhouses, apartments, and condominiums.

Mixed Use (M)

The Mixed Use designation is utilized in the Downtown District and other areas as deemed appropriate by the City and is intended to provide for a pedestrian-oriented live/work/play environment, where the business community, residents, and visitors mingle in a dynamic setting, walking from offices to restaurants to shops to home. Preservation of historic features, building design, streetscape design, signage, and the use of creative parking strategies would be integral components of development in these areas.

Commercial (C)

This designation allows up to 60 percent building coverage and up to 100 percent coverage by parking/paved areas in the downtown area. This classification is intended to provide for a range of uses including retail stores, restaurants, professional and medical offices, large office complexes, light manufacturing plants, outdoor recreation facilities, hotels, and many other uses involving the sale of a product or a service.

Heavy Industrial (I-H)

This designation allows up to 70 percent building coverage and up to 100 percent paved coverage for parking and storage. The City may differentiate between uses requiring outside storage of materials and wholly interior activities (power consumption, manufacture, etc.) which are further addressed in the Zoning Ordinance. Typical uses would include warehousing, technical support offices, fabrication, combustion turbine technology power plants (natural gas power plants), and assembly uses. Other uses would be appropriate pending discretionary review and application of performance standards to determine compatibility with existing industrial uses.

Uses that characterize an industrial designation shall require consideration of environmental and land use compatibility criteria to optimize their location. Industrial uses should be located to provide for proper truck and/or rail access and should be buffered from incompatible uses.

Light Industrial/Commercial (I-L/C)

This designation allows up to 60 percent building coverage and up to 100 percent coverage by parking/paved areas in the downtown area.

The Light Industrial/Commercial designation allows for uses such as processing, packaging, machinery, repair, fabricating, distribution, warehousing and storage, research and development, and similar uses which omit limited amounts of smoke, noise, light, or pollutants. More specific examples of uses would be trailer sales/manufacture, paint shops, and tractor sales equipment yards.

These uses can be combined in self-sufficient business parks designed to minimize the need to travel outside of the City for essential services. This approach is also designed to help reduce regional commute traffic by providing employment opportunity for residents of Orland within the city limits.

Public Facility (PF)

This designation allows up to 40 percent building coverage and up to 100 percent paved coverage with pavement, and up to 1 dwelling unit per parcel for a site manager or caretaker, as approved by the City. This designation includes properties owned by the City and other public agencies such as libraries, fire stations, public transportation corridors, and schools, as well as privately owned transportation and utility corridors.

A variety of public and private uses are allowed within this General Plan category. However, construction of private residences or private commercial uses and the subdivision of land are not allowed.

Open Space/Resource Conservation (OS/RC)

The intent of the OS/RC designation is to assure Orland residents a healthy amount of public open space, to preserve and enhance the natural environment that contributes to the quality of life in and around Orland, and to make certain that growth does not adversely affect natural resources.

The area designated by this General Plan as OS/RC is the northeast corner of the Planning Area. The area is currently the location of a gravel extraction operation subject to the Surface Mining and Reclamation Act of 1975 (SMARA), with a second extraction operation pending to be located east of the interstate. Well-planned reclamation at these locations would generate a number of public benefits, including establishing unfettered public access to Stony and Hambright creeks.

The OS/RC designation allows up to 10 percent coverage by buildings and up to 25 percent coverage with paving, and up to 1 dwelling unit per parcel for a site manager or caretaker, as approved by the City.

GENERAL PLAN/ZONING RELATIONSHIP

In addition to maintaining consistency within the General Plan, the General Plan and zoning designations must also be consistent and compatible. The General Plan land use designations and related zoning classifications are identified below in **Table 2-6**, General Plan/Zoning Compatibility.

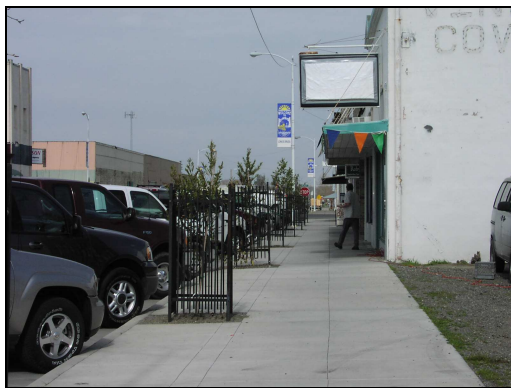
**TABLE 2-6
GENERAL PLAN/ZONING COMPATIBILITY**

General Plan Designation	Compatible Zoning
Low Density Residential	R-1
Medium Density Residential	R-2
High Density Residential	R-3
Residential Estates	R-E
Mixed Use	R-3, C-2, PD
Commercial	C-1, C-2, C-H
Light Industrial/Commercial	M-L
Heavy Industrial	M-H
Open Space/Resource Conservation	OS
Public Facility	PF

2.3 SPECIAL PLANNING DISTRICTS

Special Planning Districts have been defined within this General Plan to document the major planning issues of areas which may be developed during the term of this General Plan. The general character and anticipated uses envisioned by the City are described for each Special Planning District. The Special Planning Districts are graphically depicted on **Figure 2.3**, Special Planning Districts. These Special Planning Districts have been described in further detail in the Opportunities and Constraints Analysis performed to support and inform this General Plan.

The Special Planning Districts are overlay designations which portray uses the City would encourage. For purposes of development, the base General Plan designation as depicted on **Figure 2.2** and the parcel-specific zoning designation describe the appropriate uses.



Pedestrian and shopper-friendly – downtown Orland

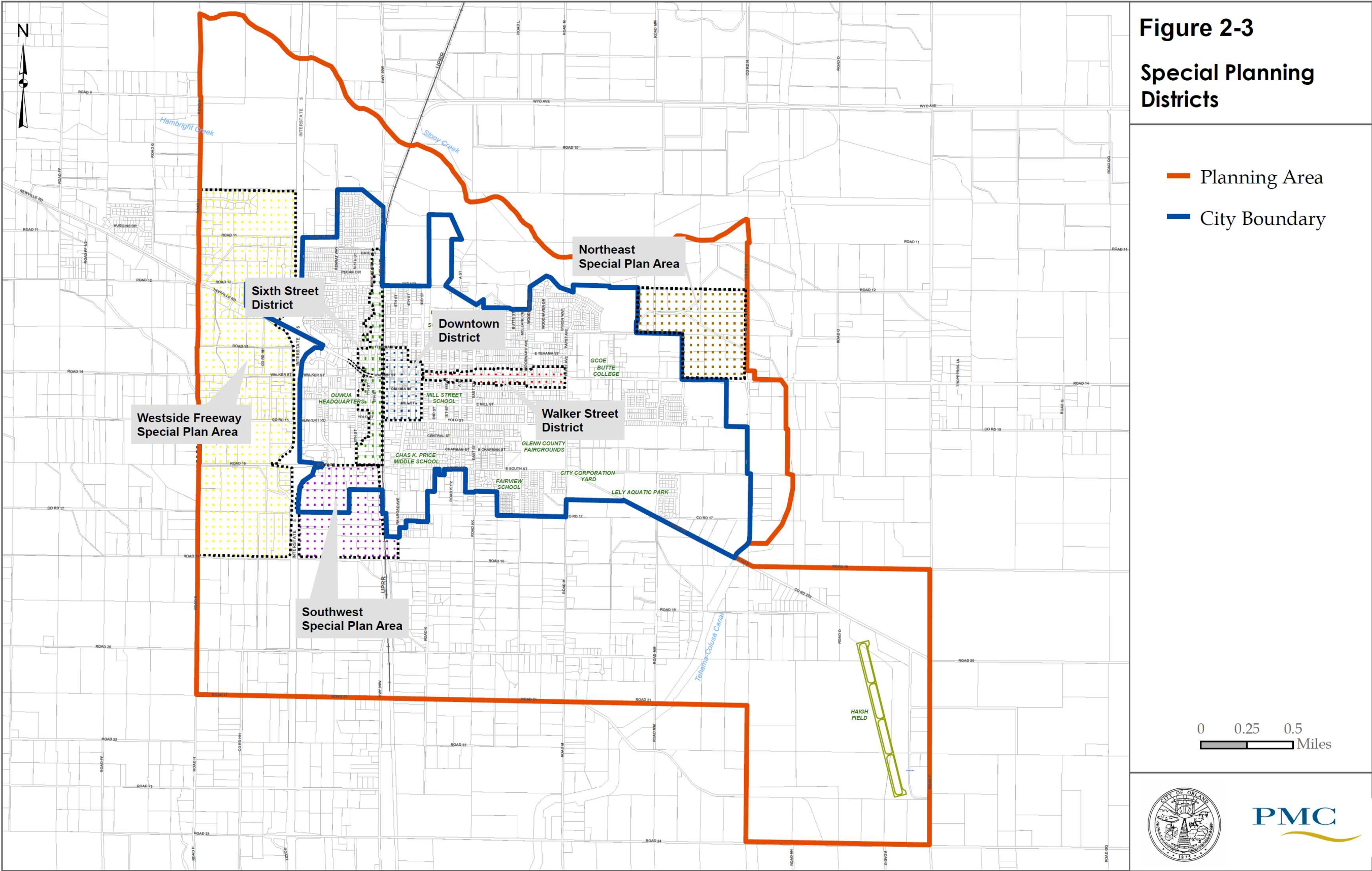
not occupied by active businesses.

1. DOWNTOWN DISTRICT

Setting

The Downtown District is the cultural, historic, and commercial core of the community and includes a substantial portion of Orland's businesses, public facilities, and historic structures.

Due to a variety of conditions, commercial uses in the downtown area have been in a state of decline during the past few decades. Currently, numerous buildings in the district are



This page intentionally left blank.

The 1996 *City of Orland Downtown Business Development and Recruitment Plan* identified 38,745 square feet in the historic Downtown District as vacant, totaling 24 percent of the area's total available commercial square footage. The Sixth Street District to the west also has a significant amount of vacancy.

The Highway 32 realignment provides an excellent impetus to address this fused district as a single, cohesive opportunity. The City may wish to consider incorporating the design and construction of a western gateway to the City core (to be matched in the future by gateways at north, south and east entries).

Downtown District – Vision

The City envisions the Downtown District as the primary cultural, civic, and commercial district of Orland. Ideally, businesses will occupy all structures throughout the District—from the Sixth Street District to the west to the Walker Street District to the east.

The historic character of downtown will be emphasized and thematically fused with the Sixth Street and Walker districts through future design guidelines, renovations, and improvements. The downtown will provide for the greatest benefit, comfort, and ease-of-use for the pedestrian and will include clearly defined entries and edges.

Through mixed-use and infill development, the number of downtown residents and amenities will increase, and the downtown will become an increasingly vital cultural, civic, and commercial center.

2. SIXTH STREET DISTRICT

Setting

Sixth Street, or County Road 99, is the north-south arterial in Orland and provides access to commercial and industrial land uses, as well as to some residential uses. The Sixth Street District is mostly north-south oriented, with the middle portion of its eastern edge abutting the Downtown District and its southern edge abutting the Southwest Orland Special Plan Area.

Like the Downtown District, commercial uses in this area have been in a state of decline over recent decades due to a variety of conditions. Numerous buildings in the district are not occupied by active businesses.

Sixth Street District – Vision

The City envisions the Sixth Street District as cooperating with the Downtown District, extending design improvements to boost pedestrian presence, traffic, and safety. Ideally, businesses will occupy all structures along Sixth Street and throughout the district, creating a complementary mix of commercial and light industrial uses in central Orland.



Highway 32 -
view westward into town, near Papst Avenue

3. WALKER STREET DISTRICT

Setting

There are currently a group of opportunities regarding how the City of Orland may best capitalize on Highway 32. Community surveys identify a common desire to improve the corridor, in terms of aesthetics and commercial value.

The General Plan Update process represents a good opportunity to begin to plan for Highway 32 as a specific benefit zone for the City. What may be addressed at this point are definitions of the differing districts that compose the

entire corridor, and how each requires a slightly different plan to reap maximum benefit to both the businesses and citizens of Orland. To date, Caltrans and the City of Orland have established a desire to cooperate in moving toward mutually beneficial planning scenarios.

Walker Street District – Vision

The City envisions (re)development of this corridor to maximize interest and commerce to both passersby and potential businesses. Architectural consistency and other improvements to increase the pedestrian presence would be designed to present the east entry into Orland in a most attractive light.

4. SOUTHWEST ORLAND SPECIAL PLAN AREA

Setting

Community surveys and studies conducted prior to the 2002 Opportunities and Constraints Analysis identified a nearly unanimous desire to expand Orland's job market and economic base. Individuals and groups alike have voiced their interest in attracting industry to the area as well as a desire to prepare suitable locations for development to lure potential employment opportunities.

The City of Orland received a Community Development Block Grant to fund a study (prepared by Rolls, Anderson, Rolls in February 1990) to determine size, location, and probable costs for the extension of utilities and general infrastructure to an area adjacent to the southwest portion of Orland, which at that time was completely outside the city limits (a portion of the area has been subsequently annexed into the City). The area consists of approximately 130 acres and is bounded by Interstate 5 on the west, Sixth Street (old Highway 99) on the east, South Street on the north, and County Road 18 on the south.

The 1990 study was predicated on the Land Use Element of the existing Glenn County General Plan (currently being updated) which designated approximately 10 acres of the southeast corner of the study area as R-M (Medium Density Residential). The balance of the study area at that time fell under the I-L/C (Light Industrial/Commercial) land use designation. Since the study was prepared, a large portion of the northern study area has been annexed into the City. The Orland General Plan designation for the study area is Light Industrial/Commercial other than the southwest corner of Sixth and South streets, which is Commercial.

Since 2002, a new medical office has been constructed in the area. Cortina Drive, along with municipal water and sewer mains, has been extended south of South Street. Additional discretionary permits have been approved for the west side of the Cortina Drive extension for a mini-mart that will tie into the available mains.

Southwest Orland Special Plan Area – Vision

An early prompt to consider this area was related to its favorable location and visibility, and how those factors may lend to development.

The City envisions this area developed in light industrial and commercial uses. This development is intended to both provide jobs and revenue to Orland and to buffer existing and future residential uses from the noise- and dust-related impacts of existing and future industrial uses and railroad activity.



*Interstate 5 passing through Orland – view to the north
from the South Street overpass*

4. WESTSIDE FREEWAY SPECIAL PLAN AREA

Setting

Commercially designated areas adjacent to Interstate 5 (I-5) are underutilized. Even where infrastructure has been extended (i.e., cul-de-sacs with curb and gutter) for site improvements, individual parcels have not been developed.

To address this, Glenn County and the City of Orland began working in concert toward the preparation of a Freeway Area Specific Plan meant “to guide the development, land uses and supportive services for outlying portions of the

community to the north and west of city limits” (*Administrative Draft Freeway Area Specific Plan*, Quad Knopf, Inc., November 2000, currently on a “hold” status).

Additional goals include appropriately planning the land use surrounding the Highway 32 and South Street interchanges, providing for manageable, phased development, and possible future annexation of land identified in the Specific Plan. The Specific Plan mainly focuses on properties west of I-5 (additional planning areas under study are to

the north), which is identified as the Western Plan Area. This area is outside the city limits, partially located within the City's existing Planning Area, completely within the LAFCO-designated Secondary Sphere of Influence, within the Draft Planning Area, and totally within the County-adopted Urban Limit Line.

Westside Freeway Special Plan Area – Vision

There has been preliminary study of this area, mainly as a means to attract and locate new businesses and jobs in Orland. If planned, the Westside Freeway Special Plan Area could yield a mix of uses that do not currently exist in Orland, many of which would focus on opportunities associated with I-5

5. NORTHEAST ORLAND SPECIAL PLAN AREA

Setting

In 2004, a group of developers approached the City with the concept of developing a Specific Plan for the northeast area of the City (detailed in the figure below). The Northeast Growth Area was defined as the area bounded on the west by the city limit boundary, on the south by East Walker Street (State Route 32), to the east by County Road N and the Sphere of Influence and Planning Area Boundary, and to the north by County Road 12.

County Road N describes the eastern city limits extending to the south of East Walker Street. Vehicles traveling westbound experience this area when first entering Orland. The Northeast Growth Area includes approximately one-third of a mile of frontage along State Route 32.

During the preliminary phases of the Specific Plan process, City of Orland staff determined that it is likely that infrastructure is able to be extended to the Northeast Growth Area. In addition, the growth area is surrounded by existing roads, including an existing intersection at East Walker Street and County Road N.

Northeast Orland Special Plan Area – Vision

The City envisions the area developed cohesively and fully integrated with the existing setting. The Northeast Orland Special Plan Area will provide an inviting and clear entrance for those entering Orland from the east. Commercial development at the intersection of East Walker Street and County Road N will provide goods and services to passersby as well as to nearby residents. Mixed density residential development is envisioned surrounding the commercial center, near amenities. A park would provide recreational opportunities for the area as well as enhance the aesthetics of Orland's eastern edge. Shasta Street would also be extended to the east through the plan area.

3.0 CIRCULATION ELEMENT

CHAPTER

3.0

Circulation Element



Looking north from the South Street interchange

INTRODUCTION

The Circulation Element, a legally required element, is included in this General Plan to address issues related to the movement of people and goods through and around the City of Orland. The purpose of this Element is to provide an overview of the means of transport to, from and within the City of Orland, and to address how these different methods can complement each other to make the City's circulation system work more efficiently and effectively. The Circulation Element addresses a range of circulation issues that affect mobility. Vehicle circulation on streets and highways, vehicle parking, bicycle and pedestrian circulation, and public transit are key issues analyzed in this Element. Other issues analyzed include public transportation, rail services, and air transportation.

The most common means of transportation is the automobile, and much of the circulation within Orland is focused on vehicle traffic. However, bicycles and pedestrians are visible throughout the City, and public transit is increasing in importance as the City grows.

State law recognizes that circulation and land use are closely related and requires that policies contemplated by the Circulation, Land Use, and other elements be related and consistent. The policies should demonstrate a balance between anticipated land

uses and the transportation facilities that serve them. The circulation policies also must be interwoven with other issues dealt with in this General Plan, including community character and design, housing and neighborhoods, recreation, air quality, noise, and safety policy issues.

LEGAL BASIS AND REQUIREMENTS

The legal requirements of the General Plan Circulation Element are defined within Government Code Section 65302(b) as follows:

The General Plan shall include a circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other public utilities and facilities, all correlated with the land use element of the plan.

The Circulation Element provides a framework to guide transportation planning throughout the City of Orland and its Sphere(s) of Influence. Goals, objectives, policies, and programs provide direction for maintaining and improving Orland's transportation systems. In addition, this Element assesses the current circulation conditions in the area and analyzes improvements to support new development anticipated within the Land Use Element of the General Plan.

Regional Setting

The City is located in northeast Glenn County, approximately 18 miles west of Chico and approximately 100 miles north of Sacramento. The circulation-transportation system is typical of a rural town, with the exception that the western boundary is formed by Interstate 5, and State Route 32 runs east-west through the middle of the City.

Local Setting

The City circulation system consists of a grid pattern street layout with north-south and east-west oriented facilities. The existing roadway system is made up of residential streets, collectors (major and minor), arterials, and freeways. The existing system within the Orland area comprises approximately 27 miles of paved roadway. The majority of the circulation system is maintained by the City of Orland and generally consists of 2-lane roadway facilities with stop sign controls at intersections.

Highway 32, which is designated Walker Street through Orland, generally consists of a 2-lane rural highway with a center turn lane. Walker Street traverses the City's business district and serves as the primary roadway through the commercial corridor of the City. This section of road is the most heavily used thoroughfare for entering and exiting Orland and serves as both a major truck route and a significant road for regional recreational traffic.

ROADWAY NETWORK

Roadway and Classifications

The existing roadway system in the Orland area comprises local streets, collectors (major and minor), arterials, and freeways.

Local

Local streets provide direct access to adjacent properties and are not intended to serve through traffic. Local streets provide access to Collector streets and generally carry low traffic volumes at low speeds. The right-of-way requirement for Local streets is 60 feet in width, with 40 feet of paved surface width between curbs, unless otherwise determined by the City Engineer.

Collector

Collector streets provide a linkage between Local streets and Arterial streets. Collector streets serve a variety of functions, providing access to individual properties and also allowing movement to and from Local streets. The right-of-way requirement for Major Collector streets is 84 feet in width, with paved surface between curbs 64 feet in width. On Minor Collector streets, the right-of-way requirement is 60 feet, with a 40-foot curb-to-curb width. In industrial areas, a 64-foot right-of-way is required with a 44-foot curb-to-curb width. All right-of-way requirements are subject to being adjusted if determined necessary by the City Engineer.

Arterial

Arterial streets connect with Collector streets and some Local streets. Arterials carry the greatest traffic volumes and are primarily intended to provide mobility through the community. The right-of-way requirement for Arterial streets is 110 feet in width, with paved surface of 68 feet in width between curbs.

ROADWAY SYSTEM

The City has two state highways within its jurisdiction and these are classified as arterials.

- Interstate 5 is a north-south oriented 4-lane freeway bisecting the western portion of the Planning Area. I-5 currently carries approximately 23,500 average daily vehicles (ADT) through Orland. Within the Planning Area, I-5 includes interchanges at County Road 16 (South Street) and at State Route (SR) 32/Newville Road.
- State Route 32 is generally a 2-lane rural highway, linking I-5 in Orland to the west to the Lassen National Forest east of the City of Chico. Between I-5 and SR 99, SR 32 is a major route for trucks and serves a significant amount of recreational traffic.

- SR 32 is the major access route to the commercial area of the City. The highway provides four travel lanes from the northbound ramp intersection at I-5 to Sixth Street. East of Sixth Street, SR 32 becomes a 2-lane facility which traverses the City of Orland business district and is designated as Walker Street from Sixth Street to the eastern city limits.
- In 2006, the SR 32/Sixth Street intersection underwent a major realignment to prevent trucks in the process of turning from mounting curbs at the corners, which frequently would cause them to swing into the lanes of oncoming traffic. While SR 32 originally traversed a one-block offset via two right-angle turns at the Sixth Street intersection, the realignment utilized a pair of curves to bring the highway into perpendicular intersection with Sixth Street. Additionally, existing traffic signals were upgraded and new signals were installed. The realignment allowed for a smoother flow of traffic and now allows large trucks to make turns without encroaching into lanes of oncoming traffic.

Other Arterials within Orland serve to connect the City to commercial and residential areas within the City and to agricultural areas within the county.

- Sixth Street, or County Road 99, is the north-south arterial in Orland and provides access to commercial and industrial land uses, as well as to some residential uses.
- South Street runs east-west and connects Sixth Street to I-5. South Street provides access from I-5 to commercial and residential areas in Orland and to agricultural areas surrounding Orland.

Interstate 5, SR 32, South Street and Sixth Street comprise the City's Arterial system. The California Department of Transportation (Caltrans) maintains all but South and Sixth streets of the City's Arterial system. Right-of-way widths and sign requirements are determined by Caltrans on Interstate 5 and SR 32. Access from Arterials to adjoining properties is limited to 300-foot intervals for safety and traffic efficiency. Curbside parking should be prohibited, where feasible.

Major Collector streets in Orland provide circulation between Arterial streets and major activity centers. Curbside parking should be prohibited wherever feasible on Major Collectors. The following streets comprise the City's Major Collector system:

- South Street (Sixth Street to Papst Avenue)
- Road 200 (Papst Avenue to Road N)
- Road 18 (Cortina Drive to Road 200)
- Cortina Drive (Newport Street to Road 18)
- Papst Avenue/County Road M (SR 32 to County Road 18)
- Road HH (Road 16 to Road 12)

- Road N (SR 32 to Road 200)
- Newville Road
- Road 16 (west of I-5)

Minor Collectors feed traffic from local streets to Major Collectors or Arterials. The following streets comprise the City's Minor Collector system:

- Date Street and extension (Olive Street to Sixth; Sixth to Road N)
- Bryant Street (Papst Avenue to Road MM)
- Tehama Street (SR 32 to East Street)
- Road 17 (East Street to Road MM)
- Hillsan Street (Papst Avenue to Road N)
- Railroad Avenue (Yolo Street to County Road 18)
- Yolo Street (Railroad Avenue to East Street)
- Fourth Street (Yolo Street to SR 32)
- Cortina Dr/Porter Ln (Newport Avenue to Walker Street)
- East Street (Road 18 to Roosevelt; Roosevelt to Date Street)
- Papst Avenue (SR 32 to Date Street)
- Road M1/2 (Bryant Street to Date Street)
- Road MM (County Road 18 to Route 200; Road 200 to Date Street)
- Road N (SR 32 to Date Street)
- Eighth Street (South Street to Date Street)

Locations and designations of City streets are shown on **Figure 3-1**, Circulation Diagram. It should be noted that many of the Arterial-Collector streets in Orland have evolved from heavy use as opposed to formal development standards. Because of this, some streets may be designated Collectors, but not have all of the improvements required for new Collectors such as right-of-way width, travel way paving, and limited access. Therefore, the Goals, Policies, and Programs section of the Circulation Element addresses measures to bring these facilities into conformance with the functional classifications where feasible.

The remainder of the City streets are classified as Local and are the most predominant way of travel for most of the City. Local streets connect single-family homes and other uses to the Arterial-Collector network. Additionally, alleys provide rear access to parcels

in several areas of the City. Alleys are not required by the City to adhere to the 60-foot right-of-way requirements for Local streets, as discussed previously.

LEVEL OF SERVICE (LOS)

Level of Service (LOS) is a measure of traffic service along a road or at an intersection. LOS ratings range from A through F, with LOS A, B, and C indicating traffic can move relatively freely. LOS D describes conditions where delay is more noticeable and average travel speeds are reduced. LOS E indicates significant delays and reduced speeds. LOS F is characterized by traffic flows at very low speeds (stop and go) and long delays (more than one minute). **Table 3-1**, below, provides detailed descriptions of LOS categories.

TABLE 3-1
LEVEL OF SERVICE DEFINITIONS

LOS	Description
A	Represents free flow. Excellent level of comfort, convenience, and freedom to maneuver.
B	Stable flow, but the presence of other road users in the traffic stream causes noticeable reductions of comfort, convenience, and freedom to maneuver.
C	Stable flow, but marks the beginning of the range of flow in which operation of individual users becomes significantly affected by interactions with others in the traffic stream.
D	Represents high density, but stable flow. Users experience restriction in speed and freedom to maneuver, with reduced levels of comfort and convenience.
E	Represents operating conditions at or near the capacity level. Freedom to maneuver is difficult, with users experiencing frustration and poor comfort and convenience. Unstable operations are frequent, where small increases in the traffic flow can cause breakdown conditions.
F	Represents forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the volume that can traverse that point. Roadways store long queues behind such locations, with traffic advancing in stop and go "waves."

In addition to traffic volume, level of service may be affected by a variety of "friction" factors. These may include large amounts of on-street parking, driveways or access points to the roadway, truck volumes, pedestrian activity and lack of left turn lanes. The presence of these factors may significantly reduce available roadway capacity, resulting in lower level of service operations.

Existing Roadway Levels of Service

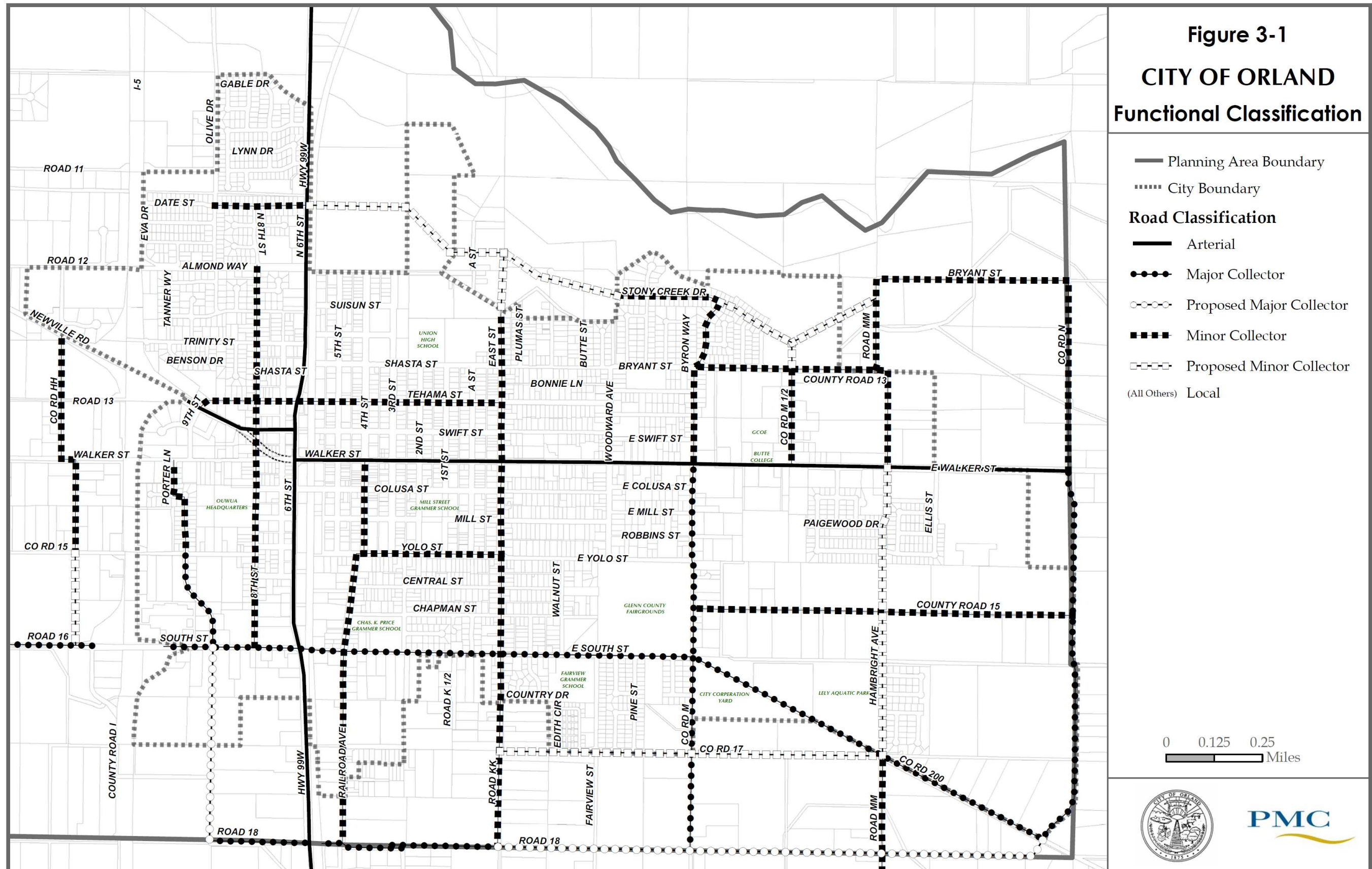
For this General Plan Update, daily traffic volumes on area roads have been acquired and compared to generalized capacity thresholds to assess the quality of traffic operations. These thresholds are based on "typical" non-peak and peak-hour parameters and can be helpful for planning purposes to suggest the daily volume of traffic that might yield various peak-hour Levels of Service. The daily volume thresholds utilized by the City of Orland are presented in **Table 3-2**. It should be noted that the capacity of urban roadway segments is generally governed by the operation of adjacent intersections and that auxiliary lanes at these intersections can have a

significant effect on street segment and intersection capacity. Daily traffic volumes on the State Highway system have been obtained from Caltrans' Publication *2000 Traffic Volumes on California State Highways*.

Chapter 3.0

This page intentionally left blank.

Figure 3-1
CITY OF ORLAND
Functional Classification



This page intentionally left blank.

TABLE 3-2
EVALUATION CRITERIA FOR TWO-WAY URBAN ROADWAYS DAILY LEVEL OF SERVICE

Facility Type	Number of Lanes	Range of Daily Traffic Volumes for Each Level of Service					
		LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
Local	2	0 - 2,700	2,701 - 3,150	3,151 - 3,600	3,601 - 4,050	4,051 - 4,500	4,500 +
Minor Collector	2	0 - 4,800	4,801 - 5,600	5,601 - 6,400	6,401 - 7,200	7,201 - 8,000	8,000 +
Major Collector	2	0 - 7,620	7,621 - 8,890	8,891 - 10,160	10,161 - 11,430	11,431 - 12,700	12,700 +
Arterial	2	0 - 9,000	9,001 - 10,500	10,501 - 12,000	12,001 - 13,500	13,501 - 15,000	15,000 +
Arterial	4	0 - 18,000	18,001 - 21,000	21,001 - 24,000	24,001 - 27,000	27,001 - 30,000	30,000 +

On City streets, daily traffic volume counts were conducted by kdAnderson in December 2007. As shown in **Table 3-3**, the majority of the roadway system in Orland is currently categorized by LOS A operations. The only exception is Highway 32/Walker Street. Although Highway 32/Walker Street east of Papst Avenue currently experiences satisfactory LOS B operations based upon daily volume thresholds, increasing traffic within the City has resulted in a LOS D on the section of Walker between Sixth Street and Papst Avenue. While LOS D exceeds the threshold for Arterial streets within Orland, it should be noted that Walker Street/Highway 32 is a State Route. According to the Department of Transportation, the acceptable level of service on State Routes is an LOS D. This section of Walker Street/Highway 32 is therefore consistent with LOS standards.

TABLE 3-3
EXISTING ROADWAY VOLUMES AND OPERATING LEVELS OF SERVICE

Roadway and Count Location		Functional Classification	Lanes	Volume		Levels of Service
				Daily	Peak Hour	
1	Almond Way, between Sixth Street & Eighth Street	Local	2	1,025	113	A
2	Monterey Street, between Fifth Street & Sixth Street	Local	2	1,425	195	A
3	Shasta Street, between Mellane Circle & Woodward Ave	Local	2	658	69	A
4	Fifth Street, north of Walker Street (SR 32)	Local	2	756	85	A
5	Fifth Street, south of Walker Street (SR 32)	Local	2	1,427	148	A
6	Fourth Street, north of Walker Street (SR 32)	Local	2	1,210	163	A
7	Third Street, north of Walker Street (SR 32)	Local	2	1,079	145	A

Chapter 3.0

Roadway and Count Location		Functional Classification	Lanes	Volume		Levels of Service
				Daily	Peak Hour	
8	Third Street, south of Walker Street (SR 32)	Local	2	1,240	143	A
9	Second Street, north of Walker Street (SR 32)	Local	2	474	72	A
10	Second Street, south of Walker Street (SR 32)	Local	2	725	154	A
11	A Street, north of Walker Street (SR 32)	Local	2	209	22	A
12	A Street, south of Walker Street (SR 32)	Local	2	406	53	A
13	Woodward Avenue, north of Walker Street (SR 32)	Local	2	1,951	185	A
14	County Road M-1/2, north of Walker Street (SR 32)	Local	2	963	131	A
15	Yolo Street, west of Papst Avenue	Local	2	1,045	128	A
16	Newville Road (SR 32), west of County Road HH	Major Collector	2	5,018	446	A
17	County Road 16, west of County Road HH	Major Collector	2	1,160	109	A
18	Cortina Drive, north of South Street	Major Collector	2	723	67	A
19	South Street, west of Papst Avenue	Major Collector	2	2,010	241	A
20	Papst Avenue, south of South Street	Major Collector	2	1,284	140	A
21	South Street (County Rd 200), west of County Road N	Major Collector	2	981	115	A
22	County Road N, north of South Street (County Road 200)	Major Collector	2	206	38	A
23	Tehama Street, between Fifth Street & Sixth Street	Minor Collector	2	1,562	186	A
24	County Road HH, south of Newville Road (SR 32)	Minor Collector	2	945	90	A
25	Tehama Street, northeast of Swift Street (SR 32)	Minor Collector	2	1,602	150	A
26	Fourth Street, south of Walker Street (SR 32)	Minor Collector	2	2,141	214	A
27	East Street, north of Walker Street (SR 32)	Minor Collector	2	2,482	331	A
28	East Street, south of Walker Street (SR 32)	Minor Collector	2	3,072	363	A
29	Fourth Street, between Mill Street & Yolo Street	Minor Collector	2	1,350	182	A

Roadway and Count Location		Functional Classification	Lanes	Volume		Levels of Service
				Daily	Peak Hour	
30	Eighth Street, north of South Street	Minor Collector	2	1,039	97	A
31	Railroad Avenue, north of South Street	Minor Collector	2	1,983	226	A
32	East Street, north of South Street	Minor Collector	2	2,311	310	A
33	Sixth Street, between Trinity Street & Shasta Street	Arterial	2	6,369	579	A
34	Sixth Street, north of South Street	Arterial	2	5,372	496	A
35	Sixth Street, south of South Street	Arterial	2	4,612	423	A
36	SR 32 (Newville Road), east of I-5	Arterial	4	6,200	470	A
37	SR 32 (Walker Street), east of Sixth Street	Arterial	2	12,800	1,000	D
38	SR 32 (Walker Street), east of Papst Avenue	Arterial	2	9,200	700	B
39	SR 32 (Walker Street), east of County Road N	Arterial	2	9,400	900	B

Truck Routes

Trucks shall be routed through the City for safety and to minimize their impact on residential areas. Local deliveries are allowed on all streets; however, through truck traffic will be restricted to streets on the designated truck routes.

The following streets comprise the designated truck routes in the City.

- State Route 32/Walker Street
- Sixth Street (County Road 99)
- South Street (I-5 to the eastern boundary of Railroad Avenue)
- Railroad Avenue (South Street to County Road 18)
- Papst Avenue (SR 32 to South Street)
- County Road 200 (Papst Avenue to County Road N)
- Road 20 (proposed)

PUBLIC TRANSPORTATION

Rail

The City of Orland is served by railroad lines which are owned by the Union Pacific Railroad and leased/operated by the California Northern Railroad, which provides freight hauling service. The line runs north-south between Sixth and Fifth Streets. Passenger rail service provided by Amtrak runs the Sacramento-Dunsmuir line; the nearest passenger stop is in Chico. The line generally operates two trips per day.

Rail-served industrial activities, within and adjacent to the rail line, contribute to the City's economic base. Freight-rail service plays an important role in the transportation of heavy or bulk materials produced locally and shipped to regional markets. Rail spurs serving these activities have historically represented an important asset to the City of Orland and Glenn County.

Bus Service/Taxi Service

Public transportation bus service is provided to the City of Orland through Glenn Ride, a program of Glenn Transit Service. Glenn Transit Service was established by a Joint Powers Agreement in 1987 between the County and the cities of Willows and Orland. The governing board of Glenn Transit Service is the Regional Transit Committee comprising two representatives each from the three agencies. Glenn Ride is a fixed-route bus system with seven round trips every weekday and three round trips on Saturday from Willows to Chico. There are currently 14 bus stops in Orland.

School buses are operated by the Orland Unified School District. The District currently operates approximately 15 buses.

There are currently two taxi services operating within the City of Orland – one private and one subsidized by Glenn County.

Bicycle and Pedestrian Facilities

Current City standards require sidewalks along all improved streets except in the industrial areas. The City of Orland is currently planning for a pedestrian facility to include a multi-use path along Stony Creek. Additionally, the City has planned to provide multi-use trails within the rights-of-way of undergrounded canals, which could be utilized as pedestrian or bicycle pathways.

The City of Orland currently does not have many designated bicycle facilities. The City utilizes wide rights-of-way which can accommodate bicycle traffic in most areas, and bike racks are available at all schools and parks. The General Plan promotes the establishment of a shared use roadway system, but encourages newly developing areas to provide for bicycle facilities.

Airport Facilities

There are two publicly owned airports in Glenn County: Haigh Field, located near Orland, and the Willows-Glenn Airport. Haigh Field, located southeast of the City off County Road P, has a 5,160-foot paved and “pilot-controlled” lighted runway, 50 feet wide. Its length qualifies it as a “Basic Transport” facility, suitable for use by general aviation users and capable of handling small or light business jets. There is sufficient land area for expanding service and facilities to meet the City’s needs and also those of the region.

Limited regional commercial carrier service is available at the City of Chico Municipal Airport where international and national connections can be made through San Francisco International Airport. However, the nearest major regional and international service is provided by Sacramento International Airport.

Air Quality and Health Issues

Air pollution is a major regional issue that has been firmly linked to transportation—cars cause more than half of all air pollution in California. Strict emission-control standards have improved auto emissions since the 1960s, but air quality will be worse in the future because people are driving more. The California Clean Air Act was passed in 1988 to address this issue. The act established strict new air quality standards and gave air quality districts new powers to achieve them. The Conservation Element of this General Plan discusses air quality issues in more detail.

The impacts of automobile use on air quality will continue to shape regional, state, and federal transportation policies. Air quality issues will also shape local transportation policies, as efforts to reduce emissions from motor vehicles are emphasized more. Local air quality could be potentially affected by increased traffic in the Orland area. Increased traffic would contribute more exhaust emissions that would adversely affect air quality. Traffic congestion would exacerbate the problem, particularly as it would increase localized emissions of carbon monoxide.

Given the emphasis on improving air quality, the City should consider programs that encourage lesser use of gasoline-powered vehicles. As an example, the City could consider parking areas with electrical outlets for electric cars. Another alternative is the encouragement of ridesharing programs, using incentives. Still another is encouragement of the use of public transportation and other modes of transportation.

Traffic Calming

In areas where vehicle speeds are excessive, it is common practice to install traffic-calming intersection and roadway features to slow vehicles. In addition to the more traditional stop signs and speed bumps, traffic-calming techniques include roundabouts and street narrowing. City staff is in the process of evaluating alternative traffic calming techniques, which may be required in new development projects.

3.1 GOALS, POLICIES, AND PROGRAMS

GOAL 3.1: PLAN FOR, PROVIDE AND MAINTAIN A CIRCULATION SYSTEM THAT PERMITS THE SAFE AND EFFICIENT MOVEMENT OF PEOPLE AND GOODS THROUGHOUT THE CITY AND ORLAND PLANNING AREA.

Policy 3.1.A: The City shall develop and maintain a network of roads that is compatible with the general land use patterns of the City.

Policy 3.1.B: The City shall develop a vehicular circulation system that is safe and sensitive to adjoining land uses.

Program 3.1.B.1: The circulation system shall be designed to minimize excessive noise impacts on sensitive land uses. New development shall mitigate noise impacts in accordance with the requirements of the Noise Element.

Policy 3.1.C: The City shall develop an efficient, economical public transportation system that meets the mobility needs of City residents.

Policy 3.1.D: The City shall discourage through-traffic on local streets in residential areas.

Program 3.1.D.1: Should it be determined that a Local street is carrying an unacceptable level of through traffic, the City may implement appropriate means to reduce traffic through creation of one-way traffic flow, installation of traffic diversion devices, and/or any other means deemed to be acceptable.

Program 3.1.D.2: Residential subdivisions shall be designed to encourage access from Local to Collector streets and to discourage use of Local streets as a bypass to Arterial streets.

Policy 3.1.E: The City shall consider additional landscape design requirements for new projects along the entryways into the City. Maintenance of these areas may be included in assessment district(s).

GOAL 3.2: ESTABLISH A SYSTEM OF SAFE AND EFFICIENT LOCAL, COLLECTOR, AND ARTERIAL ROADS TO REDUCE TRAVEL TIME AND IMPROVE TRAFFIC SAFETY THAT IS CONSISTENT WITH THE LAND USE PATTERNS OF THE CITY.

Policy 3.2.A: Locations of Major Collector street intersections with Arterial streets shall be fixed by the Circulation Plan map. Roadway dedications and development design shall implement the Circulation Plan. Location of Major Collector alignments in newly developing areas shall be logical and efficient, and established early in the development process to aid in the consistent design of subdivisions. No development will be allowed to be constructed which would conflict with future planned streets or setbacks.

Program 3.2.A.1: Encourage property owners in newly developing areas to prepare Master Plans or Specific Plans that identify future major street alignments. The City will participate in the design of street alignments in advance of development to ensure consistent and logical design of the circulation system.

Program 3.2.A.2: Continue to work with Glenn County to coordinate new street alignments and improvements.

Program 3.2.A.3: The City may pursue the reservation of right-of-way and define specific development standards and requirements through the preparation and adoption of Roadway Plan Lines.

Policy 3.2.B: The City shall coordinate planning and development of the circulation system with development approvals throughout the City and Planning Area. All proposed land divisions shall be legally accessible by an improved public street.

Program 3.2.B.1: The City's functional street classification system shall include Arterial streets, Major and Minor Collector streets, and Local streets.

Program 3.2.B.2: Prepare and adopt Standard Plans and Specifications for all streets and roads including the following guidelines and standards:

- 1) Major Collector streets shall be built at an approximate separation of one-half mile, typically leading to connections with an Arterial street(s). Because of existing right-of-way limitations, Major Collector streets may connect with Minor Collector streets when acceptable traffic volumes warrant such a connection.*
- 2) Minor Collector streets may be on less than one-half mile separation and may be an extension of a Major Collector street or may be an existing street that connects one part of the City with another.*
- 3) Minor Collector streets shall be utilized in new development areas to carry higher volume local traffic to Major Collector or Arterial streets.*
- 4) The City shall prepare and adopt access standards for Arterial and Collector streets, which generally conform to the following guidelines:*

Arterial Street Standards

- a. Driveway access to major activity centers should be located no closer than 200 feet to the intersection of a Major Collector or Arterial street.*

- b. *The distance between commercial or industrial driveways on Arterial streets should not be less than 300 feet.*
- c. *Existing points of ingress and egress shall be consolidated whenever possible. Driveway consolidation for new development shall be encouraged through access agreements along Arterial streets.*
- d. *Where there is no adopted design for median breaks on an Arterial street, there should be not less than 1,000 feet between median breaks (excluding left turn provisions). Median breaks should be consistent with the standards for driveways (not less than 300 feet from an adjacent intersection of an Arterial street).*
- e. *Separation of Minor Collector street entry points should not be less than 500 feet on Arterial streets and Major Collector streets.*
- f. *Single-family residential driveways are prohibited on new Arterial streets and shall be discouraged on existing Arterial streets.*

Collector Street Standards

- a. *Driveway access to major activity centers should be located no closer than 200 feet to the adjacent intersection of a Major Collector or Arterial street.*
 - b. *The distance between commercial or industrial driveways on Collector streets should not be less than 200 feet.*
 - c. *Raised concrete medians may be provided where left turn control is needed, and painted medians may be used at two-way left turn pockets where appropriate. Where concrete medians are provided, median breaks should be spaced not less than 300 feet apart.*
- 6) *Residential development shall not have direct access to and shall be oriented away (side-on or rear-on) from Arterial and Major Collector streets, and properly buffered so that the traffic carrying capacity on the street will be preserved and the residential environment protected from the potentially adverse characteristics of the street.*
- 7) *Where possible, Arterial and Major and Minor Collector streets shall form 4-leg, right-angle intersections; jogs, offset and skewed intersections of streets in near proximity shall be avoided.*

Policy 3.2.C: All streets, roads and easements within the City and Orland Planning Area shall be offered for dedication to the City and all improvements and rights-of-way shall be developed to City standards.

Program 3.2.C.1: Ultimate right-of-way shall be dedicated and/or developed to the appropriate width when a zone change to a greater density or intensity, division of property, or new development or major remodeling occurs.

Policy 3.2.D: On developed streets, where the existing right-of-way does not meet the current standards, the City will adopt programs to acquire the ultimate right-of-way where practical and determined to be necessary or desirable. Funding mechanisms may include the use of traffic impact fee moneys.

Program 3.2.D.1: Include the acquisition of right-of-way and the construction or reconstruction of streets in its Capital Improvement Program. The City reserves the right to reduce the ultimate right-of-way to avoid existing development for the construction of a travelway that generally meets the street classification standards, by reducing the area provided for landscaping, utilities, parking and other non-travel use.

Program 3.2.D.2: Additional right-of-way on the east side of Papst Avenue, 400 feet south of Bryant Street, and at Papst and Highway 32, will be acquired for City standard road widths. At Papst and Yolo streets, right-of-way will be acquired and intersection will be realigned to improve the north/south curve.

Policy 3.2.E: New development shall be required to mitigate traffic impacts associated with the project.

Program 3.2.E.1: Traffic studies of affected streets may be required as part of the environmental assessment of proposed projects to assure citywide traffic service levels are maintained.

Program 3.2.E.2: Traffic studies shall include level-of-service forecasts to account for individual and cumulative major land use changes in the City. Level-of-service forecasts shall be used to identify deficient roadways and update street improvement plans and priorities.

Policy 3.2.F: The City shall promote an active policy of consolidating driveways, access points and curb cuts along existing developed Arterial streets when a zone change to a greater density or intensity, division of property, or new development or a major remodeling occurs. The use of common driveways may be required as a condition for obtaining an encroachment onto a City dedicated road.

Policy 3.2.G: Locations of truck routes shall be fixed as designated on the Truck Route Map. The City shall maintain and enforce designated truck routes.

Program 3.2.G.1: Periodically review the list of streets designated as truck routes, and provide public notification of any changes to the truck route system.

Policy 3.2.H: To help ensure that adequate and safe travelways can be developed through existing developed areas of the City, right-of-way standards for each classification may be modified.

Policy 3.2.I: To ensure emergency access and response, new developments in the City and Planning Area will require circulation improvements that provide a second means of access for police, fire and medical vehicles.

Program 3.2.I.1: The City and County will coordinate street naming and addressing to assure prompt and efficient emergency response.

Policy 3.2.J: The City shall work with commercial and industrial uses to improve access to road and rail service to facilitate economic development activities.

Policy 3.2.K: Proposed streets may vary from the location shown on the Circulation Plan provided that they intersect with existing streets and the following circumstances and situations exist:

- a) There must be circumstances surrounding the applicant's situation, limited to the physical conditions of the property, which are unique in that other property in the area does not have the same conditions. The unique circumstances must cause hardship to the property owner to justify the authorization to deviate from the planned road location.
- b) A deviation from this requirement shall not be granted if it will adversely affect the interests of the public or the interests of other residents and property owners within the vicinity of the premises in question.
- c) A deviation may be authorized when it is also considered as being consistent with the objectives of the General Plan.
- d) The mere existence of a peculiar situation which will result in unnecessary hardship to the applicant does not necessarily require the granting of a deviation.
- e) The granting of a deviation must not constitute the granting of a "special privilege" inconsistent with the limitations on other nearby properties.

Policy 3.2.L: Each parcel that is developed within the Planning Area shall provide for street connections to adjacent parcels within the Planning Area.

GOAL 3.3: FORMULATE AND ADOPT CIRCULATION DESIGN AND IMPROVEMENT STANDARDS THAT REQUIRE A LEVEL OF SERVICE CONSISTENT WITH THE DEMANDS GENERATED BY PROPOSED DEVELOPMENT, PUBLIC SAFETY, AND THE EFFICIENT USE OF PUBLIC AND PRIVATE RESOURCES AND WHICH ARE UNIFORMLY APPLIED IN THE ORLAND PLANNING AREA.

Policy 3.3.A: The City shall construct street and highway improvements to maintain an overall daily roadway level of service of "C" with an a.m. and p.m.

peak-hour roadway and intersection level of service of “D” or better, unless other public health, safety, or welfare factors determine otherwise.

Policy 3.3.B: The City shall establish an inventory of City roads which will determine priorities for meeting circulation and transportation needs. Transportation projects shall be prioritized with emphasis on enhancing safety, reducing traffic congestion, and improving traffic circulation.

Policy 3.3.C: The City shall install traffic control devices at intersections, as needed, for public health and safety and to reduce traffic congestion at key intersections throughout the City.

Program 3.3.C.1: Improve intersections operating at less than p.m. peak-hour level of service “D” conditions by adding appropriate turning lanes to congested approaches, widening intersection approaches, or installing traffic signals:

- *Signalization shall be predicated upon a warrant analysis, public safety and the discretion of the City. Signalization shall be considered at, but not limited to, the following intersections: (a) South and Sixth streets; (b) Date and Sixth streets; (c) Papst and Walker streets; (d) I-5 northbound ramps and SR 32; (e) I-5 southbound ramps and SR 32; and (f) Newville Road and County Road HH.*
- *Realign intersections of Papst and Yolo streets and County Road HH and County Road 14.*
- *Complete road connections at Papst and Road 13 and Rennat and Almond Way.*
- *Refer to Caltrans any request to signalize a State Route located in the City.*

GOAL 3.4: ACHIEVE A COORDINATED REGIONAL AND LOCAL TRANSPORTATION SYSTEM THAT MINIMIZES TRAFFIC CONGESTION AND EFFICIENTLY SERVES USERS.

Policy 3.4.A: Local circulation system improvements shall be consistent with the goals and objectives of the Glenn County Regional Transportation Plan.

Policy 3.4.B: The City shall work with Caltrans to identify needed improvements to its highway facilities in the City and implement necessary programs to assist in improving State Route interchanges/intersections with local roadways.

Policy 3.4.C: The City shall coordinate local transportation plans with regional plans to ensure eligibility for state and federal funding.

GOAL 3.5: PROVIDE SAFE AND EFFICIENT PARKING AND LOADING FACILITIES FOR ALL NON-RESIDENTIAL LAND USES.

Policy 3.5.A: The City shall encourage shared parking facilities for both private businesses and public agencies.

Program 3.5.A.1: Adjacent parking areas for large commercial and professional developments should be designed to allow interconnection and free flow of traffic between those facilities. Access easements and agreements should be obtained during the development process to ensure future access.

Policy 3.5.B: The City shall reserve on-street parking in commercial areas for short-term users.

Program 3.5.B.1: Parking standards shall be evaluated for new development to ensure that parking requirements are satisfied within walking distance of the commercial area.

Policy 3.5.C: The City shall support the use of the fairgrounds parking lot for car pool parking.

GOAL 3.6: ENCOURAGE TRANSPORTATION ALTERNATIVES TO THE AUTOMOBILE.

Policy 3.6.A: Planning and development of Arterial and Major Collector streets shall include design features that can be used as public transit stops.

Program 3.6.A.1: Arterial and Major Collector streets shall be designed to provide for bus pull-outs and transit stops at locations determined by the City and transit agency to be appropriate.

Policy 3.6.B: The City shall encourage the use of car-pooling, vanpooling and flexible employment hours.

Program 3.6.B.1: New development shall consider Transportation System Management and Transportation Demand Management as strategies for the mitigation of traffic and parking congestion. Public transit, traffic management, ride sharing and parking management are to be used to the greatest extent practical.

Policy 3.6.C: The City shall coordinate with regional transit planners to determine the feasibility of developing and/or improving commuter bus service.

Policy 3.6.D: The City shall continue to support the continuation of transportation programs provided by social service agencies, particularly those serving persons with disabilities or other limitations. Coordination of other social service transit providers including schools, health services, and others should be recognized in the planning of circulation system.

Policy 3.6.E: The City shall work cooperatively with Glenn County to enhance aviation-related transportation options.

GOAL 3.7: A NON-VEHICULAR CIRCULATION SYSTEM LINKING IMPORTANT PUBLIC PLACES WITHIN THE COMMUNITY.

Policy 3.7.A: The City shall support the concept of an east/west multi-modal circulation link in north Orland.

Policy 3.7.B: The City should utilize canal rights-of-way and drainage facilities for multi-use purposes, to include trails.

Policy 3.7.C: The City shall prioritize the creation of linkages between public places (schools, parks, government buildings) to facilitate the movement of people through the City.

Policy 3.7.D: The City shall prioritize the establishment of a pedestrian crossing of Highway 32 linking residences to parks.

GOAL 3.8: A SAFE SIDEWALK SYSTEM WHICH PROVIDES MAXIMUM OPPORTUNITIES FOR PEDESTRIAN TRAFFIC THROUGHOUT THE CITY.

Policy 3.8.A: Adequate sidewalks shall be planned and constructed in connection with street construction work in the City. Where existing roads may require additional right-of-way to accommodate full improvements including sidewalks, and where it is impractical to acquire sufficient right-of-way, the vehicle travelway will be the first priority.

Policy 3.8.B: Subdivision layouts shall include designs that promote pedestrian circulation in a safe and efficient manner.

Program 3.8.B.1: Implement street standards that include sidewalk or walkways on both sides of streets, where appropriate.

Policy 3.8.C: Bicycle lanes should be established where feasible along Major and Minor Collectors in newly developing areas. A bicycle route system should be identified which serves the existing developed City. Where bicycle lanes are proposed, they should be considered a shared facility with vehicular traffic on the street.

Policy 3.8.D: The City shall encourage existing facilities and require future facilities to conform to the American Disabilities Act provisions requiring access for disabled persons.

Policy 3.8.E: The City shall maximize the use of rights-of-way, easements, and utility corridors through the installation of pedestrian and bicycle facilities.

GOAL 3.9: CONTRIBUTE TOWARD IMPROVING THE AIR QUALITY OF THE REGION THROUGH MORE EFFICIENT USE OF PRIVATE VEHICLES AND INCREASED USE OF ALTERNATIVE TRANSPORTATION MODES.

Policy 3.9.A: The City shall maintain and improve, where possible, environmental quality by the design of the circulation system and alternate forms of transportation.

Policy 3.9.B: The City shall support coordination with other cities, the County and planning agencies concerning land use and transportation planning as a means of improving air quality.

Policy 3.9.C: The City shall encourage the development of employment opportunities in Orland to reduce the need to commute to other communities for employment.

Policy 3.9.D: The City shall support the expansion and improvement of transit systems and ride sharing programs to reduce the number of single-occupant vehicle trips.

Policy 3.9.E: The City shall support the use of alternatively fueled vehicles and fueling stations for public transit vehicles and City and private vehicles.

GOAL 3.10: TO PROVIDE THE HIGHEST LEVEL OF ROADWAY MAINTENANCE FOR CITY RESIDENTS.

Policy 3.10.A: The City shall maintain roadways in a condition that provides for the safety and comfort of roadway users.

4.0 SAFETY ELEMENT

CHAPTER

4.0

Safety Element



Railroad crossing in northern Orland

INTRODUCTION

The Safety Element, a legally required element, is included in this General Plan to address the safety services performed by the City of Orland related to public safety, such as fire protection and crime prevention. The City also endeavors to plan for hazards such as flooding, earthquakes, and other potentially dangerous situations. It seeks to provide education in disaster preparedness, including public outreach, to enable residents to help themselves during a disaster. The Safety Element addresses safety concerns of the community and sets forth the goals and policies essential in addressing these concerns.

LEGAL BASIS AND REQUIREMENTS

California State law (Government Code Section 65302(g)) requires that a safety element be included within the general plan for:

[T]he protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslide and

landslides; subsidence and other geologic hazards known to the legislative body; flooding; wildland and urban fires.

In addition to these concerns, this Element also addresses the issues of hazardous waste management and emergency response preparedness.

4.1 EMERGENCY PREPAREDNESS

STANDARDIZED EMERGENCY MANAGEMENT SYSTEM

As a result of the 1991 East Bay Hills Fire in Oakland, Senate Bill 1841 was introduced by Senator Petris, passed by the California legislature and made effective January 1, 1993. The legislation established the Standardized Emergency Management System (SEMS). The intent of the law is to improve the coordination of state and local emergency response in California. The law is found in Section 8607 of the Government Code, and the regulations governing SEMS became effective September 2, 1994.

The law directed the State of California Office of Emergency Services (OES), in coordination with other state agencies and interested local emergency management agencies, to establish, implement and maintain SEMS by December 1, 1996.

The law stipulates that all state agencies must use SEMS in responding to emergencies involving multiple jurisdictions or multiple agencies. Local governments must use SEMS in responding to emergencies involving multiple jurisdictions of multiple agencies in order to be eligible for state funding or response-related personnel costs. Participation in SEMS is also required to assure reimbursement of expenses resulting from a State-declared emergency. SEMS is the standard throughout the State of California.

EVACUATION ROUTES

Standard evacuation routes have not been designated within Glenn County or the City of Orland. It is likely that Caltrans facilities such as State Route 32 and Interstate 5 would be used to evacuate the community in an emergency. Major county roads such as Sixth Street (County Road 99) and South Street are also suited to evacuation depending on the location of the emergency. These routes are all identified as Arterials in the Circulation Element of the City of Orland General Plan.

GOALS, POLICIES, AND PROGRAMS

GOAL 4.1: ENSURE THAT THE CITY OF ORLAND AND INVOLVED LOCAL AGENCIES ARE ABLE TO EFFECTIVELY RESPOND TO EMERGENCY SITUATIONS THAT MAY THREATEN THE PEOPLE AND PROPERTY OF ORLAND.

Policy 4.1.A: The City shall work toward cultivating and maintaining a relationship with other agencies that improve the City's ability to serve and protect the citizens of Orland.

Policy 4.1.B: The City shall continue participation in emergency preparedness planning with Glenn County.

Program 4.1.B.1: Review procedures for local implementation of the County Emergency Operations Plan (EOP) and help to educate the community on the need for emergency preparedness.

Program 4.1.B.2: Pursue adoption of the State of California Standardized Emergency Management System (SEMS).

4.2 FLOOD HAZARD

Areas adjacent to Stony Creek and Hambright Creek are subject to flooding during heavy rainfall. Severe flooding is prevented in the Planning Area by flood control dams on Stony Creek and the Sacramento River. A designated floodway has been mapped and adopted by the State Reclamation Board for Stony Creek. The State has jurisdiction within this designated floodway and supersedes local control.

Flood hazard areas within the Planning Area have been mapped by the Federal Emergency Management Agency (FEMA) on Flood Insurance Rate Maps (FIRM). However, these maps are designed for use in determining flood insurance needs and do not necessarily show all areas subject to flooding. As discussed in further detail within the Background Report, localized flooding is due, in part, to Orland's storm drainage system operating at capacity.

According to the 1996 FEMA Flood Insurance Rate Map, which was the most current information available, most of the area in the northwest portion of the City and along the northern edge of the Planning Area is in either Flood Zone A or Flood Zone X, which means the area may be subject to flooding. Areas located directly adjacent to Stony Creek and Hambright Creek are within Flood Zone A, which is defined as area within the 100-Year Floodway. Areas located to the north and south of Stony and Hambright creeks, but not immediately adjacent to them, are generally designated as being within Flood Zone X, which is area within the 500-Year Floodway.

It should also be noted that Flood Zone X overlaps small portions of the northwest corner of Orland's city limits. Other than this portion, the remainder of Orland is not subject to flood events, according to the 1996 FEMA Flood Insurance Rate Map. See the Background Report for additional information.

Local Flooding

As mentioned previously, a very small portion of northwest Orland is located within the 100-year flood zone as defined by FEMA. There is also significant area in the north portions of the Planning Area that are in either the 100- or 500-year flood zone. Localized flooding occurs in and around Orland during storms of less than 100-year proportions.

In extremely wet years, the capacity at the Lely Aquatic Park may be exceeded and stormwater flows onto County Road 200, then southeasterly along County Road 200. Although flood hazard areas within the Planning Area have been mapped by FEMA on Flood Insurance Rate Maps, these maps are designed for use in determining flood

insurance needs and do not necessarily show all areas subject to flooding, such as agricultural areas which have flooding potential due to irrigation water delivery systems and agricultural practices. As discussed in more detail in the Public Facilities and Services section of the Orland Background Report, localized flooding is due, in part, to Orland's storm drainage system operating at capacity. In addition to operating at capacity, localized flooding can also be attributed to obstructions or blockages in the system often caused by illegal dumping. According to the City Engineer, the City's storm drainage system is adequate and is not reflected as being substandard or deficient.

Localized flooding can also occur as an unintended result of flood irrigation of adjacent agricultural land. The amount of flooding varies depending on the difference in road and field elevations, but can be a temporary hazard to traffic.

Regional Flooding

The primary regional flooding threat for the City of Orland is the potential failure of Black Butte Dam located northwest of the City.

Dam Inundation

The California Office of Emergency Services (OES) has developed and approved dam failure inundation maps for areas below California's dams. These maps are intended to be used by state and local officials for the development and approval of dam failure emergency procedures. The maps are also used to provide information needed to make natural hazard disclosure statements. Files are maintained on the OES home page. The inundation maps maintained on file by OES are prepared for emergency planning purposes only and may not be drawn at a sufficient scale or level of detail to identify specific parcels of land. More information on these maps is available in the Background Report.

Black Butte Reservoir is fed by Upper Stony Creek and has a capacity of approximately 137,000 acre-feet of water. However, it is uncommon for the actual facility to reach capacity and the reservoir levels are typically lower than capacity during most of each year.

As shown in **Figure 4-1**, the entire Planning Area is subject to flooding should the Black Butte Dam fail. The U.S. Army Corps of Engineers Inundation Map shows a three-hour contour line just east of the City which advises that inundation is expected to occur within three hours of dam failure.

GOALS, POLICIES, AND PROGRAMS

GOAL 4.2: MINIMIZE THE RISK OF PERSONAL INJURY AND PROPERTY DAMAGE RESULTING FROM FLOODING.

Policy 4.2.A: The City shall work to develop and implement flood control strategies for the City of Orland.

Program 4.2.A.1: As necessary, the City may adopt new standards to ensure flood safety in new construction.

Program 4.2.A.2: New development projects shall be designed to avoid increases in peak storm runoff levels.

Program 4.2.A.3: All privately owned storm drainage basins and systems shall have a mechanism to reimburse the City for maintenance costs should the private maintenance fail.

Program 4.2.A.4: For any project that may affect a Caltrans facility, the City shall submit hydrologic/hydraulic study information and drainage plans for buildings, streets, parking, etc., to Caltrans in order that they may adequately evaluate impacts upon the State's rights-of-way and drainage facilities.

Policy 4.2.B: New development shall not be approved in areas which are subject to flooding without prior review and approval of plans for improvements which provide a minimum flood protection level equal to the 100-year occurrence storm event.

Policy 4.2.C: Development of habitable or commercial structures within the 100-year floodplain must be completely mitigated through proper design.

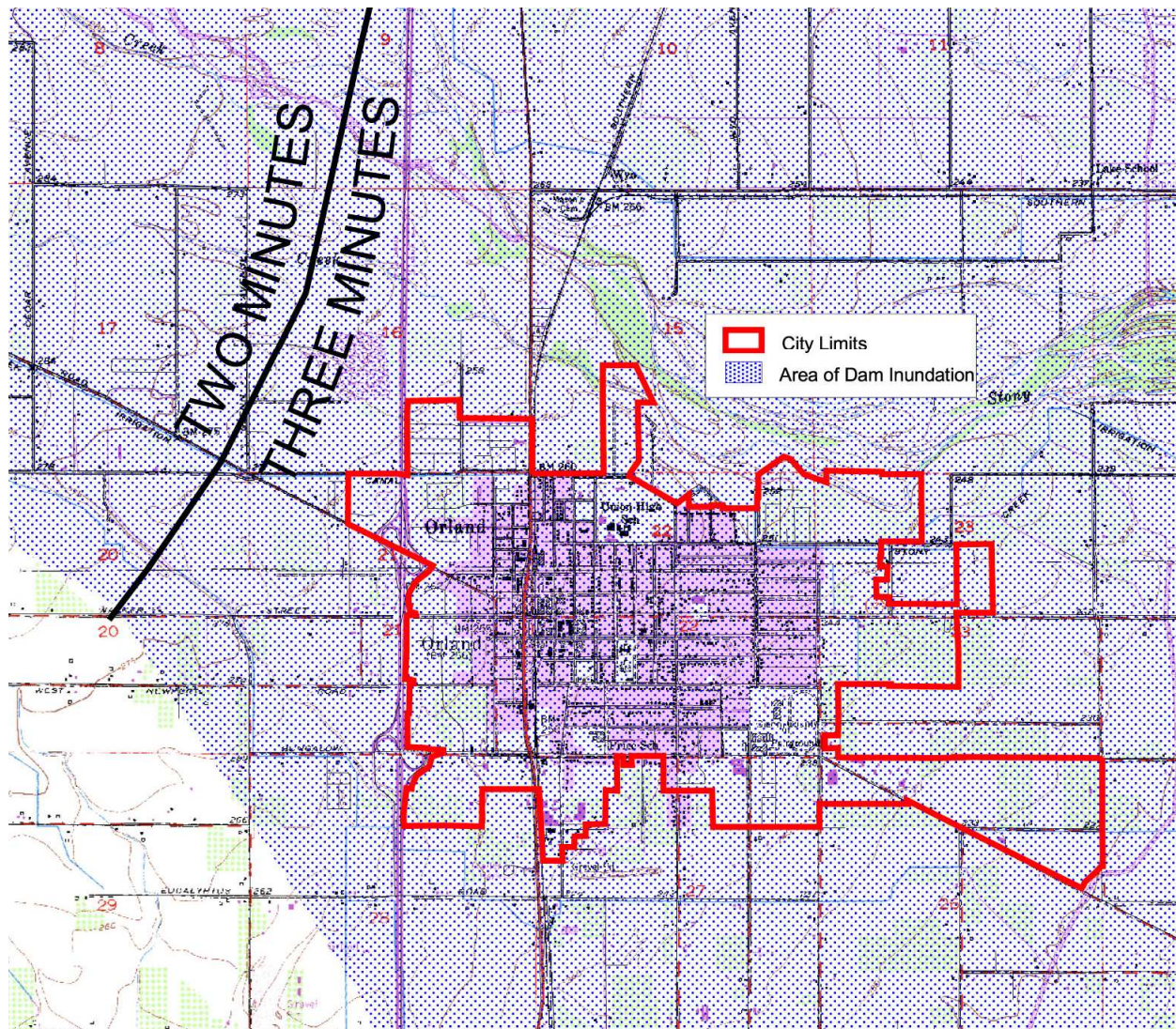
4.3 FIRE PROTECTION

Fire protection services within Orland are provided by the Orland Volunteer Fire Department. The City Department has a mutual aid agreement with the Orland Rural Fire District which is a separate department that provides fire protection services to greater Orland's surrounding, unincorporated county area. Both of these fire protection services are staffed by volunteers.

There are currently 40 active volunteers in the Orland Volunteer Fire Department. Training, equipment, and other funding is provided by the City's General Fund. The Department provides services in the form of fire emergency response, medical emergency response, and disaster aid. The Department service area is within the Orland city limits.

In 2007, there were approximately 512 fire and emergency calls for service to the Department. Of these calls, 370 were medically related. According to the Chief, the local ambulance district responds to approximately three calls per day, often outside of the city limits. See Section 4.4 below for more information regarding emergency medical services, and see the Background Report for more information regarding fire protection services.

**FIGURE 4-1
DAM INUNDATION MAP**



FIRE THREAT

Three types of fires have the potential for resulting in major losses in and around the City. These include fire or explosion at one of the local agricultural processing plants, major operational failure of the rail service or interstate that pass through Orland, and urban conflagration (multiple simultaneous structural fires).

The most likely fire threat in Orland would be a structural fire within a residence or small business. There are no unique or significant fire hazards associated with the rural/urban interface between the City and surrounding open spaces. The threat of wildland fire is considered to be minimal based on land uses surrounding the City.

The City of Orland Background Report provides additional information on state vs. local responsibility areas and provides Fire Threat Maps for the Orland area.

RESPONSE TIME

Average response time for fire protection and emergency medical services within the City of Orland is 3-5 minutes for arrival at the station, approximately 1 minute to prepare and leave the station, and an additional 2-3 minutes to the actual call site. In the future, creation of a satellite station(s) could reduce these response times considerably to outlying areas of the City. The placement of an unstaffed satellite equipment facility in the area of the northeastern section of the Planning Area could serve the purpose of reducing response times for that area, as well as to the east Orland area.

Response time to an emergency situation is affected by adequate street access for emergency vehicles. Minimum standards for roadway widths and guidelines for ensuring adequate emergency vehicle access are provided within the Circulation Element of this General Plan.

A final component of rapid emergency response is the clear identification of addresses on homes and businesses. Without clearly recognizable addresses, emergency response may be unnecessarily delayed.

WATER DELIVERY SYSTEM

There are over 300 hydrants within the city limits. Although all of the 300 hydrants are capable of delivering the maximum flow available (1,500 gallons per minute on average), such availability depends on the water mains that supply the specific hydrants. Therefore, the average flow for hydrants within the City is approximately 700 gallons per minute. The City is responsible for checking all hydrants and conducting proper maintenance to ensure that they are operating properly.

Because the City is expanding outward in multiple directions, there is some concern that increased population could add strain to fire protection services in the area. The City currently has plans to construct a new water storage tank with a minimum usable capacity of 1 million gallons. Construction of this facility would address the concerns of water supply dependability, particularly if the tank and its pumps are sized to fire-flow requirements and normal water usage computed at the peak use period (June to August).

For additional discussion and policies related to water supply and wastewater, please see **Section 5.7** and **Section 5.8** of the Open Space, Conservation, and Public Facilities Element.

FIRE STATION STAFFING/EQUIPMENT

As mentioned previously, the department is currently staffed by a 40-member volunteer crew that operates one chief's truck, one utility pickup, one rescue squad, four engines

(one 1,250 GPM, two 1,000 GPM, and one 500 GPM), one ladder truck, and one tank trailer.

GOALS, POLICIES, AND PROGRAMS

GOAL 4.3: PROTECT PEOPLE AND PROPERTY WITHIN THE CITY OF ORLAND AGAINST FIRE-RELATED LOSS AND DAMAGE.

Policy 4.3.A: The City shall maintain current levels of service for fire protection by continuing to require development to provide and/or fund fire protection facilities, operations, and maintenance.

Program 4.3.A.1: Develop and adopt standards for fire suppression facilities, including water supply and distribution system standard, and fire hydrant spacing.

Program 4.3.A.2: Review the need for automatic fire protection sprinklers within new residential and commercial development. If needed, incorporate such requirements within the City Building Code.

Program 4.3.A.3: Require all new development to design public facility improvements to ensure that water volume and hydrant spacing are adequate to support efficient and effective fire suppression.

Program 4.3.A.4: Consider amending existing ordinances or adopting a new ordinance that requires clear and recognizable addresses for all structures within the City of Orland.

Program 4.3.A.5: Enforce the requirements of Public Resources Code Sections 4290 and 4291 on all development projects. This includes, but is not limited to, the following:

- Maintain roofs of structures free of vegetative growth.*
- Remove any portion of trees growing within ten (10) feet of chimney/stove pipe outlets.*
- Maintain screens over chimney/stovepipe outlets or other devices that burn any solid or liquid fuel.*

Policy 4.3.B: The City shall continue to support the needs of the Orland Volunteer Fire Department and shall provide assistance as necessary to maintain an efficient and functional fire service operation.

Policy 4.3.C: The City shall strive to improve the City's current Insurance Service Office (ISO) rating of four, for safety and associated economic benefits.

4.4 OTHER EMERGENCY SERVICES

This section discusses emergency services other than fire protection. These services include police protection, emergency medical services, and health services. Section 4.3, Fire Protection, describes existing fire protection services in the City of Orland and includes goals, policies, and programs related to those services.

POLICE PROTECTION

The City of Orland Police Department provides police protection services within the City of Orland. The main station is located at 817 Fourth Street. However, due to the need for increased space, the Police Department is in the process of renovating an existing building located on Fourth Street in downtown Orland. The new building will provide the Police Department nearly double the square footage area of current building. The new police station is scheduled for completion by 2010-2011.

The Police Department office is open from 8 a.m. to 5 p.m. Monday through Friday, except holidays. During weekends and at night, services are provided by the Glenn County Sheriff's Office, which provides patrol and emergency dispatch services to the City.

The Orland Police Department currently has 16 employees, comprising one sworn community service officer, three non-sworn support employees, two sergeants, nine patrol officers, and one chief. The Police Department uses five vehicles for its services. For more information on the Police Department, please see the Orland Background Report.

EMERGENCY MEDICAL SERVICES

The Orland Volunteer Fire Department assumes the first response to all medical emergency calls in the City. In addition to fire emergency services, the Department provides services in the form of medical emergency response and disaster aid. The Department currently has two ambulances, with one staffed 24 hours per day. The majority of the fire department volunteers are either EMT-trained or are trained First Responders. See the Background Report for more information.

HEALTH SERVICES

Orland's role in health services issues is somewhat limited. The City is not directly involved with the establishment, management, or operation of any health care facilities. Nevertheless, Orland is a growing community with an ever-increasing need for health services that is recognized by the City in its planning efforts.

Currently, there is no hospital in the City of Orland. The closest full-service hospital is Enloe Medical Center in Chico, which is located approximately 18 miles to the east. Additionally, the Glenn Medical Center is located 15 miles to the south of Orland in Willows.

Del Norte Clinics, Inc. has a branch medical center at 1211 Cortina Drive in Orland. This clinic accepts Medi-Cal as well as private insurance and offers a sliding scale for income-eligible patients. Additionally, the Glenn County Health Department is a division of the Glenn County Health Services Agency. Located at 242 North Villa in Willows, the Department offers multiple health services as well as numerous health education services.

OUTLOOK

At the current population of 7,179, the Orland Police Department provides approximately 1.9 officers per 1,000 residents (not including non-sworn support employees). The Chief of Police has stated that the current force-level is able to meet current call demands within the City area. However, it is anticipated that during the life of the 2008–2028 General Plan, the City will need to expand the size of the Police Department staff in order to continue to serve the growing population.

Generally speaking, cities maintain a fire staffing/population ratio similar to police departments. However, because Orland's fire protection services are made up of volunteers, maintenance of a specific ratio may be impractical. While it is the City's goal to respond to fires within five minutes, the nature of a volunteer force precludes this from always occurring. As mentioned above, the placement of an unstaffed satellite equipment facility in the area of the northeastern section of the Planning Area could serve the purpose of reducing response times for that area, as well as to the east Orland area.

There are currently no plans for expansion of EMS or hospital services. As the City's population grows, the need for emergency medical services and medical facilities will likewise increase. The City has a limited role in medical services, as most facilities are operated by private organizations.

GOALS, POLICIES, AND PROGRAMS

GOAL 4.4: PROVIDE POLICE AND EMERGENCY MEDICAL SERVICES IN A WELL-PLANNED, COST-EFFECTIVE, AND PROFESSIONAL MANNER.

Policy 4.4.A: The City shall strive to provide high-quality police services for City residents and businesses with adequate facilities, modern technology and current training to maximize job performance.

Program 4.4.A.1: The City should continue to emphasize the use of modern technology in providing effective law enforcement for the community and support such technology through the budget. Up-to-date technology assists in the maintenance and improvement of service levels and response times. The City should strive to maintain and improve its stated response time standards for all calls, especially emergency.

Program 4.4.A.2: The City should continue to participate in its mutual aid agreements and coordination between the City's Police Department and other law enforcement agencies.

Program 4.4.A.3: During its annual budget review, the City shall consider the needs of the Orland Police Department and will support those needs with budget revenues, grants, and impact fees. As part of the budget review process, the City shall review impact fee rates to ensure they adequately reflect a fair share of funding by development and other law enforcement service recipients.

Policy 4.4.B: The City shall incorporate police protection considerations into City and community activities.

Program 4.4.B.1: Refer development proposals to the Orland Police Department for review and comment. The review process shall consider the provision of access to lands for emergency services, street access to all structures, and crime prevention programs.

Program 4.4.B.2: Promote ongoing public safety programs, including Neighborhood Watch, Police Explorers, Volunteers in Police Services (VIPS) and other public education and crime prevention efforts.

GOAL 4.5: ENSURE A RANGE OF HEALTH CARE SERVICES ARE CONVENIENTLY AVAILABLE TO CITY RESIDENTS.

Policy 4.5.A: The City shall assist local health service and care providers in pursuing funding opportunities, both public and private, for the planning, construction and staffing of health and medical facilities.

Program 4.5.A.1: The City should take the lead role and/or partner with nonprofit organizations in applying for funds that they cannot pursue directly because of their legal status (e.g., Community Development Block Grant program).

4.6 GEOLOGIC HAZARDS

This section addresses seismic and geologic hazards that could result in structural failures and damage to structures in the City of Orland. According to the Glenn County Seismic Safety Element, geologic hazards such as earthquake shaking, landslides, and volcanic eruption are minimal and are not expected to be a major problem in the planning area. However, the information below provides a preliminary indication of the degree of potential hazard or risk that may exist for various geologic or seismic events within the Planning Area.

SUBSIDENCE

Subsidence occurs at great depths below the surface when subsurface pressure is reduced by the withdrawal of fluids (i.e., groundwater, natural gas). A vacuum may be

created that gradually causes sinking of the ground. The primary cause of subsidence in the Planning Area would be from overdrafting of groundwater. Currently, no area of serious overdraft has been identified in the Planning Area. Additionally, there have been no reports of subsidence.

EROSION

Erosion may be expected in the Planning Area where protective vegetation is removed by construction, fire, or cultivation. Factors that contribute to erosion include topography, rainfall, and soil type. Because the Orland Planning Area is relatively flat, there is a low potential for erosion. For a discussion of erosion concerns along Stony Creek, see the Open Space, Conservation, and Public Facilities Element.

EXPANSIVE SOILS

A soil's potential to shrink and swell depends on the amount and types of clay in the soil. Certain clays expand when wet and disproportionately shrink when dry. Highly expansive soils can cause structural damage to foundations and roads and are less suitable for development than non-expansive soils. According to the Glenn County General Plan, the Orland Planning Area has a low to high potential for expansive soils. A map of expansive soils in the General Plan shows the majority of expansive soils west of I-5. Detailed geologic investigations may be necessary for areas with moderate to high shrink-swell potential. Development on expansive soils may require special grading and construction techniques. This type of soil also increases the cost of installing sewer and water lines and affects the design of storm drainage facilities since percolation is slow. This may present specific challenges in developing commercial uses in areas west of I-5. Additional soils information is presented in **Table 4-1**.

**TABLE 4-1
SELECTED PHYSICAL AND ENGINEERING PROPERTIES OF SOILS IN THE ORLAND GENERAL PLAN AREA**

Soil	Depth (inches)	USDA Texture	Percentage passing sieve number:				Liquid Limit %	Plasticity Index	Permeability: in./hr.	Shrink-Swell Potential
			4	10	40	200				
Czk: Cortina	0-8	Gravelly fine sandy loam	55-80	50-75	35-60	25-40	20-30	NP-5	2.00-6.00	Low
	8-15	Stratified very gravelly loamy sand to very gravelly loam	30-60	25-55	15-40	5-35	20-30	NP-5	2.00-6.00	Low
	15-60	Stratified very gravelly sand to very gravelly loamy sand	30-60	25-55	15-45	0-10	---	NP	6.00-20.00	Low
Czt: Cortina	0-8	Very gravelly sandy loam	30-60	25-55	15-50	5-35	20-30	NP-5	2.00-6.00	Low
	8-32	Stratified very gravelly loamy sand to very gravelly loam	30-60	25-55	15-40	5-35	20-30	NP-5	2.00-6.00	Low
	32-60	Stratified very gravelly sand to very gravelly loamy sand	30-60	25-55	15-45	0-10	---	NP	6.00-20.00	Low

Soil	Depth (inches)	USDA Texture	Percentage passing sieve number:				Liquid Limit %	Plasticity Index	Permeability: in./hr.	Shrink-Swell Potential
			4	10	40	200				
Omr: Orland	0-11	Loam	80-95	75-90	65-85	50-65	25-35	NP-10	0.60-2.00	Low
	11-42	Stratified loam to silt loam	80-95	75-90	65-85	50-65	25-35	NP-10	0.60-2.00	Low
	42-60	Stratified sand to gravel	15-65	10-60	5-40	0-15	---	NP	>20.00	Low
Wg: Wyo	0-11	Loam	80-95	75-90	65-85	50-65	25-35	5-10	0.60-2.00	Low
	11-42	Loam, very fine sandy loam	80-95	75-90	65-85	50-65	25-35	5-10	0.60-2.00	Low
	42-60	Sand and Gravel	30-55	25-50	20-30	0-5	---	NP	>20.00	Low
Wh: Wyo	0-11	Gravelly loam	65-90	55-75	50-75	35-50	25-35	5-10	0.60-2.00	Low
	11-30	Gravelly loam	65-90	55-75	50-75	35-50	25-35	5-10	0.60-2.00	Low
	30-60	Sand and Gravel	50-85	40-80	30-50	5-10	---	NP	6.00-20.00	Low
Wn: Wyo	0-11	Silt loam	100	100	85-100	60-85	25-35	5-10	0.60-2.00	Low
	11-60	Silt loam, silty clay and gravel	95-100	100	85-100	70-85	25-40	5-20	0.60-2.00	Low

SEISMIC HAZARDS

Geologic hazards such as earthquake shaking, landslides, and volcanic eruption are minimal and are not expected to be a major problem in the Planning Area. The information below provides a preliminary indication of the degree of potential hazard or risk that may exist for various geologic or seismic events in the Planning Area.

SEISMIC RISK

Fault Rupture

The Alquist-Priolo Special Studies Zone Act (APSSZ) represents the current State-mandated approach to preventing development in active fault zones. The Special Studies Zones are delineated and defined by the State Geologists and within the assigned zones, cities and counties must establish special procedures for reviewing applications for new building permits. There are no designated APSSZ within the Planning Area, nor are there any known or inferred active faults. Thus, the potential for ground rupture within Orland is considered very low. During the past 100 years, Glenn

County has experienced only minor earthquakes within its boundaries and secondary impacts from earthquakes centered out of the area.

The closest fault to Orland is located approximately 10 miles to the west near Black Butte Reservoir. This fault trends northwest-southeast and can be considered potentially active. Several other faults are located farther west in the Coastal Ranges, as well as to the east in the Sierra Nevada. Although the Planning Area is not prone to seismic hazards, potential geologic hazards can be substantially eliminated through action of the City and County such as California building code enforcement. For building code purposes, the City of Orland is in Seismic Zone "D."

Ground Shaking

Development within the Orland Planning Area may be exposed to violent shaking from periodic earthquakes or faults in the region. The major cause of structural damage from earthquakes is the result of ground shaking and liquefaction. However, because nearby faults have not been active, the likelihood of an earthquake originating from them is considered low, and the likelihood of structural damage as a result of ground shaking is also considered low.

Liquefaction

Liquefaction can occur when strong ground shaking causes the densification of soils, with a resultant local or regional settlement of the ground surface. Settlement is typically associated with high intensities of ground shaking, a shallow water table, and the presence of loose alluvial deposits on sandy soils. High intensity ground shaking is unlikely in the Planning Area as discussed above. However, area conditions (shallow groundwater and sandy alluvial soils) do favor settlement if a strong seismic event occurred in the area. Detailed soils engineering evaluations are appropriate to further evaluate the liquefaction potential for individual projects.

GOALS, POLICIES, AND PROGRAMS

GOAL 4.6: MINIMIZE THE THREAT OF PERSONAL INJURY AND PROPERTY DAMAGE DUE TO SEISMIC AND GEOLOGIC HAZARDS.

Policy 4.6.A: The City shall consider the potential for expansive soils and earthquake-related hazards when reviewing applications for developments.

Program 4.6.A.1: The City may require that a soils report, prepared by a licensed soils engineer, be required for all projects within areas of identified soils limitations. Soils reports shall evaluate shrink-swell and liquefaction potential of sites and recommend measures to minimize unstable soil hazards.

Program 4.6.A.2: Public buildings and areas designed for assembly will be constructed to meet seismic safety standards.

Program 4.6.A.3: Work with owners of existing buildings to encourage structural improvements to meet current seismic standards.

Program 4.6.A.4: Consider funding options to assist property owners with costs related to seismic safety structural improvements.

Policy 4.6.B: The City shall work with landowners and interested parties to address seismic safety concerns for older and historic buildings within the downtown area.

Program 4.6.B.1: Explore options to amend existing development codes where feasible to facilitate the reuse and redevelopment of existing structures within the downtown area relative to seismic safety standards.

Policy 4.6.C: The City shall require applications for projects that extract groundwater, oil, or gas to include a report evaluating the potential for resulting subsidence. Reports shall discuss appropriate mitigation measures to reduce the potential for subsidence.

4.7 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

The City of Orland relies on the Glenn County Hazardous Waste Management Plan to direct hazardous waste management activities throughout the county and within the City of Orland.

According to OSHA requirements under 29 Code of Federal Regulations (CFR) 1910.120 and the California Code of Regulations Title 8 Section 5192, anyone who may discover or respond to a hazardous materials incident (i.e., fire, law, health, transportation, public works, private industry) must have a minimum of Hazardous Materials First Responder Operational (HMFRO) training. The HMFRO certification should be renewed every year.

TRANSPORT OF HAZARDOUS MATERIALS

The location of Interstate 5 and State Route 32 through the Planning Area raises concerns of accidents with vehicles carrying hazardous materials. Transportation of hazardous materials is strictly regulated by state and federal agencies.

GOALS, POLICIES, AND PROGRAMS

GOAL 4.7: MINIMIZE THE RISK OF PERSONAL INJURY, PROPERTY DAMAGE, AND ENVIRONMENTAL DEGRADATION RESULTING FROM THE USE, TRANSPORT, DISPOSAL, AND RELEASE/DISCHARGE OF HAZARDOUS MATERIALS.

Policy 4.7.A: The City shall continue to work with Glenn County to manage hazardous waste.

Program 4.7.A.1: Continue to coordinate hazardous waste management programs with the Glenn County Hazardous Waste Management Plan and the Glenn County Emergency Operations Plan.

Program 4.7.A.2: Refer all permits for new projects or major additions to existing uses located on sites identified by the State as having or containing likely hazardous substances or materials to the Glenn County Health Department to ensure compliance with applicable state and local regulations.

Program 4.7.A.3: Any use which uses or manufactures hazardous substances within one-quarter mile of any existing or proposed school shall only be permitted when authorized by a conditional use permit, with ample assurances that the students will not be placed in a hazardous environment.

Policy 4.7.B: The City shall encourage HMFRO training and certification for appropriate public safety personnel.

4.8 RAIL-RELATED HAZARDS

Hazardous materials are also regularly shipped via the rail line and, while unlikely, an incident involving a rail accident within the City could have serious effects. Unfortunately, the City has little control over the types of materials that are shipped via the rail line. With regard to government activities, the content of shipments may be confidential for reasons of security.

While the City has little influence over the types of material transported via the rail line, ensuring that at-grade crossings within the City are operating in a safe and effective manner can reduce the potential for rail incidents.

GOALS, POLICIES, AND PROGRAMS

GOAL 4.8: MINIMIZE THE POTENTIAL FOR HAZARDS RELATED TO RAIL SERVICE IN AND AROUND THE CITY OF ORLAND.

Policy 4.8.1: Rail-related hazards shall be considered prior to approval of new development projects and roadway improvements in the immediate vicinity of the Union Pacific Railroad tracks.

Program 4.8.A.1: Consult with the Union Pacific Railroad Company to determine ways to minimize hazards related to at-grade rail crossings within Orland.

Program 4.8.A.2: Endeavor to monitor the operation of at-grade crossings within the city limits and shall immediately report any problems with gate function to the rail line operator.

4.9 AIRPORT-RELATED HAZARDS

There are two publicly owned airports in Glenn County: Haigh Field, located in Orland, and the Willows-Glenn Airport. Haigh Field is the only airport within the Planning Area. It is located approximately 3 miles southeast of the City of Orland's central business district, and approximately three-quarters of a mile from the City Limits at its nearest distance. Specifically, the airport is located at the southwest corner of County Roads P and 200, south of State Highway 32. The airport covers approximately 300 acres and has one runway which is approximately 5,160 feet long and 50 feet wide. Its length qualifies it as a "Basic Transport" facility, suitable for use by general aviation users and capable of handling small or light business jets. There is sufficient land area for expanding service and facilities to meet the City's needs and also those of the region.

The airport is currently located within the jurisdiction of and is managed by the County of Glenn, but is within the City of Orland Sphere of Influence. It was constructed by the U.S. Army during World War II as an auxiliary training field for the Chico Army Airfield. The facility was turned over to the County for general aviation use after World War II and named in honor of a County Supervisor.

The airport is located approximately 1.5 miles south of SR 32. It is located in an undeveloped, primarily agricultural area, with residential uses scattered on all sides with the highest density located north of the airport. Residences, businesses and other activities located adjacent to or near the airport could be exposed to hazards arising from airport operations. Land use activities located within the flight path of aircraft could be exposed to potential incidents involving aircraft. Nearby buildings could interfere with airport operations as well as be exposed to additional risk.

Comprehensive Airport Land Use Plan

The Glenn County Airport Land Use Commission adopted the Comprehensive Airport Land Use Plan (CLUP) for Orland Haigh Field Airport on February 27, 1991. The CLUP provides the land use compatibility guidelines on which compatibility of land uses with airport operations are determined. It also establishes the planning boundaries around the airport. These boundaries are established for height, noise and safety. Following adoption by the Airport Land Use Commission, a CLUP is transmitted to all jurisdictions affected by the plan.

Under California Government Code Section 65302.3, a local jurisdiction must take action within 180 days to assure that its land use regulations are consistent with CLUP provisions. In addition to the provisions of the adopted Airport Land Use Plan and the provisions of Government Code Section 65302.3, Sections 11010.13(b) and 1102.6a of the California Civil Code establish additional notification requirements for land uses applications occurring within an "Airport Influence Area." An Airport Influence Area is defined as a radius area approximately 2 statute miles beyond an active airport inside of which a formal "Notice of Airport in the Vicinity" is required.

Concerns of airport land use planning, as defined and described in the adopted CLUP, fall into three primary categories: height restrictions, noise compatibility, and safety of

persons on the ground. The CLUP evaluates all three categories. Since the Noise Element discusses airport noise issues, this Safety Element will focus on the first and third categories.

Structure Height

Height restrictions are necessary to ensure that objects will not impair flight safety or decrease the operational capacity of the airport. Federal Aviation Regulation (FAR) Part 77 defines a series of imaginary surfaces surrounding airports. Any object or structure that would penetrate any of these imaginary surfaces is considered by the FAA to be an obstruction to air navigation. Applicants for projects that penetrate certain imaginary surfaces are required to notify the FAA of their intent. The FAA then initiates an aeronautical study to analyze if the project would be a hazard to air navigation. While the FAA can determine that a project would constitute a hazard to air navigation, it cannot prohibit construction. However, California law does prohibit the construction of any structure that would constitute an air navigation hazard as defined in FAR Part 77, unless a permit is issued by the California Department of Transportation, Aeronautics Program.

The CLUP for Haigh Field has adopted the imaginary surfaces defined in FAR Part 77. In general, to determine if a project would constitute a hazard to air navigation, notice is required to be given to the FAA if construction or alteration penetrates these imaginary surfaces or is more than 200 feet in height above the ground level at the project site. Most of the structures within the Orland city limits that are in the vicinity of the airport are single-family residences no higher than two stories. These structures do not penetrate the imaginary surfaces defined in FAR Part 77, and therefore present no hazard to air navigation nor are they exposed to air hazards due to height.

Safety Zones

Areas around airports are exposed to the possibility of aircraft accidents, even with well-maintained aircraft and highly trained pilots. Airport safety areas are established to minimize the number of people exposed to aircraft crash hazards. This is accomplished by placing restrictions on land uses in various designated safety areas.

The CLUP for Haigh Field designates three safety areas: the clear zone, the approach zone, and the overflight zone. The clear zone is near the end of the runway and is the most restrictive of the safety areas. The approach zone is located under the takeoff and landing slopes and is less restrictive. The overflight zone is the area under the air traffic pattern and is the least restrictive of the safety areas. As designated by the Glenn County Airport Land Use Commission, the safety areas are as follows:

- Clear zone – Trapezoidal (fan-shaped) areas which lie on the ground underneath the imaginary runway approach surfaces and include all of the area out to a point where the approach surface reaches 50 feet above the ground level. The clear zone has an inner width of 250 feet, an outer width of 450 feet, and a length of 1,000 feet.

- Approach zone – Beginning at the outer end of the clear zone and centered along the extended runway centerline. County Road 200 at the runway's north end lies within the primary surface which extends 200 feet beyond the runway end. Power lines 30 feet high along County Road 24 are the critical obstacles within the approach, but are some 30 feet below the approach surface.
- Overflight zone – Generally coincides with the area overflown by aircraft during normal traffic pattern procedures, but outside of the clear and the approach zones.

According to the land use compatibility guidelines in the CLUP, virtually all land uses are incompatible in the clear zone, except for roadways, open space and natural areas, pastures, and agricultural row crops. None of the land currently within the Orland city limits is located within the clear zone.

The approach zone allows for some commercial and industrial uses, but it prohibits almost all residential uses, except those which meet strict guidelines. Most of the approach zone that is within the Planning Area covers land designated for agricultural uses.

The overflight zone appears to cover part of the Planning Area in the southeast. According to the Land Use Diagram, most of the land within the overflight zone that is within the Planning Area is designated Low Density Residential, which allows for mainly single-family residences. The CLUP indicates that single-family detached residences are a compatible land use in the overflight zone, provided that the density is five acres or more per single-family residence.

GOALS, POLICIES, AND PROGRAMS

GOAL 4.9: ENSURE PUBLIC SAFETY DURING AIRPORT OPERATIONS.

Policy 4.9.A: The City shall require development projects within the overflight zone of the Haigh Field Airport to consider all applicable safety policies, City standards, and land use compatibility guidelines.

Program 4.9.A.1: Refer all development projects within the overflight zone of the Haigh Field Airport to the Glenn County Airport Land Use Commission for its review and comment. As part of the development review process for projects within the overflight zone of the airport, the City should apply airport/land use safety compatibility criteria to site design review to ensure compatibility between the airport operations and proposed land uses.

Program 4.9.A.2: The City should work with the Glenn County Airport Land Use Commission to assist with the updating of the airport's Comprehensive Land Use Plan.

Program 4.9.A.3: Inform applicants whose projects fall within the Airport Influence Area that disclosure statements regarding the presence of an active airport are required.

5.0 OPEN SPACE, CONSERVATION, & PUBLIC FACILITIES ELEMENT

CHAPTER

5.0

Open Space, Conservation, and Public Facilities Element



Barn on County Road 15

INTRODUCTION

The Open Space, Conservation, and Public Facilities Element, a legally required element, is included in this General Plan to address issues related to City parks, recreation, and open space as well as a broad range of natural resource issues. This Element also discusses public utilities within the City of Orland.

The City's parks and recreation resources and programs strengthen community identity, create a sense of place, and enhance Orland's quality of life. The maintenance of open space in a largely open physical state is important to the health of Orland.

In addition to discussing parks and recreation resources, this Element will also discuss a very significant issue to the Orland area: agriculture. Agriculture is the most extensive land use in Glenn County and is the most significant component of the County's economy. Two-thirds of Glenn County's 1,317 square miles comprise agricultural croplands and pasture. The preservation of farmland is a critical component in maintaining Orland's rural, small-town character and quality of life.

LEGAL BASIS AND REQUIREMENTS

This Element combines the Open Space and the Conservation elements. Government Code Sections 65302(d) and 65302(e) require that a general plan include:

A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, mineral, and other natural resources.

An open space element as provided in Article 10.5 (commencing with Government Code Section 65560).

This Element addresses a variety of open space issues, including preservation of natural resources (fish and wildlife habitat); managed production of resources (agriculture and mineral production); outdoor recreation, including areas of scenic, historic, and cultural value; and open space for health and safety.

OVERVIEW

As mentioned in the Introduction, the most significant natural resource in the Orland Planning Area is the high-quality agricultural land surrounding the City. Other conservation issues of concern within the Orland Planning Area include protecting air quality and water resources.

The intent of this Element is not only to satisfy the requirements of applicable Governmental Codes but also to offer guidelines to the City and potential developers as to:

- How impacts to natural resources are addressed within Orland; and
- How the City may best manage resources to meet the needs of its current and future citizens.

5.1 AGRICULTURE

OVERVIEW

Orland's agricultural picture includes orchards of almonds, walnuts, olives, peaches, and prunes. Unique climatic conditions allow orange groves to flourish in the Orland area – the northernmost citrus-growing area in the state. Fields of corn, wheat, rice, and beans surround the Orland community. Dairy farmers and woolgrowers are also present. Agriculture-related industries are prominent, including processing plants for nuts, olives, citrus, prunes and dairy products. Also, several locations offer farm-fresh produce direct from the grower to the consumer.

Practices commonly associated with agricultural production such as noise and dust are often incompatible with urban residential settings. Other agricultural practices such as burning and spraying may also result in conditions which conflict with residential land uses. Because of the inherent conflicts between agricultural and urban uses, new urban

development that cannot be directed to infill parcels within the City should utilize buffers to ensure that adjacent agricultural activities can continue. In addition to providing protection for agriculture, the open space provides important wildlife habitat and contributes to the sense of place of Orland.

AGRICULTURAL BUFFERS

Buffers are important to cities in the effort to minimize conflicts between developed and undeveloped areas and incompatible land uses. A buffer is an area of land which separates two distinct land uses and acts to soften or mitigate the effects of one land use on the other.

In September 2005, the City adopted the *Administrative Guidelines for Implementation of General Plan Agricultural Buffering Policies*. These buffering standards and guidelines provide a set of criteria and examples for buffering that are used to incorporate appropriate buffering designs for various development projects. The Guidelines are used by the City and applicants in determining the general development characteristics and design features with which projects requiring buffers must comply.

The Guidelines include the following topics:

- The relationship of the Guidelines to the General Plan,
- The circumstances under which the Guidelines apply,
- Appropriate buffering design standards, and
- Strategies by which buffers can solve various issues.

SOIL CHARACTERISTICS

Soils are determined by physiographic position, soil texture, soil profile, and slope. Orland is located on an alluvial fan of Stony Creek. There are three major soils types: riverwash, Orland loam, and Cortina loam.

Riverwash consists of stratified deposits of sand and gravel with 0 to 8 percent slopes. Riverwash occurs along drainageways, on sand and gravel bars of major active streams, and in the channels of intermittent creeks.

The Planning Area contains two related Orland loam soils – Orland loam and Cortina loam. Most of the soils on more recent alluvial fans and floodplains generally consist of shallow to deep, well-drained to excessively-drained gravelly and non-gravelly stratified material. The soils in this association are shallow to deep over alluvium washed chiefly from areas on schistose and sedimentary rocks. Cortina soils, on floodplains and in channels, are gravelly and are excessively drained. They are shallow to moderately deep over channel sand and gravel.

Soils within the Planning Area are essentially gravelly. There is not a significant difference in the soils between different parts of the Planning Area which would be an overriding consideration for recommendation of development in one area or another.

ORLAND UNIT WATER USERS' ASSOCIATION

The Orland Unit Water Users' Association (OUWUA) supplies water for irrigation to land around Orland. OUWUA secured a water right to water from Stony Creek in 1902, and the first water was delivered to the Orland Project in 1910. In 1990, OUWUA had 1,100 shareholders. Each shareholder was assessed \$25.00 per acre per year to pay for the cost of water delivery. Shareholders receive three acre-feet of water per acre per year. OUWUA is governed by a nine-member Board of Directors. Assessment fees may change from year to year, but the amount of water delivered does not.

In 1990, the City and OUWUA reached an understanding that a study would be completed by the City (or developers), to be approved by the United States Bureau of Reclamation, addressing the undergrounding of the Association's irrigation facilities between Interstate 5 on the west and Road M½ to the east. In May 2006, the *Application Procedures and Construction Guidelines for the Undergrounding of the OUWUA Irrigation Canals within the City of Orland* was completed. This document provides information to applicants regarding the undergrounding of a portion of the canal system and design review by the OUWUA.

GOALS, POLICIES, AND PROGRAMS

GOAL 5.1: PROMOTE AND PROTECT THE CONTINUED VIABILITY OF AGRICULTURE SURROUNDING ORLAND.

Policy 5.1.A: Encourage the development and redevelopment of property within the city limits and Sphere of Influence prior to considering development outside of these areas.

Policy 5.1.B: Direct urban development to areas where agricultural operations are already constrained by existing non-agricultural uses.

Policy 5.1.C: During the project review process, address the impacts of siting sensitive uses in areas where conflicts with agricultural production and processing activities may result. The City may require buffers between the new urban use and the existing agricultural use as outlined in the *Administrative Guidelines for Implementation of General Plan Agricultural Buffering Policies*.

Program 5.1.C.1: Buffers shall be physically and biologically designed to avoid conflicts between agricultural and non-agricultural uses. The biological design should ensure that the buffer does not provide a host environment for pests or carriers of disease which could potentially impact farming operations.

Program 5.1.C.2: Buffers shall normally be located on the parcel proposed for non-agricultural use.

Program 5.1.C.3: Buffers should primarily consist of a physical separation between agricultural and non-agricultural uses. The appropriate width shall be determined on a site-by-site basis, taking into account the type of existing agricultural uses, the nature of the proposed development, the natural features on the site, and any other factors and project design features that affect the specific situation.

Program 5.1.C.4: In addition to physical separation, the following buffer options should be considered:

- green belts/open space
- park and recreation areas
- roads
- fences
- walls
- waterways
- vegetative screens/trees

These buffering options may be used in any combination to most effectively reduce conflicts arising from adjacent incompatible uses.

Program 5.1.C.5: An ongoing maintenance program for the buffer which may include vector controls.

Program 5.1.C.6: Policies indicating that buffer restrictions may be removed if all adjacent parcels have been irreversibly converted to non-agricultural uses.

Policy 5.1.D: Create and maintain buffer zones around areas of existing agricultural processing activities. Discourage sensitive uses that encroach upon these facilities.

Policy 5.1.E: Buffer zones surrounding agricultural processing plants may vary in width based upon existing and proposed uses, as well as whether vegetation screens are incorporated to improve buffer effectiveness.

Note: Noise-related standards for locating sensitive development in the vicinity of processing plants are contained in the Noise Element.

Policy 5.1.F: Where existing agricultural operations or agricultural processing operations exist within the city limits, the City shall encourage the use of on-site density transfers, flexible zoning standards, and density averaging on potentially constrained sites.

Program 5.1.F.1: The City shall review the existing zoning pattern to determine where the use of these provisions may be applicable or

desirable and shall provide a report to the City Council outlining options for the designation of the identified properties.

Policy 5.1.G: Refer all development requests adjacent to, or affecting, facilities owned and operated by the Orland Unit Water Users' Association (OUWUA) to the Association for review and comment prior to consideration by the City.

Policy 5.1.H: Work with the Orland Unit Water Users' Association and the Federal Bureau of Reclamation to implement the *Application Procedures and Construction Guidelines for the Undergrounding of the OUWUA Irrigation Canals within the City of Orland* and to develop a comprehensive plan to address safety, continued use, viability and access for irrigation facilities within the Planning Area.

Policy 5.1.I: Work with Glenn County to identify and adopt City/County "Areas of Mutual Concern." Also consider standard mitigation measures to reduce impacts of development on agricultural activities.

5.2 AGGREGATE MINING

OVERVIEW

Currently, two gravel extraction facilities are in operation along Stony Creek within or adjacent to the Planning Area. The two operations are located in the northwestern portion of the Planning Area upstream and downstream of I-5. All operations are subject to the Surface Mining and Reclamation Act (SMARA) and have reclamation plans. The California Department of Fish and Game (DFG) has monitored these operations with restrictions on in-channel operations since 1976.

GOALS, POLICIES, AND PROGRAMS

GOAL 5.2: ENSURE THAT ALL MINING ACTIVITY IS APPROPRIATELY PERMITTED AND THAT MINES ARE EFFECTIVELY RECLAIMED.

Policy 5.2.A: No mineral, gas or other natural resource extraction shall occur within the city limits of Orland without prior review and approval of the activity by the City.

Policy 5.2.B: Ensure that mineral extraction activities within the Orland Planning Area conform with the State Mining and Reclamation Act (SMARA) requirements, including financial assurances and reclamation plans.

Program 5.2.B.1: The City shall establish a working relationship with landowners subject to SMARA to develop reclamation plans that provide beneficial opportunities to both the City of Orland and the subject property landowners.

Program 5.2.B.2: The City shall consider the creation of policy and financial mechanisms to provide for public ownership of former aggregate extraction sites adjacent to waterways for the purposes of providing open space and public access.

Program 5.2.B.3: The City shall endeavor to define a range of funding and financing opportunities to supplement plans and other options for lands subject to reclamation under SMARA.

5.3 BIOLOGICAL RESOURCES

OVERVIEW

This section addresses wildlife and habitat issues in the Orland Planning Area. The primary area within the Planning Area which has natural vegetation and wildlife is the zone along Stony Creek.

LEGAL REQUIREMENTS FOR WILDLIFE HABITAT MANAGEMENT

As a local agency reviewing and approving projects, the California Environmental Quality Act (CEQA) requires that the City of Orland consider the environmental impacts resulting from the approval of proposed development projects. In the case of biological resources, such impact analysis focuses on species and habitat types which are designated for protection under state and federal programs.

WILDLIFE AND HABITAT OCCURRENCE

Information on riparian habitat along Stony Creek was compiled and summarized primarily from the Lower Stony Creek Fish, Wildlife and Water Use Management Plan prepared by the U.S. Department of Interior, Bureau of Reclamation (1998).

The California Natural Diversity Database (NDDDB) does not include any information on riparian vegetation along Stony Creek. Riparian plant community data for the area is for nearby locations on the Sacramento River. Similarly, the NDDDB does not include any occurrences of sensitive plant species associated with Stony Creek riparian vegetation. However, since detailed biological evaluations have generally not been conducted in the vicinity of Orland, the lack of identified occurrences is not proof of the absence of protected species.

Therefore, future urban development sites may require review by a qualified individual, to be approved by the City, to determine if habitat is present. If potential habitat is found, a biological field survey may be required to determine whether protected plant or animal species are present.

STONY CREEK

Stony Creek defines the entire northern edge of the Planning Area. As a western Sacramento Valley foothill stream, Stony Creek has a seasonal runoff pattern of high

winter flows and low summer and fall flows, with an average annual precipitation of 15 inches in the lower watershed. Water is diverted from several locations along Stony Creek below Black Butte Dam. Summer and fall releases are higher than unimpaired flows as water is released from the dam for irrigation and other deliveries.

All of the land along Stony Creek within the Planning Area is privately owned. Private land uses generally include grazing, gravel mining, agriculture, and rural residential uses. Lack of public ownership strictly limits public access and therefore opportunities for recreational activities.

Stony Creek Vegetation

Vegetation along and in Stony Creek:

- Giant Reed, a weedy non-native grass that grows on the sand and gravel bars within and along Stony Creek.
- Willow Riparian Scrub, an early seral, shrub-dominated riparian vegetation. Typical shrubs include arroyo willow, sandbar willow, blackberries, mule fat, tamarix, giant reed, and small individuals of Goodding's willow. Most of the willow riparian shrub that once occurred on Stony Creek is likely now dominated by giant reed.
- Herbaceous Riparian Vegetation, consisting of forbs and grasses such as sweetclover, star-thistle, thistles, cocklebur, ripgut brome grass, and other opportunistic noxious herbaceous species.
- Valley Oak Woodland, comprising remnant stands of valley oak woodland on the high floodplain.
- California Annual Grassland, which is present where soil conditions do not support intensive agriculture.

Stony Creek Fisheries

Stony Creek below Black Butte Dam extends approximately 24 miles before its confluence with the Sacramento River. The majority of the adjacent riparian corridor of the creek is privately owned and as such fishing access is restricted. Stony Creek's streambed has a low gradient and alternates between a meandering single channel and a braided channel. Water temperatures in Stony Creek in the Planning Area become warm in the summer months, providing suitable habitat conditions for many native and introduced (exotic) warm-water species. Flows in Stony Creek can diminish to extremely low levels during the summer months, resulting in segmented stream habitats.

Three types of native fish assemblages use lower Stony Creek: migratory species, smaller resident non-migratory species, and salmonid species.

Stony Creek Wildlife

Wildlife habitats along lower Stony Creek generally correspond to three broad zones, including the active zone of the creek channel, the border zone of riparian vegetation along the banks of the channel, and the outer zone of oaks and grasslands along the upper terraces of the floodplain.

The active zone includes frequently flooded gravel bars, open channels, and low terraces of the creek. Wildlife in unvegetated portions of the active zone of lower Stony Creek may include a variety of fish-eating species such as great blue herons, great egrets, common mergansers, belted kingfishers, and river otters. Other wildlife that may frequent the active zone include spotted sandpipers, killdeers, black phoebes, beavers, and coyotes. Bald eagles and ospreys have also been observed flying along the creek. Scattered stands of cottonwoods remaining in the active zone are important for a variety of migrant birds.

The border zone includes all vegetated riparian habitats along the outer banks of the creek that depend on its flows for water. Species such as Cooper's hawks, Swainson's hawks, red-tailed hawks, red-shouldered hawks, white-tailed kites, great egrets, and great blue herons build bulky stick nests high in the crowns of cottonwoods and oaks in the border zone of many foothill creeks, but no specific nesting records of these species along lower Stony Creek were reported in the NDDB.

The outer zone of lower Stony Creek includes high terrace habitats such as oak woodlands, grasslands, orchards, and pastures. Oak woodlands and grasslands near the creek provide shade, shelter, and breeding habitat for many wildlife species, including black-tailed deer, gray foxes, western gray squirrels, white-tailed kites, turkey vultures, American kestrels, northern harriers, mourning doves, California quail, acorn woodpeckers, Nuttall's woodpeckers, scrub jays, yellow-billed and black-billed magpies, rufous-sided towhees, and northern orioles.

Mammals usually found in adjacent grasslands and outer zone oak woodlands, such as deer mice, California voles, western gray squirrels, black-tailed hares, and gray foxes, often use riparian corridors as refuge from summer heat and drought. All these animals use the food, water, and cover that are found in riparian and wetland habitats.

THREATENED AND ENDANGERED SPECIES

The following species are determined as threatened or endangered, and are known to occur in the planning area:

- Valley Elderberry Longhorn Beetle
- Bald Eagle
- Swainson's Hawk
- Western Yellow-Billed Cuckoo

Other species which are considered candidates for listing as threatened or endangered and which are known to occur in the planning area include:

- Northwestern Pond Turtle
- Osprey
- Golden Eagle

Hambright Creek

Hambright Creek is a relatively small tributary watershed (approximately 18 square miles in area) of Stony Creek, and is shown on USGS maps as intermittent over its entire length. The current confluence of Hambright and Stony creeks is located just outside the northeastern city limits of Orland. Hambright Creek is largely ephemeral over much of its reach, flowing only after rainfall of a sufficient magnitude. There are no stream gauges on Hambright Creek.

Other Water Features

A major canal traverses the southeastern portion of the Planning Area. The Tehama-Colusa Canal begins at the Red Bluff Diversion Dam and trends southward through Glenn County eventually terminating near Dunnigan in Yolo County. In addition, the entire Planning Area is criss-crossed by a system of smaller concrete-lined canals, which distribute agriculture irrigation water to the area.

GOALS, POLICIES, AND PROGRAMS

GOAL 5.3: MINIMIZE IMPACTS TO WILDLIFE AND WILDLIFE HABITAT AS NEW DEVELOPMENT OCCURS WITHIN THE ORLAND PLANNING AREA.

Policy 5.3.A: Where appropriate, apply mitigation measures to development projects to minimize impacts to biological resources during all stages of development including grading, construction and occupancy.

Policy 5.3.B: Consider opportunities for habitat preservation, enhancement, and creation in conjunction with public facility projects, particularly storm drainage facilities.

Policy 5.3.C: Applicants for new development proposals shall be responsible for costs related to determining the potential for occurrence of protected plant and wildlife species within the proposed project area. City staff shall make determination of the degree of field investigation required.

Policy 5.3.D: If the presence of protected species is determined to be likely, the project applicant shall be responsible for all costs associated with investigating species presence and preparation of any required mitigation plans.

5.4 AIR QUALITY

OVERVIEW

The physiography of Glenn County lends to challenges in air quality management. The basin area can trap pollutants between the mountain ranges, which can then be exacerbated by a temperature inversion layer that traps air at lower levels below an overlying layer of warmer air. In addition, prevailing winds in the area are from the south and southwest – sea breezes flow over the San Francisco Bay Area and into the Sacramento Valley, transporting pollutants from the large urban areas. Growth and urbanization in Glenn County also contribute to increased vehicle emissions and the resulting air quality issues.

Children, seniors, pregnant women, and persons with existing health problems, such as respiratory and cardiovascular diseases, are especially sensitive to the effects of air pollutants, particularly carbon monoxide and ozone. Typical sensitive receptor populations are likely to be located in facilities such as schools, retirement homes, convalescent homes, hospitals and medical clinics. Air quality issues may increase as a result of future growth in the City. The City should aggressively seek compliance of the Glenn County Air Pollution Control District's Standard Mitigation Measures as well as appropriate Best Available Mitigation Measures from developers in order to diminish the impact to air quality as a result of new growth.

AIR QUALITY REGULATORY AUTHORITY

The Federal Clean Air Act, adopted in 1970 and amended twice thereafter, established the framework for modern air pollution control. The act directs the Environmental Protection Agency (EPA) to establish ambient air quality standards for six pollutants: ozone, carbon monoxide, lead, nitrogen dioxide, particulate matter (PM₁₀), and sulfur dioxide. Acceptable levels for these pollutants are adopted as the National Ambient Air Quality Standards (NAAQS).

The Federal Clean Air Act requires states to submit a State Implementation Plan (SIP) for areas that exceed the NAAQS (such areas are referred to as "non-attainment areas"). Failure to comply with requirements for preparing the SIP can result in denial of federal funding and permits for such improvements as highway construction and sewage treatment plants.

In addition, the California Clean Air Act (1988) authorizes the California Air Resources Board to require local and regional air pollution control districts to prepare Air Quality Management Plans in areas that are not attaining one or more of the state ambient air quality standards for ozone, carbon monoxide, sulfur dioxide, or nitrogen dioxide.

The California standards for pollutants are more stringent than federal standards, and Air Quality Management Plans prepared at the district level are incorporated within the SIP for the broader air basin in which the local district is situated.

Chapter 5.0

LOCAL AIR QUALITY MANAGEMENT AUTHORITY

The City of Orland is located within a region identified as the Northern Sacramento Valley Air Basin (NSVAB). The NSVAB is further divided into local air districts that are charged with the responsibility of implementing air quality programs. The local air quality district for the area surrounding and including Orland is the Glenn County Air Pollution Control District (GCPACD).

AIR QUALITY STANDARDS ATTAINMENT STATUS

Glenn County is in attainment of, or is unclassified for, all federal ambient air quality standards. However, the County is classified as “non-attainment” for state ozone and PM₁₀ standards. The County is in attainment of, or is unclassified for, all other state ambient air quality standards.

The nearest monitoring station is located in Willows on East Laurel Street. The highest measurements at the station are for ozone and PM₁₀ emissions.

GOALS, POLICIES, AND PROGRAMS

GOAL 5.4: MAINTAIN AND PROTECT AIR QUALITY WITHIN THE CITY OF ORLAND AT ACCEPTABLE LEVELS AS DEFINED BY STATE AND FEDERAL STANDARDS.

Policy 5.4.A: During the project review process, work to minimize adverse affects of odor and emissions generated by agricultural and industrial uses.

Policy 5.4.B: Work with the Glenn County Air Quality Management District in efforts to maintain air quality standards and to minimize air quality impacts associated with new development.

5.5 GREENHOUSE GASES

It is the consensus of many scientists that humans are impacting global climate by increasing greenhouse gases (GHG) in the atmosphere. Human activities result in emissions of four principal greenhouse gases: carbon dioxide, methane, nitrous oxide, and halocarbons (fluorine, chlorine and bromine). Of all human activities, the burning of fossil fuels is the largest contributor in overall greenhouse gas emissions, releasing carbon dioxide gas into the atmosphere.

The resulting increases in greenhouse gas emissions from human activities are leading to higher concentrations and a change in composition of the atmosphere. For instance, the concentration of CO₂ in the atmosphere has risen about 30 percent since the late 1800s (National Assessment Synthesis Team [NAST], 2001).

GLOBAL CLIMATE CHANGE

There is a vast body of credible scientific evidence to support the fact that the increased amounts of GHG being released into the atmosphere has led to global climate change. The Intergovernmental Panel on Climate Change (IPCC), a body

created by the World Meteorological Organization and the United Nations Environment Program, was created to assess peer reviewed scientific and technical studies and reports in order to present “comprehensive, objective, open and transparent” information on climate change (reference – *Principles Governing IPCC Work*, 1998 and amended 2003). According to the latest scientific research available at the time of this General Plan, the IPCC Fourth Assessment Report made the following statement:

Global atmospheric concentrations of carbon dioxide, methane and nitrous oxide have increased markedly as a result of human activities since 1750 and now far exceed pre-industrial values determined from ice cores spanning many thousands of years. The global increases in carbon dioxide concentration are due primarily to fossil fuel use and land-use change, while those of methane and nitrous oxide are primarily due to agriculture.

The report goes on to state that “warming of the climate system is unequivocal” and scientists agree that there is a very high confidence (9 out of 10 chance of being correct) “that the globally averaged net effect of human activities since 1750 has been one of warming.” This assessment is based upon peer reviewed scientific studies from a body of international scientists, which have taken into account changes in the climate system due to natural causes such as solar energy variations from the sun. These natural variations do not explain current rates or levels of warming or atmospheric concentrations of GHG.

California ranks 12th in the world in greenhouse gas emissions but has taken the lead in creating stringent GHG emissions reduction policies. Assembly Bill 32 will require the implementation of measures to reduce the state's GHG emissions to 1990 levels by 2020 – an expected 25 percent reduction. The main source of atmospheric carbon dioxide in California is the burning of fossil fuels, comprising 98 percent of gross carbon dioxide emissions.

Climate change is a global problem, and GHGs impact the global atmosphere. This means that activities that take place in one part of the world impact the entire atmosphere, unlike criteria pollutants which have an impact on local air quality. It will take a global effort to reduce GHG emissions to the point where global climate change does not pose a serious threat to our communities.

The City would be prudent to mitigate and adapt to climate change within the time frame of this General Plan and into the future. Quantifying, managing and reducing GHG will help protect the health of the community, ecosystems, and biodiversity from the effects of climate change. Reducing GHG also contributes to the achievement of various municipal goals such as improving air and water quality and fostering economic development.

GOALS, POLICIES, AND PROGRAMS

GOAL 5.5: REDUCE THE CONTRIBUTION OF GREENHOUSE GASES FROM EXISTING SOURCES AND MINIMIZE THE CONTRIBUTION OF GREENHOUSE GASES FROM NEW CONSTRUCTION AND SOURCES.

Policy 5.5.A: Work to comply with AB 32 and its governing regulations to the full extent of the City's ability.

Policy 5.5.B: Implement any additional adopted State legislative or regulatory standards, policies and practices designed to reduce greenhouse gas emissions, as those measures are developed.

Policy 5.5.C: Explore opportunities to train appropriate City staff on new technology and look for opportunities to improve energy efficiency in public facilities.

Policy 5.5.D: Research and consider the adoption of sustainable design practices which encourage the use of alternative energy sources to ensure future development minimizes the use of fossil fuels and GHG-emitting energy consumption.

Policy 5.5.E: Review local subdivision, zoning, and building ordinances to identify whether impediments exist to the use of alternative energy sources.

Policy 5.5.F: Encourage the use of alternative forms of transportation within the community to reduce the emissions of greenhouse gases.

Policy 5.5.G: Continue to monitor the efforts of the California Air Resources Board and other various organizations responsible for the preparation of GHG-reducing standards.

Policy 5.5.H: Explore and encourage the use of alternative energy sources such as solar- and/or wind-powered technologies.

5.6 WATER QUALITY

For policies related to water supply, see **Section 5.7** of this Open Space, Conservation, and Public Facilities Element. For policies related to wastewater, see **Section 5.8** of this Element.

OVERVIEW

Water quality in Orland is generally good. Because the main source of domestic water in Orland is groundwater, maintenance of groundwater quality is of primary importance to residents. The Glenn County Health Department regulates the installation of individual septic systems and wells.

Surface water quality is regulated by the Central Valley Regional Water Quality Control Board, Region 5 (RWQCB). The RWQCB establishes water quality standards for surface water discharge within the Water Quality Control Plan (Basin Plan), Sacramento River Basin. There are other local, state, and federal programs in place which address protection of ground and surface water from contamination related to agricultural practices.

SURFACE WATER

Several creeks and other drainage features flow through and adjacent to the Planning Area, including Stony Creek, Hambright Creek, the Tehama-Colusa Canal, and a series of smaller concrete-lined canals that criss-cross Orland and distribute water for irrigation to area agricultural users. Water quality in these water bodies is generally of good quality for agricultural purposes.

All of the land along Stony Creek within the Planning Area is privately owned. Private land uses generally include grazing, gravel mining, agriculture, and rural residential uses.

Lands with exposed soils are subject to surface water flows that carry particles away from the site. Exposed soils may be the result of construction or agricultural practices. Potential erosive action results in downslope or downstream sedimentation, which can impair drinking water, as well as adversely affect fisheries and water-related habitat.

GROUNDWATER

Groundwater is the primary source of domestic water supply in the Planning Area and is also used for irrigation in areas where surface water is not available. A thick sequence of sedimentary materials underlying the valley floor contains fresh groundwater to a depth of about 400 feet near Orland.

According to the City of Orland Engineer, the City water supply does not have water quality or contamination issues. Continuous disinfection is provided at six of the City's seven wells. The Roosevelt Well has the facilities necessary to chlorinate if needed. Water treatment is a preventive measure due to intermittent positive bacteriological test of the wells. In 2006, a Water Master Plan was completed and is currently on file with the City.

Additionally, another well (Lely Well, located at Lely Aquatic Park) has not yet been connected to the system, although Rolls, Anderson, and Rolls (City Engineer) has commenced design of system-wide improvements which will include upgrading and connecting the well. The City Engineer stated that redrilling the Eighth Street Well is anticipated as part of this project.

The aquifer underlying the Planning Area receives recharge from a number of sources. The greatest amount of natural recharge occurs in the Stony Creek area, with additional recharge coming from deep percolation of agriculturally applied water and normal surface percolation following rains. Groundwater is particularly vulnerable to contamination in the Stony Creek area, with potential sources of groundwater pollutants including chemicals used in the growing and processing of agricultural products, industrial sources, and improper installation of septic tank systems.

Groundwater levels may lower as a result of pumping combined with periods of drought, but generally rebound following normal and wet years.

GOALS, POLICIES, AND PROGRAMS

GOAL 5.6: CONSERVE, ENHANCE, AND MANAGE WATER RESOURCES, PROTECT THEIR QUALITY, AND ENSURE AN ADEQUATE LONG-TERM SUPPLY OF WATER FOR DOMESTIC, AGRICULTURAL, INDUSTRIAL, AND RECREATIONAL USE.

Policy 5.6.A: Ensure that new development complies with state and federal regulations and standards in order to maintain and improve water quality.

Program 5.6.A.1: The City shall require applicants for new development projects to adhere to RWQCB discharge standards, including identifying specific measures for minimizing project-related erosion and resulting siltation of surface water features.

Program 5.6.A.2: The City shall require that a grading and erosion control plan be submitted with each tentative parcel and tentative subdivision map prior to action by the City. Standard RWQCB best management practices (BMPs) shall be incorporated in these plans as a means to control runoff and minimize erosion impacts.

Program 5.6.A.3: The City shall ensure that new development has a minimal impact on natural drainage channels and flow capacity.

Policy 5.6.B: Reduce the potential for sediment and other pollutants to contaminate surface and groundwater resources.

Program 5.6.B.1: Where feasible, the City shall maintain the natural condition of waterways and floodplains and protect watersheds to ensure adequate groundwater recharge and water quality.

Program 5.6.B.2: The City shall require that new development at a density greater than one unit per acre and commercial and industrial areas annexed to the City be connected to the City's wastewater collection system. Existing residential development and individual homes where septic systems have failed also may be connected to the system.

Program 5.6.B.3: The City shall review City standards for drainage structures and, if determined appropriate, adopt requirements for grease and sediment traps for roads and parking lots to improve water quality of urban runoff.

Policy 5.6.C: Explore the use of pervious concrete/pavement to allow the continued filtration of groundwater into the soil.

Policy 5.6.D: Encourage the use of site design techniques for non-residential uses that provide for the discharge of on-site stormwater into landscaped basins or swales prior to discharge to the City's storm drainage system.

Policy 5.6.E: Encourage water conservation as a means of conserving not only water but also minimizing energy consumption and costs associated with pumping and delivery systems.

5.7 WATER SUPPLY

For policies related to water quality, see **Section 5.6** of this Open Space, Conservation, and Public Facilities Element. For policies related to wastewater, see **Section 5.8**.

WATER SUPPLY OVERVIEW

Data from the year 2007 indicates that the City of Orland's water supply and distribution system serves 2,315 residential water customers and 300 commercial customers.

The sole source of water within the City is groundwater, which comes from seven wells distributed throughout Orland. The wells have an average depth of approximately 200 feet, and the average depth of groundwater is generally between 20 and 50 feet. Pressure for the City water system is provided by gravity flow from an 80,000 gallon elevated storage tank. The wells produce between approximately 500 and 1,200 gallons per minute each and are automatically regulated by the water level in the storage tank. The water transmission and distribution systems consist of approximately 30 miles of pipeline. Auxiliary standby power is provided at four of the City's wells.

Almost all of the buildings within the City are on water meters, with the only exceptions being some downtown buildings and the parks. However, by 2012, all users will be required to be metered. Water fees are currently \$23.40 for two months for both residential and non-residential customers, up to 15,000 gallons. For usage beyond 15,000 gallons, customers are charged an additional \$0.60 per 1,000 gallons.

The City currently has adequate water capacity to meet peak water demands, and the City water supply does not have water quality or contamination issues. In addition to the active system, the City has a well at the Lely Aquatic Park that is currently not connected to the City's public water system. The City has tentative plans to install a larger pump in the well and include the well in its water system operation. According to the City Engineer, the City intends to connect immediately following the installation of a 10-inch pipe on Hambright Avenue between Orland Park and Whitehawk Estates.

The City Engineer has indicated that, should Orland grow to the west, a new well will be required on the west side of the freeway. There are currently two water borings under I-5, which are located at Trinity Street and Walker Street. These borings currently provide City water service to the west side of I-5.

The Haigh Field Industrial Park, located at the Haigh Field Airport 1.2 miles southeast of Orland, is served by an auxiliary water system. Public Water System 1105003 is not connected to the City's primary water system. This system has one well that produces 1,740 gallons per minute and is also equipped with auxiliary standby power.

GOALS, POLICIES, AND PROGRAMS

GOAL 5.7: PROTECT THE QUANTITY AND QUALITY OF COMMUNITY WATER SUPPLIES.

Policy 5.7.A: Ensure that groundwater resources in the vicinity of Orland are protected from contamination.

Program 5.7.A.1: The City shall require wells located on land annexed to the City and served by City water service to be properly abandoned or all possibility of cross-connection with the City water system eliminated in accordance with Glenn County Health Department guidelines.

Program 5.7.A.2: The City shall ensure that all City wells are operated and maintained to meet California Department of Health Services standards for public drinking water supplies.

Policy 5.7.B: Avoid the wasteful use of water within the Planning Area.

Program 5.7.B.1: The City shall promote the use of water-conserving devices and practices in both new construction and major alterations and additions to existing buildings.

Program 5.7.B.2: The City shall develop and implement methods for equitably distributing costs associated with providing water service to new development, including impact mitigation fees where warranted.

5.8 WASTEWATER

For policies related to water quality, see **Section 5.6** of this Open Space, Conservation, and Public Facilities Element. For policies related to water supply, see **Section 5.7**.

WASTEWATER SERVICE OVERVIEW

The City of Orland wastewater collection and treatment system comprises an extensive collection system and four sewage treatment ponds. Effluent from the treatment facility is discharged to a 50-acre parcel.

All sewage that is generated inside of the Orland city limits is collected and treated by the City of Orland Wastewater Collection and Treatment Facility. Areas outside of the city limits are treated by private on-site septic systems. The treatment facility utilizes a primary treatment process. The process consists of a bar-screen located at the headworks building with screened effluent being disposed into a rotating series of four sewage disposal ponds located west of the airport. These four primary settling ponds, along with two specially lined and isolated brine ponds, are located on a 50-acre City-owned parcel of land.

The wastewater treatment plant is currently operating under Waste Discharge Requirements Order No. 96-129 which was adopted by the Regional Water Quality Control Board, Central Valley Region on May 3, 1996. According to the City Engineer,

the permit is valid until RWQCB says it needs to be updated, which is usually dependent upon expansion of plant capacity. The City's Regional Board Waste Discharge Requirements indicate that the design capacity in 1996 for the four stabilization ponds and disposal field was 2.1 million gallons per day (mgd), with an average domestic wastewater flow of 1.3 mgd.

According to the City Engineer, the City's wastewater treatment plant currently has an average flow of 0.72 mgd, with a peak flow of 1.24 mgd. The capacity of the collection system is 3.4 mgd (based on peak flow) and the capacity of the wastewater treatment plant is 2.1 mgd (based on average flows). Based on these numbers, the system is currently operating at about 36 percent of capacity, according to the Engineer.

The City recently completed improvements to the wastewater treatment plant, which increased the usable percolation area receiving effluent discharge from the ponds. According to the City Engineer, there are not any major problems with the collection system (i.e., root intrusion).

Population projections for Orland predict that by 2028 (the life of the revised General Plan), the population will be between 8,974 and 10,495. The wastewater treatment plant can support a population of approximately 12,000. A Wastewater Master Plan is in the process of being developed for the City of Orland.

GOAL 5.8: PROVIDE QUALITY WASTEWATER SERVICE TO ALL EXISTING AND FUTURE CITY RESIDENTS.

Policy 5.8.A: Ensure that sufficient wastewater treatment capacity is available to serve anticipated growth.

Program 5.8.A.1: The City shall encourage the annexation of all land on City services in unincorporated areas and require annexation to the City as a condition of extending City services.

Program 5.8.A.2: The City shall develop and implement methods for equitably distributing costs associated with providing wastewater service to new development, including impact mitigation fees where warranted.

Program 5.8.A.3: The City shall periodically review the City's Wastewater Master Plan to ensure that adequate capacity exists for future planning.

Program 5.8.A.4: The City shall assess development impact fees to new developments that impact the City's wastewater system and update those fees regularly to ensure the City is not subsidizing the cost of wastewater service and infrastructure. User fees shall also be updated regularly to ensure adequate funding for future water system repairs, maintenance, and upgrades.

Policy 5.8.B: Require all sewage generators within the city limits to connect to the City's system, except those areas where on-site treatment and disposal facilities are deemed appropriate and beneficial to the City.

Program 5.8.B.1: The City shall update its Municipal Code and Public Works Improvement Standards to incorporate this policy.

Policy 5.8.C: The City shall require that collection systems be designed on a gravity-flow basis except where a site-specific engineering analysis clearly demonstrates the long-term cost-effectiveness of pumped facilities or the infeasibility for gravity flow.

Program 5.8.C.1: The City shall update its Public Works Improvement Standards to incorporate this policy.

5.9 STORMWATER DRAINAGE SYSTEM

The City of Orland's Stormwater Drainage System consists primarily of surface water conveyance utilizing curbs and gutters which lead to underground drainage pipes that eventually discharge into the Lely Aquatic Pond, the Stony Creek Basin Tributary Area, or on-site retention basin and leach field systems.

Approximately 80 percent of the City's area is served by, and discharges into, the Lely Aquatic Pond. The City Engineer estimates that this pond is capable of accommodating all storm events up to and including a 50-year storm. Storm events which exceed this return interval will cause some localized ponding of runoff throughout the City within street roadbeds. Should the groundwater table become elevated due to cumulative stormwater runoff and percolation (likely occurring in late winter through early spring), Lely Pond's capacity decreases, thereby resulting in a situation where larger storm events may cause the pond to exceed its capacity. When this occurs, runoff flows southeasterly along East South Street (County Road 200) until it reaches the Tehama-Colusa Canal, which thereafter becomes a dike preventing further street flow.

A storm drainage overflow system was constructed at Haigh Field Airport in 1992 through a Joint Powers Agreement between the City of Orland and the County of Glenn, although the overflow piping from Lely Pond to the airport has not yet been installed since sufficient impact fees to construct this pipeline have not been received by the City of Orland.

A majority of the residential development in Orland since 1990 has taken place in the north and northwest portions of Orland, and stormwater runoff from these developments has been directed into retention basins within the Stony Creek Basin Tributary Area which includes Hambright Creek. Recent developments in Orland have utilized on-site storm drainage retention basins and/or leach line percolation systems. All drainage within the City of Orland is disposed of by percolation and/or evaporation. Additionally, due to the limited development activity west of I-5, developed storm drainage facilities do not currently exist in that area.

The City of Orland is presently preparing mapping and a Storm Drainage Master Plan to identify future needs of the storm drainage system. See **Chapter 4.0, Safety Element**, for more information regarding stormwater flooding.

GOALS, POLICIES, AND PROGRAMS

GOAL 5.9: PROVIDE FOR THE COLLECTION, TRANSPORT, AND STORMWATER IN A SAFE MANNER TO PROTECT PEOPLE AND PROPERTY FROM DAMAGE ARISING FROM STORM DRAINAGE.

Policy 5.9.A: Require new development to ensure that the cumulative rate of peak runoff does not exceed pre-development levels.

Program 5.9.A.1: New development and redevelopment of existing sites should provide stormwater detention or retention facilities (on- or off-site), if necessary, to prevent flooding due to runoff or where existing storm drainage facilities are unable to accommodate increased stormwater drainage.

Program 5.9.A.2: The City shall review and revise its Zoning and Subdivision Ordinances, as needed, to incorporate specific data and design requirements related to stormwater drainage that are contained in this General Plan.

Program 5.9.A.3: The City shall complete its Storm Drainage Master Plan to identify and prioritize future improvements.

Policy 5.9.B: Minimize the potential for flood damage to buildings and other structures, particularly from stormwater runoff.

Program 5.9.B.1: The City shall explore the use of pervious concrete and pavement to assist in the return of water to the regional aquifer and to assist in the management of storm drainage.

Program 5.9.B.2: The City shall encourage the use of landscaped bio-swales to filter oil and other pollutants from stormwater drainage.

Program 5.9.B.3: The City shall consider the use of filtered storm drainage inlets to screen pollutants from drainage waters.

Policy 5.9.C: Review and consider the use of underground storm drainage facilities in areas of the City where new surface facilities are impractical, infeasible, or undesirable.

Policy 5.9.D: Work to increase community awareness of flooding hazards and to coordinate flood control activities with other interested agencies.

Program 5.9.D.1: The City shall work with the community and other agencies to help identify flooding hazards and mitigation options. The City should complete and implement provisions of a Local Hazard Mitigation Plan, consistent with the requirements of FEMA, and should work with FEMA to periodically update the City's FEMA flood maps. The City should also participate in FEMA's Cooperating Technical Partners Program to advance the update of the City's Flood Insurance Rate Maps as needed.

Program 5.9.D.2: The City should coordinate flood hazard mitigation efforts with Glenn County to seek compliance with the Disaster Management Act of 2000, in order to ensure eligibility for funding through FEMA grant programs.

Policy 5.9.E: All new development projects comprising more than 100 units shall establish a financing district to pay for the ongoing operation of the storm drainage facilities.

5.10 RECREATION RESOURCES

OVERVIEW

The City of Orland is in a unique position with respect to its parks, recreation and open space planning. Citizens benefit from City-provided and developed (or “improved”) resources as well as a range of additional regional resources including Black Butte Lake, Lassen National Park (and Lassen National Forest), the Mendocino National Forest, the Sacramento River, and more. And, while there are existing and future challenges in regard to the City’s provision of recreation facilities and services, there is a great range of opportunity where the City can “get ahead of the curve” in terms of meeting the parks, recreation and open space needs of its future residents.

The City of Orland currently has no open space, parks, and recreation master plan. A common approach to municipal recreation planning is development and implementation of such a master plan for the identification of park and recreational needs in a given planning area, the management of existing recreational resources, and the development of additional facilities to meet identified needs. This encourages public agencies to inventory their recreational resources and develop policies for responsible utilization and stewardship. A comprehensive recreation master plan develops policies and parkland acquisition strategies directed toward the development of additional recreational facilities. Policies and parkland acquisition tools also address achieving equilibrium between economic development and providing for the community’s recreational needs.

The National Recreation and Park Association (NRPA) has developed area standards that have been traditionally applied to assess demand for parkland in cities. The NRPA standards recommended a range of 6 to 10.5 acres of developed parkland per every 1,000 residents.

The Subdivision Map Act allows a local jurisdiction to require fees or land dedication for park and recreation purposes as a condition of approval of a tentative map. In 2003, the Orland City Council set the park dedication standard at 8.4 acres per 1,000 residents based upon the 53 acres of improved parkland and the 2000 census figure of 6,281 residents.

As applied to public parks and recreation resources, standards provide a measurement of recreation space and facilities that should be provided for specific population numbers. They were established to help determine if an area has sufficient park area,

facilities, etc. Standards are also used to establish the space and other requirements for recreation facilities in order to know what improvements a site may accommodate. Recreation area, facility and open space standards are used in the planning, design and decision-making process.

Standards are needed (1) to allow appropriate area, number and location of facilities, thus establishing minimum area or acres to allow per type of park and (2) to establish a comprehensive and sound fiscal approach for an orderly acquisition and development program. However, they can be misleading and meaningless if misused. Standards and guidelines can be too idealistic or may not fit a specific planning area or population. In these cases, standards and guidelines are modified to fit the situation.

Standards can be soundly used when related to existing and current population:

- 1) To determine areas, number and types of facilities that are needed to best serve the people and generally where they should be provided.
- 2) To develop a sound, fiscal acquisition and development program.
- 3) To justify to state and local political bodies, for grants and funding purposes, the acquisition and development of parks and recreation areas and facilities and for the determination of priorities in acquisition and development.
- 4) To help measure the effectiveness of a public jurisdiction in providing needed recreation areas and facilities.
- 5) To reasonably use as a forecaster, in the case of tourism, as a means to plan to bring increased revenue into the planning area.
- 6) To help attract and retain desired residents in general or specific areas.

As such, park and recreation standards should be considered as planning guidance and as a decision-making tool, especially in terms of providing perspective for how the City may best meet the positive recreation needs of its residents.

Public facilities including parks and recreation facilities are shown on **Figure 5-1, Public Facilities**. The City of Orland currently has approximately 53 acres of improved parks and facilities for its population:

- Vinsonhaler Park – 18.1 acres
- Lely Aquatic Park – 30.0 acres
- Library Park – 2.6 acres
- Spence Park – 2.1 acres
- Welcome to Orland Park – 0.26 acres

With 53 acres of improved parkland and 7,189 residents (7.4 acres per 1,000 residents), Orland is just above the midpoint of the published NRPA acreage range for parkland.

However, in order for the City to maintain the 2000 ratio of park acreage set forth in the park dedication standard, the City would have had to add 7.6 acres of improved park space within the City.

Table 5-1, Population Projections for Orland, below, projects high, medium, and low growth scenarios.

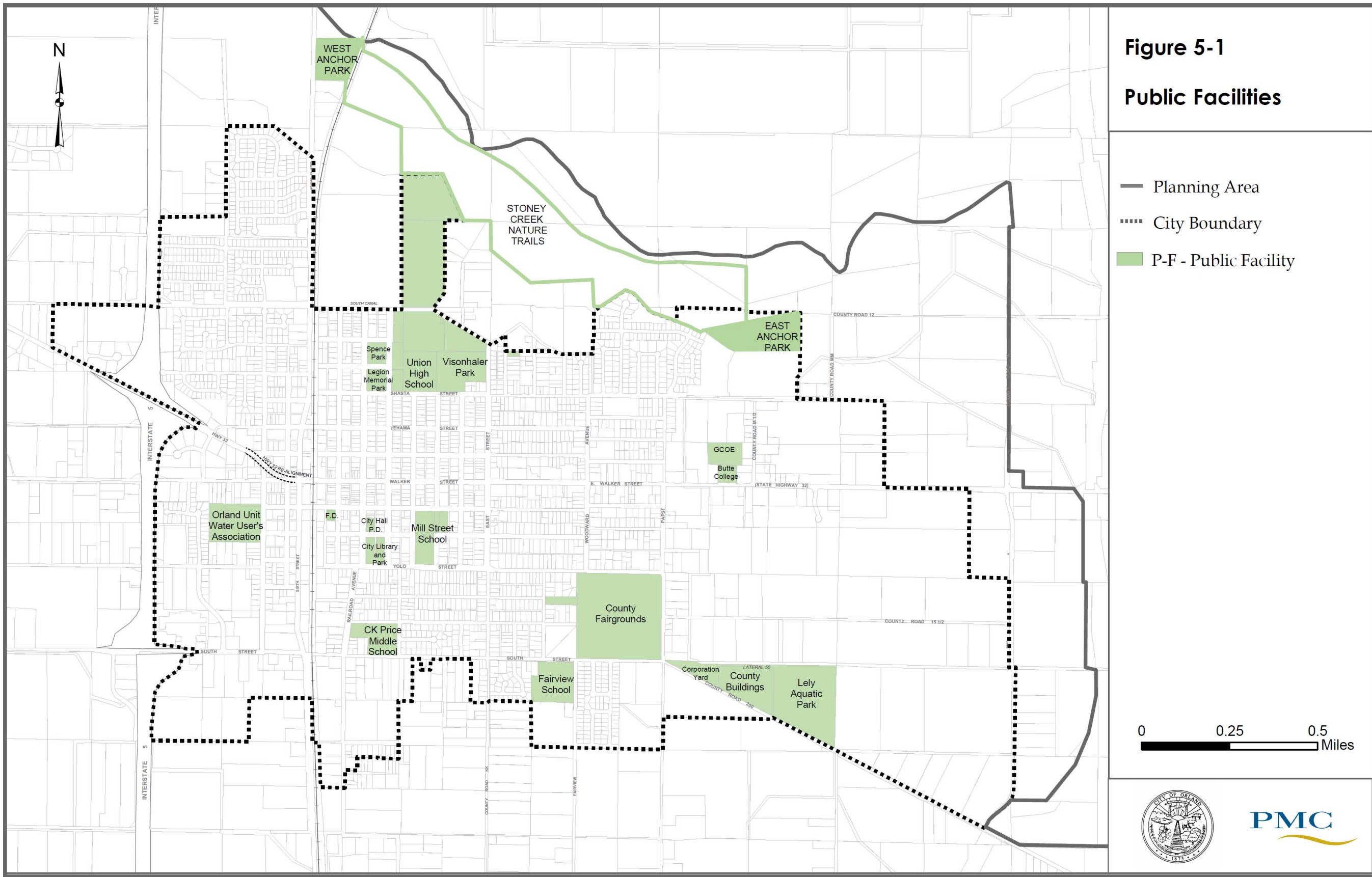
TABLE 5-1
POPULATION PROJECTIONS FOR ORLAND

Growth Rate	Orland Population Projections			
	2013	2018	2023	2028
High (2.6%)	8,360	9,505	10,806	12,286
Medium (2.2%)	8,198	9,141	10,191	11,363
Low (1.8%)	8,039	8,789	9,609	10,506

Source: PMC

Assuming Orland's park dedication standard of 8.4 acres of improved parkland per 1,000 residents and the projections in **Table 5-1**, the City would need to acquire and improve 27.4 acres of parkland under the low growth projection for 2028. The figure for parkland acquisition and improvement in the high growth scenario would be 43.1 acres.

The Recreation Department is responsible for organizing citywide recreational activities and programs offered year-round to City and County residents. The Recreation Department manages various recreation facilities including softball fields, baseball fields, soccer fields, basketball courts, horseshoe pits, lighted tennis courts, picnic tables, a children's playground, and a city swimming pool.



This page intentionally left blank.

A new sports complex is in the process of being developed at Orland High School through a combination of grant funding and City funding. The new complex will provide space for two full-size or multiple youth soccer fields. As part of the El Paseo project, a 5 acre public park with sports field is planned. To date, the project has been approved but construction has not commenced. A recreation center including office space for the Recreation Department staff as well as gymnasium space, restrooms, and an indoor basketball court is planned for Lely Park.

In addition to the managed recreation via parks, a more passive opportunity for public recreation may also be open to the City for further investigation. Streams and their adjacent riparian corridors have long been recognized as important recreational resources, providing opportunities for wildlife viewing, picnicking, fishing, and the like.

To those ends, the City is pursuing funding through grant opportunities for a proposed 1½ mile creek trail project. The Stony Creek Recreation and Interpretive Area project will add five new public access areas along the south bank of Stony Creek between Highway 99 and the Blair Estates Subdivision, Unit 1. Phase 1 of the proposed project includes development of the 10-acre access granted to the City in perpetuity from the Blair Estates Subdivision, Unit 1. Funding for the four remaining access points will be applied for in future phases.

An ongoing and endless challenge for the City is the upkeep and maintenance of its recreation facilities. The assessment area that had been formed under the Landscape and Lighting Act to fund the maintenance and operations of these parks was voted out of existence in the late 1990s. However, the City's Public Works Department, although understaffed for park maintenance, continues to maintain the value and benefit that the parks were designed to provide.

GOALS, POLICIES, AND PROGRAMS

GOAL 5.10: DEVELOP AND SUSTAIN AN INTEGRATED AND COHESIVELY DESIGNED PARK SYSTEM THAT IS COMPLEMENTARY TO EXISTING AND PROPOSED DEVELOPMENT AS WELL AS THE NATURAL ENVIRONMENT. THIS SHALL INCLUDE DEVELOPMENT AND MAINTENANCE OF A NETWORK OF RECREATIONAL TRAILS, BICYCLE LANES AND BIKEWAYS.

Policy 5.10.A: Provide adequate parkland acreage and facilities in both location and size to meet the recreational needs of existing and future residents.

Program 5.10.A.1: The City shall adopt a park dedication standard of 8.4 acres per 1,000 residents for the City of Orland to maintain the existing parks standard in the City.

Program 5.10.A.2: The City shall provide neighborhood parks within easy walking distance of the residential neighborhoods they serve.

Program 5.10.A.3: The City shall place a priority on the acquisition of land or the addition of improvements in those existing neighborhoods where recreation facilities are currently limited or nonexistent.

Program 5.10.A.4: The City shall require common open space areas with appropriate recreation facilities in multiple-family development having more than 20 units.

Program 5.10.A.5: The City shall plan and design for linkage opportunities between existing and planned recreation and open space facilities, where practical.

Program 5.10.A.6: The City shall review development proposals for consistency with this Element and require easements, dedications, and improvements when necessary.

Program 5.10.A.7 The City shall plan for recreational facilities on the west side of the freeway to serve future residents.

Program 5.10.A.8: The City shall require a neighborhood park and/or recreational facilities within the area designated as the Northeast Orland Specific Plan Area at the expense of any future development in the area.

Policy 5.10.B: Encourage development and implementation of a City of Orland Recreation Master Plan.

Policy 5.10.C: Utilize developed parklands and undeveloped natural features to create elements around which Orland and its neighborhoods can be centered or oriented.

Program 5.10.C.1 The City shall use open space to define the edges of urban development and the beginning of agricultural production or resource management.

Program 5.10.C.2 The City shall develop greenbelt corridors for bike and pedestrian uses.

Policy 5.10.D: Consider and explore all available financing and acquisition methods, tools, and techniques in the development and maintenance of park and recreation facilities.

Program 5.10.D.1: To the maximum extent possible, the City should explore means by which ongoing maintenance for the various facilities, areas, and trails that compose parks systems can be accomplished through cooperative-sharing agreements with other public agencies, volunteer user groups, and/or private parties.

6.0 NOISE ELEMENT

CHAPTER

6.0

Noise Element



A quiet day at the corner of Second and Swift Streets

INTRODUCTION

The Noise Element, a legally required element, is included in this General Plan because noise in any community can be regarded as a health problem, not in terms of actual physiological damage such as hearing impairment, but in terms of interference with the quiet use and enjoyment of one's property. The health effects of noise in the community can interfere with human activities such as sleep, speech, recreation, and tasks demanding concentration or coordination. When community noise interferes with human activities, public tolerance for that noise source decreases. This decrease in acceptability and the threat to public health and welfare are the basis for land use planning policies that minimize or prevent exposure to excessive noise levels. This Noise Element addresses issues related to noise in and around the City of Orland.

LEGAL BASIS AND REQUIREMENTS

The legal requirements of the general plan Noise Element are defined within Government Code Section 65302(f) as follows:

[The general plan shall include] a noise element which shall identify and appraise noise problems in the community. The noise element shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all of the following sources:

- 1) Highways and freeways
- 2) Primary arterials and major local streets
- 3) Passenger and freight railroad operations
- 4) Commercial, general aviation, aircraft overflight and ground facilities related to airport operation
- 5) Local industrial plants
- 6) Other ground stationary noise sources which contribute to the community noise environment.

Government code requires that noise contours be shown for the above noise sources based on accepted noise modeling techniques. The noise contours are to be used as a guide for designating land uses within the land use element that minimizes the exposure of community residents to excessive noise. The noise element shall include policies, implementation measures, and possible solutions that address existing and foreseeable noise problems, if any.

OVERVIEW

Compatibility between noise generated by various land uses and the sensitivity of surrounding land uses to the noise environment is an important planning consideration. Noise level compatibility varies with numerous factors, including:

- Background noise levels
- Intensity of noise source
- Character of noise source
- Frequency of noise
- Timing of noise (day vs. night)
- Sensitivity of adjacent land uses

The information presented in this Element is based upon various sources, including field measurements of community noise levels, observations of existing traffic levels, existing City land uses and projections for future land uses, and transportation (road and rail) activities.

The findings of the Noise Element have aided in the development of the General Plan Land Use Diagram. Where possible, land uses have been arranged to avoid exposure of sensitive land uses to excessive noise levels.

This Element also seeks to protect existing and future industrial uses from encroachment by noise-sensitive uses. Unchecked, such encroachment can lead to land use conflicts and ultimately require relocation of the industrial use.

SETTING

Located in the northeast portion of Glenn County, Orland has a strong cultural and economic relationship with agriculture. As such, residents of Orland have historically been tolerant of noise levels related to agricultural land uses.

The major noise sources in Orland consist of Interstate 5 (I-5), Highway 32 (Walker Street), and local traffic on City streets, commercial and industrial uses, active recreation areas of parks, outdoor play areas of schools, auto racing events at the fairgrounds, and occasional railroad operations on the California Northern Railroad.

Haigh Field is within the Planning Area, approximately three-quarters of a mile southeast of the city limits. The City of Orland is located well beyond the noise impact zones, as determined by the noise contours contained within the Airport's Land Use Plan. That plan is incorporated into this document by reference, and additional information is included below. The existing ambient noise environment of the City of Orland is not significantly influenced by aircraft noise.

DEFINITIONS

Noise evaluation is one of the more technical components of the general plan. The purpose of the element is to minimize negative effects of noise within the community. However, each individual experiences noise differently due to variations in hearing ability. Also, how often noise occurs and the time of day it occurs affect the impact a noise source will have on the community.

The following terms are commonly used to define the impact that a given noise source will have on the community.

Ambient noise: Ambient noise refers to the total noise associated with an environment.

Decibel (dB): dB is an objective measure of the pressure that sound waves generate. Decibels may be measured with a noise meter.

A-Weighted Decibel Levels (dBA): dBA refers to a filtered noise meter measurement which stimulates how people perceive noise.

Energy-Equivalent Level (L_{eq}): L_{eq} measures individual noises for a period of time (typically one hour) and determines the average noise level.

Day-Night Average Noise Level (L_{dn}): L_{dn} is a formula based on L_{eq} values which is weighted to reflect the greater significance of noise at night (10 p.m. to 7 a.m.).

Community Equivalent Noise Level (CNEL): CNEL is a more sophisticated version of L_{dn} which also values evening noise (7 p.m. to 10 p.m.) as more significant. Typically, results of CNEL and L_{dn} analysis for a given situation are very similar.

NOISE MEASUREMENT

The human ear is subject to a wide range of sound intensities, and the sounds that people hear are in direct proportion to those intensities. The decibel (dB) scale is a logarithmic scale used to compress this range. On the dB scale, the smallest audible sound (near total silence) is 0 dB. A sound 10 times more powerful is 10 dB. A sound 100 times more powerful than total silence is 20 dB. A sound 1,000 times more powerful than total silence is 30 dB. See **Table 6-1** for more information. The "A" weighting scale, that which most closely resembles human hearing, is used in this General Plan and is noted by the symbol dBA.

Varying noise levels are often described in terms of the equivalent constant decibel level. Equivalent noise levels (L_{eq}) are used to develop single-value descriptions of average noise exposure over various periods of time. Such average exposure ratings often include additional weighting factors for annoyance potential because of time of day or other considerations.

Ambient noise levels constitute the composite from all sources far and near. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

The Day-Night Average Level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighting applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

The Community Noise Equivalent Level (CNEL) is similar to the L_{dn} , but with weighting factors placed on two time periods (7:00 a.m. to 10:00 p.m., and 10:00 p.m. to 7:00 a.m.).

TABLE 6-1
TYPICAL A-WEIGHTED SOUND LEVELS OF COMMON NOISE SOURCES

Decibels	Description
130	Threshold of pain
120	Jet aircraft take-off at 100 feet
110	Riveting machine at operators position
100	Shotgun at 200 feet
90	Bulldozer at 50 feet
80	Diesel locomotive at 300 feet
70	Commercial jet aircraft interior during flight

Decibels	Description
60	Normal conversation speech at 5-10 feet
50	Open office background level
40	Background level within a residence
30	Soft whisper at 2 feet
20	Interior of recording studio

COMMUNITY NOISE SURVEY

To quantify existing noise levels in the quieter parts of the City of Orland, a community noise survey was performed at eight locations which are removed from major noise sources. Two of the eight locations were monitored over a continuous 24-hour period, while the other six locations were each monitored for two short-term periods during the daytime hours and one during nighttime hours. (The locations of the noise monitors and the results of the survey are presented in Table 9-3 of this document's Background Report.)

ROADWAY NOISE

The Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) with the Calvenio vehicle noise emission curves was used to predict traffic noise levels within the Orland city limits. The FHWA Model is the traffic noise prediction model currently preferred by the Federal Highway Administration, the State of California Department of Transportation (Caltrans), and most city and county governments for use in traffic noise assessment. Although the FHWA Model is in the process of being updated by a more sophisticated traffic noise prediction model, the use of RD-77-108 is considered acceptable for the development of general plan traffic noise predictions.

Interstate 5 and Highway 32 (Walker St.)

Interstate 5 and Highway 32 are the two most heavily traveled roadways in the City of Orland. The FHWA Model was used with existing traffic data to develop L_{dn} contours for Interstate 5 and Highway 32, as well as other major roadways in the City of Orland. The FHWA Model input data for those roadways is provided in Appendix A. The predicted L_{dn} at a reference distance of 100 feet, and the distances from the centerlines of the major roadways to the 60 and 65 dB L_{dn} contours are summarized in Table 1 of the Background Report.

To check the accuracy of the FHWA Model in predicting noise levels for Interstate 5, continuous noise level measurements were conducted at the highway right-of-way on January 21–22, 2008, at location "B" identified on Figure 9-2 in the Background Report. The noise measurement results from that location are provided in Appendix B. The 24-hour noise level measurements indicate that the FHWA Model provided a reasonably accurate assessment of existing Interstate 5 traffic noise levels in Orland.

RAILROAD NOISE

According to the *Railroad Atlas of North America*, the railroad tracks in Orland are operated by the California Northern Railroad (CFNR). The tracks run from north to south and generally parallel Sixth Street (Highway 99 West). According to noise level measurements and field observations conducted by Bollard & Brennan, Inc., this line has relatively few train passages per day. Due to the low number of existing daily railroad operations on the CFNR, railroad noise generation in Orland is not expected to exceed accepted land use compatibility criteria at noise-sensitive land uses in the City. It is recognized, however, that the use of the railroad warning horns at the roadway crossings results in brief periods of elevated noise levels in the proximity of the tracks.

It is difficult to report existing, or predict future, railroad noise exposure in the City of Orland without knowing if, or to what degree, railroad activity currently exists or may change in the future. Table 9-2 in the Background Report was developed to estimate the distances to the 60 and 65 dB L_{dn} railroad noise contours for various numbers of daily trains in Orland. The Table 9-2 data assume that, since this is not a main line, additional railroad operations in Orland would likely occur primarily during daytime hours (7 a.m. to 10 p.m.). The data also assume a mean railroad sound exposure level (SEL) of 100 dB at a distance of 100 feet.

AIRPORT NOISE

There are two publicly owned airports in Glenn County: Haigh Field, located in Orland, and the Willows-Glenn Airport. Haigh Field is the only airport within the Planning Area. It is located approximately 3 miles southeast of the City of Orland's central business district. Specifically, the airport is located at the southwest corner of County Roads P and 200, south of State Highway 32. The airport covers approximately 300 acres and has one runway, which is approximately 5,160 feet long and 50 feet wide. Its length qualifies it as a "Basic Transport" facility, suitable for use by general aviation users and capable of handling small or light business jets. There is sufficient land area for expanding service and facilities to meet the City's needs and also those of the region.

The airport is currently located within the jurisdiction of and is managed by the County of Glenn, but is within the City of Orland Sphere of Influence. It was constructed by the U.S. Army during World War II as an auxiliary training field for the Chico Army Airfield. The facility was turned over to the County for general aviation use after World War II and named in honor of a County Supervisor.

The airport is located approximately 1.5 miles south of SR 32. It is located in an undeveloped, primarily agricultural area, with residential uses scattered on all sides with the highest density located north of the airport. Residences, businesses and other activities located adjacent to or near the airport could be exposed to hazards arising from airport operations. Land use activities located within the flight path of aircraft could be exposed to potential incidents involving aircraft. Nearby buildings could interfere with airport operations as well as be exposed to additional risk.

Comprehensive Airport Land Use Plan

The Glenn County Airport Land Use Commission adopted the Comprehensive Airport Land Use Plan (CLUP) for Orland Haigh Field Airport on February 27, 1991. The CLUP provides the land use compatibility guidelines on which compatibility of land uses with airport operations are determined. It also establishes the planning boundaries around the airport. These boundaries are established for height, noise and safety. Following adoption by the Airport Land Use Commission, a CLUP is transmitted to all jurisdictions affected by the plan.

Noise contours are based on the Community Noise Equivalent Level (CNEL) as defined in Title 21 of the California Code of Regulations. The history of noise complaints around general aviation airports suggests that some land use regulation measures are required under the traffic pattern and within the 55 CNEL contour. Preferred measures are those that restrict residential land use within the traffic pattern. Land use restrictions may include prohibiting residential development underneath that traffic pattern or limiting development to low density uses.

The local standard for noise levels near Haigh Field Airport is 60 dBA L_{dn} for residential areas or other sensitive receptors. **Table 6-2**, taken from the CLUP, shows detailed airport/land use noise compatibility criteria.

TABLE 6-2
IMPACT OF AIRPORT NOISE ON LAND USE

Land Use Category	CNEL or L_{dn} , dBA 1				
	50-55	55-60	60-65	65-70	70-75
Residential					
Single-family detached and duplexes	+	0	♦	♦♦	♦♦
Multi-family and transient lodging	++	+	0	♦	♦
Mobile homes	+	♦	♦	♦♦	♦♦
Public					
School, libraries, hospitals, nursing homes	+	0	♦	♦	♦♦
Churches, auditoriums, concert halls	+	0	0	♦	♦♦
Transportation, parking, cemeteries	++	++	++	+	0
Commercial and Industrial					
Offices, retail	++	+	0	0	♦
Service commercial, wholesale trade warehousing light industrial	++	++	+	0	0
General manufacturing, utilities, extractive industry	++	++	++	+	+
Agricultural and Recreational					
Cropland	++	++	++	++	+
Livestock breeding	++	+	0	0	♦

Land Use Category	CNEL or L _{dn} , dBA 1				
	50-55	55-60	60-65	65-70	70-75
Parks, playgrounds, zoos	++	+	+	0	0
Golf courses, riding stables, water recreation	++	++	+	0	0
Outdoor spectator sports	++	+	+	0	♦
Amphitheaters	+	0	♦	♦♦	♦♦

Land Use Acceptability	Interpretations Conditions
++ Clearly Acceptable	The activities associated with the specified land use can be carried out with essentially no interference from the noise exposure.
+ Normally Acceptable	Noise is a factor to be considered in that slight interference with outdoor activities may occur. Normal construction methods will eliminate most noise intrusions upon indoor activities.
0 Marginally Acceptable	The indicated noise exposure will cause moderate interference with outdoor activities and indoor activities with windows open. This is acceptable upon the conditions that outdoor activities are minimal and construction features which provide for sufficient noise attenuation are used. Under other circumstances, the land use should be discouraged.
♦ Normally Unacceptable	Noise will create substantial interference with both outdoor and indoor activities. Noise intrusion upon indoor activities can be mitigated by requiring special noise insulation construction. Land uses which have conventionally constructed structures and/or involve outdoor activities which would be disrupted by noise should generally be avoided.
♦♦ Clearly Unacceptable	Unacceptable noise intrusion upon land use activities will occur. Adequate structural noise insulation is not practical under most circumstances. This land use should be avoided unless strong overriding factors prevail.

Figure 6-1 depicts the airport noise contour lines for the Orland Haigh Field Airport, as found in the CLUP. It should be noted that, according to the CNEL, this figure only provides contour lines for the 55 CNEL level due to the airport's small size and lack of commercial air traffic. Noise levels are not considered significant within the contour lines of the runway.

ORLAND HAIGH FIELD COMPREHENSIVE AIRPORT LAND USE PLAN NOISE POLICIES

The following noise policies were adopted for Haigh Field Airport in the CLUP:

- 1) Airport/land use noise compatibility shall be evaluated in terms of the Community Noise Equivalent Level (CNEL), as defined in Title 21 of the California Code of Regulations.
- 2) The maximum noise exposure which shall be considered normally acceptable for residential areas is 60 dBA CNEL.
- 3) The relative acceptability or unacceptability of particular land uses with respect to the noise levels to which they would be exposed as indicated in the

Airport/Land Use Noise Compatibility Criteria matrix (**Table 6-2**). These criteria shall be the principal determinants of whether a proposed land use is compatible with the noise impact from a nearby airport, but special circumstances which would affect the specific proposal's noise (e.g., the extent or lack of outdoor activity) also shall be taken into account.

Caution: Land use compatibility is determined by comparing proposed land use against height, noise and safety guidelines. Proposed land uses must be compatible with each.

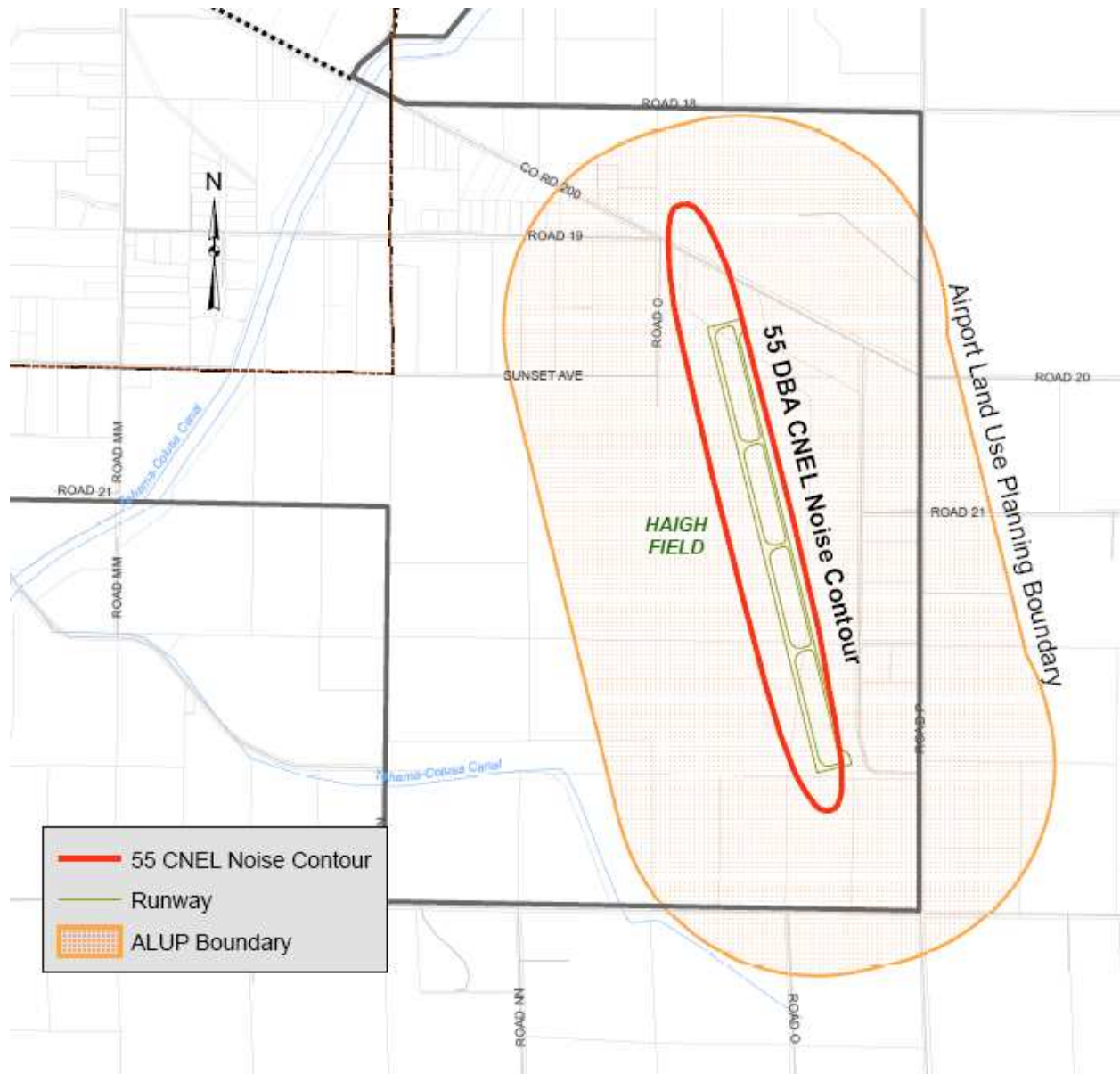
- 4) One of the conditions for approval of a land use which is "marginally acceptable" or "normally unacceptable" for the given noise environment is that the building must provide a satisfactory degree of noise attenuation.
- 5) In applying the interior level criteria, engine run-up noise shall be considered as a source of commonly-occurring exterior noise.
- 6) When applying the noise compatibility criteria to a given location, the basis for evaluation shall be the maximum Community Noise Equivalent Level to which the location is or is forecast to be exposed. For the Orland Airport covered by this Policy Plan, the year 2000 contours shall be used. Year 2000 CNEL contours of 60 dBA are depicted in **Figure 6-1**.
- 7) If a noise analysis, including noise monitoring, is conducted for a particular location and the results indicate that the maximum CNEL will be less than shown herein, the lower exposure level may be used for the land use evaluation at the discretion of the Airport Land Use Commission.

NON-TRANSPORTATION NOISE SOURCES

The production of noise is a result of many processes and activities, even when the best available noise control technology is applied. Noise exposures within industrial facilities are controlled by federal and state employee health and safety regulations (OSHA), but exterior noise levels may exceed locally acceptable standards. Commercial, recreational and public service facility activities can also produce noise which affects adjacent sensitive land uses.

From a land use planning perspective, fixed-source noise control issues focus upon two goals: to prevent the introduction of new noise-producing uses in noise-sensitive areas, and to prevent encroachment of noise-sensitive uses upon existing noise-producing facilities. The first goal can be achieved by applying noise performance standards to proposed new noise-producing uses. The second goal can be met by requiring that new noise-sensitive uses in proximity to noise-producing facilities include mitigation measures to ensure compliance with those noise performance standards.

**FIGURE 6-1
ORLAND HAIGH FIELD AIRPORT NOISE CONTOUR LINES**



Source: CLUP

6.1 GOALS, POLICIES, AND PROGRAMS

GOAL 6.1: PROTECT CITIZENS OF ORLAND FROM THE HARMFUL EFFECTS OF EXPOSURE TO EXCESSIVE NOISE. ADDITIONALLY, PROTECT EXISTING NOISE-SENSITIVE LAND USES FROM NEW USES THAT WOULD GENERATE NOISE LEVELS THAT ARE INCOMPATIBLE WITH THOSE USES AND DISCOURAGE NEW NOISE-SENSITIVE LAND USES FROM BEING DEVELOPED NEAR SOURCES OF HIGH NOISE LEVELS.

Policy 6.1.A: The interior and exterior noise level standards for noise-sensitive areas of new uses affected by traffic or railroad noise sources in the City of Orland are shown in Table 6-3, below.

TABLE 6-3
NOISE STANDARDS FOR NEW USES AFFECTED BY TRAFFIC AND RAILROAD NOISE

New Land Use	Outdoor Activity Areas L _{dn}	Interior –L _{dn} /Peak Hour Leq (Note 1)	Notes
Residential	60-65	45	2, 3, 4
Transient Lodging	65	45	5
Hospitals, Nursing Homes	60	45	6
Theaters, Auditoriums, Music Halls	--	35	
Churches, Meeting Halls, Schools, Libraries, etc.	60	40	
Office Buildings,	65	45	7
Commercial Buildings	65	50	7
Playgrounds, Parks	70	--	
Industry	65	50	7

Notes:

1. For traffic noise within the City of Orland, L_{dn} and peak-hour Leq values are estimated to be approximately similar. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in closed positions.
2. Outdoor activity areas for single-family residential uses are defined as back yards. For large parcels or residences with no clearly identified outdoor activity area, the standard shall be applicable within a 100-foot radius of the residence.
3. For multi-family residential uses, the exterior noise level standard shall be applied at the common outdoor recreation area, such as at pools, play areas, or tennis courts.
4. Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn} or less using a practical application of the best available noise-reduction measures, an exterior noise level of up to 65 dB L_{dn} may be allowed provided that available exterior noise reduction measures have been implemented and interior noise levels are in compliance with this table.
5. Outdoor activity areas of transient lodging facilities include swimming pools and picnic areas.
6. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
7. Only the exterior spaces of the uses designated for employee or customer relaxation have any degree of sensitivity to noise.

Policy 6.1.B: Where the noise level standards for Table 6-3 are predicted to be exceeded at new uses proposed within the City of Orland which are affected by traffic or railroad noise, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with Table 6-3 standards.

Policy 6.1.C: Assessment of traffic noise impacts within the City of Orland shall be based on projections of traffic volumes commensurate with cumulative buildout of the City of Orland.

Policy 6.1.D: If future railroad operations occur during nighttime hours (10 p.m. to 7 a.m.), proposals for the development of new residential uses within 1,000 feet of railroad grade crossings should address noise impacts in terms of the potential for sleep disturbance in addition to the Table 6-3 standards.

Policy 6.1.E: If an acoustical analysis is required by the City of Orland to assess compliance with the City's Noise Element standards, it shall be prepared in accordance with Table 6-4, Requirements for Acoustical Analyses Prepared in Orland.

**TABLE 6-4
REQUIREMENTS FOR ACOUSTICAL ANALYSES PREPARED IN ORLAND**

An acoustical analysis prepared pursuant to the Noise Element shall:	
1.	Be the responsibility of the applicant.
2.	Be prepared by qualified persons experienced in the fields of environmental noise assessment and architectural acoustics.
3.	Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
4.	Estimate existing and projected (cumulative City buildout) noise levels in terms of the standards of Tables 6-1, 6-2, and 6-3 and compare those levels to the adopted policies of the Noise Element.
5.	Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms evaluating possible sleep disturbance.
6.	Estimate interior and exterior noise exposure after the prescribed mitigation measures have been implemented.
7.	Describe the post-project assessment program which could be used to evaluate the success of mitigation measures.

Policy 6.1.F: The interior and exterior noise level standards for noise-sensitive areas of new uses affected by non-transportation noise sources in the City of Orland are shown by Table 6-5, below.

TABLE 6-5
NOISE STANDARDS FOR NEW USES AFFECTED BY NON-TRANSPORTATION NOISE

New Land Use	Outdoor Activity Area – Leq		Interior – Leq	
	Daytime	Nighttime	Day & Night	Notes
All Residential	50	45	35	1, 2, 7
Transient Lodging	55	--	40	3
Hospitals, Nursing Homes	50	45	35	4
Theaters and Auditoriums	--	--	35	
Churches, Meeting Halls, Schools, Libraries, etc.	55	--	40	
Office Buildings	55	--	45	5, 6
Commercial Buildings	55	--	45	5, 6
Playgrounds, Parks, etc.	65	--	--	6
Industry	65	65	50	5

Notes:

1. Outdoor activity areas for single-family residential uses are defined as back yards. For large parcels or residences with no clearly identified outdoor activity area, the standard shall be applicable within a 100-foot radius of the residence.
2. For multi-family residential uses, the exterior noise level standard shall be applied at the common outdoor recreation area, such as at pools, play areas, or tennis courts. Where such areas are not provided, the standards shall be applied at individual patios and balconies of the development.
3. Outdoor activity areas of transient lodging facilities include swimming pool and picnic areas, which are not commonly used during nighttime hours.
4. Hospitals are often noise-generating uses. The exterior noise levels standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
5. Only the exterior spaces of those uses designated for employee or customer relaxation have any degree of sensitivity to noise.
6. The outdoor activity areas of office, commercial, and park uses are not typically utilized during nighttime hours.
7. It may not be possible to achieve compliance with this standard at residential uses located immediately adjacent to loading dock areas of commercial uses while trucks are unloading. The daytime and nighttime noise level standards applicable to loading docks shall be 55 and 50 dB Leq, respectively.

Program 6.1.F.1: The Table 6-5 standards shall be reduced by 5 dB for sounds consisting primarily of speech or music and for recurring impulsive sounds.

Program 6.1.F.2: If the existing ambient noise level exceeds the standards of Table 6-5, then the noise level standards shall be increased at 5 dB increments to encompass the ambient noise.

Policy 6.1.G: The Table 6-5 standards are applied to both new noise-sensitive land uses and new noise-generating uses, with the responsibility for noise mitigation placed on the new use.

Policy 6.1.H: Where the noise level standards of Table 6-5 are predicted to be exceeded at new uses proposed within the City of Orland which are affected by or include non-transportation noise sources, appropriate noise mitigation measures shall be included in the project design to reduce projected noise levels to a state of compliance with Table 6-5 standards.

Policy 6.1.I: Noise associated with construction activities shall be exempt from the noise standards cited in Table 6-5.

Policy 6.1.J: Construction activities shall be limited to the hours of 7 a.m. to 5 p.m. unless an exemption is received from the City to cover special circumstances.

Policy 6.1.K: All internal combustion engines used in conjunction with construction activities shall be muffled according to the equipment manufacturer's requirements.

HOUSING ELEMENT

CITY OF ORLAND HOUSING ELEMENT
PUBLISHED UNDER A SEPARATE COVER