TOWN OF PARADISE

1994 GENERAL PLAN

VOLUME I
POLICY DOCUMENT

AS AMENDED THROUGH JANUARY 2008

TOWN OF PARADISE COMMUNITY DEVELOPMENT DEPARTMENT
QUAD CONSULTANTS

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KEY AGENCIES CONTACTED

BUTTE, COUNTY OF

Planning Department
Airport Land Use Commission
County Assessor
Air Quality Control Board
Fire Department/CDF
Environmental Health Department
Community Action Agency
U. C. Cooperative Extension/Farm Advisor
LAFCo

CALIFORNIA, STATE OF

Department of Conservation, *Division of Mines and Geology*
Department of Fish and Game
California Energy Commission
Department of Housing and Community Development
Division of Highway (Caltrans)
Office of Planning and Research
Department of Forestry and Fire Prevention
Office of Attorney General
Integrated Waste Management Board
Air Resources Board
Fireman's Association
Office of Historic Preservation
Office of Emergency Services
Department of Social Services, *Community Care Licensing Division*

CALIFORNIA ARCHAEOLOGICAL INVENTORY

Northeastern Information Center, California State University, Chico

OTHER AGENCIES

Butte County Association of Governments
Butte County Mosquito Abatement District
Paradise Chamber of Commerce
Paradise Fire Department
Paradise Police Department
Paradise Irrigation District
Paradise Unified School District
Lime Saddle Community Services District
Paradise Recreation and Park District
Del Oro Water Company
City of Chico Planning Department

PARADISE GENERAL PLAN
ACKNOWLEDGEMENTS

TOWN COUNCIL

12/88 to 07/92

William Allen (to 12/90)
Larry R. Duncan
Lew Hubb (from 12/90)
Robert D. Jeffords, Jr.
Howard Johnson
Lise A. Young

07/92 to 12/92

Mark Fugh
Jack Griffin
Lew Hubb
Ellsworth "Skip" Rowe
Rocky Toudouze

12/92 to Present

Mark Fugh
Jack Griffin
Robert D. Jeffords, Jr.
Lew Hubb
Debbie Presson

PLANNING COMMISSION

12/88 to 06/94

Lee Cage (to 06/92)
Joe Smith (to 06/91)
Wayne Hall (to 06/93)
Vivian Cleveland (to 06/92)
Daniel Wentland (from 06/91)
Shane Shane (from 06/92)
Larry R. Duncan (from 06/92)
John L. Malone (from 12/90 to 06/93)
Anthony L. Campa (from 06/93)
Jackie A. Woodcox (from 06/93)

TOWN STAFF

Kenneth Whorton, Town Manager
Jon Lander, Community Development Director/Town Engineer
Al McGreehan, Planning Director
Charley Stump, Senior Planner (Project Manager)
Dennis Ivey, Economic Development Director
Leo Trombley, Public Safety Director
Dan Cook, Project Manager, Onsite Wastewater Management District
Carolyn Mattingly, Fire Prevention Officer
Jennifer Forbes, Intern, Community Development Department
Dwight Moore, Town Attorney
Cathy Pitts, Department Secretary (word processing, document formatting, computer graphics)

CONSULTANTS

QUAD Consultants

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Westley Rhodehamel
Alfred Farber

Brown-Buntin Associates

Jim Buntin
Jim Brennan

Dowling Associates

John Dowden

GENERAL PLAN STEERING COMMITTEE

October 1990 to July 1992

William Allen, Councilmember
Larry R. Duncan, Councilmember (Vice Chairman)
Lew Hubb, Planning Commissioner/ Councilmember
Robert D. Jeffords, Jr. Councilmember
Howard Johnson, Councilmember
Lise A. Young, Councilmember
Lee Cage, Planning Commissioner
Vivian Cleveland, Planning Commissioner
Wayne Hall, Planning Commissioner
John L. Malone, Planning Commissioner
Daniel Wentland, Planning Commissioner
Dennis Ivey, Economic Development Director
Al McGreehan, Planning Director (Chairman)
Charley Stump, Senior Planner

July 1992 to December 1992

Mark Fugh, Councilmember
Jack Griffin, Councilmember
Lew Hubb, Councilmember
Ellsworth "Skip" Rowe, Councilmember
Rocky Toudouze, Councilmember
Larry R. Duncan, Planning Commissioner (Vice Chairman)
Wayne Hall, Planning Commissioner
John L. Malone, Planning Commissioner
Shane Shane, Planning Commissioner
Daniel Wentland, Planning Commissioner
Dennis Ivey, Economic Development Director
Al McGreehan, Planning Director (Chairman)
Charley Stump, Senior Planner

December 1992 to July 1993

Mark Fugh, Councilmember
Jack Griffin, Councilmember
Lew Hubb, Councilmember
Robert D. Jeffords, Jr., Councilmember
Debbie Presson, Councilmember
Larry R. Duncan, Planning Commission (Vice Chairman)
John L. Malone, Planning Commissioner
Wayne Hall, Planning Commissioner
Shane Shane, Planning Commissioner
Daniel Wentland, Planning Commissioner
Dennis Ivey, Economic Development Director
Al McGreehan, Planning Director (Chairman)
Charley Stump, Senior Planner

July 1993 to June 1994

Mark Fugh, Councilmember
Jack Griffin, Councilmember
Lew Hubb, Councilmember
Robert D. Jeffords, Jr., Councilmember
Debbie Presson, Councilmember
Anthony L. Campa, Planning Commissioner
Larry R. Duncan, Planning Commission (Vice Chairman)
Shane Shane, Planning Commissioner
Daniel Wentland, Planning Commissioner
Jackie A. Woodcox, Planning Commissioner
Dennis Ivey, Economic Development Director
Al McGreehan, Planning Director (Chairman)
Charley Stump, Senior Planner

CITIZEN SUBCOMMITTEES
April 1991 - July 1992

The backgrounds of citizens involved in the subcommittee process truly characterize the diversity of Paradise residents; ranging from high school students to retired corporate executives; from small business owners to painting contractors; from local bankers to tree cutters.

GROUP 1

Diana Shuey Brown
Eugene Butry
Vivian Cleveland
Marge Eggers
Elizabeth French
Susan Gardner
Howard Johnson
Michael G. Logelin
Bill Mannel
Ray E. Miller
A. Daniel Peck
Adele Perry
Walt Puciata
Moore and Pat Stuart
Frank Terstegge
Janeece Webb

GROUP 2

Donna Albright
Elizabeth Davidson
Robert Davy
Joseph Dudek
Kathy Gerevich
Clark L. Hanson
Charles Kasza
Judith Small McMullen
Donna Miller
Rose Reiling
Keith Robbins
Joe Smith
Donna M. Steiger
Alma S. Theis
Daniel Wentland
Lise A. Young

GROUP 3

Lorin Dale Bentley
Wayne Hall
Betty L. Hanson
John R. Hawkins
Bob Heckinger
Lew Hubb
Robert D. Jeffords, Jr.
Maurine R. Johnson
Kandy Judd
Alan Lieberman
Jerry G. Novotny
Paul Nunn
Paul D. Reiling
Arie B. Schuurman
Jean Shane
Jackie M. Sharpe
Roy West

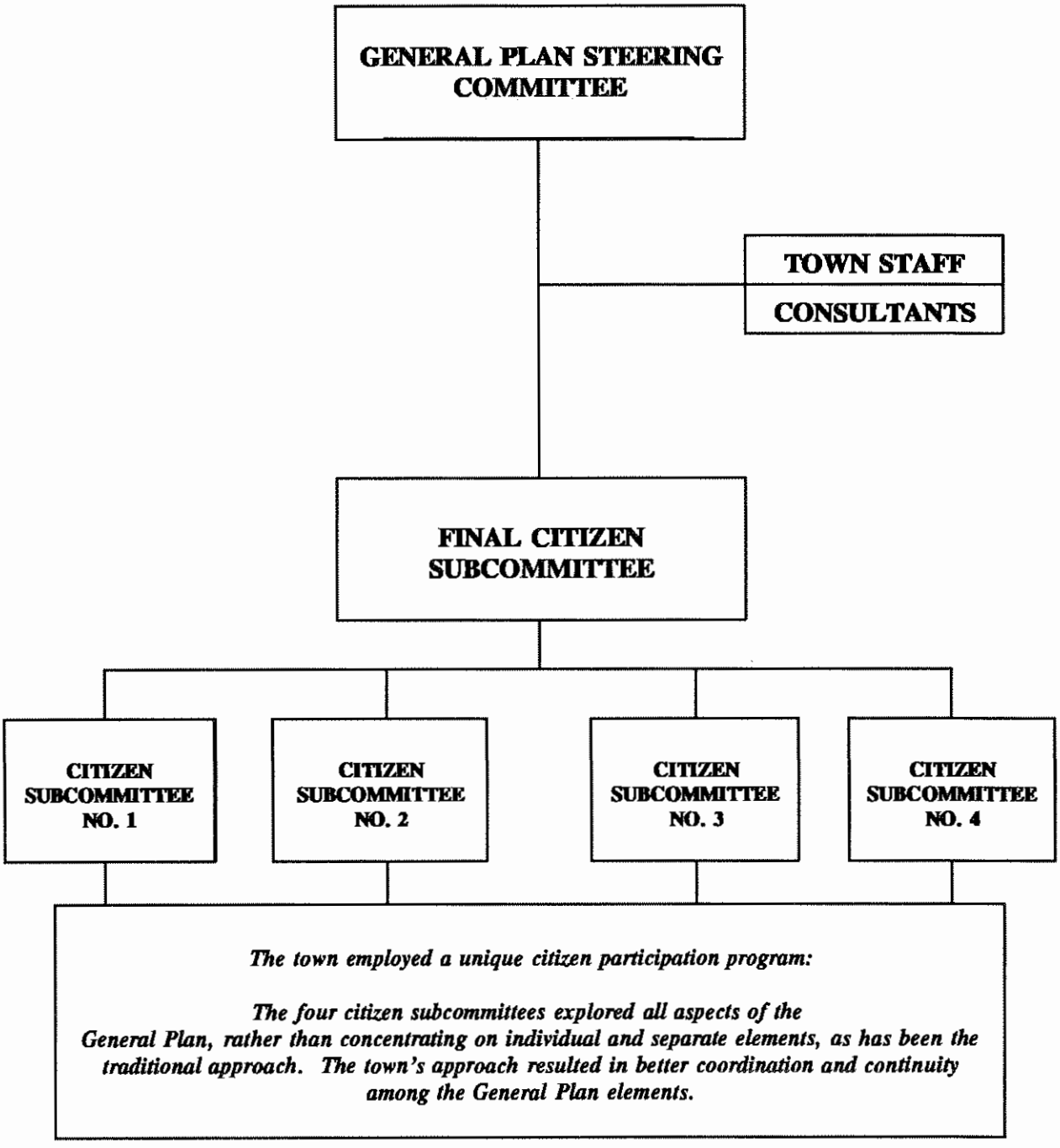
GROUP 4

Lee and Ann Albright
Robert C. Bell
Lee Brown
Lee Cage
Yvonne Capineri
Galen Steven Capineri
Larry R. Duncan
John Hanford
Larry L. Hoover, Sr.
Pat Johnson
John L. Malone
Steve Petersen
Ellsworth "Skip" Rowe
Shane Shane
Pat Waldron
Marge Witting

FINAL CITIZEN SUBCOMMITTEE

Robert C. Bell
Lorin Dale Bentley
Diana Shuey Brown
Eugene Butry
Lee Cage
Joseph Dudek
Larry R. Duncan
Marge Eggers
Kathy Gerevich
Wayne Hall
Clark L. Hanson
Lew Hubb
Robert D. Jeffords, Jr.
Charles Kasza
Judith Small McMullen
John Malone
Mary Lynn Meyer
Ray E. Miller
Jerry Novotny
A. Daniel Peck
Debbie Presson
Paul D. Reiling
Rose Reiling
Ellsworth "Skip" Rowe
Steven Scarborough
Arie B. Schuurman
Linda Sexton
Jean Shane
Shane Shane
Janeece Webb
Daniel Wentland
Barbara Wilding
Marge Witting
Lise A. Young
Stan Zemansky

PARADISE GENERAL PLAN
COMMITTEE ORGANIZATION



RELATION OF GENERAL PLAN CHAPTERS TO STATE MANDATED ELEMENTS

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PREFACE

The Paradise General Plan revision process began during the latter part of 1990 when the Town Council selected QUAD Consultants to assist with designing and implementing a work program for producing a new Paradise General Plan. Over the ensuing three plus years, the program experienced three different Town Councils, four different Planning Commissions and four different General Plan Steering Committees. In addition to the General Plan Steering Committee, a strong and focused citizen subcommittee patiently followed the process and played a major role in shaping the plan and maintaining continuity.

The community struggle regarding whether or not the town's commercial core area should be sewered has evolved and matured during the production of the draft revised General Plan documents. The primary issues that meld the sewer controversy and the revisions to the town General Plan are growth, health and safety.

Growth is an important issue to every community in California and invariably it becomes the focus of the community's General Plan. To some, it represents traffic congestion, noise, air and water pollution, obstructed viewsheds, health and safety problems, and long lines at the grocery store. To others, it represents possible financial contributions from developers to the cures for improving a deteriorating local quality of life; and a way to maintain current public services. Basic to all communities, growth represents change from the way it was and the way it is, to something new.

This General Plan focuses on managing growth so that changes are predictable and occur in a manner that is acceptable to the majority of people in the community. It distinguishes between population and economic growth, choosing to manage residential and population growth, while at the same time seeking to stimulate and diversify the local economy. The overall General Plan goal is to produce a community within the fifteen-year time frame of the plan, that has contained its population growth, maintained its natural environment and rural setting, improved its infrastructure, enhanced its open space, eliminated any health and safety problems and boosted its local economy.

USER'S GUIDE

USER'S GUIDE

The Paradise General Plan has been written and designed as a user friendly document. It is hoped that a person unfamiliar with land use planning and the concept of a General Plan will be able to read and understand it without difficulty. An attempt has been made to not use technical language and traditional bureaucratic jargon. Where unfamiliar land use and environmental planning terms have been used, information boxes are provided to define those terms on the same pages where they appear. A glossary of terms is also provided for the convenience of the reader.

- *To understand the general approach to the plan, continue reading the introduction, and pay special attention to Section 1.7, which describes the organization of the plan.*
- *If you are interested in background information, such as the history of the town, descriptions of the existing soils, topography, traffic levels, housing conditions, demographics, etc., refer to Volume III, the Environmental Setting Document.*
- *To familiarize yourself with the potential environmental effects of implementing the policies and programs contained in this volume (Volume I, Policy Document), refer to Volume II, the Environmental Impact Report.*
- *The Paradise General Plan also includes a land use designation diagram (map), traffic circulation diagram (map), and development constraints diagram (map). These maps are critical components of the plan, and should be reviewed along with the written text to fully understand the approach to planning for future growth, development and conservation. The diagrams are located in the map jacket at the end of this document.*
- *If you are interested in finding out how the General Plan affects your particular property, review the land use designation map and see how your parcel (s) is designated. Then turn to Chapter 2.0 of this document for a description of that designation. Also take time to review the "constraints" map to see if identified development constraints affect your property.*
- *If you are interested in the goals, objectives, policies and implementation measures of a specific topic, such as land use, housing, open space/conservation, etc., turn directly to Chapter 6.0.*

1.0 INTRODUCTION

Many of the chapters contain highlighted boxes in this format, either for the purpose of summarizing, defining technical terms or referencing related information in other parts of the document.

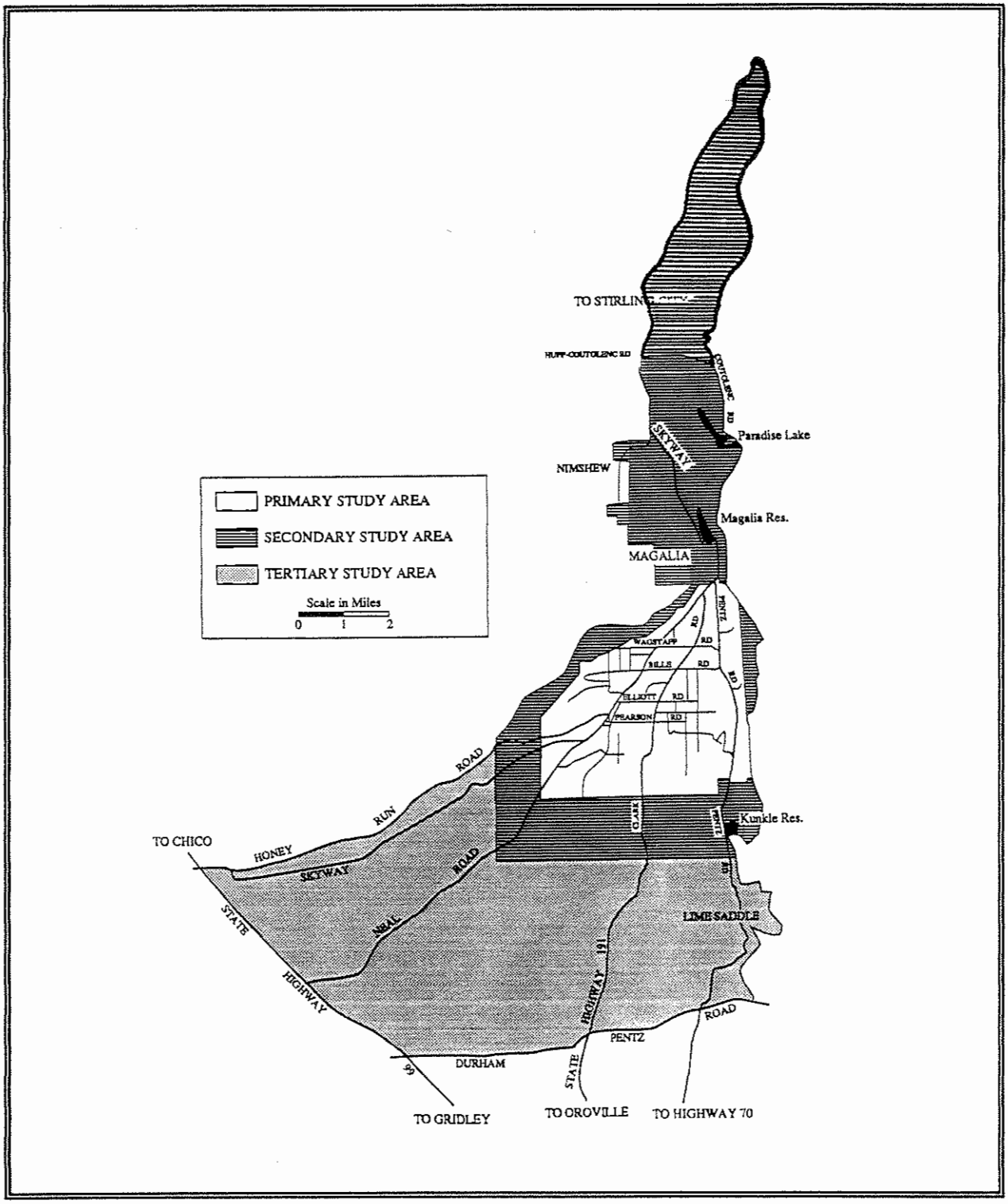
1.1 THE TOWN OF PARADISE

The Town of Paradise, California is located in eastern Butte County in the western foothills of the Cascade-Sierra Nevada Mountains. Located north of Paradise are the smaller unincorporated communities of Magalia, Paradise Pines, Nimshew and DeSabla; to the south of the town is the Lime Saddle area. These areas are known as the Upper and Lower (Eden) Ridge, respectively. To the southeast is the City of Oroville (the county seat), and to the west is the City of Chico. State Route 191 partially bisects the community and ends at its intersection with Pearson Road, located in south central Paradise, and the West Branch of the Feather River flows along the easterly edge of the community.

Three study areas were established for the town and surrounding areas for the purpose of the *General Plan*:

- **Primary Study Area** - reflects the existing town limits.
- **Secondary Study Area** - encompasses the existing Sphere of Influence adopted for the town by the Butte County Local Agency Formation Commission (LAFCo), and the Paradise/Magalia Reservoir watershed area to the north.
- **Tertiary Study Area** - extends to the south and west to Highway 99 and Durham-Pentz Road.

These areas are shown on Figure 1-1. For purposes of this *Policy Document*, the terms "Study Area," "Planning Area" or "Plan Area" refer collectively to the primary, secondary and tertiary study areas.



PLANNING AREAS (GENERALIZED) **FIGURE 1-1**

1.2 PURPOSE AND NATURE OF THE GENERAL PLAN

Every California city and county is required by state law to adopt a general plan for its future physical development. The *General Plan* is frequently referred to as a "constitution" for growth, development, and conservation, because it is the legal foundation upon which all land use decisions are to be based. It is a comprehensive expression of community values, and the formulation of long-term development goals and public policy statements related to the distribution of future land uses.

The *Paradise General Plan* is intended to chart and direct future land use decision making over the next fifteen years. It contains chapters (elements) on land use, circulation, housing, noise, safety, open space/conservation/energy, and education and social services. Together, the chapters identify the various issues, goals, objectives, policies and specific implementation measures related to land use development and conservation. Collectively, the chapters form the basis and structure for the decision making process.

The *General Plan* process offers the town the opportunity to plan proactively, rather than simply reacting to development proposals. It also allows the town and other public service providers (i.e. Paradise Irrigation District, Paradise Recreation and Park District and the Paradise Unified School District) to plan for providing services, facilities and infrastructure consistent with the plan.

The *Paradise General Plan* has a number of important characteristics that reflect the uniqueness of the community. First, it is a growth management plan, intended to balance population growth with the availability of public services, infrastructure, open space enhancement, as well as with the preservation of the special rural charm of the town. Second, the *Paradise General Plan* is intended to reflect the values, needs and desires of the citizenry. It is hoped that citizens monitor and ensure its implementation, and participate in revisions and changes as the community evolves. Finally, it is intended to be a creative and special vision for the future of Paradise. It blends the ideas and imaginative thinking of the citizenry, calls for the innovative use of land use planning tools and methods, and stresses the importance of citizen participation in the planning and decision making process. Citizens are encouraged to monitor the plan to ensure implementation, and they are encouraged to participate in its revisions and changes as the community evolves.

1.3 GROWTH MANAGEMENT

Many cities and counties are searching for more effective ways to manage growth. Decision makers, with citizen support are creating tools and methods for timing, shaping and limiting population expansion. Community leaders are discovering that unmanaged growth can provoke a variety of problems ranging from an inability to provide adequate public services to the degradation of the environment and aesthetic qualities of a community.

The goal of growth management programs is to balance the various types of land use development with the preservation of the natural environment and the unique qualities of a community. Most programs seek to reduce public costs for providing infrastructure and services, manage traffic levels, preserve sensitive lands, and in other ways improve the overall quality of life for community residents.

An approach to growth management should not be conceived merely as a bundle of techniques individually assigned to treat the symptoms of the complex problems of growth. The approach should be designed as a

comprehensive statement, and a systematic strategy which relates goals, objectives and policies to actual implementation.

The approach and strategy of growth management must also be tailored to the individual community. Environmental, economic and social constraints to growth and development should provide the foundation for building a comprehensive growth management program.

1.4 THE LEGAL BASIS FOR GROWTH MANAGEMENT

General plans that emphasize growth management have not been adopted and implemented without legal challenge. In order to protect the rights of property owners, the state and federal courts have defined several principals that should be considered when designing a growth management plan. First, the regulations of the plan must promote the public welfare. The approach to growth management must not exceed the local governmental "police power," as defined by the courts. Is the approach to managing growth within the community a legitimate and rational way to promote the public welfare? Second, the approach should include a way to equitably address local and regional housing demands. Does the growth management plan provide housing opportunities for all citizens in the community or does it inherently exclude certain groups? Third, the approach must provide for the free mobility of all citizens in the community. The plan cannot isolate a citizen's "right to travel" freely. Fourth, the approach to growth management cannot restrict the use of land so severely that it removes all reasonable economic use of the property. The restrictions on land use must be designed to achieve an appropriate and legitimate governmental objective, while a reasonable economic use of property is retained.

1.5 PARADISE'S APPROACH TO GROWTH MANAGEMENT

When the town incorporated in November of 1979, it inherited a community where growth and development had not always been comprehensively planned or managed. Residential neighborhoods and commercial areas had evolved with little regard for the compatibility of land uses, infrastructure service capacity needs or physical constraints. The amount of growth was market driven, yet no effective planning tools, political leadership or planning policies were either in place or practiced to comprehensively manage the growth that was occurring.

This *Paradise General Plan* is intended to provide the comprehensive approach, planning tools, programs and policies to successfully manage growth as it occurs. The plan requires consideration of both environmental and infrastructure constraints when assigning future zoning classifications, thus affecting potential densities to properties. The plan also establishes "performance standards" with an emphasis on "constraints analysis" for growth and development, rather than allowing growth to occur unchecked, or simply banning it outright. The primary tools and standards in the plan that are intended to manage growth are:

- A detailed constraints analysis system.
- Moderate to large minimum parcel sizes.
- Specific fire and police response time thresholds.
- Specific traffic service levels.
- An overriding policy of requiring development to be designed to accommodate constraints, rather than altering the environment to accommodate the development project.

The use of these tools, standards and policies will provide an approach allowing the community and its decision makers to regulate the source of varied land use problems (traffic, public services, water, densities, aesthetics, etc.), rather than growth in and of itself. The intent is to have the town grow at an orderly, safe and cautious pace, and consistent with the population growth rate experienced over the past five-ten years.

1.6 PREPARATION OF THE GENERAL PLAN

This document represents the third *General Plan* for the Town of Paradise. Following incorporation in November of 1979, the town adopted the *Butte County General Plan* as its first *General Plan*. In 1982, the town adopted its first "locally originated" *General Plan*. That particular *General Plan* was intended to cover a ten-year time frame (1982-1992). Upon its adoption, this particular plan will supersede the previous *Paradise General Plan* as the official guide for planning and development in the Town of Paradise, and possibly its environs.

QUAD Consultants

The town's *General Plan* revision and update program was initiated in December 1990 with the selection of QUAD Consultants and specialty subconsultants Dowling Associates (transportation engineers) and Brown-Buntin Associates (noise specialists) to assist the town with the process. One of the first steps in the process was the conducting of a citizens' opinion telephone survey. It polled a representative sample of the community to identify local issues, needs, concerns and desires. Numerous volunteers conducted the survey under the direction of town staff. Survey results are included in Volume III, *Environmental Setting*, as an appendix.

Policy Development

As a basis for policy development, the consultants prepared a detailed *Environmental Setting* document which describes existing conditions in the Town of Paradise, the secondary and tertiary study areas and the region. The *Environmental Setting* document includes chapters on town history, geology/seismicity, soils and topography, climate and air quality, hydrology, vegetation and wildlife, noise, light and glare, land use, population, housing, transportation/circulation, risk of upset and safety, public services and utilities, scenic and cultural resources, and relationship to other plans of the town and other agencies.

General Plan Revision Steering Committee

The *General Plan* update and revision process has been directed, and all documents have been reviewed, by a General Plan Revision Steering Committee appointed by the Town Council. This Committee consists of the members of the Town Council, the Planning Commission and Community Development Department staff. The composition of the General Plan Revision Steering Committee has changed during the process of revising the plan, due to the changes in members of both the Planning Commission and Town Council.

General Plan Citizen Subcommittees

Public participation in the *General Plan* process has been primarily provided by four subcommittees of the steering committee, consisting of more than seventy Paradise residents representing a wide variety of affiliations and interests. These subcommittees met numerous times over a period of several months to identify issues, formulate goals, policies and alternatives and review materials prepared by the consultants. All meetings were open to the public and input was allowed from noncommittee members.

With the assistance of these subcommittees, *General Plan* goals, objectives and policies were formulated in response to major community issues identified through the survey, by the steering committee, town staff, other public agencies and by the subcommittees themselves. Each subcommittee formulated its own vision for the community in the form of a map, representing in graphic form the subcommittees' goal and policy statements. These four sets of goals, objectives, policies (organized by *General Plan* element) and maps, along with a narrative description of each subcommittee's approach, were compiled into two working papers entitled *Issues, Goals and Objectives* and *Alternatives Development and Evaluation*. These documents were presented to the steering committee for review and selection of a preferred alternative. In order to assist steering committee members in reaching consensus, the major topics were then reorganized into approximately thirty-five issues for discussion purposes. Those issues are highlighted in Chapter 3.0 of this document.

Preparation of the Draft Documents

Based upon the direction and recommendations of the steering committee, and consultation with town staff, the consultants prepared the draft *Policy Document* of the *General Plan*, consisting of goals, objectives, policies and implementation measures, as well as land use, circulation, and constraints diagrams. At the same time, the consultants prepared a *draft Environmental Impact Report* (EIR) to satisfy the requirements of the California Environmental Quality Act. The EIR appears as Volume II of the *General Plan* document.

On December 16, 1992 the General Plan Revision Steering Committee unanimously decided to direct town staff to revise the draft *General Plan* documents, based upon the comments received from the general public, special districts, and interested organizations.

1.7 ORGANIZATION OF THE GENERAL PLAN

The *Paradise General Plan* consists of three documents: the ***General Plan Policy Document*** **(Volume I)**, the ***Environmental Impact Report*** **(Volume II)** and the ***Environmental Setting*** **(Volume III)** documents. Volume III describes and analyzes the existing conditions in the Town of Paradise, the Secondary and Tertiary Study Areas and the region. It provides supporting documentation for the *Policy Document* and also serves as the required "environmental setting" section of the Environmental Impact Report.

Volume I sets forth the goals, objectives, policies, and implementation measures for the *General Plan*, as well as the *Land Use Diagram* and *Circulation Diagram* designations and standards for population density, land use and building intensity. Together, these statements, definitions, diagram and standards constitute the policy of the Town of Paradise for the comprehensive, long-range physical development of the community.

Goals, objectives, policies, standards, implementation measures and plan diagrams are defined in the 1990 State of California *General Plan Guidelines* as follows:

- **Goals.** A goal is a direction setter. It is an ideal future end, condition or state related to the public health, safety or general welfare toward which planning and planning implementation measures are directed. A goal is a general expression of community values and, therefore, is abstract in nature. Consequently, a goal is generally not quantifiable, time dependent or suggestive of specific actions for its achievement.

- **Objective.** An objective is a specific end, condition or state that is an intermediate step toward attaining a goal. It should be achievable and, when possible, measurable and time specific. An

objective may only pertain to one particular aspect of a goal or it may be one of several successive steps toward goal achievement. Consequently, there may be more than one objective for each goal.

- **Policy.** A policy is a specific statement that guides decision-making. It indicates a clear commitment of the local legislative body [**Town Council**]. A policy is based on a general plan's goals and objectives as well as the analysis of data. For a policy to be useful as a guide to action it must be clear and unambiguous.

- **Implementation Measure.** An implementation measure is an action, procedure, program or technique that carries out general plan policy. Each policy must have at least one corresponding implementation measure.

- **Standard.** Standards define the abstract terms of goals, objectives and policies with concrete specifications.

- **Diagram.** A diagram is a graphic expression of a general plan's development policies, particularly its plan proposals. A diagram must be consistent with the general plan text and should have the same long-term planning perspective as the rest of the general plan. Typically, a diagram is not regulatory in nature as is a zoning ordinance map. Rather, it, along with the general plan text, provides a rational basis for planning-related regulations.

Chapter 2.0 of the *General Plan Policy Document* defines and describes the land use and circulation designations which appear on the *Land Use Diagram* and *Circulation Diagram*, and also sets forth the standards for population density and land use intensity for each designation. This chapter also includes the diagrams (which are physically located in the pocket inside the back cover), a description of the street classification system, and estimated *General Plan* build out information (Table 2-2). Chapters 3.0, 4.0 and 5.0 present, respectively, a summary of the major assumptions and issues considered during the planning process, the central goals of the *General Plan*, and the constraints and opportunities that form the parameters within which the Plan was developed.

The goals, objectives, policies and implementation measures for the *General Plan* are found in Chapter 6.0. This chapter is divided into several sections corresponding to the seven mandatory *General Plan* elements: *Land Use, Circulation, Open Space/Conservation and Energy* (combined to avoid duplication of similar topics), *Safety, Noise and Housing*. An optional element entitled "*Education and Social Services*" has also been prepared. Within each section, or element, statements are arranged in hierarchical order: goals, objectives, policies and implementation measures. The numbering system for these statements is based upon the name of the element (e.g. *Land Use, Housing, etc.*) and the type of statement (goal, objective, policy or implementation measure), abbreviated as follows:

- Land Use (LU)
- Circulation (C)
- Housing (H)
- Noise (N)
- Safety (S)
- Open Space/Conservation/ Energy (OCE)
- Education and Social Services (ES)
- Goal (G)
- Objective (O)
- Policy (P)
- ImplementationMeasure (I)

Within each hierarchy, statements are numbered sequentially. For example, the first goal statement in the *Housing Element* is numbered HG-1; the third policy statement in the *Safety Element* is numbered SP-3.

Volume II of the *Paradise General Plan* is the *Environmental Impact Report* prepared for the *General Plan*. As provided in Section 15166 of the *state CEQA Guidelines*, this EIR is integrated with the *General Plan* document, and was prepared in compliance with the requirements of the California Environmental Quality

Act. The EIR assesses the impacts of the *Paradise General Plan* on the environment, and recommends mitigation measures for significant impacts, most of which are already incorporated into the policy statements of the *General Plan.*

2.0 LAND USE AND CIRCULATION DIAGRAMS, LAND USE CONSTRAINTS DIAGRAM, GENERAL PLAN DESIGNATIONS AND STANDARDS

This chapter presents a description of the *Land Use Diagram* and *Circulation Diagram* for the *General Plan* (Figures 2-1, 2-1a and 2-2, inserted separately). Also included in this chapter are definitions and descriptions of each of the *General Plan* land use designations, standards (population density, land use and building intensity) for each designation, the circulation system classifications, and *General Plan* build out estimates.

The *Land Use Diagram* depicts the planned land use, and the *Circulation Diagram* depicts the planned circulation system for the Town of Paradise and the secondary planning area through the year 2008, consistent with the goals, objectives and policies set forth in Chapter 6.0 of this document.

For definitions of the street classifications systems (principal, arterial, collector, access street, etc.) turn to page 2-7 and 2-8.

The *Circulation Diagram* details the recommended street classification system for the Paradise Planning Area. It shows the arterial and collector street segments and various new connector roadways. Table 2-3 indicates the number of planned travel lanes on most of the major roadway segments. A number of collector streets are shown on the diagram which are not named. Some streets which were designated collectors within the 1982 *General Plan* have been reclassified as access streets.

The land use plan, as depicted on the *Land Use Diagram*, generally concentrates commercial uses along Clark Road and Skyway, providing for some infill between existing commercial uses, and larger nodes at major intersections. A central commercial area is designated in the area generally bounded by the Paradise Memorial Trailway, Elliott Road, Pearson Road and Skyway, within which mixed land uses will be allowed and an architectural theme will be encouraged. The diagram reflects an expansion of the existing industrial area along Clark Road. Existing low density residential areas for the most part remain unchanged.

The *Land Use Diagram* primarily reflects existing land uses in the Upper Ridge within the secondary planning area, but does not propose additional development in excess of that already planned because of the impacts that increased traffic would have on roads in the Town of Paradise.

With regard to the south portion of the secondary planning area, the *Land Use Diagram* reflects new business park uses along Clark Road, adjacent to the airport. The policies of the *General Plan* (Chapter 6.0) call for the preparation of a specific plan for the south area which would more precisely determine the distribution, location and extent of land uses; the major components of public and private infrastructure (sewage disposal, water, drainage, solid waste disposal, energy, transportation); and an implementation program and financing strategies. The planned designation of most of this area as "Open Space/Agriculture" reflects the current lack of public services and the presence of physical constraints in this area. It is intended that "Open Space/Agriculture" serve as a holding designation until such time as a specific plan is adopted and public services and facilities are planned for the area. It is intended

"Open Space/Agriculture" serve as a holding designation until such time as a specific plan is adopted and public services and facilities are planned for the area.

Butte County and the City of Chico are both in the process of comprehensive updates of their General Plans. The Town of Paradise will coordinate specific planning of the southerly secondary planning area with Chico and Butte County officials.

Future general locations are shown on the diagram for fire stations, schools, open space and "gateways" to the town. These locations are generally described in Section 6.6, the *Open Space/Conservation/Energy Element*, but are intended to be conceptual and do not apply to specific properties at this time. Actual locations will be selected in conformance with the policies and criteria set forth in Chapter 6.0 of this volume.

Also included in this chapter are *Land Use Constraints Diagrams* (inserted separately), intended to be used in concert with the *Land Use Diagram* and *Circulation Diagram*. While the *Land Use Diagram* identifies areas where the various land uses are planned and potentially permitted, it must be considered in conjunction with the *Constraints Diagrams*, which may limit development of a portion(s) of a site in the interest of protecting the public health, safety and welfare or an important natural resource. The *Constraints Diagrams* represent a composite of the following hazards and natural features, as identified in Volume III, the *Environmental Setting*, and Chapter 6.0, *Goals, Objectives, Policies and Implementation Measures*, of this volume:

- Important stream courses/drainage areas
- High/very high wildland fire hazard areas
- Slopes of thirty percent or greater
- Deer herd migration routes (windows)
- Paradise Irrigation District watershed boundary
- Airport safety areas
- 60 dB L_{dn} noise contours and 55 dB L_{dn} airport noise contour
- High archaeological sensitivity area
- Sensitive wildlife habitat areas
- Soils
- Trees are also a major constraint; however, they are not mapped

The constraints map (diagram) is conceptual in nature and does not provide a detailed depiction of environmental and infrastructural constraints. The future amendments to the Paradise zoning ordinance and zoning map will involve a more detailed quantification of both environmental and infrastructural constraints.

2.1 LAND USE DESIGNATIONS AND STANDARDS

Population density standards are best expressed as the relationship between two factors:

- The number of potential dwellings per acre.
- The number of residents per dwelling.

The population density standards for the *Paradise General Plan* are set forth in Table 2-1, Population Density/Land Use and Building Intensity Matrix.

The land use and building intensity standards for the *Paradise General Plan* are set forth in Table 2-1. Maximum potential dwelling units per acre is the standard used for the residential land use designations, and is also included for the nonresidential designations which allow residential uses. Floor area ratio (the ratio of building floor area to the total site area) is the standard used for all other designations.

DEFINITION

Net Acre - a term meaning that after you "net out" or "subtract" the square footage of roadway easements or rights-of-way from your land holding, you have a minimum of 43,560 square feet.

Gross Acre - the total land area of a parcel of land, including any easement or right-of-way that equals 43,560 square feet.

Land Use Designations

- **Agricultural-Residential** (A-R). This designation applies to existing and planned residential areas characterized by larger parcels and accessory agricultural uses, including raising of livestock and other forms of agricultural production. It provides for single-family detached homes, limited agricultural uses, churches and public uses. Residential densities shall be in the range of one or less dwelling unit per gross acre.

  This designation is mainly applied to areas in the southern portion of the primary study area characterized by larger parcels and existing agricultural/residential land uses.

- **Rural-Residential** (R-R). This designation applies to a substantial portion of existing and planned single-family rural residential areas in the primary study area. A transitionary area of "R-R" designation shall be established across the south portion of the primary study area with Buschmann Road possibly being the northerly boundary, Pentz Road from Bille Road north to be the eastern boundary, with no boundary on the west canyon rim because the area is developed. It provides for single-family detached homes and secondary residential units as well as accessory rural uses. It may also provide for churches and public uses. Residential densities shall be in the range of one to two dwelling units per gross acre.

- **Town-Residential** (T-R). This designation applies to existing residential areas characterized by small sized (one-half gross acre or less) parcels and the absence of accessory rural uses, particularly the keeping of livestock. It provides for single-family detached and attached homes, mobile home parks, churches and public uses. These designated areas may be served by a community sewer system if ever established during the time frame of this plan. Residential densities shall be in the range of one to three dwelling units per gross acre. Mobile home parks with densities no greater than six dwelling units per gross acre may also be deemed consistent with this designation.

- **Multi-Family-Residential** (M-R). This designation applies to existing and planned multiple family residential areas. It provides for single and multiple-family residential structures, mobile home parks, convalescent homes, residential care facilities, churches and public uses. Planned multi-family residential areas shall be located in areas near existing or planned commercial uses, community service uses, and along designated arterial or collector streets. Dependent upon the presence and application of constraints, maximum potential residential densities shall not exceed **fifteen dwelling units per acre if served by an approved clustered wastewater treatment and disposal system.** Mobile home parks with densities no greater than **eight** dwelling units per gross acre may also be deemed consistent with this designation.

- **Neighborhood-Commercial** (N-C). This designation provides for existing and planned neighborhood and locally-oriented retail and service uses and public uses. This designation is primarily applied to small sites adjacent to residential neighborhoods and along designated arterial or collector streets.

As required by California law (Government Code Section 65915), a residential density bonus may be granted to developments that reserve units for low and/or moderate income households or include significant public recreational facilities or other public facilities which benefit the entire community.

- **Central-Commercial** (C-C). This designation provides for retail and service uses, public uses, professional and administrative office uses, and multiple family residential uses. This designation is applied only to the central commercial (downtown or core) area of Paradise, and is intended to accommodate visitor- as well as locally-oriented commercial uses and mixed uses which conform to an adopted architectural design theme and guidelines. Maximum potential residential densities shall not exceed **fifteen dwelling units per gross acre if served by an approved clustered wastewater treatment and disposal system.**

- **Town-Commercial** (T-C). This designation provides for a full range of locally- and regionally-oriented commercial uses, including retail, retail centers, wholesale, storage, hotels and motels, restaurants, service stations, automobile sales and service, light fabrication, professional and administrative offices, churches and public uses. This classification is applied to existing moderate to high intensity commercial areas, to areas between existing commercial uses which are suitable for infill and to areas located at the intersection of designated arterial and/or collector streets. Maximum potential residential densities shall not exceed **ten** dwelling units per gross acre.

- **Business-Park** (B-P). This designation provides for large-scale and parklike professional and administrative offices, laboratories, financial institutions, industrial parks, warehouses, distribution centers, light manufacturing, accessory commercial uses, and public uses, with a minimum site are of twelve acres. This designation is intended to provide for large-scale, planned development of the types of uses described above.

- **Light-Industrial** (L-I). This designation provides for smaller-scale, light industrial and manufacturing uses, warehouses, intensive nonretail commercial uses, and public uses. This designation is applied to existing industrial uses along Clark Road and to sites of less than twelve acres which are planned for light industrial uses.

- **Community-Service** (C-S). This designation provides for private uses which serve a community purpose or benefit the community. These uses include private hospitals, medical offices, schools, residential care facilities and day care facilities (other than those located in private residences), convalescent homes, emergency shelters and transitional housing, auditoriums and other places of assembly, senior citizen and youth centers, clubs and lodges, private utilities and facilities, and airports. This designation is primarily applied to existing or planned uses of this nature throughout the primary study area. Dependent upon the presence and application of constraints, maximum potential residential densities shall not exceed **fifteen dwelling units per gross acre if served by an approved clustered wastewater treatment and disposal system.**

- **Recreational** (R). This designation provides for public and private uses of land devoted to or planned for recreation, including parks, trails, golf courses, playgrounds, ball fields, camping and picnic areas.

- **Public-Institutional** (P-I). This designation provides for public and public institutional uses, including public hospitals, schools and school sites, public utilities and facilities, emergency shelters and public buildings.

- **Open-Space/Agricultural** (O-S/A). This designation provides for areas to remain in their natural, primarily undeveloped state or to be used for agricultural purposes. It is applied to areas which

are determined suitable to remain in open space for the preservation of natural or cultural resources, protection of people or property from natural and/or manmade hazards, or the promotion of public health and safety.

- **Gateway** (G). This designation provides for facilities, signage, landscaping and other features which define or identify entrance/exit points to the town, particularly the primary planning area. It is applied at points along major roadways entering Paradise.

- **Timber-Production** (T-P). This designation is applied to lands that are zoned for timberland production pursuant to the California Timberland Productivity Act of 1982, Chapter 6.7 (commencing with Section 51100) of Part 1 of Division 1 of Title 5.

TABLE 2-1
PARADISE GENERAL PLAN
BUILDING INTENSITY/RESIDENTIAL DENSITY AND POPULATION DENSITY MATRIX

Land Use Designation	Building Intensity/ Floor Area Ratio (FAR) or Lot Coverage	Residential Density (dwelling units/acre)	Population Density (persons/dwelling unit)
Agricultural-Residential	N/A	1 or less	2.33
Rural-Residential	N/A	1 to 2	2.33
Town-Residential	N/A	1-3 per gross acre 6 per gross acre (mobile home park)	2.33
Multi-Family-Residential	0.30 to 1.00	**up to 15***	1.92
Neighborhood-Commercial	0.50 to 1.00	N/A	N/A
Central-Commercial	1.00 to 1.00	**up to 15***	1.92
Town-Commercial	0.50 to 1.00	**up to 10**	1.92
Business-Park	60 percent coverage	N/A	N/A
Light-Industrial	60 percent coverage	N/A	N/A
Community-Service	50 to 80 percent coverage	**up to 15***	1.00
Public-Institutional	0.50 to 1.00	N/A	N/A
Recreational	0.20 to 1.00	N/A	N/A
Open-Space/Agriculture	0.02 to 1.00	N/A	N/A
Gateway	0.02 to 1.00	N/A	N/A
Timber-Production	0.02 to 1.00	N/A	N/A

*Depending upon the presence and application of constraints, maximum potential residential densities shall not exceed **fifteen dwelling units per gross acre if served by an approved clustered wastewater treatment and disposal system.**

DEFINITIONS

Floor Area Ratio - the ratio of gross floor area on a lot to the gross lot area.

Lot Coverage - the amount of a lot covered by impervious surface.

Population Growth and Build Out Projections

The population growth anticipated over the next fifteen years could average approximately 1.3 percent annually. The plan's growth management thrust is intended to keep residential construction and population growth near to that experienced over the past ten years. Carrying this projection forward will result in a population increase from the current 26,000 to approximately 31,114 by the year 2008. Using net rather than gross acreage, the build-out population projection is estimated at 29,752.

Build out projections contained in the *Paradise General Plan* are based primarily on a survey of existing land uses, the land use designations established by this plan, and the vacant land gross acreage town wide. The numbers have been modified from those contained in the May 1992 draft *General Plan*, consistent with the text revisions directed by the General Plan Revision Steering Committee.

Table 2-2 contains estimated acreage, square footage, dwelling units and population, as applicable to each land use designation, at build out in accordance with the *General Plan*. This information is presented for both the Primary and Secondary Planning Areas. Dwelling unit estimates are based on an average within the density range for each land use designation, and actual densities may be somewhat higher or lower, depending upon the adequacy of infrastructure, the application of environmental constraints as identified on the *Land Use Constraints Diagrams* and the nature of actual development proposals that are approved.

2.2 CIRCULATION SYSTEM CLASSIFICATIONS

Street classifications have been developed recognizing differences between a street used to provide land access and a street used for through traffic. Differences between classifications are based upon differences in street purpose, street width, traffic volumes, access control, speed limit, traffic control needed, spacing to the next street of the same category, linkages to land use types and other similar design or operating features.

The functional classification used by federal, state, metropolitan planning organizations, and local agencies defines three arterial street classifications: collectors, minors and principals. Access streets and freeways are also included in the classifications. Arterials need to be classified to meet federal or state requirements. For example, to be eligible for federal or state funding assistance, the street must be designated on the Federal Aid System and have an inventory number; to receive that number it must be part of the local agency street classification system and designated as one of the two arterial classifications. However, the following arterial, collector and access street classifications have been modified and designed to conform with the rural character of Paradise, as well as with the goals, objectives and policies of the *General Plan*.

- **PRINCIPAL ARTERIAL:** The primary function of principal arterials is to expedite through traffic to major traffic generators. The generators include central business districts, community shopping centers and traffic between communities and/or between freeways and "lower" arterial systems. Access (driveways) is restricted on major generators; it is limited to having as few driveways (access points) as possible. Principal arterials are forty to sixty-four feet in width with eighty feet of right-of-way. Traffic volumes are as high as 35,000 vehicles per day, with speed limits of twenty-five/fifty-five miles per hour.

- **MINOR ARTERIAL:** Minor arterials service inter-community traffic trips between neighborhoods or trips between a neighborhood and a higher arterial. They operate at a somewhat lower level of mobility than a principal arterial. Side streets including collector arterials are stopped for minor arterials, major intersections may be signalized, speed limits are twenty-five/thirty-five miles per hour, and minor arterials are spaced between one-half and one mile apart. Traffic volumes reach 20,000 vehicles per day, curb to curb widths are normally twenty-eight to forty feet on sixty foot rights-of-way, parking may be restricted, driveways may have turn movements restricted, and the number of driveways and spacing is controlled.

- **COLLECTOR:** Collectors service traffic traveling between access streets and higher classifications(minor or principal arterials); they primarily serve local traffic of a neighborhood or a commercial/industrial area. Collectors provide some through traffic movement, carry local traffic within the local area (neighborhood), and primarily provide access to abutting land and to "higher" arterials. Speed limits are thirty miles per hour, and collectors are usually spaced at one-half mile intervals. They are normally twenty-four to twenty-eight feet in width on a thirty-five to forty foot right-of-way.

- **ACCESS STREETS:** Normally, between sixty and eighty percent of a city's streets are access streets (not classified as an arterial). Their primary purpose is to serve traffic that is destined and originating from abutting land. The adjacent land is most often residential but access streets also serve industrial and commercial areas. They also provide access to "higher" street classifications. Traffic volumes range up to 2,000 vehicles per day, street widths are normally twenty to twenty-four feet wide; right-of-way is fifty feet minimum and sixty feet desirable. The Town of Paradise utilizes a great

number of private streets as local streets. Prior development has generated substandard widths and deteriorated roadways that affect public access for fire and police protection.

2.2.1 PLANNED CIRCULATION SYSTEM IMPROVEMENTS AND FUNCTIONAL CLASSIFICATIONS

Table 2-3 presents the *General Plan* street classifications, lane requirements, classification and levels of service. Table 2-4 presents the recommended collector streets within the Paradise planning area. Streets which are not identified as arterials or collectors are classified as access streets.

TABLE 2-2
GENERAL PLAN BUILD OUT - ACREAGE, DWELLING UNITS AND POPULATION (PRIMARY AREA)

Land Use Designation	Existing Acreage by Land Use[1]	Existing Units/ Sq. Ft.[2]	Potential New Acreage[3]	Potential New Units/ Sq. Ft.[4]	Build out Units/ Sq. Ft.[5]	Total Persons[6]	Total Planned Acreage
Agricultural-Residential	-	-	2,587	517 u	517 u	1,205	2,587
Rural-Residential	-	-	454	820 u	820 u	1,911	5,015
Town-Residential	5,348	10,883 u	78	156 u	11,039 u	25,721	2,283
Multi-Family Residential	146	796 u	92	390 u	1,186 u	2,277	465
Neighborhood-Commercial	-	-	6	38,670 sf	38,670 sf	-	26
Central-Commercial	-	-	4	87,120 sf	87,120 sf	-	128
Town-Commercial	318	1,558,124 sf	39	451,380 sf	2,009,504 sf	-	433
Business-Park	-	-	-	-	-	-	-
Light-Industrial	30	310,500 sf	141	1,006,236 sf	1,316,736 sf	-	212
Community-Service	56	195,000 sf	71	87,120 sf	282,120 sf	-	166
Public-Institutional	414	666,405 sf	-	-	666,405 sf	-	175
Recreational	147	-	0.5	-	-	-	210
Open-Space/Agricultural	145	-	-	-	-	-	145
Timber-Production	-	-	-	-	-	-	-
Totals						**31,114**	**11,845**

[1] Based on existing land use survey.

[2] Based on Housing Condition Surveys, March 1991 and February 1990, and documentation for the development of the Paradise Area Transportation Model Planning prepared for the Butte County Council of Governments, October 1990; Mobile homes are included with single-family units.

[3] Based on land use designation and vacant land gross acreage **(it is estimated that these figures could be reduced up to ten percent when figuring net rather than gross acreage)**.

[4] Based on population density and building intensity ratios contained in Table 2-1. Residential densities are figured on the averaged allowable density; A-R density is figured on one unit per five acres. Commercial, Business Park and Industrial calculations allow for property constraints.

[5] Based on existing plus potential new, allowing for property constraints, and where data on existing square footage is available.

[6] Based on average household size of 2.33 for single-family dwellings and 1.92 for multiple-family dwellings.

IMPORTANT NOTE: It is estimated that the numbers in the above table could be reduced up to ten percent when figuring **net** rather than **gross** acreage. Accordingly, the projected population at build out of **net** acreage would be approximately **29,752**.

TABLE 2-2
GENERAL PLAN BUILD OUT - ACREAGE, DWELLING UNITS AND POPULATION (SECONDARY AREA)

Land Use Designation	Acreage[1]	Potential New Units/Sq. Ft.[2]	Existing Units/Sq. Ft.[3]	Build out Units/ Sq. Ft.[4]	Total Persons[5]
Agricultural-Residential	3,678	736 u	-	736 u	1,715
Rural-Residential	2,300	1,000 u	4,096 u	5,096 u	11,874
Town-Residential	-	-	-	-	-
Multi-Family-Residential	-	147 u	12 u	159 u	305
Neighborhood-Commercial	1	-	10,890 sf	10,890 sf	-
Central-Commercial	-	-	-	-	-
Town-Commercial	330	-	99,350 sf	99,350 sf	-
Business-Park	197	556,653 sf	-	556,653 sf	-
Light-Industrial	-	-	10,000 sf	10,000 sf	-
Community-Service	63	108,900 sf	-	108,900 sf	-
Public-Institutional	1,398	-	121,737 sf	121,737 sf	-
Recreational	262	-	-	-	-
Open-Space/Agriculture	8,811	-	-	-	-
Timber-Production	588	-	-	-	-
Totals	**17,628**				**13,894**

[1] Based on total gross acres allocated to each land use designation under *General Plan*.

[2] Based on population density and building intensity ratios contained in Table 2-1. Residential densities are figured on the averaged allowable density; A-R density is figured on one unit per five acres. Commercial, Business Park and Industrial calculations allow for property constraints.

[3] Based on Housing Condition Surveys, March 1991 and February 1990, and documentation for the development of the Paradise Area Transportation Model Planning prepared for the Butte County Council of Governments, October 1990; Mobile homes are included with single-family units.

[4] Based on existing plus potential new, allowing for property constraints, and where data on existing square footage is available.

[5] Based on average household size of 2.33 for single-family dwellings and 1.92 for multiple-family dwellings.

IMPORTANT NOTE: It is estimated that the numbers in the above table could be reduced up to ten percent when figuring **net** rather than **gross** acreage. Accordingly, the projected population (total persons) at build out of **net** acreage would be approximately **12,505**.

TABLE 2-2
GENERAL PLAN BUILD OUT
ACREAGE, DWELLING UNITS AND POPULATION
FULL BUILD OUT
(PRIMARY AND SECONDARY AREAS)

Land Use Designation	Total Acres	Total Units	Total Persons	Total Sq. Ft.
Agricultural-Residential	6,265	1,253	2,919	-
Rural-Residential	7,315	6,004	13,989	-
Town-Residential	2,283	11,039	25,721	-
Multi-Family-Residential	465	1,345	2,582	-
Neighborhood-Commercial	27	-	-	49,560
Central-Commercial	128	-	-	87,120
Town-Commercial	763	-	-	2,108,854
Business-Park	197	-	-	556,653
Light-Industrial	212	-	-	1,326,736
Community-Service	229	-	-	391,020
Public-Institutional	1,573	-	-	788,142
Recreational	472	-	-	-
Open-Space/Agricultural	8,956	-	-	-
Timber-Production	588	-	-	-
Totals using gross acreage	**29,473**	**19,641**	**45,211**	
Totals using net acreage	**26,526**	**18,659**	**42,257**	

TABLE 2-3
PROJECTED TRAFFIC VOLUMES, LANE REQUIREMENTS CLASSIFICATION AND LEVELS OF SERVICE

Roadway Segment	Existing Two-Way Volume	Projected Two-Way Volume	Proposed Lanes (#)	Divided/ Undivided	Proposed Classification	LOS D Threshold	LOS
Skyway							
South of Neal	20,370	23,360	4	D	Arterial	27,000	C
Neal to Pearson	26,880	37,926	4/6	D	Arterial	27,000/40,000	F/D
Pearson to Elliott	22,372	31,968	4/6	D	Arterial	27,000/40,000	F/C
Elliott to Oliver	24,258	34,578	4/6	D	Arterial	27,000/40,000	F/C
Oliver to Maxwell	22,218	31,786	4/6	D	Arterial	27,000/40,000	F/C
Maxwell to Bille	21,490	29,830	4/6	D	Arterial	27,000/40,000	F/C
Bille to Wagstaff	15,554	22,890	4	D	Arterial	27,000	C
Wagstaff to Clark	11,298	16,937	4	U	Arterial	21,000	C
Clark to Pentz	15,316	20,088	4	U	Arterial	21,000	D
North of Pentz	15,008	20,557	4	D	Arterial	27,000	C
Clark Road							
South of Pearson	8,010	18,074	4	U	Arterial	21,000	C
Pearson to Elliott	14,570	22,076	4	D	Arterial	27,000	C
Elliott to Bille	16,930	24,153	4	D	Arterial	27,000	C
Bille to Wagstaff	16,980	21,504	4	D	Arterial	27,000	C
Wagstaff to Skyway	9,180	10,978	2	D	Arterial	13,000	C
Pentz Road							
South of Pearson	4,630	7,780	2	U	Collector	8,000	C
Pearson to Bille	3,590	8,765	2	D	Collector	9,000	C
Bille to Skyway	4,910	6,270	2	U	Collector	8,000	C
Neal Road							
South of Skyway	3,934	5,302	2	U	Collector	16,000	C
Pearson Road							
Skyway to Clark	10,850	19,187	4	U	Arterial	21,000	C
Clark to Edgewood	6,310	12,690	2	U	Arterial	13,000	D
Edgewood to Pentz	4,340	8,826	2	U	Arterial	10,500	C
Elliott Road							
Skyway to Clark	11,396	14,942	4	U	Arterial	21,000	C
Clark to Sawmill	7,500	8,027	2	U	Collector	8,000	C
Sawmill to Pentz	N/A	3,347	2	U	Collector	8,000	C
Bille Road							
Skyway to Clark	8,246	12,012	2	U	Arterial	13,000	C
Clark to Sawmill	5,390	8,675	2	D	Collector	9,000	D
Sawmill to Pentz	3,720	6,567	2	U	Collector	8,000	C
Wagstaff Road							
Skyway to Clark	6,146	8,595	2	U	Arterial	10,500	C
Clark to Pentz	5,490	7,369	2	U	Collector	9,000	C
Sawmill Road							
Pearson to Bille	2,420	2,670	2	U	Collector	8,000	C
South of Pearson	830	1,178	2	U	Collector	8,000	C

Roadway Segment	Existing Two-Way Volume	Projected Two-Way Volume	Proposed Lanes (#)	Divided/ Undivided	Proposed Classification	LOS D Threshold	LOS
Rocky Lane Wagstaff to Skyway	924	924	2	U	Collector	8,000	C
Maxwell Drive Elliott to Skyway	2,996	3,249	2	U	Collector	8,000	C
Central Park Drive Maxwell to Clark	2,160	2,601	2	U	Collector	8,000	C
Nunneley Road Pearson to Sawmill	2,730	3,123	2	U	Collector	8,000	C
Buschmann Road Foster to Clark	2,560	2,631	2	U	Collector	8,000	C
Roe Road Neal to Foster	500	1,000	2	U	Collector	8,000	C
South Libby Road South of Pearson	500	1,000	2	U	Collector	8,000	C
Edgewood Lane South of Pearson	500	1,000	2	U	Collector	8,000	C

Source: Dowling Associates standard traffic model - figures are projected for the year 2008

DEFINITION

Divided road - one that has a physical barrier between opposing lanes of traffic. An example is the lower Skyway, where north and southbound traffic is divided by a strip of land, trees and other vegetation. Physical barriers could include landscaped medians, guardrails, natural strips of land or other features designed to separate traffic moving in opposite directions.

TABLE 2-4
RECOMMENDED COLLECTOR STREETS WITHIN PARADISE

North/South Collectors	East/West Collectors
Moore Road	Dean Road
Rocky Lane	Merrill Road
Oliver Road	Stark Lane
Vista Knoll	Valley View Drive
Lucky John Road	Central Park Drive
Berkshire Avenue	Nunneley Road
Forest Lane	Honey Run Road
Maxwell Drive	Buschmann Road
North Libby Road	Roe Road*
Sawmill Road	Wayland Road
Kibler Road	Stearns Road
Foster Road	Elliott Road west of Skyway
Scottwood Road	Forest Service Road
Academy Drive	
South Libby Road	
Edgewood Lane	
Copeland Road (Elliott to Nunneley Road)	

Source: Dowling Associates, 1992.

* Roe Road currently operates as a collector road, "collecting" automobiles from residential neighborhoods and taking them to arterial streets. This *General Plan does not envision any significant changes to Roe Road, such as widening, realignment or extension to another street.*

DEFINITION

The purpose of Table 2-4 is to list both existing and recommended collector streets within the Town of Paradise. *(For a definition of a collector street, turn to page 2-8.)*

3.0 SUMMARY OF MAJOR ASSUMPTIONS, ISSUES AND "KEYS TO THE FUTURE"

The assumptions and issues listed in this section were developed and used by the first General Plan Revision Steering Committee, consultants and town staff during the development of the Paradise General Plan. Assumption Nos. 5 and 10 were added as a result of the new growth management approach to the plan as directed by the current steering committee.

The assumptions listed below were developed and used by the General Plan Revision Steering Committee, the consultants and town staff during the development of the *Paradise General Plan*. They were based on several sources, including the citizens' opinion telephone survey, meetings with the steering committee and town staff, and information gathered during the preparation of Volume III, the *Environmental Setting*.

Assumptions

- Things that residents like most about living in Paradise include the natural beauty, trees, fresh air, and friendly, small-town atmosphere.
- Things that residents like the least about living in Paradise include unplanned growth, lack of opportunities (shopping, employment, recreation, etc.), lack of services and traffic.
- Residential growth in Paradise will be slow and steady, dictated by topography, the availability of infrastructure and public services, and resources such as water.
- A sewer system may be constructed during the fifteen-year life of the *General Plan* to serve most commercial areas, and the onsite wastewater management district will regulate the remaining properties.
- The Paradise onsite wastewater management district will become fully operational during the planning period.
- Residential densities will remain relatively low.
- Automobile transportation will remain dominant, but interest and participation in the use of alternative forms of transportation will increase.
- The central commercial area and the Skyway and Clark Road corridors will be the primary commercial centers of the town.
- Economic development will continue to be pursued during the planning period.
- Economic growth can be accomplished without a significant increase in residential populations.
- The population of Paradise will continue to change from predominantly senior citizens to a larger share of families with school-age children.
- The planning period will be fifteen years.

Issues

Issues are important community matters or problems that are identified in a community's general plan and dealt with by the plan's goals, objectives, policies, plan proposals and implementation measures.

As described in Chapter 1.0, pertinent issues have been identified through a variety of sources. The General Plan Revision Steering Committee and citizen subcommittees initially identified concerns, as did town staff. In addition, volunteers conducted a citizens' opinion telephone survey of town residents to seek citizen opinions on a variety of issues relevant to the *General Plan* process. Finally, other public agencies identified issues of concern, through meetings and correspondence. These issues were summarized in narrative form in the *Issues, Goals and Objectives* working paper.

Each subcommittee met and worked independently, with meetings facilitated by the consultants and Community Development Department staff. Each subcommittee considered all of the subject issue areas, although with different degrees of emphasis, based upon the interests of the subcommittee members. They also evaluated constraints and opportunities which influence the manner in which these issues can be realistically addressed (see Chapter 5.0).

Each subcommittee developed proposed goals, objectives and policies for those issues which were of interest to that subcommittee. These efforts, along with input from the steering committee, town staff and the consultants, have been formulated into the *General Plan* goals, objectives, policies and implementation measures contained in Chapter 6.0 of this document.

California Government Code Section 65302 and other statutes establish the basic list of issues that a general plan must cover and the state *General Plan Guidelines* were used to supplement the issues identified in the *Issues, Goals and Objectives* working paper. While the General Plan must meet the minimum requirements of the law, Government Code Section 65301 (c) indicates that each state-mandated element need be addressed only to the extent it is relevant to the town's planning area. This is commonly referred to as the "shoe-fits" doctrine.

To facilitate consideration of the *Alternatives Development and Evaluation* working paper, which presented four alternative plan scenarios developed by the four subcommittees, approximately thirty-two major issues were highlighted for further consideration by the steering committee. Those issue statements are listed below. The notation following each issue statement indicates the *General Plan* element(s) in which that issue is addressed.

- Manage residential growth by linking it to the availability of all public services and the adequacy of town infrastructure. (*Land Use, Circulation*)
- New development must pay its fair share of the cost of infrastructure and public services. (*Land Use, Circulation, Safety*)
- Police and fire standards should be linked to development - maintaining at a minimum the existing service levels. (*Land Use, Safety*)
- Promote economic development. (*Land Use*)
- Preservation of natural beauty - particularly trees and stream/drainage courses. (*Open Space/Conservation*)
- Develop a sense of community identity/town theme. (*Land Use*)
- Develop attractive entrances to the Town. (*Land Use, Open Space/Conservation*)
- Promote regional planning and decision making for such issues as housing, air quality and traffic. (*Land Use, Circulation, Conservation/Open Space, Housing*)

- Allow some mixed uses (residential, commercial, business offices) in commercial areas. (*Land Use*)
- Promote cultural events and quality tourism. (*Land Use)*
- Extension of east-west connector roads; impacts on existing neighborhoods and schools. (*Circulation*)
- Possible consolidation of public service providers, including the library. (*Land Use*)
- Encourage orderly and compatible infill development in balance with existing residential neighborhoods, open space and traffic circulation. (*Land Use*)
- Promote new single-family residential densities, such as one-half acre gross minimum. (*Land Use*)
- Redevelopment of a commercial core area. (*Land Use*)
- Encourage architectural design that is compatible with the town theme and community identity. (*Land Use*)
- Encourage high density (multi-family -- including mobile home parks) residential located where roads can accommodate traffic load. (*Land Use*)
- Investigate with Butte County the possible closure of Honey Run Road to motorized vehicles. (*Circulation*)
- Impacts of through traffic on Skyway. (*Circulation*)
- New industrial development locations: Airport, Clark Road, etc. (*Land Use*)
- Emergency evacuation routes. (*Circulation, Safety*)
- Expansion/linkages of bike and pedestrian paths. (*Circulation, Open Space/Conservation*)
- Development and management of additional bike, pedestrian and equestrian paths. (*Circulation, Open Space/Conservation*)
- Increase the number of neighborhood parks and open space. (*Open Space/Conservation*)
- Promote and encourage water and energy conservation. (*Open Space/Conservation*)
- Encourage new growth and development opportunities (particularly industrial and open space) to the unincorporated south - would require annexations. (*Land Use*)
- Encourage and promote new commercial development to occur in centers rather than strips whenever feasible. (*Land Use, Circulation*)
- Private road issues. (*Circulation*)
- Implementation of stream protection zones - development of standards. (*Open Space/Conservation*)
- Encourage and create incentives for the retention of agricultural lands. (*Land Use, Open Space/Conservation*)
- Preserve existing neighborhoods. (*Housing, Open Space/Conservation*)
- Alternatives to the automobile. (*Circulation*)

Consideration of these issues at several meetings facilitated consensus building by the steering committee on most topics, development of a preferred alternative and provided direction to the consultants to prepare the draft *General Plan* document.

KEYS TO THE FUTURE

Based upon the background assumptions, community issues and future goals developed by the citizen subcommittees and General Plan Revision Steering Committee, a number of "keys to the future" have been identified. The first, and perhaps foremost "key," is the importance of preserving the natural beauty and rural charm of the town. This would not only serve to maintain the Paradise that attracted its citizens in the first place, but would also demonstrate the town's priorities and commitment to its basic quality of life.

A second "key," also related to preserving the natural beauty of the town, is to successfully manage residential growth, and interface local economic growth and productivity with environmental quality. Realistically, economics and the environment go hand in hand, and it is critical for the future of Paradise that both features be successfully balanced. The Paradise community is challenged to manage and control population growth, so that it occurs in a way that retains and enhances its quality of life--the trees, views, the unique setting, and everything special about Paradise.

Third, the town must work diligently to provide an adequate and reasonable level of public services. Town government, the local citizenry, special service districts, and all service providers must work together to develop a unified approach to providing Paradise with an efficient, cost effective, coordinated and comprehensive delivery of public services.

Fourth, a real and concerted effort must be made to support and encourage community education. The children of Paradise need a quality education in order to contribute to their community and to find success in their lives. Life-long learning opportunities should also be available to citizens of all ages, and an awareness of local government and civic undertakings must become paramount to a broader spectrum of the general public.

Fifth, the public must be brought further into the governmental decision making process. Open and productive exchanges of thoughts and ideas between concerned citizens, decision makers, and staff is crucial for building true consensus, developing trust and honesty and for the overall health of the community.

Sixth, an effort must be made to encourage and promote regional planning. Cooperative decision-making efforts between towns, cities, and the county will ease frustration and the problems of managing broad land use, environmental, and economic issues. Paradise must use a proactive approach concerning growth and development issues within the secondary and tertiary planning areas. Such an action will allow the town to influence change, control its destiny, and dictate its overall quality of life. A primary regional issue is the protection of the Paradise watershed and the quality of domestic water supplied to the citizens of the community.

The goals, objectives and policies of the Paradise *General Plan* are intended to guide land use decision-making with these "keys" in mind.

4.0 CENTRAL GOALS

The major goals of this *General Plan* are grouped and discussed below. These goals were prepared by citizen subcommittees and the General Plan Revision Steering Committee. They set the tone and direction for growth and development in the Town of Paradise during the next fifteen years.

- **Maintain managed growth that will provide adequate infrastructure for Paradise, to ensure an orderly, well-planned community.**

The quality of life in Paradise can be improved and enhanced by carefully managing the amount and location of new development. Growth and development that includes the improvement of public services and infrastructure ensures a balanced mixture of uses and will enhance the quality of life in Paradise.

Among Paradise's assets are its natural beauty, rural atmosphere, open spaces and its historic past. By carefully managing where and how the town grows and develops, the dramatic viewsheds, forests, and sense of place can be preserved.

- **Create a healthy local economy in Paradise by encouraging a greater mix of goods and services, and promoting economic development in the community.**

It is a goal of the *General Plan* to provide a full range of affordable public services, and to improve the local economy by retaining existing businesses, attracting unique and revenue enhancing businesses and industries and assisting the private sector to create jobs. This goal will help to create a more self sufficient municipality, while serving to develop a community identity and maintain or improve upon the current level of public services.

- **Encourage and accommodate thoughtful, well-planned commercial and industrial growth that is compatible with adjacent land uses and infrastructure capabilities.**

It is a goal of the *General Plan* to properly manage growth to preserve the local quality of life. To effectively balance the special needs of the community, the plan distinguishes between residential and commercial/industrial growth. The town needs appropriate commercial and industrial growth in order to preserve its unique quality of life.

- **Promote tourism as an economic development measure, and revitalize the central commercial area.**

Paradise is rich in California history, and tourism has been identified as a potential tool for melding the local history with economic development. Renewal of the old commercial core area of the town to promote an historical theme has been identified as a way to support and encourage local business.

- **Designate adequate land and a range of residential densities sufficient to meet the needs of Paradise residents and persons expected to reside in Paradise, while preserving the present rural residential character and small town atmosphere.**

Broadening the amount of land designated for a variety of residential land uses will provide more opportunity for housing a wider range of Paradise residents. Proper planning and implementation will maintain and enhance

the unique rural character of Paradise, even as residential areas build out.

- **Preserve and enhance the natural beauty of Paradise, and the significant physical features, such as the trees, views, stream courses, wildlife habitat, and clean air.**

One of the greatest assets Paradise has to offer is its natural beauty. The trees, streams, clean air and dramatic viewsheds are among several reasons why the town is attractive as both a place of residence and a place to visit. Preservation of the natural beauty and the enhancement of open space and parks are viewed as keys to a healthy future for the Town of Paradise.

- **Provide safe, efficient and effective traffic flow, both within Paradise and between Paradise and its environs.**

Improving traffic and pedestrian circulation throughout the planning area is regarded as a high priority in the *General Plan*. Traffic congestion is one of the first symptoms of a growing community, and one that can have dramatic effects on the local quality of life. By improving traffic flows, eliminating hazards, and promoting alternative forms of transportation, the rural quality of life in Paradise can be preserved. In addition, it is a goal of the *General Plan* to maintain the integrity of residential neighborhoods by minimizing traffic and associated noise impacts.

- **Assure that fire and police protection are enhanced sufficiently to meet the demands of new and existing land use development.**

As the town grows and develops, so does the need for police and fire protection. The town has a significant amount of high wildland fire hazard areas and is uniquely situated in a setting characterized by dramatic topography, difficult circulation, and deficient water pressures or volumes. While crime rates have not increased significantly in recent years, the types of crimes have changed. Criminal activity in Paradise is more reflective of urban type crime than it was ten years ago. It is a goal of the *General Plan* to maintain the current level of both fire and police protection, and to enhance and improve service as the town grows and develops.

- **Assure the safety of all Paradise residents from potential natural disasters, such as earthquake, flooding, volcanic activity, hazardous waste accidents, and major storms.**

Major disasters can disrupt and cripple a community very quickly. It is a goal of the *General Plan* to improve and enhance the preparedness of the community for critical disasters, and to find ways to limit their impact. A well prepared and safe community reflects upon the overall high quality of life.

- **Actively promote water and energy conservation.**

It is an important *General Plan* goal to promote water conservation. In addition, a continual focus on energy conservation throughout the life of the plan can save both citizens and the town money, and contribute to local, regional, national and global efforts to conserve dwindling energy supplies.

- **Facilitate the implementation of the town's affordable housing goals as set forth by the State of California and the Butte County Association of Governments.**

In the past, the community has had difficulty in implementing the policies and provisions of the *Housing Element*. Coupled with the goal of stimulating the local economy and creating local jobs, it is a goal of the *General Plan* to create opportunity for the establishment of affordable housing in the community.

- **The town shall explore the feasibility of assisting the Paradise Unified School District in providing a quality education for all school children in Paradise.**

It is a goal of the *General Plan* to assist the Paradise Unified School District in providing a well-rounded quality educational environment to the children of Paradise. Education of the children in the Paradise community is the responsibility of the School District, parents, and all concerned citizens who believe that education is a key component to the local quality of life, and the long term viability of the community.

- **Improve and expand communication and cooperation between Paradise, Butte County, Chico and the various special districts in order to assure effective and sound land use decisions within the region.**

Butte County, Chico and Oroville are all revising their *general plans* during the early 1990s. The region is expected to continue to grow as people, businesses and industry become dissatisfied with the problems of being located in major urban areas, and decide to relocate to Northern California. It is a goal of the *General Plan* to improve communication and coordination with other jurisdictions and special districts to cooperatively address planning issues from a regional standpoint.

- **Fully implement the onsite wastewater management district.**

It is an objective of the *General Plan* to fully implement and sustain the operations of the town onsite wastewater management district.

- **Surface and groundwater quality shall be improved and preserved and the Paradise area watershed shall be protected.**

It is a policy of the *General Plan* to protect the quality of domestic water supplied to the community. The primary mechanism for implementing the policy shall be to strive to influence activities within the watershed and outside the town limits in order to preserve the natural state and ecological integrity of the watershed.

5.0 CONSTRAINTS ANALYSIS AND DEVELOPMENT OPPORTUNITIES

A constraint is defined as something that restricts, limits or regulates a given course of action. An opportunity, on the other hand, is a favorable or advantageous combination of circumstances which allows for a beneficial outcome. In the context of a general plan, opportunities are assets that can be used to the community's advantage to achieve desired ends. Constraints represent the limitations for growth and development within which proposals and potential solutions must be designed.

This *General Plan* identifies environmental/physical, infrastructure and policy constraints. When melded together, the constraints reveal the opportunities for growth, development and the preservation and enhancement of open space.

The environmental/physical constraints identified in the *General Plan* are:

- High fire hazard areas
- Soils
- Topography/slopes
- Creeks, streams and natural drainages
- Sensitive plant and animal habitats
- Noise sensitivity
- Airport safety areas
- High archaeological sensitivity
- Deer migration window
- Trees are also a major constraint; however, they are not mapped

The infrastructure constraints identified in the *General Plan* are:

- Water supply and distribution
- Roadway levels or service thresholds
- Police and fire protection response times
- Sewage disposal
- Paradise Unified School District service capacity
- Paradise Recreation and Park District service capacity
- Drainage

- ***High wildland fire hazards are discussed in Section 6.5 (Safety Element) and Section 14.2 in Volume III.***
- ***Local school district service capacity is discussed in Section 6.7 (Education and Social Services Element) and Section 14.6 in Volume III.***

NOTE: Other constraints, both environmental and infrastructure related, not identified in the *General Plan* may also affect the eventual zoning of properties and future development opportunities.

It should be noted that state and federal laws may preempt the strict application of constraints analysis to the siting and construction of certain utility infrastructural improvements.

As a growth management tool, the constraints analysis system is intended to provide a systematic and rational method in which to determine the development opportunity of a given property. To a certain degree, known infrastructure and environmental constraints have been used to assist in the selection of *General Plan* land

use designations for given properties. The Paradise *General Plan* requires the use of constraints analysis in developing future zoning classifications for properties, as well as for analyzing future development proposals.

Zoning Classification Directives

The *Paradise General Plan* directs future zoning classification work to be driven by constraints analysis. Specific zoning densities, uses and standards will be established as a result of a comprehensive evaluation of site specific constraints. Property designated for future residential development may, as a result of detailed constraints analysis, be assigned a zoning classification with a low density. Conversely, another property may be devoid of constraints, and therefore receive a zoning classification allowing a higher land use density or intensity.

If and when the identified infrastructure constraints are overcome by implementation of capital improvements, the town may choose to revise the zoning classification to allow a more intensive use of the property. If a particular development project proposes to overcome infrastructure constraints by providing the necessary infrastructure, such as, upgrading the roadway system, constructing a new fire station, or fully mitigating the impacts to the local school district, then the proposal may need to include a request for amendment to the *Paradise General Plan* and zoning ordinance. The town decision makers, with the assistance of staff and the citizenry would then have the opportunity to decide if that particular type and intensity of development is in the best interest of the community at that particular time.

It is suggested that a variety of residential zoning districts be established to provide a wide range of residential land uses.

Typical infrastructure constraints used in the analysis may include, but not be limited to the following:

- **A lack of adequate water distribution infrastructure.** The water mains and hydrants in a given location (particularly high wildland fire hazard areas) may not produce the required pressure and flow to adequately fight a fire, and therefore a zoning classification intended for high density/intensity development would be inappropriate.

- **A lack of domestic water service capacity.** If local water purveyors indicate that domestic water service is limited, the zoning classifications for residential, commercial and industrial land uses must coincide with feasible service capacity levels.

- **A lack of adequate sewage disposal infrastructure.** The absence of a community sewer system available to serve a given piece of property and/or existing soils on the site are very shallow and do not drain well. Such circumstances would direct a zoning classification for low density or low intensity land uses.

- **A lack of adequate roadway infrastructure.** The roadway system in a given location may not have through access to a publicly maintained street, or may contain narrow and deteriorated lanes and roads. The streets and intersections in a given area may be experiencing a level of service below the minimum established in the *General Plan*, and therefore is not appropriate for high intensity/density development.

- **A lack of adequate police and fire response times.** A given location may be outside the identified and required response time ranges for adequate police and fire protection. In addition, some properties may be situated within a high wildland fire hazard area. These constraints would dictate a zoning classification allowing low intensity/density development.

- **A lack of service capacity of the Paradise Unified School District.**

Environmental constraints, such as those listed on page 5-1, shall also be used in determining future zoning classifications.

Analysis of Development Proposals

> ***"Development projects should be designed in a manner to accommodate the constraints on a parcel by avoiding them altogether or creating minimal loss or conflict."***

As the town slowly builds out, the remaining vacant lands are generally those with physical/environmental constraints that have limited development opportunities in the past. Accordingly, there will be increased pressure to attempt to overcome the constraints and develop the land. It is the purpose of the constraints analysis system to encourage and entertain development that is sensitive to the constraints on a given parcel. Development projects should be designed in a manner to accommodate the constraints on a parcel by avoiding them altogether or creating minimal loss or conflict. It is a policy of the *Paradise General Plan* to direct development to areas devoid of or exhibiting minimal constraints.

The maximum potential development density permitted under the *General Plan* land use designation and zoning classification may not be achievable given the physical/environmental constraints that exist on a particular site. For example, a one acre parcel designated for multi-family residential development, may be limited to five units per acre because of steep topography, the presence of archaeological resources, mature stands of trees, and a creek.

With the strong *General Plan* goals of preserving the natural environment and Paradise's rural charm, methods of overcoming physical/environmental constraints shall be limited. Removing stands of mature trees and filling in drainage swales as a means of overcoming significant vegetation and wildlife and plant habitat constraints shall not be condoned and should not be permitted. Additionally, excessive grading, significant cut and fills, and major retaining wall construction as a means of overcoming topographic constraints should not be permitted. The filling and rerouting of drainage swales and creeks will not be permitted as a means of overcoming net lot area requirements for compliance with the town sewage disposal ordinance.

General Plan Policy Constraints

The *Paradise General Plan* contains growth and development policies related to land use, circulation, housing, noise, safety, open space/conservation/energy, and education and social services. These policies must also be considered a form of constraint to the development opportunity on property in Paradise.

> ***It is the combination of the infrastructure, physical/environmental, and policy constraints taken as a whole that shapes and reveals the development opportunity of a given parcel of land.***

Development Opportunities

As a result of continued building activities since town incorporation combined with the presence of infrastructural and environmental constraints, land suitable for residential, commercial and industrial development is becoming limited within the primary planning area. Poor water distribution in some areas, potential water supply difficulties, narrow, steep and

deteriorated roads, steep slopes, shallow soils, the presence of important streams, and a general lack of large parcels of land have reduced potential development opportunities in the town. Generally, the remaining vacant lands within the town are those with some degree of constraints, which have tended to discourage development in the past.

The remaining vacant lands devoid of major constraints or with a small degree of constraints are located in various parts of the community, ranging from the properties just north of the golf course to smaller pockets of parcels in the northeastern portion of town. Larger land holdings south of Roe Road, east of Clark Road, west of Neal Road, and north of Honey Run Road all experience some degree of major constraints.

The opportunities of future development may include infilling small pockets of vacant land within the proposed rural residential, town residential, and various commercially designated land areas. While the town has not experienced a significant amount of redevelopment or 'tear-down' type development, it is expected that such an approach may provide valuable opportunities for both residential and commercial development within the fifteen-year time frame of the plan.

The General Plan does designate additional land for light industrial and business park development. The potential for actual development of this land is dependent upon, to some degree, the overcoming of infrastructural constraints.

The General Plan also designates additional land for community service land uses. The plan attempts to provide new opportunities for community service type development, such as residential care facilities, medical offices, senior citizen and youth centers, and day care facilities.

The General Plan directs revisions to the *Downtown Revitalization Plan* which will focus on opportunities and strategies for commercial development in the downtown area and the enhancement of the local economy.

6.0 GOALS, OBJECTIVES, POLICIES AND IMPLEMENTATION MEASURES

6.1 LAND USE ELEMENT

Introduction

The *Land Use Element* lays out the dimensions and directions for growth anticipated over the next fifteen years. It includes a statement of the standards of population density and building intensity for the various land use designations. These standards are set forth in Table 2-1 in Chapter 2.0 of this volume. The land use designations are also identified and described in Chapter 2.0, as are the *Land Use Diagram* and *Land Use Constraints Diagram*.

The thrust of the *Land Use Element* is to closely manage residential development, while encouraging thoughtful, well-planned commercial and industrial development that adheres to long-term community and economic development strategies, and that will conform to the strong goals for preserving the environmental quality and rural charm of the town.

The theme of growth management threads through the entire General Plan, with the strongest focus in the land use, housing, circulation and open space/conservation energy elements.

Paradise's general land use pattern is well established and unlikely to experience major changes during the fifteen year planning period. Residential neighborhoods will not experience major increases in density, nor will the general permitted and conditional land uses for these areas change significantly as a result of the new *General Plan*. Commercial areas may experience some infill development, and opportunities for mixed uses in these areas will result from the new *General Plan*.

The *Land Use Element* calls for the revitalization of the new Commercial Core area in the old downtown. This area would adopt a "theme," and would encourage mixed uses, provide opportunity for an artisans center, play a community goods and services role, and provide a focus and community identity.

Local economic development and local environmental quality are two community goals that are somewhat at tension, yet they are <u>not</u> mutually exclusive.....both goals need each other to help create a high quality of life in the community. Yet, in the final analysis, it is the role of economic development to support the goals of the General Plan, and in doing so, support the goals of the community.

Light industrial and business park land use opportunities will increase, but actual development of these types of uses will depend upon the degree of infrastructural and environmental constraints affecting eligible properties, as well as the availability of land and the interests of land owners. Opportunities for open space and recreational land uses will increase, but acquisition of land and actual development of facilities will depend

upon the ability of the town, the Paradise Recreation and Park District and the citizenry to work together and develop sound financial strategies.

The *Land Use Element* also includes guidelines for growth and development in the tertiary planning area intended to provide an opportunity for proactive participation with both Butte County and the City of Chico in land use and environmental planning related matters.

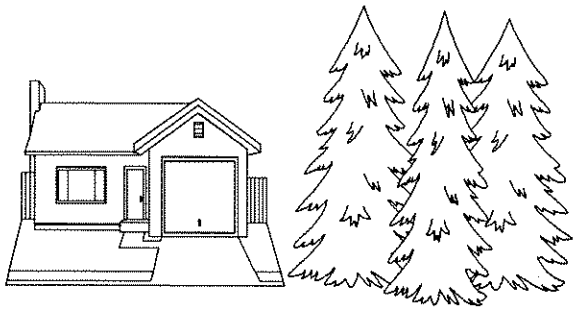
The town has determined that future growth and development in the tertiary planning area could have significant impacts upon the quality of life in Paradise.

The *Land Use Element* for the *Paradise General Plan* is divided into eight components. Each component contains separate goals, objectives, policies and implementation measures designed to successfully manage growth and provide a consistent and comprehensive approach to overall land use in the future. The eight (8) components include:

- Growth and land use development
- Public services and infrastructure
- Land use distribution and location
- Land use densities
- Economic development/redevelopment
- Intergovernmental coordination
- Land use controls
- The tertiary planning area

GROWTH

The General Plan controls and manages population growth, while encouraging and stimulating local economic growth.



LUG - LAND USE GOAL
LUO - LAND USE OBJECTIVE
LUP - LAND USE POLICY
LUI - LAND USE IMPLEMENTATION MEASURE

GROWTH AND LAND USE DEVELOPMENT

Goals

LUG-1 Manage growth with a balance of land uses.

LUG-2 Accommodate a rate of growth consistent with the physical and infrastructural limitations in Paradise.

LUG-3 Provide for an orderly, well-planned community.

Objectives

LUO-1 Maintain a level and pattern of residential growth that sustains the current quality of life.

LUO-2 Stimulate and accommodate commercial/industrial growth while maintaining the current quality of life.

LUO-3 If studies determine annexation to be feasible, initiate annexation of lands within the town's Sphere of Influence boundary during the fifteen-year planning period.

LUO-4 Carefully manage and control population growth, while stimulating local economic growth.

Policies

LUP-1 The limitations imposed on the Paradise area by topography, soils and other physical features shall be recognized in site-specific development design as well as when establishing long-term growth objectives.

LUP-2 The environmental and infrastructure constraints analysis system should be used to determine future zoning classifications, densities and intensities of land use and to evaluate future development projects.

LUP-3 The town should require all development proposals on sites which contain slopes exceeding twenty percent, and/or which border or include significantly important stream courses or natural drainageways, to include programs for replanting and slope stabilization, erosion control plans, and to incorporate designs which minimize grading and cut-and-fill.

LUP-4 In conjunction with input solicited from Butte County, as soon as feasible the town shall prepare a specific plan for an orderly and balanced development of the secondary planning area south of the town limits which will more precisely determine residential densities, roads, drainage, utilities and sewage disposal.

LUP-5 The "Open Space/Agriculture" land use designation shall be applied to most lands within the Butte County urban reserve area in the southerly secondary planning area as a holding designation to prevent premature conversion to urban uses until such time as a specific plan is adopted and public facilities and services are available.

LUP-6 The town should consider annexation of the substantially undeveloped area between Neal Road and the Feather River, including portions of the Lime Saddle Community Services District.

LUP-7 Residential structures shall not exceed thirty-five feet above the highest finished grade.

LUP-8 The town shall be cognizant of and oftentimes will evaluate the potential cumulative impacts of a given development proposal in accordance with the requirements of the California Environmental Quality Act.

LUP-9 The Paradise Community Development Department should mail public notices to all property owners potentially affected by any proposed subdivision project, General Plan amendment application and rezoning application.

LUP-10 The town shall encourage the preparation and submittal of master plans and/or planned developments for large projects.

LUP-11 Development projects should be designed in a manner to accommodate the constraints on a parcel by avoiding them altogether or creating minimal loss or conflict.

Implementation Measures

LUI-1 Monitor building permits and development approvals to track the annual residential growth rate.

LUI-2 Prepare a specific plan for the southerly secondary planning area.

LUI-3 Amend the Paradise Municipal Code as necessary to require comprehensive erosion control plans, site design standards which minimize grading and cut-and-fill, and programs for replanting and slope stabilization.

LUI-4 Amend the zoning ordinance to establish new zoning classifications on properties consistent with new *General Plan* land use designations, taking into account known infrastructure and environmental constraints.

PUBLIC SERVICES AND INFRASTRUCTURE

Goals

LUG-4 Provide adequate public services and infrastructure to meet future need.

LUG-5 Assure that future residential, commercial and industrial development pays its fair share of future infrastructure and public service costs.

LUG-6 Provide cost-effective public services in the community.

LUG-7 Fully implement the onsite wastewater management district.

LUG-8 Assure that law enforcement and fire protection services are enhanced sufficiently to meet the demands of new and existing land use development.

Objectives

LUO-5 Assure that an adequate water supply exists prior to approval of development in the Paradise planning area.

LUO-6 Maintain a law enforcement response time for emergency police calls of no more than five minutes.

LUO-7 Maintain an overall fire insurance (ISO) rating of three or better, and an emergency fire response within five minutes for 90% of all emergency incidents within the Town Limits.

LUO-8 Maintain a balance between public agency revenues and expenditures attributable to new land use development during the planning period.

LUO-9 Within the fifteen-year planning period, consider studying the feasibility of consolidation of some special districts with or by town government and/or with each other.

LUO-10 Consider the construction and installation of a formal sewer system to service the commercial and industrial areas in the town within the fifteen-year planning period.

Policies

LUP-12 The character of future development should be compatible with the town's service delivery abilities and shall not result in service level declines.

LUP-13 The town shall attempt to assure that the rate and character of growth is commensurate with, or does not exceed the current levels of public services, and shall attempt to assure that municipal services can be provided to areas planned for annexation and development.

LUP-14 Growth and land use development should be linked to the availability of public services and facilities, and to the degree of overall infrastructure and environmental constraints affecting property in the town.

LUP-15 The town shall continue to investigate means to improve its public service delivery capacity to assure that future growth does not outstrip services.

LUP-16 Unless assurance is obtained that an adequate level of all public facilities, including schools and parks, will be available to future residents, no discretionary residential project should be approved [to increase density of use]. The assurance shall include details of how any impacts identified as a result of the proposed land use actions are to be mitigated.

LUP-17 The town shall attempt to encourage the Paradise Irrigation District, Lime Saddle Community Services District, Paradise Recreation and Parks District, Paradise Cemetery District, and Paradise Unified School District to expand or enhance service capacity, consistent with the town's *General Plan*.

LUP-18 The Town Council shall attempt to meet bi-annually with the Paradise Irrigation District Board of Directors and/or other local water supply purveyors and hold joint puhlic meetings to discuss water supply issues, Paradise General Plan implementation, and how current issues may affect the future growth and development of the community. If it is determined that water supply is limited and/or unavailable, alternative measures for conserving water and limiting growth and development shall be explored.

LUP-19 Land use densities should primarily be based, upon the development opportunity influenced by infrastructural and environmental constraints affecting properties in the town.

LUP-20 New land use development shall not cause the levels of police and fire protection to fall below the service levels established by this plan.

LUP-21 Establishment of assessment districts should be considered in newly developing areas to assure that the longer term costs of land use development are adequately funded.

LUP-22 A system of fees shall be established sufficient to assure that future growth pays its equitable share of service delivery costs.

LUP-23 The town should investigate the feasibility of annexing developing areas in order to more equitably share the cost of service delivery within the Paradise region.

LUP-24 If feasibility studies are performed concerning the merging of the Paradise Irrigation District water treatment and delivery systems with town operations, and the conclusions of the studies reveal potential cost savings to the public, the merging of the entities shall be considered.

LUP-25 The town should designate general locations for new schools, fire stations and parkland/open space in the planning area and should reflect the general location of these future facilities on the *Land Use Diagram*.

The actual location of fire stations shall be in conformance with the criteria established in the *Safety Element*. The actual location of schools should be in conformance with the criteria established in the *Education and Social Services Element*. The actual location of new parkland/open space should be in conformance with the criteria established in the open space/conservation/energy element.

LUP-26 The town shall attempt to make specific findings regarding public service and infrastructure capacity when acting on applications for divisions of land, rezonings, annexations, and General Plan amendments.

Implementation Measures

LUI-5 Develop and implement a five-, ten- and fifteen-year capital improvements program addressing critical infrastructure needs.

LUI-6 Seek the cooperation of the Paradise Irrigation District and the Lime Saddle Community Services District to assure an adequate water delivery system for the community.

LUI-7 Continue to implement the *Master Storm Drain Study and Facilities Plan.*

LUI-8 Establish law enforcement and fire protection impact fees for new land use development sufficient to assure that established levels of protection are maintained.

LUI-9 If feasible, establish law enforcement and fire protection service fees for existing land uses sufficient to assure that established levels of protection are maintained.

LUI-10 Establish a fee or fees to be collected upon issuance of permits for new development that will cover the cost of additional services and infrastructure not paid directly by the developer.

LUI-11 Investigate and possibly utilize other forms of assessment district financing where the economics of new development permit.

LUI-12 If the town decides to pursue the merging of any special districts with town operations during the fifteen-year planning period, it shall request that LAFCo study the potential consolidations.

LUI-13 Work closely with Paradise Irrigation District, Paradise Recreation and Park District and Paradise Unified School District in monitoring housing, population and enrollment trends and evaluating their effects on future service, parks and school facility needs.

LAND USE DISTRIBUTION AND LOCATION

Goals

LUG-9 Encourage compatible mixed uses in commercial areas.

LUG-10 Encourage infill development consistent with open space needs, neighborhood character and infrastructure capacity.

LUG-11 Encourage infill development within the Central Commercial area.

LUG-12 Promote attractive and appropriately located commercial development.

LUG-13 Designate appropriate areas for high density residential use and for institutional and public uses in centralized and convenient locations.

LUG-14 Designate multiple sites for future light industrial and business park activity in order to provide greater job opportunities in Paradise.

LUG-15 Protect planned land uses from incompatible uses on adjacent and nearby properties.

LUG-16 Protect residential neighborhoods from encroachment by incompatible land uses.

Objectives

LUO-11 Make necessary changes in the zoning ordinance and development standards within two years.

LUO-12 Prepare an inventory of target sites for infill development within two years.

LUO-13 Establish new or expanded industrial park locations, and designate up to 120 acres of land for new industrial or business park uses.

LUO-14 In locations convenient to residential areas, provide sufficient planned and zoned sites for commercial uses, including professional office uses, to serve an estimated population projected to the year 2008.

Policies

LUP-27 The town shall create a Central Commercial area generally bounded by Skyway, the Paradise Memorial Trailway, Elliott Road, and Pearson Road, evidencing the following: ready access from a variety of directions, visibility, established businesses, available developable land, and sufficient infrastructure planned or in place to support a more concentrated form of activity.

LUP-28 The Central Commercial area shall be designated for limited mixed uses (commercial and residential) and shown on the *Land Use Diagram*.

LUP-29 In addition to serving convenience needs of nearby residents, the Central Commercial area should fill a community-wide goods and services role and should provide a focus for visitors to the community.

LUP-30 Capital improvement projects should be directed to areas planned for revitalization and high intensity land use.

LUP-31 Commercial development along Skyway should be directed toward "visitor services," and retail sales and infill strip development should be permitted along the Skyway between Neal Road and Bille Road.

LUP-32 The town shall discourage additional strip commercial development along Clark Road, particularly north of Wagstaff, while encouraging a concentration of activity at key intersections accessible to pedestrians.

LUP-33 Existing strip commercial use along Skyway and Clark Road should be permitted to fill in.

LUP-34 Larger retail and/or professional office developments should be encouraged to locate in centers with appropriate access, parking, landscaping and architectural design.

LUP-35 Professional office development sufficient to accommodate future population should be permitted provided that the magnitude of constraints is low, in the following locations: along major arterials, in proximity to the Central Commercial area, and adjacent to major medical facilities.

LUP-36 The existing industrial park shall be expanded to the extent possible.

LUP-37 Light Industrial/Business Park areas shall be designated adjacent to Clark Road (State Highway 191).

LUP-38 Light Industrial uses should be located away from high intensity residential and public uses.

LUP-39 Whenever feasible, the character of present residential neighborhoods shall be preserved through appropriate zoning and design of future developments.

LUP-40 Community facilities should be compatible with traffic and circulation patterns.

LUP-41 Only low-intensity industrial uses and other uses compatible with FAA regulations, the *Paradise Skypark Airport Land Use Plan*, and surrounding land uses should be allowed adjacent to Paradise Skypark Airport.

LUP-42 Locations for cemeteries should be designated, as shown on the *Land Use Diagram*, consistent with Paradise Cemetery District plans.

LUP-43 Timber production areas within the secondary planning area shall be identified on the *Land Use Diagram*.

LUP-44 General locations for gateway areas shall be shown on the *Land Use Diagram.*

Implementation Measures

LUI-14 Include provisions for mixed land uses in the town zoning ordinance.

LUI-15 Zone properties consistent with their *General Plan* land use designation.

LUI-16 Amend the zoning ordinance as necessary to provide for Central Commercial and visitor services classifications.

LUI-17 Prepare and adopt a capital improvements plan.

LUI-18 Establish access, parking, landscaping and architectural design guidelines for larger retail and professional office developments.

LAND USE DENSITIES

Goals

LUG-17 Designate adequate land and a range of residential densities sufficient to meet the needs of Paradise residents and persons expected to reside in Paradise, while preserving the present rural residential character and small town atmosphere.

Objectives

LUO-15 Establish a single-family residential density sufficient to allow adequate room on lots for mature trees, septic systems and buffers between residences.

LUO-16 Through appropriate constraints analysis and possible mitigation, assure that traffic generated by high density residential land use development will not exceed roadway capacity and level of service standards.

Policies

LUP-45 New higher density land use development should only be permitted in areas compatible with surrounding land uses, infrastructure capabilities and established service levels.

LUP-46 Higher density land use development shall be encouraged within and adjacent to the Central Commercial area to promote convenient and compatible concentration of residential and business activity, and to encourage use of alternative forms of transportation.

LUP-47 Residential densities shall be consistent with standards for onsite wastewater disposal and other infrastructural constraints, and shall provide for newly created minimum lot sizes of not less than one-half acre gross in new developments unless the lots are to be served by a cluster wastewater treatment system and proposed to be created via the assignment of a planned development combining zone.

LUP-48 High density residential development shall be located along designated arterial or collector streets to accommodate traffic generated by such development.

LUP-49 High density residential development should receive the higher town density range if all the following factors are achieved:

- The property is devoid of or exhibits minimal constraints
- The design of the project preserves natural features
- The project includes affordable housing
- The project includes "high end" amenities, such as bicycle/pedestrian paths, mini parks, noise and aesthetic buffers, and aggressive landscaping plans.
- **The project is to be served by an approved clustered wastewater treatment and disposal system.**

LUP-50 Low-density multi-family uses (duplexes, triplexes and fourplexes) shall be encouraged in multi-family zones and possibly town residential designated areas.

Implementation Measures

LUI-19 Zone properties consistent with adopted *General Plan* land use designations, building intensity standards, and infrastructural and environmental constraints.

LUI-20 Require findings to be made, on a case-by-case basis, that residential development is in accordance with the *General Plan* policies and will not exceed the standards established in the *General Plan.*

LUI-21 Develop safety standards in the zoning ordinance for high density residential development and residential care facilities.

LUI-22 Identify and map those areas that are difficult to develop, based upon environmental and infrastructural constraints, and reduce (or establish) low potential densities.

ECONOMIC DEVELOPMENT/ REDEVELOPMENT

Goals

LUG-18 Create a balanced community containing a healthy mix of homes, jobs and commerce.

LUG-19 Encourage the town's economic well being sensitive to its unique environmental characteristics.

LUG-20 Develop a strong local economy, recognizing that this is a key element in solving service providers' financial difficulties.

LUG-21 Discover and enhance the local factors which provide a competitive edge for the Paradise economy.

LUG-22 Bring a greater mix of goods and services to Paradise.

LUG-23 Develop a town theme for commercial and public uses within the Central Commercial area.

LUG-24 Encourage a sense of community in Paradise.

LUG-25 Inventory and promote historical resources in the Central Commercial area and elsewhere as tourist attractions.

LUG-26 Encourage tourism and recreation as an economic development measure.

LUG-27 Encourage cultural and recreational activities that attract visitors.

LUG-28 Encourage the concept of providing an "incubation" facility for existing local small businesses.

LUG-29 Encourage the appropriate development of home based businesses that do not adversely impact residential neighborhoods.

Objectives

LUO-17 Improve the town's sales tax receipts.

LUO-18 Complete an inventory of historic resources within two years.

LUO-19 If sufficient funds can be secured, fully implement the gateway concept, including financing and acquisition where necessary.

LUO-20 Work with other organizations to create and enhance cultural activities that will increase revenues from the transient occupancy tax.

LUO-21 Encourage the establishment of a major hotel/motel with conference facilities or a community center.

LUO-22 Revise and update architectural design guidelines/standards for commercial land use development and establish a review process within two years.

Policies

DEFINITION

Target business and industry - those businesses or industries, which after careful analysis appear to be most compatible with the surrounding area.

LUP-51 Target businesses and industries desired in Paradise shall be identified and the town

shall strive to acquire and provide the resources and the physical, cultural and regulatory environment needed to attract them.

LUP-52 The reuse of existing, vacant commercial buildings should be promoted when feasible.

LUP-53 Commercial and public land use development guidelines/standards should be revised and updated consistent with the town theme for the Central Commercial area.

LUP-54 Architectural compatibility with the adopted town theme shall be encouraged in the Central Commercial area, including compatibility between new and old structures.

LUP-55 Commercial structures should be limited to a height no greater than thirty-five feet above finished grade.

LUI-26 calls for the revision and updating of architectural and site development guidelines for the Central Commercial area. This will help to assure architectural integrity, functionality, and the development of visually pleasing commercial buildings.

LUP-56 Moderate and large-scale commercial parking areas should be appropriately screened and landscaped utilizing native, drought-tolerant and low maintenance plant materials.

LUP-57 The creation of an artisans and tourist center accommodating small shops and crafts as a part of the Central Commercial area should be encouraged by the town.

LUP- 58 The town shall endeavor to create scenic gateway areas that are eye-appealing and representative of the town at general locations as depicted on the *Land Use Diagram*.

LUP-59 The town shall support the retention of open space and natural features along Skyway between Paradise and Chico in order to maintain a scenic entrance to the community.

LUP-60 The town shall attempt to establish a common design theme for gateway areas, including distinctive signing and a tie to the town theme.

LUP-61 The town shall direct its efforts toward elimination of unsightly collections of vehicles and other aesthetically adverse materials near the entrances to the community.

LUP-62 The town should actively encourage the Paradise area as a tourist destination and shall seek means to expand and upgrade accommodations to attract a greater volume of visitors.

LUP-63 Specialty retail uses which attract tourists as well as local shoppers should be encouraged.

LUP-64 Bed and breakfast inns should be encouraged and accommodated in the Central Commercial area and in residential areas where feasible.

LUP-65 Development of a conference center/ destination resort should be encouraged.

LUP-66 The *Downtown Revitalization Plan* should be amended or updated as necessary and implemented, to provide the Central Commercial area a planned identity and

character which is distinguishable and uniquely reflective of Paradise.

LUP-67 The town should identify potentially available sites and shall encourage a public/private partnership approach to the development of a business park and new or expanded industrial park.

Implementation Measures

LUI-23 Investigate participation in the California "Main Street" downtown revitalization program.

LUI-24 Promote the establishment of a regularly scheduled farmers market which includes other vendors (e.g. arts and crafts), and specialty theater/musical events.

LUI-25 If sufficient funds can be secured, adequately staff economic and business development programs and activities.

LUI-26 Revise and update design guidelines for architectural, site and landscaping design in the Central Commercial area, including parking lots.

LUI-27 Amend and enforce the zoning ordinance as necessary to accommodate new standards, procedures, and specialty uses for the Central Commercial area.

LUI-28 Create a citizens committee to evaluate exterior commercial building design and revise and update commercial theme guidelines/standards.

LUI-29 Apply appearance guidelines/standards to existing development in the Central Commercial area when businesses apply for permits for remodeling or expansion of buildings.

LUI-30 Establish special land use controls applicable to gateway areas to assure that development that is unsightly or out of character with Paradise is discouraged, and amend town ordinances as necessary.

LUI-31 Identify funding sources and specific properties for establishment of scenic gateway areas.

LUI-32 Upgrade the entrance signs to the town located along the Skyway and State Highway 191 (Clark Road).

LUI-33 Review and improve the present sign regulations of the Paradise Municipal Code to assure that existing and future signs will conform to established community standards, including standards for height, appearance, size, shape, and total number of signs allowed on a site.

LUI-34 Encourage the completion of the Paradise Auditorium.

LUI-35 Provide/facilitate weekend events to attract tourists; and promote local art exhibits, cultural and arts events, and music festivals and seek private sponsorship for special events.

LUI-36 Study the need for parking structure(s) in the Central Commercial area.

LUI-37 Improve the present code enforcement program, including seeking ways to fund necessary personnel.

LUI-38 Amend and enforce the zoning ordinance as necessary to prohibit outdoor display of

objects (e.g. appliances) which detracts from community appearance.

LUI-39 Attempt to establish incentives for relocation of nonconforming uses.

INTERGOVERNMENTAL COORDINATION

Goals

LUG-30 Retain communication and cooperation between Paradise, Butte County, Chico and all special districts in order to assure effective and sound land use decisions within the region.

LUG-31 Actively pursue joint land use decision making with Butte County in the Paradise region.

Objectives

LUO-23 Arrange annual joint meetings of the Paradise Town Council/Butte County Board of Supervisors and/or the Paradise Planning Commission/Butte County Planning Commission to discuss land use issues.

Policies

LUP-68 The Butte County Association of Governments and the Butte County Association of Cities shall be used as vehicles to improve communication and decisions affecting land use in the Paradise area.

LUP-69 Joint decision making on broad general policies directing growth in the region, including establishment of urban limit lines, shall be encouraged.

LUP-70 Encourage Butte County to maintain the urban reserve policy for the area south of the town limits and work with Butte County officials to develop appropriate policies for growth and development of the area north of Paradise.

Refer to Circulation Element on page 6-16

LUP-71 The town shall work proactively with the Paradise Irrigation District, Butte County and interested community groups to assure protection of the Paradise watershed, the enhancement of the quality of domestic water and the improvement of the town water supply distribuion system.

Implementation Measures

LUI-40 Monitor actions of Butte County and other agencies with jurisdiction over surrounding lands.

LUI-41 Participate in the comprehensive update of the *Butte County General Plan* and the *Chico General Plan* update programs.

LUI-42 Meet with Butte County officials to discuss means of sharing decision making in the Paradise region; and enter into joint powers agreements when appropriate to assure implementation of decisions.

LAND USE CONTROLS

Goals

LUG-32 Assure that all land uses in the town conform to the goals and policies of the *General Plan*.

LUG-33 Strive to eliminate legally nonconforming land uses.

Objectives

LUO-24 Survey and identify nonconforming uses/structures, and explore the options for eliminating them.

LUO-25 Establish an ongoing program to reduce the number of nonconforming uses and structures within the next fifteen years.

Policies

LUP-72 The relocation of nonconforming uses to areas where such uses are permitted shall be encouraged.

LUP-73 The expansion of existing legally nonconforming uses should be strongly discouraged.

LUP-74 The Town shall endeavor to improve its present code enforcement program, including seeking ways to fund necessary personnel.

LUP-75 Proposed commercial additions and expansions should be examined to determine if pedestrian and handicapped accessibility can be enhanced.

LUP-76 As time and resources permit, the town staff shall revise the local CEQA Guidelines, including a mitigation monitoring program.

Implementation Measures

LUI-43 Zone properties consistent with their *General Plan* land use classification.

LUI-44 Review permitted uses in zoning classifications to determine whether changes are appropriate.

LUI-45 Consistently enforce the regulations of the zoning ordinance when alerted of illegal uses.

THE TERTIARY PLANNING AREA

The tertiary planning area has been defined and addressed in the General Plan because the citizens of Paradise believe that growth and development in this unincorporated area of Butte County could have a dramatic effect on their quality of life. The people of Paradise want to be proactive in the planning of land uses in the tertiary planning area in an effort to cooperatively manage growth from a regional perspective. The goals, objectives, policies and implementation measures are intended to assist in guiding the decision-making process for future growth and development in the tertiary planning area.

Goals

LUG-34 In an effort to improve and enhance opportunities for Paradise, as well as to promote regional planning in the area, the Town of Paradise shall establish a program of proactive interaction concerning future decision making of land use development in the tertiary planning area.

Objectives

LUO-26 Within two years, explore the feasibility of extending the town Sphere of Influence line to match the tertiary planning area boundary, and consider preparing a master environmental assessment for the area.

Policies

LUP-77 Development projects proposed in the tertiary planning area should not be approved if, after detailed analysis, it is revealed that the proposal would have long-term cumulative adverse environmental impacts on the Town of Paradise.

LUP-78 Proposed development projects in the tertiary planning area should not be approved if, after detailed analysis, it is revealed that the proposal would have a significant adverse impact upon the traffic levels and circulation patterns of the Town of Paradise; particularly on the Skyway, Neal Road, Clark Road and Pentz Road.

LUP-79 Development projects proposed in the tertiary planning area should not be approved if, after detailed analysis, it is revealed that the proposal would have a significant adverse effect upon the local economy of Paradise.

LUP- 80 Proposed development projects in the tertiary planning area should include significant amounts of open space and regional recreation opportunities.

LUP-81 Development projects proposed in the tertiary planning area should include significant open space buffers between the project area and the Town of Paradise.

LUP-82 Proposed development projects in the tertiary planning area shall acknowledge potential high wildland fire hazards, and include a comprehensive approach to regional fire protection, consistent with state and local fire protection laws and standards.

Implementation Measures

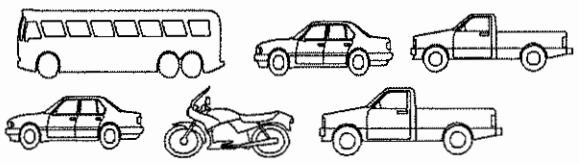
LUI-46 Monitor actions of Butte County and other agencies and special districts with jurisdiction over surrounding lands.

LUI-47 Participate in the comprehensive update of the *Butte County General Plan* and *Chico General Plan* update program.

LUI-48 Enter into joint powers agreements when appropriate to formalize interagency consultation procedures on planning projects and assure implementation of decisions.

LUI-49 Request LAFCo to initiate the expansion of the current Sphere of Influence to coincide with the tertiary planning area boundary.

6.2 CIRCULATION ELEMENT



Introduction

The *Circulation Element* is more than simply a transportation plan. It delineates the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element of the plan.

The *Circulation Element* has a strong relationship with the land use element. The provisions of the *Circulation Element* support the goals, objectives, policies and proposals of the *Land Use Element*, while the *Land Use Element* reflects the community's existing and planned circulation system. The *Circulation Element* also has direct relationships with the housing, open space, noise and safety elements.

The existing circulation system, traffic volumes, and levels of service are described in Section 13.0 of Volume III, *Environmental Setting*. The proposed circulation system for Paradise, and planned circulation system improvements, are contained in Chapter 2.0 and the *Circulation Diagram*. The proposed circulation system goals, objectives, policies, street standards and implementation measures are set forth in this chapter.

Circulation Map - an important part of the Paradise General Plan is the circulation map. Drawn at a scale of 1" = 2000'; it shows existing and proposed roadways and their classifications.

The regional context of the *Circulation Element* must also be considered. The existing and planned circulation systems for Butte County and the State of California, as well as regional transportation plans (Butte County *Regional Transportation Plan* and *Congestion Management* Program prepared by BCAG) have been referenced in Sections 13.0 and 16.0 of Volume III, *Environmental Setting*, and incorporated into the circulation system planning for Paradise. Other related issues include air pollution from motor vehicles, other modes of transportation (the Paradise Skypark Airport, public transportation systems and facilities, pedestrian and bicycle routes and facilities), and parking.

GROWTH MANAGEMENT AND THE CIRCULATION ELEMENT

In order to successfully manage population growth and preclude adverse impacts resulting from development, the Paradise General Plan sets traffic and intersection "thresholds" as policy. Encroachment into or beyond the "threshold" will not be permitted (CP-1)

Issues, goals, objectives, policies and implementation measures related to public facilities and services (including water, storm drainage, schools, and solid waste) are included in the *Land Use Element.*

The *Circulation Element* focuses on planning for safe and efficient traffic flows, providing adequate sized

roads and associated improvements, supporting regional transportation planning efforts, improving pedestrian and bicycle opportunities, maintaining air quality, and promoting alternative forms of transportation. Important objectives include increasing east-west roadway linkages, implementing road standards that are sensible for the community, establishing park and ride facilities, significantly reducing reliance on the automobile, and improving roads to Town standards.

The *Circulation Element* policies set the level of service standards at "D" or better, require new development to mitigate its share of circulation impacts, direct the Town to explore methods of recovering costs associated with the use of Skyway by Upper Ridge residents, improving community access to Feather River Hospital, and developing and implementing five, ten and fifteen-year critical needs capital improvement programs. It also calls for an exploration of alternatives to street widening if and when roadways reach the "D" level of service.

DEFINITION

Level of Service (LOS): Qualitatively describes the operating conditions encountered on roadways. LOS ranks roadway operations based on the amount of traffic and the quality of traffic operations on a scale of A through F. Level A represents free flow conditions and Level F represents jammed or "at capacity" conditions.

CG - CIRCULATION GOAL
CO - CIRCULATION OBJECTIVE
CP - CIRCULATION POLICY
CI - CIRCULATION IMPLEMENTATION MEASURE

Goals

CG-1 Support cooperative and coordinated transportation planning and development activities with federal, state, regional and local agencies in order to assure maximum coordination of effort in the Paradise region.

CG-2 Provide safe, efficient and effective traffic flow, both within Paradise and between Paradise and its environs.

CG-3 Enhance and improve pedestrian and bicycle safety and use by establishing additional linkages between areas of town.

CG-4 Provide adequate access, including access for emergency vehicles and evacuation, to all new parcels and to existing parcels when feasible.

CG-5 Maintain and improve local and regional air quality.

CG-6 Reduce reliance on the automobile by careful land use planning, and encourage the use of non-automobile travel modes through a balanced and integrated set of land use and transportation planning policies.

Objectives

CO-1 Increase the number of east-west roadway linkages.

CO-2 Within five years, establish an additional major east-west arterial road connection in the community.

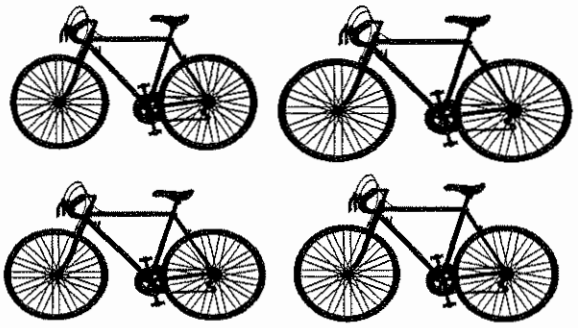
CO-3 Assure that traffic generated by high density residential land use development will not exceed roadway capacity and level of service standards.

CO-4 Encourage an ongoing program to promote upgrading of substandard roadways to minimum town standards over the life of the *General Plan*.

CO-5 Plan and complete public street improvements to accommodate projected traffic during the planning period.

CO-6 As necessary revise and update both the bicycle and pedestrian and the Paradise Memorial Trailway master plans.

The Paradise Memorial Trailway is one of the town's greatest amenities. It provides open space and recreation opportunities for walkers, bicyclists, runners, bird watchers, equestrians, etc. It is frequently referred to as "the lifeblood" of Paradise. The trailway is also discussed in the Open Space/Conservation/ Energy Element.



CO-7 Complete construction of the major components and planned recreation features for the Paradise Memorial Trailway within five to seven years.

CO-8 Discourage establishment and continued usage of nonsanctioned improvements encroaching within the Paradise Memorial Trailway right-of-way.

CO-9 Work with Butte County to establish a common improvement standard for private and public roads within the Paradise secondary planning area.

CO-10 Encourage efforts to significantly reduce reliance on the private automobile during the fifteen year planning period.

CO-11 Explore the feasibility of establishing a trail system in the secondary planning area.

CO-12 Encourage efforts to improve and enhance tranportation services that meet the recreational, medical and other needs of both senior citizens and children.

By reducing the use of automobiles in Paradise, local air quality and traffic levels will improve, and roadways will be safer.

Policies

CP-1 The town shall strive to maintain a level of service (LOS) "D" or better as the standard for new and existing roadways in the Paradise planning area. LOS "D" or better should be maintained on all local streets within the town limits, and LOS "C" or better should be maintained whenever feasible.

CP-2 Existing circulation problems should be eliminated on a prioritized basis.

CP-3 Potential impacts upon existing residential neighborhoods shall be considered when approving extension of streets.

CP-4 New land use development shall be required to mitigate its share of the circulation impacts it creates.

CP-5 Methods of recovering costs associated with use of roadways within the Town of Paradise by residents of the Upper Ridge should be explored, including imposition of development impact fees.

The citizens of Paradise are concerned about the traffic impacts to the town, resulting from increased build out in Paradise Pines and Magalia. Circulation policy CP-5, land use implementation measure LUI-42 and land use policies LUP-68, 69 and 70 are intended to address this issue.

CP-6 Creation of additional connections north to Paradise Pines; from west to east to Feather River Hospital; and from west to east in the southern portion of the town shall be studied.

CP-7 The feasibility of synchronization of new traffic signals to improve traffic flow shall be investigated.

CP-8 The town should continue to designate and regulate truck routes in order to protect residential areas from unwanted noise and traffic.

CP-9 Establishment of park-and-ride facilities at the upper and lower ends of Paradise shall be pursued in order to reduce trips passing through Paradise on Skyway.

CP-10 Safe paths for pedestrians, equestrians and bicyclists should be provided, particularly for school children and the elderly. A sidewalk and pathway development program should be instituted for selected locations and where feasible should link with the Paradise Memorial Trailway.

CP-11 The feasibility of a bicycle path and hiking system and a network of trails should be explored, with access to schools, creeks, commercial and residential areas, parks, along canyons, and possibly extending from Stirling City to Chico.

CP-12 The town shall encourage Butte County to require development applications within the secondary planning area [Sphere of Influence] to dedicate and improve streets to town standards and to provide other transportation improvements (e.g. bus stops, park-and-ride lots).

CP-13 Automobile dependency within Paradise should be reduced for local residents and visitors by implementing congestion management and trip reduction plan programs that decrease the number of vehicle miles travelled which, in turn, reduces air pollution and congestion and saves energy.

CP-14 As staff and funding become available, expanded transit services for seniors and the handicapped should be promoted in accordance with the results of future studies.

CP-15 Expand public transportation services within Paradise and between Paradise and major employment centers as feasible, based on service demand and financial constraints.

CP-16 The town shall attempt to undertake a program to improve parking in the Central Commercial area.

CP-17 Whenever the LOS "D" is reached on roadways within Paradise, the town shall explore all feasible alternatives for improving

traffic flow, rather than automatically implementing a road widening project.

CP-18 Any plan for extending a roadway in the Town of Paradise shall include early public/neighborhood workshops to discuss circulation and safety issues, potential solutions to problems, and viable alternatives.

CP-19 As staff and resources become available, the town should strive to increase the transit opportunities for children and senior citizens in the community.

CP-20 As time and resources permit during the duration of this fifteen-year General Plan, the Town Council shall direct the Town Engineer to study and possibly revise all circulation studies assigned to the Town of Paradise.

Implementation Measures

CI-1 Develop and enforce access standards for properties adjoining arterial roadways and other major traffic carrying facilities to improve street performance and capacity.

CI-2 Conduct detailed feasibility studies of east-west road connections designated on the land use and circulation diagram.

New east-west roadway connections, particularly in southern Paradise are important for emergency vehicle access, and to reduce traffic levels on existing neighborhood streets. These needs, however, must be balanced with the property owners desires to maintain the rural ambiance of their neighborhood.

CI-3 Establish a townwide development impact fee program, and review and update on an annual basis.

DEFINITION

Development impact fee - fees levied on the developer of a project by the town as compensation for unmitigated impacts the project will produce.

CI-4 Pursue a joint powers agreement with Butte County for the maintenance and improvement of the Skyway.

CI-5 Coordinate with the Butte County Association of Governments in the maintenance of a regional traffic model and region-wide congestion management program.

CI-6 Identify locations for sidewalks and pathways along existing major collector and arterial roadways as well as standards for requiring sidewalks adjacent to new developments.

CI-7 Require new development to provide a pedestrian pathway on at least one side of new public streets and new private roads (if feasible).

CI-8 Improve shoulders of some roads to make them safer for pedestrians and bicyclists, and relocate mailboxes where feasible from sidewalks.

CI-9 Require transportation facilities such as bus stops to be incorporated into major new developments.

CI-10 Utilize transportation funds for selected alternative transportation facilities or programs and parking facilities, if possible.

CI-11 Address and promote the establishment of common standards for private roads located within the secondary planning area during preparation of the Butte County *Circulation Element* update.

Street Standards

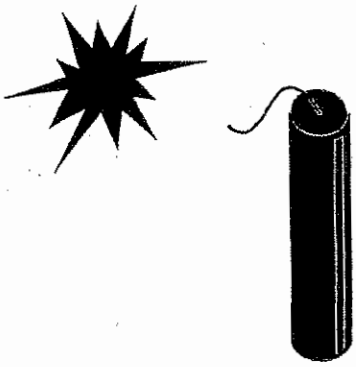
The *Circulation Element* hereby incorporates by reference the adopted street standards of the Town of Paradise.

6.3 HOUSING ELEMENT

THIS IS A STAND ALONE DOCUMENT

(Pages 6-22 thru 6-30)

6.4 NOISE ELEMENT



Introduction

The purpose of the *Noise Element* is to identify and appraise noise problems in the community. It must recognize the guidelines adopted by the Office of Noise Control in the state Department of Health Services. The *Noise Element* analyzes and quantifies current and projected noise levels for the following sources applicable to the Paradise planning area:

- Highways, arterials and major streets
- General aviation airport operations
- Local industrial plants
- Other ground stationary noise sources which contribute to the community noise environment.

Current noise levels are analyzed and quantified in Section 7.0 of Volume III, *Environmental Setting*. Projected noise levels are analyzed and quantified in this chapter, and projected noise contours are incorporated into the *Land Use Constraints Diagram* contained in Chapter 2.0 The noise contours have been used as a guide for establishing a pattern of land uses in the *Land Use Element* that minimizes the exposure of community residents to excessive noise. This land use pattern is reflected in the *Land Use Diagram*. The

Noise Element also serves as a guideline for compliance with the state's noise insulation standards.

The goals of the *Noise Element* include preserving the quiet rural environment of the town and protecting citizens from harmful and annoying noise. They also include the protection of the economic base of the town by preventing noise producing incompatible land uses from being established.

The listed objectives are geared towards assuring that both nontransportation and transportation-generated noise sources comply with specific noise standards through proper analysis and mitigation.

The policies require acoustical analyses to accompany proposed projects where noise is an identified issue, the development of mitigation measures to offset impacts exceeding the adopted standard, the designation of specific truck routes, and the development of procedures to monitor compliance with imposed noise mitigation measures.

THE NOISE ELEMENT AND GROWTH MANAGEMENT

By carefully managing and controlling the amount, type and location of growth and development, impacting noise sources will not be introduced into the community, and existing noise sources will not be forced to defend themselves against nuisance complaints.

NG - NOISE GOAL
NO - NOISE OBJECTIVE
NP - NOISE POLICY
NI - NOISE IMPLEMENTATION MEASURE

Goals

NG-1 Preserve the quiet, rural environment of the town and surrounding areas.

NG-2 Protect town residents from the harmful and annoying effects of exposure to excessive noise.

NG-3 Protect the economic base of the town by preventing incompatible land uses from encroaching upon existing or planned noise-producing uses.

Objectives

NO-1 New development of noise-sensitive uses shall not be allowed where the noise level due to nontransportation noise sources will exceed the noise level standards of Table 6.4-1 , as measured immediately within the property line of the new development, unless effective noise mitigation measures have been incorporated into the development design to achieve the standards specified in Table 6.4-1.

NO-2 Noise created by new proposed nontransportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 6.4-1 as measured immediately within the property line of lands designated for noise-sensitive uses. This objective does not apply to noise sources associated with agricultural operations on lands zoned for agricultural uses.

NO-3 New development of noise-sensitive land uses will not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels specified in Table 6.4-2.

NO-4 Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table 6.4-2 at outdoor activity areas or interior spaces of existing noise-sensitive land uses in either the incorporated or unincorporated areas.

Policies

NP-1 Where proposed nonresidential land uses are likely to produce noise levels exceeding the performance standards of Table 6.4-1 at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

NP-2 The feasibility of proposed projects with respect to existing and future transportation noise levels should be evaluated by comparison to Figure 6.4-1, *Land Use Compatibility Guidelines*.

NP-3 Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 6.4-2 or the performance standards of Table 6.4-1, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

NP-4 Where noise mitigation measures are required to achieve the standards of Tables 6.4-1 and 6.4-2, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers should be considered a supplemental means of achieving the noise standards after all practical design-related noise mitigation measures have been integrated into the project.

NP-5 Acoustical analyses should be prepared in accordance with the requirements of Table 6.4-3.

NP-6 New land uses within the projected 55 dB L_{dn} contour of Paradise Skypark Airport shall be compatible with aircraft-generated noise. Single-family residential and institutional land uses such as schools, hospitals, convalescent homes, and other inpatient health care facilities shall not be permitted.

NP-7 Multi-family residential land uses may be permitted within the 55 dB L_{dn} contour of the Airport subject to an acoustical analysis showing that all structures have been designed to limit interior noise level in any habitable room to 45 dB L_{dn} within the boundaries of the 55 dB L_{dn} contour as projected in the *Paradise Skypark Airport Land Use Plan*. Compliance with the acoustical analysis requirement shall be as specified in Table 6.4-3.

NP-8 The town should endeavor to preserve quiet residential areas by limiting traffic and noise-generating uses in such areas.

NP-9 Appropriate standards should be established and enforced which control obtrusive noise in residential areas, including vehicle noise.

Noise Policies regarding truck routes are included in the Circulation Element.

NP-10 The town shall assure that new development situated near existing residential care and retirement facilities is consistent with the goals, objectives and policies of the *Noise Element*.

Implementation Measures

NI-1 Develop and employ procedures to ensure that noise mitigation measures required pursuant to an acoustical analysis are implemented in the project review and building permit processes.

NI-2 Develop and employ procedures to monitor compliance with the standards of the *Noise Element* after completion of projects for which noise mitigation measures were required.

NI-3 Enforce the state Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code.

NI-4 Enforce the California Vehicle Code Sections relating to adequate vehicle mufflers and modified exhaust systems.

NI-5 Periodically review and update the *Noise Element* to ensure that noise exposure information and policies are consistent with changing conditions within the community and with noise control regulations or policies enacted after the adoption of this element.

NI-6 Improve and strengthen the language and enforcement of the existing noise ordinance.

NI-7 Adopt by reference the *Paradise Skypark Airport Land Use Plan.*

ACOUSTICAL (NOISE) TERMINOLOGY

***Ambient Noise Level** - the composition of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.*

***CNEL** - Community noise equivalent level. The average equivalent sound level during a twenty-four hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.*

***Decibel (dB)** - a unit for describing the amplitude of sound, equal to twenty times the logarithm the base ten of the ratio of the pressure of the sound measured to the reference pressure, which is twenty micropascals (twenty micronewtons per square meter).*

***L_{dn}** - Day-night average sound level. The average equivalent sound level during a twenty-four hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7;00 a.m.*

***L_{eq}** - Equivalent sound level. The sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over one, eight and twenty-four hour sample periods.*

***L_{max}** - The maximum sound level recorded during a noise event.*

***L_n** - The sound level exceeded "n" percent of the time during a sample interval. L_{10} equals the level exceeded ten percent of the time (L_{90}, L_{50}, etc.)*

***NOTE:** CNEL and L_{dn} represent daily levels of noise exposure averaged on an annual basis, while L_{eq} represents the average noise exposure for a shorter time period, typically one hour.*

TABLE 6.4-1

NOISE LEVEL PERFORMANCE STANDARDS FOR NEW PROJECTS AFFECTED BY OR INCLUDING NONTRANSPORTATION SOURCES

Noise Level Descriptor	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly L_{eq}, dB	50	45
Maximum level, dB	70	65

Each of the noise levels specified above shall be lowered by five dBA for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

TABLE 6.4-2
MAXIMUM ALLOWABLE NOISE EXPOSURE
TRANSPORTATION NOISE SOURCES

Land Use	Outdoor Activity Areas[1] L_{dn}/CNEL, dB	Interior Spaces L_{dn}/CNEL, dB	Interior Spaces L_{eq}, dB[2]
Residential	60[3]	45	--
Transient Lodging	60[3]	45	--
Hospitals, Nursing Homes	60[3]	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60[3]	--	40
Office Buildings	60[3]	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

[1] Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

[2] As determined for a typical worst-case hour during periods of use.

[3] Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

TABLE 6.4-3
REQUIREMENTS FOR AN ACOUSTICAL ANALYSIS

An acoustical analysis prepared pursuant to the *Noise Element* shall:

A. Be the responsibility of the applicant.

B. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.

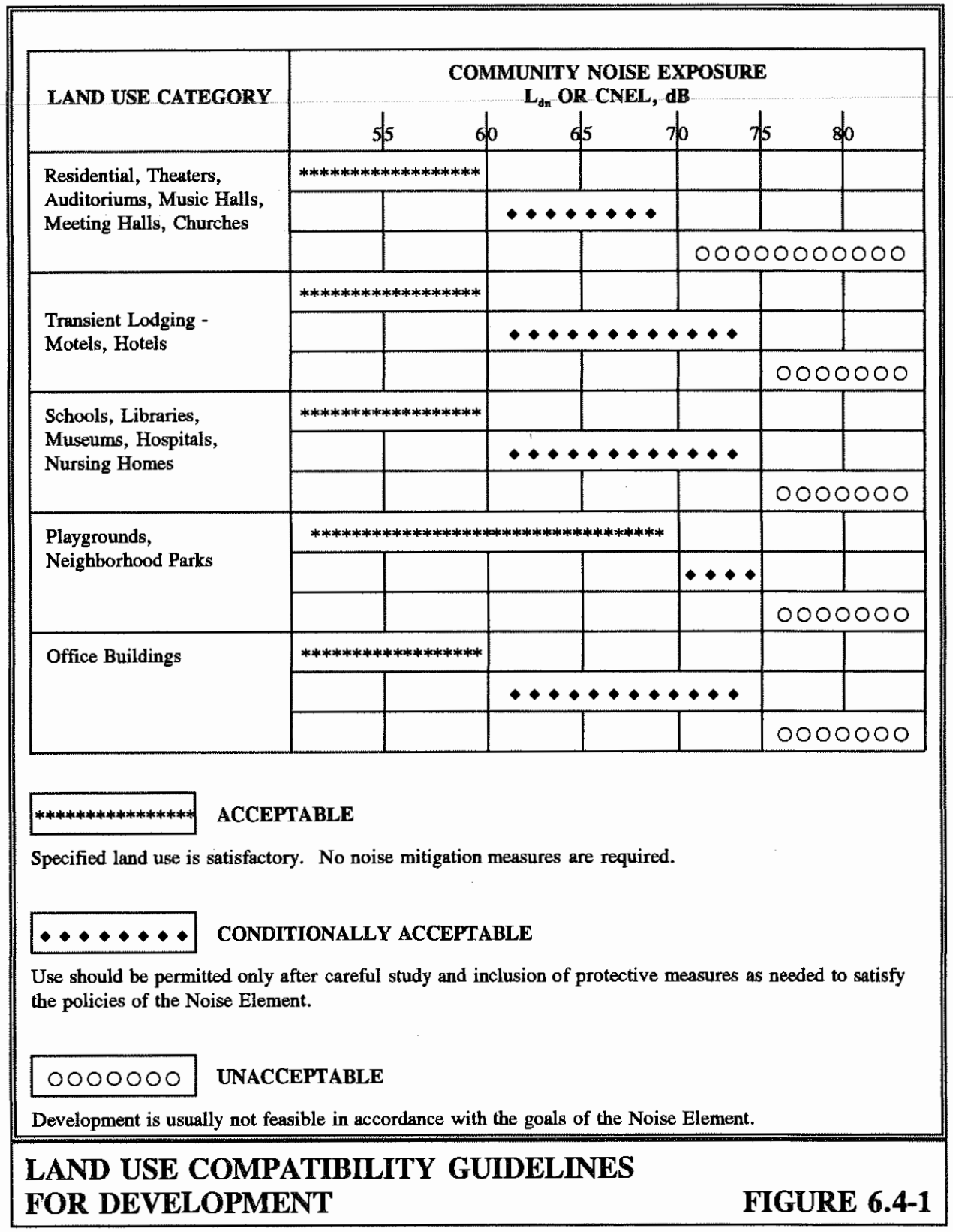
C. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.

D. Estimate existing and projected (20 years) noise levels in terms of L_{dn} or CNEL and/or the standards of Table I-1, and compare those levels to the adopted policies of the *Noise Element*.

E. 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 in terms of possible sleep disturbance.

F. Estimate noise exposure after the prescribed mitigation measures have been implemented.

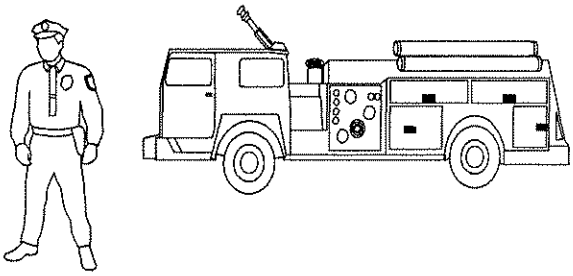
G. Describe a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures.



LAND USE COMPATIBILITY GUIDELINES FOR DEVELOPMENT

FIGURE 6.4-1

6.5 SAFETY ELEMENT



Introduction

The purpose of the *Safety Element* is to reduce the risk of death, injuries, property damage, and other economic and social consequences associated with natural and societal hazards. The *Safety Element* is designed to protect the community from unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence and other known geologic hazards; flooding, and wildland and urban fires. It must include mapping of known seismic and geologic hazards. Section 3.0 of Volume III, *Environmental Setting*, contains the required maps and a description of seismic and geologic conditions, including slope, landslides, subsidence, liquefaction, volcanics, erosion, expansive soils and dam inundation hazards. Slope instability and flood hazards are incorporated into the *Land Use Constraints Diagram* included in Chapter 2.0 of this volume.

Other issues which must be addressed in the *Safety Element* include evacuation routes, peakload water supply requirements, and minimum road widths and clearances around structures, as these items relate to identified fire and geologic hazards. With regard to fire hazards, state responsibility areas and a map of fire hazard severity zones are included in Section 14.2 of Volume III, *Environmental Setting*. Emergency evacuation routes are discussed in Section 10.0 of that volume, and water supply is discussed in Section 14.2. The town's *Multihazard Disaster Plan* is another source of information on these topics.

The Paradise Multihazard Disaster Plan was adopted by the Paradise Town Council on January 23, 1992, and is available for public review at Town Hall.

In addition to these mandatory issues, this *Safety Element* includes the topics of law enforcement, high wildland fire hazards and hazardous waste management. Law enforcement is discussed in Section 14.1 of Volume III (high wildland fire hazards are discussed in this section) and hazardous waste and the Butte County *Hazardous Waste Management Plan* are discussed in Sections 10.0 and 16.5 respectively.

The primary goals of the element are to protect the residents of Paradise from these hazards, as well as assuring that both law enforcement and fire protection are enhanced to meet the demands of new and existing land use development.

The listed objectives include maintaining specific fire protection and law enforcement levels of service, implementing the *Paradise Multihazard Disaster Plan*, and designating an emergency aircraft landing strip within three years.

Safety Element policies call for ensuring adequate fire flows, requiring development to be located away from drainageways and flood zones, enforcing soil erosion requirements, and developing new fire stations so that all areas of town are within a five minute response time. The policies listed for hazardous waste

management are consistent with the county *Hazardous Waste Management Plan*, as well as the Town of Paradise adopted Household Hazardous Waste Element (HHWE).

Implementation measures include development impact fees for funding new fire and police protection facilities, educating citizens about evacuation routes and the findings of the *Multihazard Disaster Plan*, and requiring new development to comply with the Uniform Building and Fire Codes.

The goals, objectives, policies, and implementation measures of the *Safety Element* are set forth below.

GROWTH MANAGEMENT AND THE SAFETY ELEMENT

Safety Element policies will not permit development that causes Police and Fire Department response times to fall below established service levels:

Police: ***not more than Five Minutes***
Fire: ***within Five Minutes for 90% of all incidents [Unmitigated]***

SG - SAFETY GOAL
SO - SAFETY OBJECTIVE
SP - SAFETY POLICY
SI - SAFETY IMPLEMENTATION MEASURE

Goals

SG-1 Assure that law enforcement and fire protection services are enhanced sufficiently to meet the demands of new and existing land use development.

SG-2 Provide adequate access, including emergency vehicle access and evacuation, to all new parcels and existing parcels where feasible.

SG-3 Strive to protect the Paradise community from injury, loss of life and property damage resulting from catastrophes and hazardous conditions.

SG-4 Strive to reduce the impact of pollutants on the well being of Paradise citizens.

SG-5 Assure that mining is performed safely and will not have a detrimental effect on the quality of life in Paradise.

SG-6 Improve the communication system(s) used during townwide emergencies, such as wildland fires, earthquakes or volcanic occurrences.

Objectives

SO-1 Endeavor to maintain a law enforcement response time for emergency police calls of no more than five minutes.

SO-2 Maintain an overall fire insurance (ISO) rating of three or better, and an emergency fire response within five minutes for 90% of all emergency incidents within the Town Limits.

SO-3 Maintain the *Paradise Multihazard Disaster Plan* and conduct practice exercises throughout the life of the *General Plan*.

SO-4 Designate an emergency aircraft landing area within three years.

Policies

SP-1 New and unmitigated land use development shall not cause the police and fire protection services emergency repsonse times to fall below the service levels established by this plan.

SP-2 Through the development review process, adequate roads shall be required to be constructed and/or improved for emergency vehicle access, particularly in high wildland fire hazard areas.

SP-3 Future development should be designed and constructed to take maximum advantage of known fire and crime prevention siting, orientation and building techniques.

SP-4 The town shall work with the Del Oro Water Company, the Paradise Irrigation District and the Lime Saddle Community Services District to assure the adequacy of fire flow and peakload water supplies.

SP-5 The town should promote fire prevention by continuing to require brush removal and fuel load clearing as ongoing conditions of development approval and property maintenance.

SP-6 The town should maintain adoption of a current Uniform Fire Code amended to reflect the unique needs of Paradise, and require compliance with its provisions.

SP-7 New fire stations(s) shall be located so that all areas within Town Limits are within a five-minute emergency response time for 90% of all emergency incidents. New fire station locations should be within a one-half mile radius of the symbols indicated on the *Land Use Diagram.*

SP-8 The town shall encourage Butte County to enforce standards conforming to the fire safety standards established by the state Board of Forestry for state responsibility areas within the Paradise secondary and tertiary planning areas, including:

- Road standards for fire equipment access
- Standards for signs identifying streets, roads and buildings
- Minimum private water supply reserves for emergency fire use
- Fuel breaks and greenbelts
- Land use policies and safety standards that take into account the recurrent nature of wildland fires
- Design standards establishing minimum road widths and clearances around structures
- Emergency preparedness protocol and procedures
- Maximum length of cul-de-sac roadways

SP-9 The town should assure that increased runoff resulting from additional coverage of surface area on developing properties does not adversely affect surrounding properties, roads or stream courses.

SP-10 The town shall attempt to assure that no new structures are located within potential floodways.

SP-11 Development should not be permitted if identified or potential flooding and drainage impacts cannot be overcome by sound engineering practices.

SP-12 All new development should comply with the procedures and regulations of the *Master Storm Drain Study and Facilities Plan.*

SP-13 The town shall attempt to require all new development to comply with the airport height restriction policy, airport safety area(s) policies and land use guidelines for safety compatibility of the *Paradise Skypark Airport Land Use Plan.*

SP-14 Detrimental and toxic discharge into natural waterways shall not be permitted.

SP-15 Development projects should be designed to minimize soil erosion, and shall be required to comply with all Town of Paradise-adopted soil erosion standards maintained by the Paradise Community Development Department.

SP-16 The town should require all development proposals on sites which contain slopes exceeding twenty percent, and/or which border or include significant and sensitive stream courses or natural drainageways, to include programs for replanting and slope stabilization, erosion control plans, and to incorporate designs which minimize grading and cut-and-fill.

SP-17 Building on slopes in excess of thirty percent should not be permitted.

Implementation Measures

SI-1 Establish standards for adequate fire flows for new land use development and expansion of existing development.

SI-2 Review existing standards for roadway widths, emergency access and road and structural identification and amend as necessary.

SI-3 Establish law enforcement and fire protection impact fees for new land use development sufficient to assure that established levels of protection are maintained.

SI-4 If feasible, establish law enforcement and fire protection service fees for existing land uses sufficient to assure that established levels of protection are maintained.

SI-5 Educate residents regarding the dangers of seismic activity and wildland fires, and the Town of Paradise *Multihazard Disaster Plan* and adopt the Town of Paradise *Multihazard Disaster Plan* by reference in the *General Plan*.

SI-6 Enforce and comply with the provisions of the Uniform Building Code and the Uniform Fire Code.

SI-7 Require adequate dry brush clearance around structures.

SI-8 Amend the town ordinances as necessary to require erosion control plans, site design which minimizes grading and cut-and-fill, and programs for replanting and slope stabilization.

SI-9 Constantly re-evaluate and continue to implement the *Master Storm Drain Study and Facilities Plan.*

SI-10 Adopt by reference the *Paradise Skypark Airport Land Use Plan.*

SI-11 Submit all zoning, subdivision and general plan amendment applications within the adopted airport area of influence to the Butte County Airport Land Use Commission for review and approval.

Hazardous Waste Management

The County of Butte has prepared and adopted a *Hazardous Waste Management Plan* in accordance with state law. The plan contains information on sites that may be potentially suitable for various hazardous waste facilities, including transfer and storage facilities, treatment and recovery facilities, and solidification for storage or residuals repositories. Using a "constraints and opportunities mapping" process, the county has

selected candidate areas that may be appropriate for siting the various facilities. Maps contained in the plan show portions of the Town of Paradise, as well as the secondary and tertiary planning areas, as "potentially suitable" or "potentially usable with adequate mitigation measures."

In accordance with the requirements of state law, the Town of Paradise adopted a Household Hazardous Waste Element (HHWE) during 1992; and it is hereby incorporated by reference into this *Paradise General Plan*.

State law provides that the Town of Paradise, and all Butte County cities, must incorporate the approved *Hazardous Waste Management Plan* into the town's *General Plan*. The entire text of the *Hazardous Waste Management Plan* is incorporated by reference into the *Paradise General Plan*, including goals, objectives, policies, siting criteria and implementation measures. The goals, objectives, policies and implementation measures listed below have been limited to those that have direct pertinence to the Town of Paradise.

Goals

SG-7 Provide for the safe disposal and handling of toxic and hazardous waste.

SG-8 Direct and promote hazardous waste management practices and technologies that will, in order of priority:

- reduce the use of hazardous substances and the generation of hazardous wastes at their source;
- recover and recycle the remaining waste for reuse to the extent feasible;
- treat those wastes not amenable to source reduction or recycling so that the environment and community health are not harmed by their ultimate release or disposal;
- ensure the safe transportation and disposal of treated hazardous waste residuals in repositories made secure from liquids that might create a toxic leachate and contaminate groundwater.

SG-9 Reduce the need for additional hazardous waste disposal sites.

SG-10 Recognize the responsibility of Butte County and the Town of Paradise for permitting on-site facilities and siting offsite facilities capable of meeting the need of generators in the county.

SG-11 Encourage active public involvement in planning for the management of hazardous wastes.

SG-12 Promote regional cooperation between Butte County, its cities and adjacent counties in the siting of hazardous waste facilities and management of hazardous wastes.

Objectives

SO-5 Minimize the generation of hazardous wastes by seeking waste reduction alternatives which are safe, economically viable, and which represent the best technology available to the generator.

SO-6 Provide assistance to hazardous waste generators to enable adoption of waste reduction strategies.

SO-7 Decrease the need for siting additional offsite facilities in the county and ensure that only those wastes that do not pose a threat to public health and the environment are land disposed.

SO-8 Reduce illegal disposal practices and educate small quantity generators (SQGs) on waste reduction, recycling and treatment options and on how to comply with hazardous waste regulations.

Policies

SP-18 Butte County and its cities should provide for the siting of at least one hazardous waste transfer station in Butte County that will be available to receive hazardous wastes from small quantity generators and households. Facilities shall be designed and sized primarily to meet the needs of hazardous waste generators located in Butte County or to meet the county's broader commitments under an inter-county agreement.

SP-19 The county and its cities shall act to provide for the safe, effective management of hazardous wastes generated within the county. New offsite hazardous waste management facilities shall be primarily limited to a scale necessary to meet the hazardous waste management needs of this county; larger facilities may be permitted in accordance with effective inter-jurisdictional agreements reached between Butte County and other jurisdictions or upon determination of the local governing body that the project meets local planning criteria and serves public needs.

SP-20 The county and its cities encourage multi-county and regional efforts to plan and implement alternatives to land disposal of untreated hazardous wastes and to limit the risks posed by the transportation of hazardous wastes around the state. Agreements for new facilities to provide the offsite capacity needed for hazardous waste treatment and residuals disposal should be reached among jurisdictions according to their fair share of the hazardous waste stream, each jurisdiction's environmental suitability for different types of facilities, their economic interests, and the economic viability of different types and sizes of facilities.

SP-21 The county and its cities shall ensure that onsite and offsite hazardous waste treatment facilities are subject to complete local review.

SP-22 Butte County and its cities should designate a system of preferred transportation routes for hazardous wastes within the county. Selection of preferred routes should be determined on the criteria of minimal risk of accident, and minimal exposure of the county's population to the consequences of any accidents. The designation of preferred routes need not imply any restrictions on other routes, nor any conflict with the California Highway Patrol's role in establishing transportation routes for hazardous materials.

SP-23 This plan recommends the siting of community collection and transfer facilities in the industrial area of Paradise (see Figure 8-11, *Hazardous Waste Management Plan*). The community collection and transfer station would serve as a collection station for household and small quantity generator waste in Butte County.

SP-24 The county, and each city, shall require that all local land use decisions on siting specified hazardous waste management facilities are consistent with the goals and policies and the siting criteria contained in the *Hazardous Waste Management Plan.*

Implementation Measures

SI-12 Review of development proposals shall take into consideration the findings, recommendations and policies of the town *Hazardous Waste Management Plan* and the town Household Hazardous Waste Element.

SI-13 Work with Butte County to seek agreements with other counties in the region to site regionally scaled facilities designed to meet the needs of hazardous waste generators from several counties.

SI-14 Work with Butte County to develop a program for ongoing hazardous waste data collection to increase accuracy and reliability of data estimates during subsequent plan updates.

SI-15 Carry out implementation tasks required by AB 2948, including the enactment of ordinances to require that all applicable zoning, subdivision, conditional use permit and variance decisions be consistent with the Hazardous Waste Management Plan's siting criteria, as incorporated in the *Safety Element*.

SI-16 Work with Butte County to develop a countywide hazardous waste reduction program which will identify economically feasible waste reduction practices and incentives available to the following key target groups: large and small quantity industrial and commercial hazardous waste generators, agriculture and individual households.

SI-17 Work with Butte County to establish a program to manage waste oil produced by households and small quantity generators in Butte County.

SI-18 Work with Butte County to develop small quantity generator and residential hazardous waste educational programs. Such programs should provide information as to types of hazardous waste products, State and local requirements for disposal of hazardous wastes, available means for disposal of small quantities of hazardous wastes, and the risks associated with illegal disposal of hazardous wastes in septic systems, public wastewater treatment facilities and the municipal waste stream, and disposal to land.

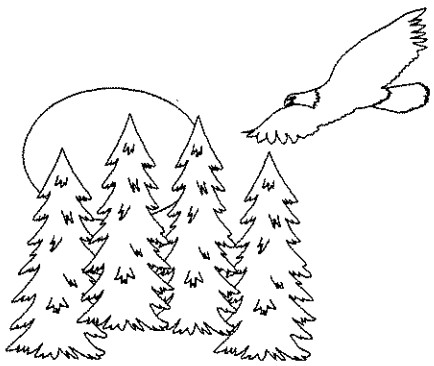
SI-19 Work with Butte County to develop a public information program to improve the level of general understanding about hazardous waste management and siting issues; to educate Butte County residents as to particular hazardous waste issues of concern, such as the risk to groundwater and drinking water supplies; to involve the public in hazardous waste management; and to build a vehicle for incorporating public concerns into subsequent *Safety Element* updates.

SI-20 Work with Butte County to prepare countywide air quality control standards pertaining to siting of hazardous waste treatment facilities as necessary to protect the health and welfare of the residents of Butte County.

SI-21 Establish a collection program for household hazardous waste.

SI-22 Initiate public education programs for household hazardous waste.

6.6 OPEN SPACE/ CONSERVATION/ENERGY ELEMENT



Introduction

The *Open Space, Conservation and Energy Elements of the Paradise General Plan* have been combined in this document because of the many topics and issues they have in common. The *Open Space Element* addresses the preservation of open space land for the following purposes:

- Open space for the preservation of natural resources, including habitat for fish, wildlife and plant life and rivers, streams and watersheds.
- Open space for the managed production of resources, including agricultural lands, forest lands, and areas containing major mineral deposits.
- Open space for outdoor recreation, including areas of outstanding scenic, historic and cultural value; areas suited for park and recreation purposes; and areas which link major recreation and open space areas.
- Open space for public health and safety, including earthquake fault zones, unstable soil areas, flood plains, watersheds, high fire hazard areas, fuel break and fire access, and areas required for the protection of water quality and reservoirs.
- Demands for trail-oriented recreational use.

The *Open Space/Conservation Element* is divided into three sections: 1) a gateways and scenic highway corridors section; 2) a section concerning land acquisition and local park enhancement; and 3) an open space/natural resource conservation section. The *Energy Element* is addressed in a separate section entitled, "Energy Conservation."

The purpose of the *Open Space Element* is to discourage the premature and unnecessary conversion of open space lands to urban uses, and to recognize that open space land is a limited and valuable resource that must be conserved wherever possible. The purpose of the *Conservation Element* is the conservation, development, and utilization of specified natural resources, including water and its hydraulic force, forests, soils, rivers and other waters, fisheries, wildlife, and other natural resources. The purpose of the *Energy Element* is to promote and encourage local and regional energy conservation. The goals, objectives, policies and implementation measures of the *Open Space/Conservation/ Energy Element* are set forth in this chapter and are reflected in the *Land Use Diagram.*

OPEN SPACE AND GROWTH MANAGEMENT

Open space policies assist in influencing General Plan land use designations and future zoning classifications. Severely constrained lands are to be designated and zoned for open space, agriculture or low density rural residential use.

OCEG - OPEN SPACE/CONSERVATION/ ENERGY GOAL
OCEO - OPEN SPACE/CONSERVATION/ ENERGY OBJECTIVE
OCEP - OPEN SPACE/CONSERVATION/ ENERGY POLICY
OCEI - OPEN SPACE/CONSERVATION/ ENERGY IMPLEMENTATION MEASURE

Goals

OCEG-1 Improve the aesthetic appearance of the open areas within the primary and secondary study areas, particularly the entrances to the town.

OCEG-2 Create an open space system in the Paradise region adequate to serve the needs of the community.

OCEG-3 Preserve open space as necessary to protect the public health, safety and welfare, and to maintain the rural character of the community.

OCEG-4 Increase the amount of open space, recreational opportunities and services in the community over the next fifteen years.

Gateways and Scenic Highway Corridors

The form and character of the Town of Paradise is primarily distinguished by what one views from its streets. A sense of entry occurs at "gateways" along Paradise's main roads. Each gateway contributes importantly to the town's identity.

The intent of formally establishing and regulating development within the gateways is to preserve and enhance the visual setting along the entryways to the town. It is hoped that by establishing standards for land use and development in the gateway areas, the unique environmental setting will be preserved, and will contribute to the overall evolution of the identity and sense of place of the town. Gateway areas are identified and depicted on the *Land Use Diagram* as follows:

- An area approximately 2,000 feet in circumference along the lower Skyway in the vicinity of the southern Sphere of Influence boundary.
- An area approximately 2,000 feet in circumference along lower Clark Road (Highway 191) in the vicinity of the southern Sphere of Influence boundary.
- An area approximately 2,000 feet in circumference along lower Pentz Road in the vicinity of the southern Sphere of Influence boundary.
- An area approximately 2,000 feet in circumference along lower Neal Road in the vicinity of the southern sphere of influence boundary.

The intent of establishing scenic highway corridors is to preserve the important scenic and visual resources of those areas along major streets within the town and the Sphere of Influence. It is hoped that by designating scenic corridors and implementing land use and development standards for these areas, the visual experience of driving these stretches of road will be preserved and enhanced. Scenic corridors link and

branch off of the gateways, extending into, and in the case of Pentz Road, through the town. Scenic highway corridors are identified and depicted on the *Land Use Diagram* as follows:

- A corridor extending 150 feet from the centerline of the public road right-of-way, encompassing the Skyway between the current western Sphere of Influence line and Neal Road.
- A corridor extending 100 feet from the centerline of the public road right-of-way, encompassing Pentz Road between the current southern Sphere of Influence line and its intersection with the Skyway at the northern town limits.
- A corridor extending 150 feet from the centerline of the public road right-of-way, encompassing Clark Road between the current southern Sphere of Influence line to the southern town limits.
- A corridor extending 100 feet from the borders of the public road right-of-way, along Honey Run Road between the current western Sphere of Influence line and the southwestern town limits.
- A corridor extending sixty feet from the centerline of the public road right-of-way embodying Neal Road between the current southern sphere of influence line to its intersection with the Skyway.

Gateways and scenic highway corridors contribute to the local quality of life for residents, and to the town's tourism potential.

Objectives

OCEO-1 Protect and enhance the gateway and scenic corridors that escort people into Paradise.

OCEO-2 Promote establishing protection and enhancement of gateway areas and designated scenic corridors by both Butte County and the State of California.

Policies

OCEP-1 Pentz Road and State Highway 191 between the south town limits and the southern boundary of the secondary planning area shall be designated as scenic highways.

OCEP-2 The Skyway between the southwest town limits and the westerly boundary of the secondary planning area shall be designated a scenic highway.

OCEP-3 In making land use decisions concerning development within identified gateway and scenic highway corridors, the town shall recognize that the unique natural features such as the trees, dramatic canyons and varied topography are an integral part of Paradise's community character.

OCEP-4 New billboards exceeding 100 square feet in size shall not be permitted within town limits. No new billboards shall be permitted within designated gateways or scenic highway corridors.

OCEP-5 The town shall strive to locate new buildings and other structures, including utility lines, that would otherwise block vistas or degrade the natural landscape, outside of scenic view corridors.

OCEP-6 Natural vegetation should be maintained within gateway and scenic highway corridor areas.

Implementation Measures

OCEI-1 Prepare and adopt land use regulations and development standards intended to maintain the integrity of the scenic highway designation for Pentz Road, lower Skyway and state Highway 191.

OCEI-2 Locate transmission and utility lines in designated gateways or scenic highway corridors where they may be concealed by vegetation or topographical features.

OCEI-3 Amend the zoning ordinance to prohibit new billboards exceeding 100 square feet in size within the town limits, and to provide that signs within designated gateways or scenic highway corridors shall not exceed nine (9) square feet maximum for residential uses and one-hundred (100) square feet maximum for commercial or community service uses. Signs will not extend above the roof line of any onsite building, nor shall they be placed on the roof of any building. Future commercial and/or community service signs to be located within designated gateways or scenic highway corridors shall be subject to the Town of Paradise Design Guidelines.

Land Acquisition and Local Park Enhancement

A primary goal of the *Open Space Element* is to add to the existing stock of open space and recreational land within the primary and secondary planning areas over the next fifteen years. The success in reaching this goal will depend upon a number of factors, which include, but are not limited to the following:

- A strong and committed relationship between the County of Butte, the Paradise Planning Commission, Town Council, and Paradise Recreation and Park District. The Paradise Unified School District and Paradise Irrigation District may also play key roles.
- The will of the citizenry, and their commitment toward helping to support and create more open space and recreational lands in and around Paradise.
- The plight of the current state financial situation, its impact upon the town and local special districts, and the resulting availability of grant monies and other funding opportunities.
- The creativity and commitment of land owners and developers in designing projects that will provide needed open space, and/or will seriously contribute to the goals of increasing open space and recreational lands in and around Paradise.
- The creativity and commitment of decision makers, staff, and the citizenry in exploring and implementing land acquisition strategies and techniques well before the town approaches build out levels, and viable opportunities are lost.

Criteria for designating areas as potential future parkland/open space on the General Plan land use map:

- ***Geographic continuity and a balance with existing parkland facilities.***
- ***Areas with "usable" lands: minimal constraints.***
- ***Areas with vacant and available land.***

The following objectives, policies and implementation measures are intended to guide the community towards increasing the amount of open space in and around Paradise to adequately serve the needs of the citizenry.

Objectives

OCEO-3 Increase the standard ratio of park acreage to population to five acres per 1,000 population.

OCEO-4 Attempt to establish additional parks/open space areas throughout the community in accordance with the park area-to-population ratio during the next fifteen years.

OCEO-5 Increase open space, such as neighborhood and community parks within the more densely developed portions of town.

Policies

OCEP-7 The town shall consider open space as an important and viable infill tool, particularly in the more densely developed portions of the community.

OCEP-8 Whenever feasible, trailways should be established in conjunction with new development, to serve as buffers and corridors between development, linking existing trailways, parks and school sites.

OCEP-9 The town shall explore a cooperative venture with Butte County to enhance public access to Lookout Point along the Skyway.

OCEP-10 A linear park, which is natural and aesthetically pleasing in design, should be established encompassing the Paradise Memorial Trailway.

OCEP-11 The town, with the assistance of the Paradise Recreation and Park District, shall designate general locations for new parks and recreational facilities on the *Land Use Diagram* as sites are identified or become available.

OCEP-12 The town, in cooperation with the Paradise Recreation and Park District, shall endeavor to acquire and/or establish additional open space, particularly in the eastern portion of town.

Implementation Measures

OCEI-4 Within two years, if staff and funding resources become available, reach a cooperative agreement with the Paradise Recreation and Park District to prepare an open space and recreational facilities specific plan for Paradise, consistent with the goals, objectives and policies of the town *General Plan*. The preparation of the specific plan shall include citizen representation, and shall focus on detailed action strategies for community outreach, land inventories and acquisition, funding mechanisms, and community needs.

OCEI-5 Work with the Paradise Park and Recreation District to facilitate development of park and recreational facilities consistent with the *General Plan* and assist with identification and acquisition of funding sources.

OCEI-6 Request LAFCo to initiate the expansion of the current Sphere of Influence for Paradise to coincide with the tertiary planning area, including Lookout Point and the area between Neal Road and Butte College.

OCEI-7 Contact Butte College to determine if future public open space east of Neal Road would have value as an "outdoor

campus" in conjunction with other college activities.

Open Space/Natural Resource Conservation

Goals

OCEG-5 Preserve the natural beauty and rural charm of Paradise.

OCEG-6 Preserve and protect naturally sensitive areas, and significant natural features in Paradise such as trees, views, stream courses, wildlife habitat and clean air.

OCEG-7 Actively promote water conservation and recycling efforts.

OCEG-8 Encourage the retention of remaining agricultural lands and related uses whenever feasible.

OCEG-9 Identify, record, preserve and protect historical and archaeological resources.

Objectives

OCEO-6 Attempt to develop a program to implement reforestation practices in appropriate areas within two to three years, including the Central Commercial area.

OCEO-7 Maintain or improve the current level of water quality through the next fifteen years.

OCEO-8 Comply with the standards, provisions and objectives of the Butte County *Air Quality Attainment Plan.*

OCEO-9 Explore options for creating incentives for preservation of agricultural lands within two years.

OCEO-10 Develop objectives in coordination with the Paradise Irrigation District and the Lime Saddle Community Services District to reduce water use within the town limits.

OCEO-11 Reduce municipal waste disposed of in landfills by twenty-five percent by 1995 and fifty percent by 2000.

OCEO-12 Develop criteria and standards for natural resource extraction in the secondary and tertiary planning areas.

Policies

OCEP-13 Existing large trees of historic and/or cultural significance should be protected to the best of the town's ability. Trees so identified should only be removed as a last resort.

OCEP-14 Reforestation and maintenance of trees shall be encouraged along road corridors.

OCEP-15 Existing, significantly important natural habitat areas having high value for birds and other wildlife should be preserved for future generations through careful land use planning and public participation.

OCEP-16 Area fisheries shall be protected, and the cooperation of responsible agencies shall be sought to assure minimum stream flow and restore fisheries.

OCEP-17 Where feasible, limit new development within the secondary planning area to

designated development zones as established by the Department of Fish and Game to protect deer herd migration routes.

OCEP-18 Within the context that growth and development will occur, every effort should be made to preserve and enhance the views of surrounding lands, ridges and canyons.

OCEP-19 View sheds and natural areas along Skyway should be protected.

OCEP-20 Views of development from other properties should be considered when making decisions on compatibility of development.

OCEP-21 Ridge line development shall be carefully reviewed to assure a minimization of proposed structures that intrude into the view-line of nearby roadways and properties.

OCEP-22 The undergrounding of existing utility lines shall be encouraged.

OCEP-23 Surface and groundwater quality shall be improved and preserved and the Paradise area watershed shall be protected.

The fundamental domestic water supply issues in the Town of Paradise concern the quality of potable water available for domestic use, the delivery and distribution of quality domestic wataer, and the careful management and protection of the watershed that supplies domestic water.

OCEP-24 Stream courses identified and designated as significantly important shall be carefully protected from the impacts of land use development, both within and outside the town limits.

OCEP-25 The town shall strive to influence activities within its watershed and outside the town limits in order to protect and preserve the town's water resources.

OCEP-26 Natural riparian vegetation along creeks should be protected.

OCEP-27 Protective land use designations and zoning classifications should be established for sensitive lands such as areas of resource production, steep canyons and stream corridors, and areas of significant natural resource value.

OCEP-28 Grading in subdivisions shall be controlled to minimize erosion and alteration of natural topography.

OCEP-29 The continued operation of the golf course should be encouraged, possibly through public acquisition.

OCEP-30 The town shall consider the preparation and adoption of a grey water usage ordinance in compliance with state law.

OCEP-31 Retention of agricultural lands within the town limits should be encouraged while recognizing that changing circumstances may necessitate a change in use for some lands.

OCEP-32 Significantly important agricultural and timber production lands, particularly those located in the secondary and tertiary planning areas, shall be identified

and protected from incompatible development.

OCEP-33 Timber production areas within the planning area shall be identified on the *Land Use Diagram*.

OCEP-34 The town shall support and develop programs to recycle useful materials, including composting as an alternative to vegetation burning.

OCEP-35 Active community involvement in solid waste management and recycling should be encouraged.

OCEP-36 The *Land Use Constraints Diagram* identifies areas of potential archaeological sensitivity. Proposed development or public works projects within this area shall be required to undertake an archaeological survey prior to project approval. Proposed projects outside this area, in locations that have not been significantly disturbed, shall be referred to the California Archaeological Inventory, Northeast Information Center, California State University, Chico for review and comment, and shall be required to undertake an archaeological survey prior to project approval upon recommendation by the center.

Implementation Measures

OCEI-8 Identify and map significantly important permanent and intermittent stream courses and drainage areas in the planning area on the *Land Use Constraints Diagram* and develop standards for their protection, including appropriate setbacks.

OCEI-9 Establish open space, resource conservation, or low density rural residential zoning on sensitive (environmentally constrained) lands, such as areas of resource production, stream corridors and slopes greater than thirty percent.

OCEI-10 Prevent unauthorized discharges into creeks and enforce regulations regarding such discharges.

OCEI-11 Seek grants to help fund a reforestation program.

OCEI-12 Amend the tree ordinance to assure that its administration and enforcement will help sustain and enhance the present forested setting of Paradise, and to assure that trees are only removed as a last resort. Establish a mitigation program for tree removal.

OCEI-13 Encourage Arbor Day and related activities throughout the Paradise Planning Area.

OCEI-14 Require significantly important natural areas with high wildlife value to be set aside and preserved during land use development.

OCEI-15 Establish priorities for undergrounding existing utility lines.

OCEI-16 Acquire conservation easements on important agricultural lands as funds are available to do so.

OCEI-17 If legally feasible, establish a Williamson Act program and execute Williamson Act contracts with interested property owners.

OCEI-18 Require compliance of all development projects with Appendix K (archaeological impacts) of the *Guidelines for Implementation of the California Environmental Quality Act.*

OCEI-19 When an archaeological survey is required by the town or recommended by the California Archaeological Inventory, Northeast Information Center, the survey shall be undertaken by a qualified professional archaeologist who is certified by the Society of Professional Archaeologists or has equivalent qualifications.

OCEI-20 Should any historic or pre-historic artifacts be discovered during construction, all work shall cease until a qualified professional archaeologist views the site, provides recommendations and gives clearance to continue.

OCEI-21 Implement the Town of Paradise *Source Reduction and Recycling* and *Household Hazardous Waste Elements.*

OCEI-22 Work towards establishment of a composting/chipping program.

OCEI-23 Consider establishing a mandatory refuse disposal program, including a curbside recycling program.

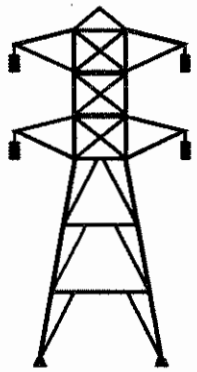
OCEI-24 Improve recycling operations to accept all recyclables and maintain convenient hours of operation.

OCEI-25 Eliminate leaf burning after establishing a program for disposing of yard waste in an environmentally sensitive manner.

OCEI-26 Support the water conservation standards and programs of the Paradise Irrigation District, the Del Oro Water Company and the Lime Saddle Community Services District.

OCEI-27 Explore the feasibility of establishing a specific development impact mitigation program to assist the Paradise Recreation and Park District to offset the impacts upon their facilities resulting from residential growth.

Energy Conservation



The Town of Paradise is situated in a unique location along the western Sierra-Cascade foothills. Some sources describe the location as the "thermal belt" because it does not freeze as readily or receive the same amount of fog as the valley floor. It does, however, freeze on occasion, and it has been known to snow in all parts of the town. The summers are hot and dry, with occasional moist thunderstorms. Because of this variety of temperature extremes, the town seems well suited for a comprehensive energy conservation program. Heating and cooling requirements are an important aspect of living and working in Paradise, so that an energy conservation and planning program can have a positive effect on the local quality of life.

Population growth is not expected to change significantly. Nevertheless, housing demand will grow,

and demands for public services will increase. In addition, because of the "isolation" of the town, automobile transportation will continue to be an important component of the Paradise lifestyle.

Paradise can reduce the effects of energy shortages by reducing its dependence on conventional energy resources. Conserving energy can be viewed as an inexpensive way of producing energy and energy conservation can assist in personal and community savings, that can then be utilized for other opportunities. If a community is planned so that residents can maintain their quality of life while using less energy than other communities, that community will have a competitive edge. A well planned community that organizes its land use, transportation, and construction techniques will achieve goals for maintaining and enhancing its quality of life.

The following goals, objectives, policies and implementation measures address residential, commercial, and industrial development, as well as transportation,as they relate to energy conservation. It is hoped that as a result of the approach to energy conservation provided in this *General Plan*, the community as a whole, including Town government, will become better educated and assume a lead role regionally on the topic of energy conservation. Ultimately, it is envisioned that this leadership will encourage a shift in lifestyles that will not only benefit the citizens of Paradise, but also the citizens of Butte County and the State of California as a whole.

Goals

OCEG-10 Maximize Paradise's energy efficiency.

OCEG-11 Become a regional leader in the approach to energy conservation.

Objectives

OCEO-13 Within three years, consider the adoption of an energy conservation ordinance.

OCEO-14 Significantly reduce townwide energy consumption.

OCEO-15 Throughout the life of the *General Plan*, encourage energy conservation in building design, construction techniques, and in the overall lifestyle of Paradise citizens.

OCEO-16 Within two years, explore the concept of amending the town zoning ordinance to allow flexibility in the siting of fences, and to permit flexible yard setbacks on the south side of structures to promote energy conservation.

Policies

OCEP-37 The town should investigate cogeneration (electricity and heat) possibilities for future large-scale residential and industrial development.

OCEP-38 The town shall promote and encourage the recycling of metals, plastics, paper and cardboard, and the concept of composting discarded vegetative debris.

OCEP-39 Multi-family residential uses should be located near shopping areas, medical offices, where possible, and collector streets to promote pedestrian travel and use of local bus systems.

OCEP-40 Internally illuminated commercial and industrial signs shall be discouraged.

OCEP-41 Landscaping plans shall be required for all new commercial and public parking facilities and shall be consistent with the design standards contained in the town landscape ordinance.

OCEP-42 All new subdivisions should be designed to encourage pedestrian travel and use of bicycles.

OCEP-43 The design of collector streets shall include bicycle lanes, and cul-de-sacs shall be connected by paths wherever possible.

Implementation Measures

OCEI-28 Establish a liaison between the town and local utility companies to explore methods for promoting and encouraging energy conservation.

OCEI-29 Consider formulating a citizen subcommittee to explore the feasibility of preparing an energy conservation ordinance for possible adoption by the town.

OCEI-30 Examine budgetary requirements for amending both the zoning and subdivision ordinances to promote, encourage and require energy conservation design and construction.

6.7 EDUCATION AND SOCIAL SERVICES ELEMENT

Introduction

During the past five years, one of the fastest growing age groups in Paradise was children aged five to eleven. The 1991 *General Plan* citizens' opinion survey suggested that the population of citizens under the age of eighteen is increasing, and that the average age of Paradise citizens may be dropping. School enrollment in the Paradise Unified School District has jumped from 3,563 in 1979 to 5,204 in 1993, with all local schools reaching or currently exceeding capacity. Related to education is the need to support and maintain the local library. This facility provides learning opportunities for all residents, and is a critical component in the overall quality of life in the community. Along with an increasing need for enhancing school and educational facilities is the need for family day care facilities and activities for teenagers. There is a growing need for both small and large family day care homes within the Paradise community and a need to open new opportunities for teen activities.

Even with the apparent increase in younger people moving to or staying in Paradise, the population of retirees remains significant. The influx of retirees in the 1970s and 1980s has resulted in a significant current population of the aging and elderly.

The thrust of the *Education and Social Services Element* is to acknowledge and support community education, child care services, senior services, the local library, and the arts. The goals include assuring a quality education and adequate educational facilities in the community; improving quality of life for the senior population; providing affordable and quality child care services; increasing usage, expansion and support for

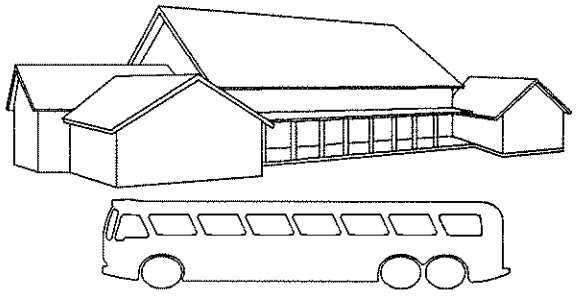
library services; and promoting the arts as both an enhancement to the local quality of life, and a potential tool for stimulating the local economy.

The listed objectives include assisting the Paradise Unified School District to meet their facility needs, increasing community awareness of the needs of the senior population, encouraging the establishment of large family day care homes, promoting and encouraging a variety of arts and entertainment in the community, and promoting public awareness and use of the library.

Policies and implementation measures include exploring the feasibility of creating a development impact fee program for the Paradise Unified School District, enhancing the relationship between town staff and the Paradise Unified School District and coordinating planning efforts, promoting and endorsing public education regarding the needs of the elderly, amending the zoning ordinance to streamline the process for establishing child day care facilities in the community, supporting art galleries, live theater, and craft shops, and capitalizing on any opportunities to assist in the funding for programs and operation of the local library.

This element also covers the arts as a component of the community quality of life. The arts serve many residents in the form of entertainment, livelihood, education and local economic development. Education, child care and senior services, library services, and the arts are covered in this chapter of the *General Plan*.

EDUCATION AND SCHOOLS



Cooperative planning between the town and the Paradise Unified School District (PUSD) for adequate school sites must continue and be enhanced as the town plans its future growth. Options and alternatives for new school sites must be explored as land is designated and developed for residential use, and as new lands are annexed to the Town. Strategies for assisting the school district to fund improvements, acquire new lands and develop new schools must be considered as a key component to the maintenance and enhancement of the local quality of life. The Paradise Unified School District is currently facing extreme enrollment and capacity pressures from residential growth, while at the same time facing dismal funding alternatives.

EDUCATION/SOCIAL SERVICES AND GROWTH MANAGEMENT

By establishing a strong relationship between residential growth and infrastructure requirements, including school capacity, providing a solid education is assured. Social services will benefit from the close management of growth and development, because they too will be able to keep pace with demand.

ESG - EDUCATION AND SOCIAL SERVICES GOAL
ESO - EDUCATION AND SOCIAL SERVICES OBJECTIVE
ESP - EDUCATION AND SOCIAL SERVICES POLICY
ESI - EDUCATION AND SOCIAL SERVICES IMPLEMENTATION MEASURE

Goals

ESG-1 Encourage the Paradise Unified School District to continue to provide a quality education for all school children in Paradise.

ESG-2 Ensure adequate educational facilities are properly sized and located.

Objectives

ESO-1 Promote the neighborhood school concept over the life of the *General Plan*.

ESO-2 Assist the Paradise Unified School District to meet their school facility needs.

The development of school buildings is subject to standard town approval processes unless the school district board specifically exempts themselves by a four-fifths vote. School districts are required by law to consult a town's general plan as part of their development process.

Policies

ESP-1 Future elementary and middle schools should be:

- centrally located within or adjacent to residential neighborhoods and within the projected attendance area to minimize walking distances,
- located to minimize the number of students who would have to cross a major street to reach the school,
- located with direct access to an existing or planned collector or minor arterial street, as well as direct or indirect access to a second road, and
- conveniently and safely accessible to pedestrians and bicyclists.

ESP-2 Future high schools should be sited:

- directly abutting a minor arterial or larger street, as well as directly or indirectly abutting a secondary road, and
- in residential or commercial areas, depending on access, noise, and safety.

ESP-3 In planning school sites, the following approximate usable areas for school sites should be taken into consideration:

• Elementary schools	Ten acres
• Middle schools	Twenty acres
• High schools	Forty acres
• Continuation high schools	Eight acres

(A different acreage may be required if planned student enrollment is smaller or larger than normal.)

ESP-4 School sites should be basically level and rectangular in shape (recommended not more than three to five width to length ratio).

ESP-5 Wherever possible, schools and local parks should be adjacent to one another.

ESP-6 School sites should have on a timely basis access to all utilities and services, including sewer, water, gas, electricity, and drainage.

ESP-7 School sites must meet all state Department of Education site review requirements.

ESP-8 Proposed *General Plan* amendment(s) or zoning reclassification(s) to allow increased residential development shall not be approved if it is documented by the Paradise Unified School District to the Town of Paradise Planning Commission that adequate school facilities cannot be made available concurrently with the need for such facilities. This documentation shall demonstrate that:

- The Paradise Unified School District has imposed all school mitigation fees pursuant to Government Code Section 53080 or equivalent mitigation measures not otherwise prohibited by statute.
- The Paradise Unified School District has filed a current copy of its *School Facilities Plan* with the Community Development Department.
- The Paradise Unified School District's *School Facilities Plan* shall accurately document its existing facilities, provide future school facilities projections, both short and long term, and identify the use of the current and projected revenues which are anticipated to meet those needs. In addition, the *School Facilities Plan* shall document the district's reasonable good faith efforts to seek all available funding, without substantial prejudice to the Paradise Unified School District's reasonable historical educational standard(s), and a current representation regarding the prospects for seeking and/or obtaining funds in the reasonably foreseeable future.
- The Paradise Unified School District shall file any and all amended *School Facilities Plan(s)* with the Town of Paradise Community Development Department within thirty days after their adoption.

ESP-9 The town shall route all requests for divisions of land, rezonings, annexations and *General Plan* amendments to the Paradise Unified School District and Paradise Recreation and Park District for review and comment.

ESP-10 The town shall make specific findings regarding school enrollment and service capacities when acting on applications for divisions of residential land, residential rezonings, annexations and *General Plan* amendments.

Implementation Measures

ESI-1 The Town of Paradise will continue to forward development proposals and/or *General Plan* amendments to the district for review with regard to school capacity and potential school sites.

ESI-2 The Town of Paradise will notify the district, to the extent that they have been informed, of proposed development of federal or state-owned property not under the jurisdiction of the *General Plan*.

ESI-3 The Town of Paradise will continue to review proposed school sites for consistency with the *General Plan.*

ESI-4 Establish a liaison between the Paradise Unified School District and the Town to facilitate ongoing planning for school sites within the planning area.

ESI-5 Possibly amend the town subdivision ordinance to include the requirement for specific findings dealing with school enrollments and capacities for all subdivision and parcel map applications.

ESI-6 Explore the feasibility of establishing a specific development impact mitigation program to assist the Paradise Unified School District to offset the impacts upon their facilities resulting from residential growth.

SENIOR SERVICES

The Paradise Senior Citizens Center is located at 877 Nunneley Road.

Paradise has been largely known as a retirement community. The 1970s and 1980s brought a significant influx of retirees from many areas throughout California, and the number of new citizens at retirement age continues to grow. Even while the number of children and other age groups rises as the community evolves, the population of senior citizens remains significant.

This *General Plan* recognizes the senior population in Paradise, and is acutely aware of the important and highly significant civic contributions that this age group provides. Their vast backgrounds, broad experiences and values, and the strength of leadership are acknowledged and appreciated.

Goals

ESG-3 Improve the quality of life in Paradise for the aging and elderly.

ESG-4 Increase the opportunity for affordable housing for senior citizens.

ESG-5 Improve health care opportunities for senior citizens.

ESG-6 Increase the number of health care providers for the aging and elderly.

ESG-7 Improve in-home supportive services for the aging and elderly.

Objectives

ESO-3 Increase community awareness of the needs of the aging and elderly during the life of the *General Plan.*

ESO-4 Actively encourage the use, improvement and expansion of public transportation.

ESO-5 Assure that new development situated near existing residential retirement facilities complies with the goals and policies of the *Noise Element* contained in the town *General Plan.*

ESO-6 Increase affordable housing opportunities for the aging and elderly, through such tools as zoning and development standards.

ESO-7 Improve and enhance home delivered meal services in the community.

ESO-8 Promote and enhance the concept of shared transportation resources for the aging and elderly.

Policies

ESP-11 The town shall endorse and promote public education regarding the needs of the aging and elderly.

ESP-12 The town should participate in a continuing educational effort regarding preventive health care.

ESP-13 The town shall promote and encourage the development of health care facilities for the aging and elderly.

ESP-14 Whenever feasible, the town shall assist local senior citizen groups with improving their facilities and services.

ESP-15 The town should attempt to increase the opportunities for the development of health care facilities for the aging and elderly, through such tools as zoning, development standards, and low interest loan or grant funding activities.

ESP-16 The town should assist local organizations in any way they can to secure funding to improve program(s) for home delivered meal services.

Implementation Measures

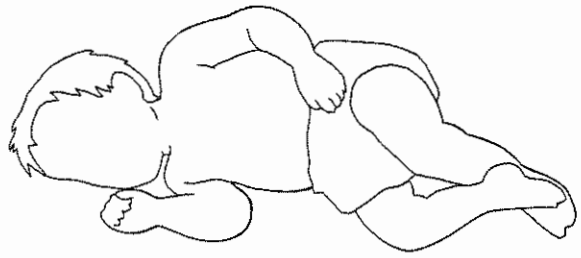
ESI-7 Establish a liaison with local senior citizen groups to facilitate an ongoing understanding of issues and problems affecting the senior population.

ESI-8 Designate additional Community Services (CS) land uses on the *General Plan* land use designation map.

ESI-9 Amend the town zoning ordinance, if necessary, to allow for increased opportunities for health care facilities.

ESI-10 Explore alternative means for assisting senior citizen groups with improving their facilities and services.

CHILD DAY CARE



Information generated as a part of the *General Plan* revision program suggests that the average age of citizens has been dropping over the past ten years. The number of citizens in their working years has increased, and Paradise has evolved into a bedroom community for both Chico and Oroville. As more young people move to the Paradise region, and double income couples commute to surrounding communities to work, the need for child care increases. Affordable and quality child care within the Town of Paradise is vital to the well being of the parents, children, and all citizens of the community. Local government's role in helping to provide quality child care facilities is dramatically important. Providing a simplified review and approval process, while ensuring compliance with applicable standards to protect the health and safety of

the community, can go a long way in meeting the child care needs of families in Paradise.

Goals

ESG-8 Encourage the provision of affordable and quality child day care facilities to meet the needs of Paradise citizens.

Objectives

ESO-9 Promote and encourage the establishment of large family child day care homes within the Paradise community.

ESO-10 Make changes in the town zoning ordinance, if necessary, within one year, to provide a streamlined process for establishing large family day care homes consistent with state law.

ESO-11 Promote public awareness of the need for large family day care homes in the Paradise community, and of the role of the state in encouraging their establishment.

ESO-12 Continue to improve upon the communication and relationship between the town and the various public and private organizations involved with creating and monitoring child care facilities.

Policies

ESP-17 Large family day care home facilities should be permitted in single family residential zones consistent with the provisions of State law and any legally applicable town-adopted land use regulations.

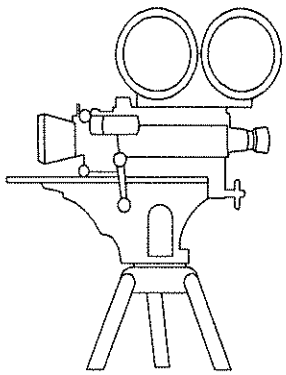
ESP-18 The town shall make specific factual findings indicating why individually proposed large family day care homes are appropriate in a given neighborhood.

ESP-19 The town shall route all requests for large family day care homes to the state Department of Social Services for review and comment.

Implementation Measures

ESI-11 If needed, the town shall amend its zoning ordinance to provide a streamlined process for establishing large family day care homes in single family residential neighborhoods, consistent with state law.

THE ARTS



Paradise has a large population of citizens who are both involved with and appreciative of the arts. The performances of the local Theater-On-The-Ridge group are usually standing room only, local crafters are everywhere, and well known artists find the beauty and solitude of Paradise inspirational. There is great potential for the arts and entertainment to thrive in Paradise. It is hoped that all ages of the citizenry value and participate in the enhancement and support for local

artists, crafters and actors. In addition, the richness of local history is acknowledged, and it is hoped that the citizenry and visitors support all museums and activities celebrating the history of Paradise.

It is a goal of the *General Plan* to encourage and support all forms of art and entertainment, as a means of enhancing the local quality of life, and providing a tool for stimulating the local economy with the vision, talents and creations of local citizens.

Goals

ESG-9 Promote the cultural and performing arts as both an enhancement to the local quality of life, and a potential tool for stimulating the local economy.

ESG-10 Encourage the completion of the Paradise Auditorium.

Objectives

ESO-13 Assist in any way possible, the efforts of local groups involved in the arts to fulfill their goals of providing quality art and entertainment to the Town of Paradise.

ESO-14 Promote and encourage a variety of art and entertainment, particularly in the Central Commercial area of the town.

ESO-15 Promote public awareness of the arts as a tool for enhancing the local quality of life.

Policies

ESP-20 Art galleries, small retail craft shops and other low intensity art related uses shall be encouraged in the Central Commercial area of the town.

ESP-21 Live dramatic theater facilities that do not have an adverse impact upon surrounding land uses shall be endorsed and promoted.

ESP-22 The town shall increase the opportunity for the development of local art programs and facilities for all citizens of Paradise.

ESP-23 The town shall participate in an ongoing educational effort regarding the benefits and value of the local arts.

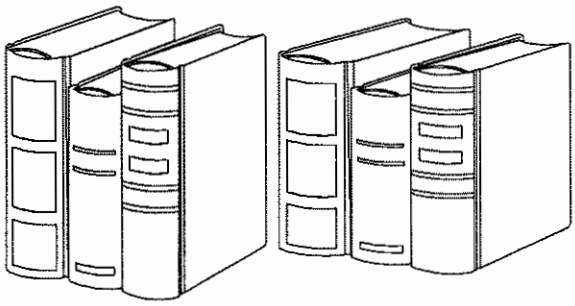
Implementation Measures

ESI-12 Establish a liaison between the town and local art/entertainment groups for the ongoing support and encouragement of the arts.

ESI-13 Explore the feasibility of providing incentives for development proposals to include the works of local artists, such as sculptures within development projects.

ESI-14 Explore the feasibility of establishing an area for displaying local art works within Town Hall.

LIBRARY SERVICES



Library services are crucial to the local educational system for all citizens of Paradise. Governmental financial contributions to the local library have been restricted and closure has unfortunately become a possibility in the future. However, the local library continues to be used by citizens of all ages, and has an active and strong leadership. Accordingly, the town recognizes the importance of the local library as a component to the overall quality of life, and it is a goal of this Plan to promote and encourage use of the library, and assist in any way possible, to further both the resources of the facility and to seek funding for its continued operation.

Goals

ESG-11 Increase usage of the local library, and promote the expansion and enhancement of its resources and operation.

Objectives

ESO-16 Promote public awareness of the library, its resources, programs and value to the community.

ESO-17 Assist in any way possible the financial resources of the library.

ESO-18 Within the life of this plan, investigate ways in which to assist the library to increase its resources and programs.

ESO-19 Within two to four years, explore the feasibility of the consolidation or acquisition of the library with town government.

Policies

ESP-24 The town shall participate in an ongoing educational effort, focused on the value and benefits of utilizing the local library.

ESP-25 The town shall capitalize on any opportunities to assist in the funding for the programs and operation of the local library.

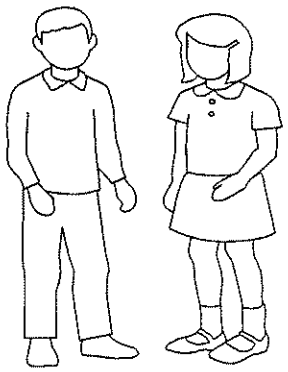
ESP-26 The town shall support, in any way possible, the educational programs and offerings of the local library.

Implementation Measures

ESI-15 Establish a liaison between the town and the local library for the ongoing support and encouragement of its programs and operation.

ESI-16 Request LAFCo to study the feasibility of consolidating the local library with town government.

ACTIVITIES FOR TEENAGERS



In 1990, 8.3 percent (2100) of Paradise's population, was between the ages of twelve and nineteen. The town seeks to open new opportunities for teen activities by encouraging private enterprises which serve teenagers, and by encouraging teenager input into the functions of the town Planning Commission, Town Council, the Paradise Recreation and Park District and the Paradise Unified School District.

Goals

ESG-12 Improve and increase opportunities for teen activities.

Objectives

ESO-20 Provide facilities for teen recreation and social activities.

ESO-21 Establish a program for teen input into the local governmental process, which may involve the establishment of a youth advisory council, or teenager representation on local committees involved in activities affecting the youth of Paradise.

Policies

ESP-27 Existing recreational facilities, both indoor and outdoor, should be made available and used for teen activities.

ESP-28 The town shall encourage private enterprises that will provide teen recreation and social activities.

ESP-29 The town shall solicit teen input on matters involving the youth of Paradise.

Implementation Measures

ESI-17 Consider the sponsoring of periodic surveys of junior high and high school students in Paradise to determine needs and desires.

ESI-18 The town shall work with the appropriate special districts and other organizations to establish a youth advisory council and/or avenues for teen input into their functions and decision making related to the youth of Paradise.

ESI-19 The town shall diligently attempt to include teenagers on citizen committees involved in long-range planning efforts, and other matters involving the youth of Paradise.

7.0 ADOPTION AND AMENDMENTS

7.1 RESOLUTION OF ADOPTION

7.2 DOCUMENTS ADOPTED BY REFERENCE

7.3 RESOLUTION OF AMENDMENTS

TOWN OF PARADISE

RESOLUTION NO. 94-42

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE ADOPTING THE 1994 PARADISE GENERAL PLAN

WHEREAS, the California Government Code requires all cities in California to adopt a comprehensive and long-term General Plan for the future physical and orderly development of the community; and

WHEREAS, the Town of Paradise has a General Plan which includes a natural resources element, natural hazards element, life enrichment element, environmental quality element, community development element, regulatory devices element and a land use designation map all adopted in 1982, and a revised housing element adopted in 1985; and

WHEREAS, case law promulgated by the judicial system of the State of California has decreed that a community's General Plan needs to be revised and kept current in order to best direct orderly development decision making that appropriately addresses and reflects the public needs of a community; and

WHEREAS, Section 65300 et seq of the California Government Code empowers local jurisdictions to prepare and adopt General Plans or amendments thereof; and

WHEREAS, in July of 1990 the Paradise Town Council initiated a program to update and revise the Paradise General Plan, and directed the town Community Development Department planning division staff to manage the preparation of a comprehensive revision to the General Plan; and

WHEREAS, the Town Council appointed a General Plan Revision Steering Committee comprised of all members of the Town Council, all members of the Planning Commission and some members of town staff to oversee the General Plan revision program; and

WHEREAS, during the latter part of 1990, the Town of Paradise contracted with a professional planning consultant firm, QUAD consultants of Sacramento, California to prepare the revised draft Paradise General Plan; and

WHEREAS, the General Plan Revision Steering Committee directed staff to design and initiate an extensive citizen participation program including a comprehensive opinion survey, the formation of four (4) citizen subcommittee groups, public workshops and meetings, scoping sessions, speaking engagements and other community outreach programs; and

RESOLUTION NO. 94-42

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE ADOPTING THE 1994 PARADISE GENERAL PLAN

WHEREAS, the Community Development Department planning division prepared an environmental setting document (Working Paper No. 1), issues, goals and objectives document (Working Paper No. 2), and an alternatives development and evaluation document (Working Paper No. 3) documenting the natural setting of the town, long-range planning concerns, and alternatives approaches on how the revised General Plan could address the long-range planning issues and concerns; and

WHEREAS, the Community Development Department planning division, with assistance from QUAD consultants, participating citizens, and the General Plan Revision Steering Committee prepared a draft General Plan consisting of *Volume I - Policy Document*, *Volume II - Environmental Impact Report and Addendum*, Volume III - Environmental Setting Document, a circulation map (diagram), constraints map (diagram), and land use map (diagram) that constituted a preferred alternative strategy for growth, development and conservation of the community; and

WHEREAS, in 1990 the State Office of Planning and Research published a document entitled: "State of California General Plan Guidelines"; and

WHEREAS, the Community Development Department planning division utilized said General Plan Guidelines to help develop a revised General Plan for the Town of Paradise which meets and exceeds the requirements of the General Plan Guidelines; and

WHEREAS, the preparation and adoption of a General Plan is subject to the requirements of the California Environmental Quality Act; and

WHEREAS, an environmental impact report has been prepared in conjunction with the General Plan, which environmental impact report meets the requirements of the California Environmental Quality Act and has been certified as adequate by the Paradise Planning Commission; and

WHEREAS, pursuant to California Government Code Section 65585, the planning division staff sent a copy of the draft General Plan to the state Department of Housing and Community Development for review and comment concerning its compliance with state housing law and guidelines; and

WHEREAS, the state Department of Housing and Community Development reviewed and submitted written commentary to the Town of Paradise identifying its

concerns with the contents of the housing element of the draft Paradise General Plan; and

WHEREAS, the Planning Commission of the Town of Paradise conducted public hearings concerning the proposed draft Paradise General Plan in accordance with California Government Code Section 65353, receiving oral and written testimony on the following dates: August 30, 1993, August 31, 1993, September 13, 1993, September 27, 1993, October 7, 1993 and October 18, 1993; and

WHEREAS, the Planning Commission conducted closed public hearings on November 8, 1993 and November 15, 1993, to address the major issues raised during the public hearing process and to reach consensus on recommendations to the Town Council concerning those issues and on General Plan land use designation requests; and

WHEREAS, on November 30, 1993 the Paradise Planning Commission adopted Resolution No. 93-7, recommending Town Council adoption of the public draft 1993 Paradise General Plan with additional modifications and specifically including modifications to the text of its housing element in order to substantially comply with the requirements of state housing law and housing guidelines as identified within written commentary submitted and received from the state Department of Housing and Community Development; and

WHEREAS, the Town Council conducted a series of public hearing meetings concerning the recommendations of the Planning Commission relative to the public draft 1993 Paradise General Plan and its associated draft environmental impact report (EIR); and

WHEREAS, upon closure of its public hearing on March 22, 1994, the Town Council referred all planning issues and General Plan land use map designation requests raised during the public hearings to the Paradise General Plan Revision Steering Committee for review and recommended actions; and

WHEREAS, the General Plan Revision Steering Committee conducted meetings open to and available for dialogue with the attending public on April 12, April 26, May 9, June 6 and June 28, 1994 to review and deliberate recommended actions concerning the planning issues and requests referred to them by the Town Council; and

RESOLUTION NO. 94-42

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE ADOPTING THE 1994 PARADISE GENERAL PLAN

WHEREAS, on June 28, 1994 the General Plan Revision Steering Committee completed its assigned tasks and directed town staff to prepare a compendium document(s) reflecting all the committee's recommended amendments to the Paradise General Plan as a supplement to the Planning Commission's original recommended General Plan and that it be sent back to the Town Council for consideration; and

WHEREAS, on July 5, 1994 the Town Council set and authorized a noticed public hearing to consider the final draft 1994 Paradise General Plan and its related EIR on August 16, 1994 at 7:00 p.m.; and

WHEREAS, on August 16, 1994 the Town Council conducted a public hearing concerning the final draft revised 1994 Paradise General Plan and its related EIR as recommended by the General Plan Revision Steering Committee; and

WHEREAS, following the conclusion of the public hearing and per the directive of the Town Council, the planning division staff revised the 1994 Paradise General Plan into a format for formal adoption in accordance with the desires of the Town Council; and

WHEREAS, the California Government Code requires the Town Council to adopt a General Plan by resolution; and

WHEREAS, the 1994 Paradise General Plan which has been prepared represents the best cumulative efforts of the Town of Paradise to adopt long-term and comprehensive development goals, objectives, policies and implementation measures that best promote and protect the public interests of the Paradise citizenry.

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Paradise as follows:

1. The Town Council has considered the long-range environmental impacts of adopting and implementing the policies and implementation measures contained in the final draft 1994 Paradise General Plan.

2. The Town Council certifies that the 1994 Paradise General Plan environmental impact report (EIR) - *(Volume II - Environmental Impact Report and Addendum)* has been prepared in accordance with the

California Environmental Quality Act and the Town of Paradise environmental review procedures and guidelines.

3. Acknowledging input received from the Town Attorney, the Town Council finds that the 1994 Paradise General plan meets the requirements of the state planning law.

4. The 1994 Paradise General Plan consisting of "*Volume I - Policy Document, Volume II - Environmental Impact Report and Addendum, Volume III - Environmental Setting Document* and its related diagrams (i.e. land use maps, circulation map, and constraints map) and officially on file with the office of the Town Clerk is hereby adopted.

5. Any prior Paradise General Plan amendment/revision actions or documents not referred to in this resolution or within the 1994 Paradise General Plan are hereby rescinded.

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RESOLUTION NO. 94- 42

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF PARADISE ADOPTING THE 1994 PARADISE GENERAL PLAN

PASSED AND ADOPTED by the Town Council of the Town of Paradise this 4th day of October, 1994, by the following vote:

AYES: Mark Fugh, C.L. Hubb, Robert D. Jeffords, Deborah R. Presson, Vice Mayor

NOES: John I. Griffin, Mayor

ABSENT: None

NOT VOTING: None

John I. Griffin, Mayor

ATTEST:

By: Frankie Rutledge
Frankie Rutledge, Town Clerk

APPROVED AS TO FORM:

Dwight L. Moore, Town Attorney

7.2 DOCUMENTS ADOPTED BY REFERENCE

The following documents adopted by the Town of Paradise are incorporated into and are hereby declared formal components of the Paradise General Plan. Any future changes or modifications to these documents may also require amendments to the Paradise General Plan:

- Town of Paradise Multihazard Disaster Plan
- Butte County/paradise Hazardous Waste Management Plan
- Town of Paradise Household Hazardous Waste Element (HHWE)
- Town of Paradise Source Reduction and Recycling Element (SRRE)

The following additional plans and documents referenced in the Paradise General Plan and incorporated as background material would not require amendments to the General Plan in the event of modification or change:

- Uniform Building and Fire Codes
- Town of Paradise Master Storm Drainage and Facilities Plan
- Town of Paradise Memorial Trailway Plan
- Paradise Skypark Airport Land Use Plan
- Butte County Regional Transportation Plan and Congestion Management Program

7.3 RESOLUTIONS OF AMENDMENTS

The following resolutions adopted by the Town of Paradise are hereby incorporated by reference into and are declared formal components of the 1994 Paradise General Plan, and are available for inspection in the Town of Paradise Community Development Department.

- Town of Paradise Resolution No. 95-28 adopted on 11/21/95 – Text and Map Amendments
- Town of Paradise Resolution No. 96-05 adopted on 04/16/96 – Map Amendment
- Town of Paradise Resolution No. 97-07 adopted on 03/04/97 – Map Amendment
- Town of Paradise Resolution No. 97-24 adopted on 10/07/97 – Map Amendment
- Town of Paradise Resolution No. 98-25 adopted on 09/15/98 – Text Amendment
- Town of Paradise Resolution No. 99-10 adopted on 04/06/99 – Map Amendment
- Town of Paradise Resolution No. 00-15 adopted on 05/28/00 – Text Amendment
- Town of Paradise Resolution No. 01-07 adopted on 02/27/01 – Map Amendment
- Town of Paradise Resolution No. 01-11 adopted on 04/10/01 – Map Amendment
- Town of Paradise Resolution No. 01-31 adopted on 09/25/01 – Map Amendment
- Town of Paradise Resolution No. 01-37 adopted on 11/27/01 – Text and Map Amendments
- Town of Paradise Resolution No. 02-22 adopted on 05/14/02 – Map Amendment
- Town of Paradise Resolution No. 02-66 adopted on 12/10/02 – Map Amendment
- Town of Paradise Resolution No. 03-26 adopted on 05/27/03 – Map Amendment
- Town of Paradise Resolution No. 03-28 adopted on 06/10/03 – Map Amendment
- Town of Paradise Resolution No. 04-07 adopted on 02/10/04 – Map Amendment
- Town of Paradise Resolution No. 04-22 adopted on 06/03/04 – Map Amendment
- Town of Paradise Resolution No. 05-03 adopted on 01/11/05 – Map Amendment
- Town of Paradise Resolution No. 05-20 adopted on 06/28/05 – Map Amendment
- Town of Paradise Resolution No. 05-34 adopted on 09/27/05 – Map Amendment
- Town of Paradise Resolution No. 05-35 adopted on 09/27/05 – Text Amendment
- Town of Paradise Resolution No. 05-50 adopted on 12/31/05 – Map Amendment
- Town of Paradise Resolution No. 06-08 adopted on 03/28/06 – Map Amendment
- Town of Paradise Resolution No. 06-52 adopted on 10/24/06 – Map Amendment
- Town of Paradise Resolution No. 07-06 adopted on 02/13/07 – Text Amendment (Housing)
- Town of Paradise Resolution No. 07-12 adopted on 05/08/07 – Map Amendment
- Town of Paradise Resolution No. 07-22 adopted on 07/10/07 - Map Amendment
- Town of Paradise Resolution No. 07-43 adopted on 10/23/07 - Map Amendment
- Town of Paradise Resolution No. 08-04 adopted on 01/08/08 - Text Amendment
- Town of Paradise Resolution No. 08-20 adopted on 05/13/08 – Map Amendment
- Town of Paradise Resolution No. 08-23 adopted on 05/13/08 – Map Amendment
- Town of Paradise Resolution No. 08-46 adopted on 08/12/08 - Map Amendment
- Town of Paradise Resolution No. 08-58 adopted on 10/28/08 - Map Amendment
- Town of Paradise Resolution No. 09-05 adopted on 01/08/08 - Text Amendment

8.0 GLOSSARY OF TERMS

ABBREVIATIONS

- **BCAC** Butte County Association of Cities
- **BCAG** Butte County Association of Governments
- **BCHA** Butte County Housing Authority
- **CAA** Community Action Agency
- **CDBG** Community Development Block Grant
- **CDD** Community Development Department
- **CEQA** California Environmental Quality Act
- **CRHP** California Rehabilitation Program (housing)
- **EIR** Environmental Impact Report
- **HCD** Housing and Community Development (state)
- **HHWE** Household Hazardous Waste Element
- **ISO** Insurance Services Office
- **LAFCo** Local Agency Action Formation Commission
- **LOS** Level of Service (traffic)
- **LSCSD** Lime Saddle Community Services District
- **PEDC** Paradise Economic Development Commission
- **PID** Paradise Irrigation District
- **PMC** Paradise Municipal Code
- **PRPD** Paradise Recreation and Park District
- **PUSD** Paradise Unified School District
- **UBC** Uniform Building Code
- **UFC** Uniform Fire Code

DEFINITIONS

- **Access/Egress.** The ability to enter a site from a roadway (access) and exit a site onto a roadway (egress) by motorized vehicle.

- **Acres, gross.** The entire acreage of a site, used for density calculations.

- **Acres, net.** The portion of a site remaining after public or private rights-of-way are subtracted from the total acreage.

- **Affordable.** Capable of being purchased or rented by a household with very low, low, or moderate income, based on a household's ability to make monthly payments necessary to obtain housing. Housing is considered affordable when a household plays no more than thirty (30) percent of it gross monthly income (GMI) for housing.

- **Appropriate.** An act, condition, or state which is considered suitable.

- **Aquifer.** Underground water-bearing strata that supplies well water.

- **Assessment District.** An area within a public agency's boundaries which receives a special benefit from the construction of a public facility. An assessment district has no legal life and cannot act on its own. It enables property owners in a specific area to cause the construction of public facilities or to maintain them by contributing their fair share of the construction and/or installation and operating costs.

- **Below-Market-Rate (BMR) Housing Unit.** Any housing unit specifically priced to be sold or rented to very low, low, or moderate-income households for an amount less than fair market rent or value of the unit. The U. S. Department of Housing and Urban Development sets standards for determining which households qualify as "very low income," "low income" or "moderate income."

- **Bicycle Lane.** A corridor expressly reserved for bicycles, existing on a street or roadway in addition to any lanes for use by motorized vehicles. Identified by the state as a Class II facility.

- **Bicycle Route.** A paved route not on a street or roadway and expressly reserved for bicycles traversing an otherwise unpaved area. Bicycle paths may parallel roads but typically are separated from them by landscaping. Identified by the state as a Class I facility.

- **Bikeways.** A term that encompasses bicycle lanes, bicycle paths and bicycle routes.

- **Biomass.** Plant or other organic material used for the production of such things as fuel alcohol and nonchemical fertilizers. Biomass sources may be plants grown especially for that purpose or waste products from wood harvesting or milling or from agricultural production or processing.

- **Buffer Zone.** An area of land separating two distinct land uses which acts to soften or mitigate the effects of one land use on another.

- **Building.** Any structure used or intended for supporting or sheltering any use or occupancy.

- **Business Park.** The combination of a variety of businesses, from office to research and development to light industry to warehousing, located in structures built with open floor plans, so as to leave most interior improvements to the tenants to design to their needs.

- **Butte County Regional Transportation Plan/Congestion Management Plan.** A regional transportation plan prepared by Butte County with the assistance and participation of each local municipality.

- **California Environmental Quality Act (CEQA).** A state law requiring state and local agencies to regulate activities with consideration for environmental protection. If a proposed activity has the potential for an adverse significant environmental impact, an Environmental Impact Report (EIR) must be prepared.

- **Caltrans.** California Department of Transportation.

- **Capital Improvements Program.** A program, administered by town government and reviewed by the Planning Commission, which schedules permanent improvements five or more years into the future to fit the town's fiscal capability. The program is generally reviewed annually, and the first year of the program is adopted in the town's annual budget.

- **Carrying Capacity.** The level of land use, human activity or development for a specific area that can be accommodated permanently without an irreversible change in the quality of air, water, land or plant and habitats. It may also refer to the upper limits beyond which the quality of human life, health, welfare, safety or community character within an area will be impaired. Carrying capacity is usually used to determine the potential of an area to absorb development.

- **Circulation.** Refers to the overall movement of automobiles, pedestrians, bicyclists, equestrians, etc.

- **Clear Zone.** That section of an approach zone of an airport where the plane defining the glide path is fifty (50) feet or less above the centerline of the runway. Land use is restricted.

- **Cluster Development.** Development in which a number of dwelling units are placed in closer proximity than usual, or are attached, with the purpose of retaining an abutting open space area.

- **Cogeneration.** The harnessing of heat energy that is normally a waste byproduct of electricity generation. It has become more common in institutional and industrial applications and electric power plants, but may also be possible for large residential complexes.

- **Community Child Care Agency.** A nonprofit agency established to organize community resources for the development and improvement of child care services.

- **Community Development Block Grant (CDBG).** A grant program administered by the U. S. Department of Housing and Urban development (HUD) and the state Department of Housing and Community Development (HCD). This grant allots money to cities and counties for housing and community development. Jurisdictions set their own program priorities within specified criteria.

- **Community Park.** Land with full public access intended to provide recreation opportunities beyond those supplied by neighborhood parks. Community parks are larger in scale than neighborhood parks but smaller than regional parks.

- **Compatible.** Capable of existing together without conflict or ill effects.

- **Conservation.** The management of natural resources to prevent waste, destruction or neglect.

- **Consistent.** Free from variation or contradiction. Programs in the *General Plan* are to be consistent, not contradictory or preferential. State law requires consistency between a general plan and implementation measures such as the zoning ordinance.

- **Constraint.** Something that restricts, limits or regulates a given course of action. It is used in the *General Plan* to describe "constraints" to development. *Environmental* constraints include, but are not limited to, steep slopes, poor soils and rare and endangered plant and animal species. *Infrastructural* constraints can include poor roads, antiquated water distribution systems, a lack of service capacity of the local school district and a lack of a community sewer system.

- **Cut and Fill.** The act of cutting into a slope and using the soil to backfill an area. A common example is the construction of a roadway on a slope where earth is removed from the upper side of the cut into the hill and used to fill the lower or outer edge of the cut to widen the road.

- **Dedication of Land.** The turning over by an owner or developer of private land for public use, and the acceptance of land for such use by the governmental agency having jurisdiction over the public function for which it will be used. Dedications for roads, parks, school sites or other public uses are often made conditions for town approval of a development.

- **Dedication, in lieu of.** Cash payments which may be required of an owner or developer as a substitute for a dedication of land, usually calculated in dollars per lot or square foot of land or building area, and referred to as in lieu fees or in lieu contributions.

- **Density.** The degree of crowding together of people or buildings. For housing, density is the number of permanent residential dwelling units per acre of land. All densities specified in the *General Plan* are expressed in maximum number of units per net developable acre. (See "Developable Acres, Net.") Density can be managed through zoning in the following ways: minimum lot size requirements, floor area ratio, land use intensity ratio, setback and yard requirements, minimum house size requirements, ratios comparing number and types of housing units to land area, limits on units per acre, and other means. Maximum allowable density often serves as the major distinction between residential districts.

- **Density Bonus.** The allocation of development rights that allow a parcel to accommodate additional square footage or additional residential units beyond the maximum for which the parcel is zoned, usually in exchange for the provision or preservation of an amenity at the same site or at another location. (See "Development Rights, Transfer of.")

- **Density Transfer.** A way of retaining open space by increasing densities--usually in compact areas adjacent to existing urbanization and utilities--while leaving unchanged historic, sensitive or hazardous areas. For example, developers can buy or trade development rights of properties targeted for public open space and transfer the additional density to the base number of units permitted in the zone in which they propose to develop.

- **Design Guidelines.** Guidelines established by a local municipality intended to advise and direct the design of buildings, roads, parking facilities, etc.

- **Developable Acres, Net.** The portion of a site remaining after removing or deducting public or private road rights-of-way and land not developable (see "Developable Land"), and which can then be built upon. Net acreage includes requires yards or setback areas.

- **Developable Land.** Land which is suitable as a location for structures and which can be developed free of or with minimal development constraints, and without disruption of, or significant impact on, natural resource areas.

- **Development.** The physical extension and/or construction of urban land uses. Development activities include: subdivision of land; construction or alteration of structures, roads, utilities and other facilities; installation of septic systems; grading; deposit of refuse, debris or fill materials; and clearing of natural vegetation cover (with the exception of agricultural activities). Routine repair and maintenance activities are exempted.

- **Development Rights.** The selling of rights to develop land by a landowner who maintains fee-simple ownership of the land. The owner keeps title but agrees to continue using the land as it has been used, and the holder of the development rights maintains the right to develop. Such rights usually are expressed in terms of density allowed under existing zoning.

- **Development Rights, Transfer of (TDR).** Also known as "Transfer of Development Credits," a program which can relocate potential development from areas where proposed land use or environmental impacts are considered undesirable (the "donor" site) to another ("receiver") site chosen on the basis of its ability to accommodate additional units of development beyond that for which it was zoned, with minimal environmental, social, and aesthetic impacts. (See "Development Rights.")

- **Detention Dam.** Dams may be classified according to the broad function they serve, such as storage, diversion or detention. Detention dams are constructed to retard flood runoff and minimize the effect of sudden floods. Detention dams fall into two main types: in one type, the water is temporarily stored and released through an outlet structure at a rate which will not exceed the carrying capacity of the channel

downstream; in the other type, the water is held as long as possible and allowed to seep into the permeable banks of gravel strata in the foundation. The latter type is sometimes called a water-spreading dam or dike because its main purpose is to recharge the underground water supply. Detention dams are also constructed to trap sediment. They are often called debris dams.

- **Discourage.** To advise or persuade to refrain from.

- **Diversion.** The direction of water in a stream away from its natural course (i.e., as in a diversion that removes water from a stream for human use).

- **Dwelling Unit.** A room or group of rooms (including sleeping, eating, cooking and sanitation facilities, but not more than one kitchen) which constitutes an independent housekeeping unit, occupied or intended for occupancy by one family on a long-term basis.

- **Easement.** Usually the right to use property owned by another for specific purposes. Easements are either for the benefit of land, such as the right to cross "A" to get to "B," or "in gross," such as a public utility easement. For example, "rear" lots without street frontage may be accessed via an easement over the "front" lots. Utility companies use easements over the private property of individuals to be able to install and maintain utility facilities.

- **Easement, Scenic.** A tool that allows a public agency to use, at a nominal cost, private land for scenic enhancement, such as roadside landscaping or vista preservation.

- **Economic Base.** Economic base theory essentially holds that the structure of the economy is made up of two broad classes of productive effort--basic activities which produce and distribute goods and services for export to firms and individuals outside a defined localized economic area, and nonbasic activities whose goods and services are consumed within the boundaries of the local economic area. The theory holds that the reason for the growth of a particular region is its capacity to also support the nonbasic activities which are principally local in productive scope and market area.

- **Economic Development.** The implementation of strategies to consciously and purposefully influence the local economy in order to provide jobs for town residents, increase per capita income and strengthen the local tax base.

- **Ecosystem.** An interacting system formed by a biotic community and its physical environment.

- **Elderly Housing.** Typically one and two-bedroom apartments designed to meet the needs of persons sixty-two years of age and older, and restricted to occupancy by them.

- **Encourage.** To stimulate or foster a particular condition through direct or indirect action by the private sector or government agencies.

- **Enhance.** To improve existing conditions by increasing the quantity or quality of beneficial uses.

- **Environment.** CEQA defines environment as "the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, mineral, flora, fauna, noise and objects of historic or aesthetic significance." This *General Plan* defines environment to also include social and economic conditions.

- **Environmental Impact Report (EIR).** A report that assesses all the environmental characteristics of an area and determines what significant effects or impacts will result if the area is altered or disturbed by a proposed action. (See "California Environmental Quality Act.")

- **Environmental Impact Report Addendum.** Additional information added to a draft EIR that discusses minor changes in the project. It is used only when the changes and revisions to the project do not introduce new potential impacts not addressed in the draft EIR, no substantial changes in the circumstances under which the project is undertaken have occurred since the production of the draft EIR, no new information has become available that would lead to a conclusion of potential significant impacts not addressed in the draft EIR, and the revisions and changes will not cause impacts determined to be insignificant in the draft EIR to now become significant.

- **Erosion.** The loosening and transportation of rock and soil debris by wind, rain or running water.

- **Exaction.** A contribution or payment required as an authorized precondition for receiving a development permit; usually refers to mandatory dedication (or fee in lieu of dedication) requirements found in many subdivision regulations.

- **Feasible.** Capable of being done, executed or managed successfully from the standpoint of the physical and/or financial abilities of the implementor(s).

- **Finding(s).** The result(s) of an investigation and the basis upon which decisions are made. Findings are made by government agents and bodies prior to taking action, and are a record of the justifications for such action(s).

- **Fire Hazard.** Any condition or action which increases or may cause an increase of the hazard or menace of fire or explosion to a degree greater than that customarily recognized as normal by persons in the public service of suppressing or extinguishing fires; or which may obstruct, delay or hinder, or may become the cause of an obstruction, delay or hinderance to the prevention suppression or extinguishment of the fire.

- **Flood, 100-Year.** The magnitude of a flood expected to occur on the average every 100 years, based on historical data. The 100-year flood has a one one-hundredth, or one percent, chance of occurring in any given year.

- **Flood Plain.** All land between a natural or manmade waterway and the upper elevation of the one hundred year flood.

- **Gateway.** A point along a roadway entering the town at which a motorist gains a sense of having left the environs and of having entered the town. A gateway may be a publicly owned place having an area for motorists to pull off or park and view maps, gather information, and generally become oriented to Paradise; or it may be a privately owned place which through special development standards or guidelines (e.g., for landscaping and signs), marks entry to the town; or a combination of both. The intent of the gateway designation on the *General Plan* Land Use Map is to ensure that a highly visible location in the town may be appropriately treated.

- **General Plan.** A compendium of the town's policies regarding its long-term development, and designed in the form of official maps and accompanying text. The *General Plan* is a legal document required of each local agency by the State of California Government Code Section 65301 and is adopted by the town Council. The *General Plan* may be called a "town plan," "comprehensive plan" or "master plan."

- **General Plan Citizen Subcommittee.** The group of volunteer citizens who have assisted in the preparation of the revised Paradise *General Plan.*

- **General Plan Revision Steering Committee.** A committee comprised of the members of the Town of Paradise Town Council, Planning Commission and three members of town staff. The purpose of the committee was to oversee the *General Plan* revision program.

- **Geologic Review.** The analysis of geologic hazards, including all potential seismic hazards, surface ruptures, liquefaction, landsliding, mudsliding and the potential for erosion and sedimentation.

- **Goal.** A general, overall and ultimate purpose, aim or end toward which the town will direct effort.

- **Grasslands.** Land reserved for pasturing or mowing, in which grasses are the predominant vegetation.

- **Grey Water.** Water reclaimed from nonhazardous household activities such as showers, and washing machine use, that can potentially be reused for other purposes.

- **Groundwater.** Water under the earth's surface, often confined to aquifers capable of supplying wells and springs.

- **Groundwater Recharge.** The natural process of infiltration and percolation of rainwater from land areas or streams through permeable soils into water holding rocks which provide underground storage. (See "Aquifer.")

- **Growth Management.** The use by a community of a combined variety of techniques to establish the amount, type, and rate of growth desired by the community and to channel that growth into designated areas. Growth management policies can be implemented through growth rates, zoning, capital improvements programs, public facilities ordinances, urban limit lines, constraints analysis systems and other programs.

- **Guidelines.** General statements of policy direction around which specific details may later be established.

- **Habitat.** The physical location or type of environment in which an organism or biological population lives or occurs.

- **Hazardous Material.** An injurious substance, including (among others) pesticides, herbicides, poisons, toxic metals and chemicals, liquified natural gas, explosives, volatile chemicals and nuclear fuels.

- **Historic Preservation.** The preservation of historically significant structures and neighborhoods until such time as restoration or rebabilitation of the building(s) to a former condition can be accomplished.

- **Home Occupation.** A commercial activity conducted solely by the occupants of a particular dwelling unit in a manner incidental to residential occupancy,

- **Household.** All persons residing in a single dwelling unit.

- **Housing and Community Development Department of the State of California (HCD).** The state agency principally charged with assessing whether, and planning to ensure that, communities meet the housing needs of very low, low and moderate income households.

- **Housing and Urban Development, U. S. Department of.** A cabinet level department of the federal government (HUD) which administers housing and community development programs.

- **Housing Unit.** The place of permanent or customary abode of a person or household. A housing unit may be a single-family dwelling, a condominium, a modular home, a mobile home, a cooperative, or located in a multi-family dwelling or any other residential unit considered real property under state law. A housing unit has at least cooking facilities, a bathroom and a place to sleep.

- **Impact Fees.** Fees levied on the developer of a project by the Town as compensation for unmitigated impacts the project will produce.

- **Impervious Surface.** Surface through which water cannot penetrate, such as a roof, road, sidewalk and paved parking lot. The amount of impervious surface increases with development and establishes the need for drainage facilities to carry the increased runoff.

- **Implementation.** Actions, procedures, programs or techniques that carry out policies.

- **Infill.** Development of vacant land (usually individual lots or leftover properties) within areas which are already largely developed.

- **Infrastructure.** Public services and facilities, such as water supply and distribution, storm drainage improvements, other utility systems, roads, and service capacities of the local school district and recreation and park district.

- **Interagency.** Indicates cooperative actions between or among two or more discrete agencies in regard to a specific program.

- **Interest, Fee.** A share or right in property that entitles a landowner to exercise complete control over disposition and use of land, subject only to governmental land use regulations. Modernly, and not in strict legal terms, "fee" is synonymous with "fee simple" or ownership.

- **Interest, Less-than-Fee.** An interest in land other than outright ownership; includes the purchase of development rights via conservation, open space or scenic easements. (See "Development Rights," and "Easement, Scenic.")

- **Intermittent Stream.** A stream that normally flows for at least thirty days after the last major rain of the season and is dry a large part of the year.

- **Land Banking.** When a local government buys land and holds it for resale at a later date, usually for development of affordable housing. (See "Affordable.")

- **Landmark.** Refers to a building or site (including a specific tree or tree species) having historic, architectural, social or cultural significance and designated for preservation by the local, state or federal government.

- **Landscaping.** Planting--including trees, shrubs, and ground covers--suitably designed, selected, installed and maintained so as to permanently enhance a site, the surroundings of a structure, or the sides or medians of a roadway.

- **Land Use.** The occupation or utilization of land or water area for any human activity or any purpose defined in the *General Plan*.

- **Land Use Designations** . A classification system for the designation of appropriate use of properties. The land use designations include the various residential, commercial/industrial, recreational and public service land uses assigned to property within the primary and secondary planning areas (see Chapter 2 of Volume I, *Policy Document*).

- **Land Use Element.** A basic element of the *General Plan*, it combines text and maps to designate the future use or reuse of land within a given jurisdiction's planning area. A land use element serves as a guide to the structuring of zoning and subdivision controls, urban renewal and capital improvements programs, and to official decisions regarding the distribution, density and intensity of development and the location of public facilities and open space.

- **Land Use Regulation.** A term encompassing the regulation of land in general and often used to mean those regulations incorporated in the *General Plan*, as distinct from zoning regulations (which are more specific).

- **Level of Service (LOS).** Qualitatively describes the operating conditions encountered on roadways. LOS ranks roadway operations based on the amount of traffic and the quality of traffic operations on a scale of A through F. Level A represents free flow conditions and Level F represents jammed or "at capacity" conditions.

- **Local Agency Formation Commission (LAFCo).** A county commission that reviews and evaluates all proposals for formation of special districts, incorporation of cities, annexation to special districts or cities, consolidation of districts and merger of districts within cities. Each county's LAFCo is empowered to approve, disapprove or conditionally approve these proposals.

- **Lot.** (See "Site.")

- **Lot Coverage.** The amount of a lot covered by impervious surface.

- **Manufactured Housing.** Houses which are constructed entirely in the factory, and which since 1976 have been regulated by the federal Manufactured Home Construction and Safety Standards under the administration of the U. S. Department of Housing and Urban Development (HUD).

- **Master Environmental Assessment.** An assessment and documentation of the existing physical and environmental conditions of a given area.

- **May.** That which is permissible.

- **Minimize.** To reduce or lessen, but not necessarily to eliminate.

- **Mining.** The act or process of extracting resources, such as coal, oil or minerals from the earth.

- **Mitigate.** To ameliorate, alleviate or avoid to the extent reasonably feasible. According to CEQA, mitigations include: (a) avoiding an impact by not taking a certain action or parts of an action; (b) minimizing an impact by limiting the degree or magnitude of the action and its implementation; (c) rectifying an impact by repairing, rehabilitating or restoring the environment affected; (d) reducing or eliminating an impact by preserving and maintaining operations during the life of the action; (e) compensating for an impact by replacing or providing substitute resources or environments.

- **Mobile Home.** A structure, transportable in one or more sections, built on a permanent chassis and designed for use as a single-family dwelling unit when connected to required utilities.

- **Modular Unit.** A factory fabricated, transportable building or major component designed for use by itself or for incorporation with similar units onsite into a structure for residential, commercial, educational, or industrial use. A modular unit does not have any chassis for future movement. (See "Mobile Home.")

- **Multi-Family Dwelling.** A building legally accommodating more than one family.

- **Must.** That which is mandatory.

- **Natural State.** The condition existing prior to development.

- **Necessary.** Essential or required.

- **Need.** A condition requiring supply or relief. The town may act upon findings of need within or on behalf of the community.

- **Neighborhood Park.** Publicly owned land intended to serve the recreation needs of people living or working within a one-half mile radius of the park and also intended to contribute to a distinct neighborhood identity.

- **Noise Attenuation.** Reduction of the level of a noise source using a substance, material or surface, such as earth berms, fencing, walls, etc.

- **Nonattainment.** The act of not achieving a desired or required level of performance. Frequently used in reference to air quality.

- **Objective.** A specific statement of desired future conditions towards which the town will expend effort in the context of striving to achieve a broader goal.

- **Onsite Wastewater Maintenance District.** A district that monitors the performance of individual septic tank and leachfield systems and the enforcement of the town sewage disposal ordinance.

- **Outer Approach Zone.** Air space in which an air traffic controller initiates radar monitoring for incoming flights approaching an airport.

- **Overlay.** A land use designation on the Land Use Map, or a zoning designation on the zoning map, which modifies the basic underlying designation in some specific manner. In this *General Plan*, the urban separator is an overlay which recognizes the underlying residential densities and permits the transfer of the underlying number of units to a developable portion of the same property, on a case-by-case basis.

- **Paradise Municipal Code.** The compendium of local laws that regulate specified activities within the Town of Paradise.

- **Parcel.** A lot, or contiguous group of lots, in single ownership or under single control, usually considered a unit for purposes of development.

- **Parking Area, Common.** A public or private parking area used jointly by two or more land uses.

- **Parking Area, Public.** An open area, excluding a street or other public way, used for the parking of automobiles and available to the public, whether for free or for compensation.

- **Performance Standards.** Zoning regulations that admit uses based on a particular set of standards of operation rather than on the particular type of use. Performance standards may be established to limit noise, air pollution, emissions, odors, vibrations, dust, dirt, glare, heat, fire hazards, wastes, traffic generation and visual impact of a use.

- **Physical Diversity.** A quality of a site, town or region in which are found a variety of architectural styles, natural landscapes and/or land uses.

- **Planning Period.** The assigned timeframe of the revised Paradise *General Plan*. The planning period for the new *General Plan* is fifteen (15) years.

- **Policy.** A specific statement that guides decision making. It indicates a clear commitment of the local legislative body (Town Council). A policy is based on a *General Plan*'s goals and objectives as well as an analysis of data. For a policy to be useful as a guide to action it must be clear and unambiguous.

- **Pollution, Nonpoint.** Sources of water for pollution which are difficult to define and which usually cover broad areas of land, such as the carrying of fertilizers from agricultural land by runoff.

- **Pollution, Point.** In reference to water quality, a discrete source from which pollution is generated before it enters receiving waters, such as a sewer outfall or an industrial waste pipe.

- **Prorata.** Refers to the proportionate distribution of the cost of infrastructure improvements associated with new development to the users of the infrastructure on the basis of projected use.

- **Protect.** To maintain and preserve beneficial uses in their present condition as nearly as possible.

- **Rare or Endangered Species.** A species of animal or plant listed in Sections 670.2 or 670.5, Title 14, of the California Administrative Code; or Title 50, Code of Federal Regulations, Section 17.11 or Section 17.2, pursuant to the federal Endangered Species Act designating species as rare, threatened or endangered.

- **Recognize.** To officially (or by official action) identify or perceive a given situation.

- **Recycle.** The process of extraction and reuse of materials from waste products.

- **Regional Park.** A park typically 150-500 acres in size focusing on activities and natural features not included in most other types of parks and often based on a specific scenic or recreational opportunity.

- **Regulation.** A rule or order prescribed for management of government.

- **Rehabilitation.** Used in the context of housing, the term rehabilitation means to restore housing units to their former state or to a safe and pleasing condition.

- **Resource, Nonrenewable.** Refers to natural resources, such as fossil fuels and natural gas, which, once used, cannot be replaced and used again.

- **Restore.** To renew, rebuild or reconstruct to a former state.

- **Restrict.** To check, bound or decrease the range, scope or incidence of a particular condition.

- **Retrofit.** The addition of materials and/or devices to an existing building or system to improve its operation or efficiency.

- **Ridgeline.** A line connecting the highest points along a ridge and separating drainage basins or small scale drainage systems from one another.

- **Right-of-Way.** The strip of land over which certain transportation and public use facilities are built, such as roadways, railroads and utility lines.

- **Risk.** The danger or degree of hazard or potential loss.

- **Scenic Highway.** In the context of the *General Plan*, the term scenic highway refers to corridors along main streets entering the town. (See the *Open Space/Conservation Element* contained in Volume I, *Policy Document*, for a detailed description.)

- **Shall.** That which is obligatory or necessary.

- **Should.** Signifies a directive to be honored if at all possible.

- **Sign.** Any representation (written or pictorial) used to identify, announce or otherwise direct attention to a business, profession, commodity, service, or entertainment.

- **Siltation.** (a) the accumulating deposition of eroded material; (b) the gradual filling in of streams and other bodies of water with sand, silt and clay.

- **Single-Family Dwelling, Attached.** A dwelling unit occupied or intended for occupation by only one family that is structurally connected with other such dwelling units.

- **Single-family Dwelling, Detached.** A dwelling unit occupied or intended for occupation by only one family that is structurally independent from any other such dwelling unit or structure intended for residential or other use.

- **Site.** A parcel of land used or intended for use or a group of uses and having frontage on a public or an approved private street.

- **Slope.** Land gradient described as 100 times the vertical rise divided by the horizontal run. For example, a hill or road which rises in elevation fifteen feet in a horizontal length of 100 feet has a slope of fifteen percent.

- **Solar Access.** The provision of direct sunlight to an area specified for solar energy collection when the sun's azimuth is within forty-five degrees of true south.

- **Solid Waste.** General category that includes organic wastes, paper products, metals, glass, plastics, cloth, brick, rock, soil, leather, rubber, yard wastes, and wood. Organic wastes and paper products comprise about seventy-five percent of typical urban solid waste.

- **Specific Plan.** A tool for detailed design and implementation of a defined portion of the area covered by a general plan. A specific plan may include all detailed regulations, conditions, programs, and/or proposed legislation which may be necessary or convenient for the systematic implementation of any general plan element(s) or portion thereof.

- **Sphere of Influence.** A planned area for the probable ultimate physical boundaries and service area of a local government agency.

- **Standards.** Usually refers to *site design regulations*, such as lot area, height limit, frontage, landscaping, and floor area ratio, as distinguished from *use restrictions*; loosely refers to all requirements in a zoning ordinance.

- **Storm Runoff.** Surplus surface water generated by rainfall that does not seep into the earth but flows overland to flowing or stagnant bodies of water.

- **Structure.** Anything constructed or erected which requires location on the ground (excluding swimming pools, fences, and walls used as fences).

- **Study Area(s).** The area(s) included for study within the Paradise *General Plan*. These areas include primary, secondary and tertiary study areas.

- **Substantial.** Considerable in importance, value, degree or amount.

- **Target Businesses**. Those businesses or industries, which after careful analysis appear to be most compatible with the surrounding area.

- **Tourism**. The business of providing services for persons traveling for pleasure, tourism contributes to the vitality of the community by providing revenue to local business. Tourism can be measured through changes in the transient occupancy tax or restaurant sales.

- **Trees, Street**. Trees strategically planted--usually in parkway strips or medians--to enhance the visual quality of a street.

- **Trip**. A one-way journey that proceeds from an origin to a destination via a single type of vehicular transportation; the smallest unit of movement considered in transportation studies.

- **Trip Generation**. The dynamics that account for people making trips in automobiles or by means of public transportation. Trip generation is the basis for estimating the level of use for a transportation system and the impact of additional development or transportation facilities on an existing, local transportation system.

- **Truck Route**. A path of circulation required for all vehicles exceeding set weight or axle limits, a truck route follows major arterials through commercial or industrial areas and avoids sensitive residential areas.

- **Undevelopable**. Specific areas where topographic, geologic and/or soil conditions indicate a significant danger to future occupants.

- **Urban Sprawl**. Haphazard growth or outward expansion of a community resulting from uncontrolled or poorly managed development.

- **Use**. The purpose for which a lot or structure is or may be leased, occupied, maintained, arranged, designed, intended, constructed, erected, moved, altered and/or enlarged pursuant to the town's zoning ordinance and *General Plan* land use designation.

- **Very Low Income**. Very low income households are those earning less than fifty percent of the county median income.

- **View Corridor**. The line of sight identified as to height, width, and distance of an observer looking toward an object of significance to the community (e.g., ridgeline, river, historic building, etc.).

- **Viewshed**. The area within view from a defined observation point.

- **Wastewater Irrigation**. The process by which wastewater that has undergone primary treatment is used to irrigate agricultural land.

- **Watershed.** The total area above a given point on a waterway that contributes water to its flow; the entire region drained by a waterway or watercourse which drains into a lake or reservoir.

- **Waterway.** Natural or once natural (perennially or intermittently) water including rivers, streams and creeks. Includes natural waterways that have been channelized, but does not include man made channels, ditches and underground drainage and sewage systems.

- **Williamson Act.** Known formally as the *California Land Conservation Act of 1965*, it was designed as an incentive to retain prime agricultural land and open space in agricultural use, thereby slowing its conversion to urban and suburban development. Landowners were offered reduced property tax assessments if they agreed not to develop their land for ten years. The lowered assessments were based on the agricultural use of their land--"use value," instead of "market value."

- **Zoning.** The division of the town by legislative regulations into areas, or zones, which specify allowable uses for real property and size restrictions for buildings within these areas; a program that carries out policies of the *General Plan*.

- **Zoning District.** A designated section of the town for which prescribed land use requirements and building and development standards are uniform.

Town of Paradise

Figure 2-1

Landuse

Residential
- AR - Agricultural
- RR - Rural
- TR - Town
- MR - Multi-Family

Commercial
- NC - Neighborhood
- CC - Central
- TC - Town

Industrial
- LI - Light
- BP - Business Park

Public/Quasi-Public
- CS - Community Service
- R - Recreational
- PI - Public Institutional

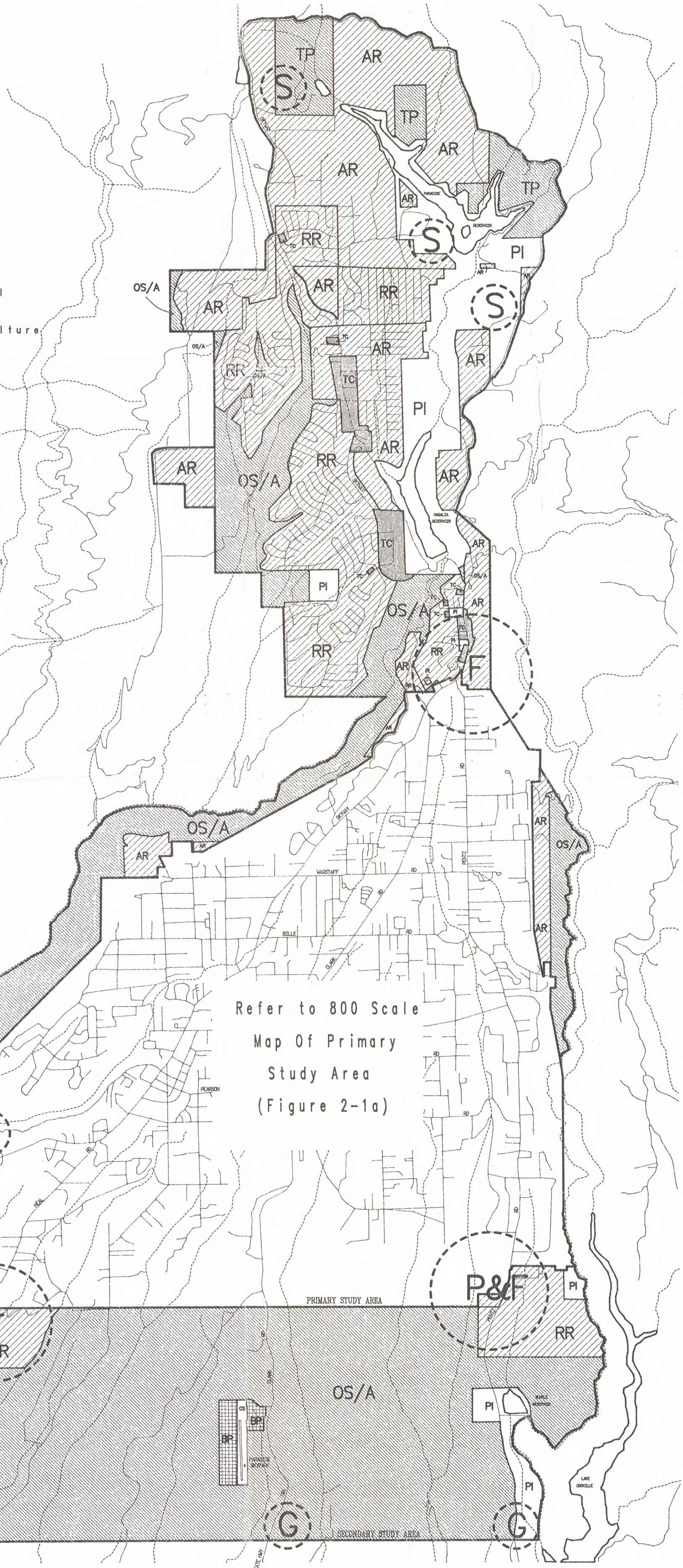
Open Space/Agriculture
- OS/A - Open Space/Agriculture
- TP - Timber Production

(F) Future Fire Station
(S) Future School Site
(P) Future Park Site
(G) Gateway

N

SCALE: 1 inch = 2000 feet

Center For Planning and Geographic Analysis
California State University, Chico
Revised By: Jim Aranguren September 23, 1994
Base Source: Quad Consultants, Sac., CA



Refer to 800 Scale Map Of Primary Study Area (Figure 2-1a)

Town of Paradise General Plan
Land Use Designations - Primary Study Area
(Figure 2-1a)
RESIDENTIAL
AR Agricultural Residential
RR Rural Residential
TR Town Residential
MR Multi-family Residential
COMMERCIAL
NC Neighborhood Commercial
CC Central Commercial
TC Town Commercial
INDUSTRIAL
LI Light Industrial
PUBLIC/QUASI-PUBLIC
CS Community Service
R Recreational
PI Public Institutional
OPEN SPACE/AGRICULTURE
OS/AG Open Space/Agriculture
F Future Fire Station
S Future School Site
P Future Park Site
G Gateway
800 0 800 1600 2400 3200 Feet
Town of Paradise General Plan
Land Use Designations
Prepared by Craig Baker
July, 2009
N
W
E
S

Town of Paradise

Figure 2-2

Circulation

- Arterial Streets
- Collector Streets
- Residential Collector Streets
- New Connection (Non-Collector)
- New Connection (Collector)
- Scenic Corridor
- Area With Potential Future East-West Through Road Linkage

SCALE: 1 inch = 2000 feet

Center For Planning and Geographic Analysis
California State University, Chico
Prepared By: Eric Lintz, June 11, 1993
Revised By: Jim Aranguren, September 23, 1994
Base Source: Quad Consultants, Sac., CA

Town of Paradise

Figure 2-3

Land Use Constraints Diagram

All Lands Within Primary Study Area

High/Very High Wildland Fire Hazard Area

Slopes (30% or greater)

Important Streamcourses/Drainage Areas

Noise Contours (60 dB L_{dn} Contour)

Airport Noise Contour (55 dB L_{dn})

Airport Safety Areas

Paradise Irrigation District Watershed Boundary

High Archaeological Sensitivity Area

Deer Migration Window

Note: The depicted constraints are not all inclusive. Other unidentified constraints may affect the development potential of a given piece of property.

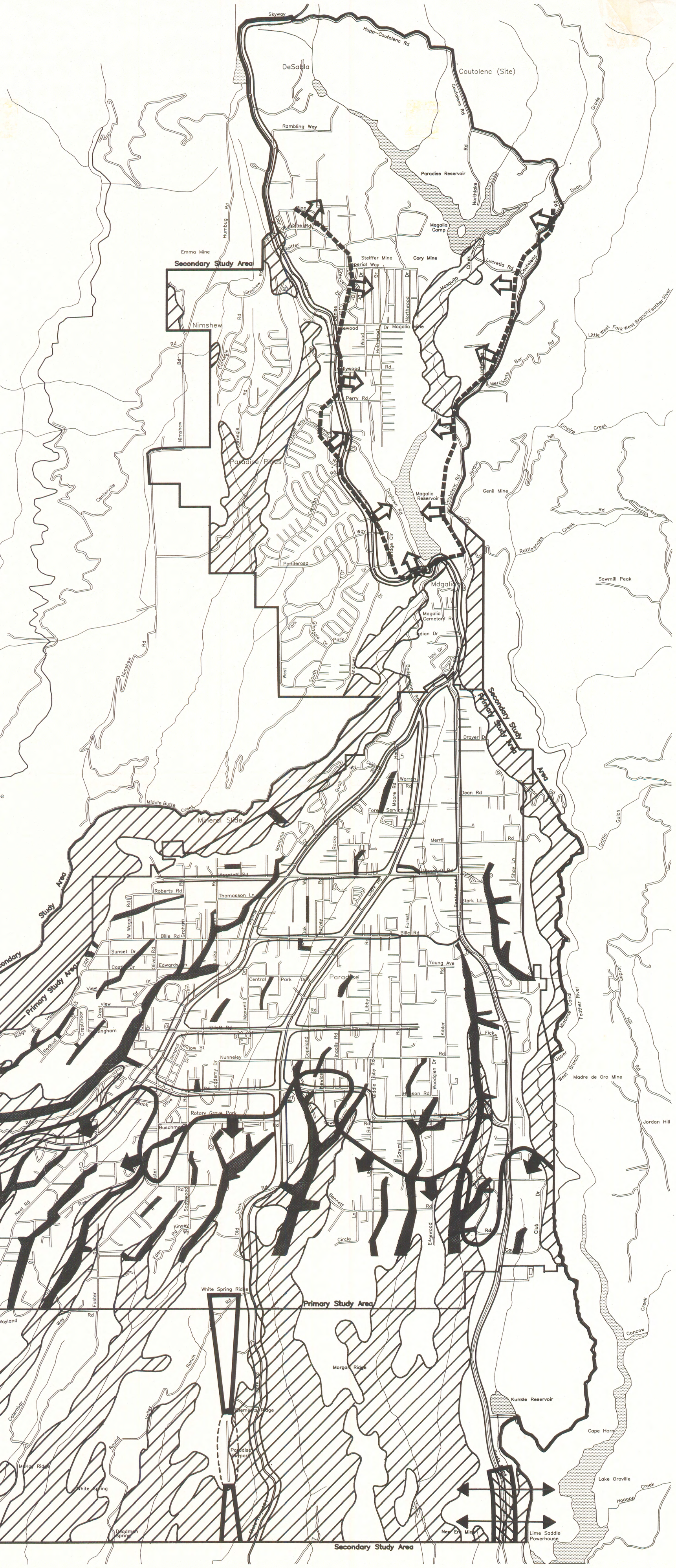
NORTH

SCALE: 1" = 2000'

0 1" 2"

QUAD

90 259 GP1
10 FEB 92
Paulson
24 MAR 92
13 MAY 92
22 SEPT 94



TOWN OF PARADISE

1994 GENERAL PLAN

VOLUME II
ENVIRONMENTAL IMPACT REPORT

SCH NO. 91043055

Prepared for and distributed by:

THE TOWN OF PARADISE
as the Lead Agency
5555 Skyway
Paradise, CA 95969
Community Development Department

May 1992

Prepared by:

QUAD Consultants
2530 J Street, Suite 302
Sacramento, CA 95816

TOWN OF PARADISE
GENERAL PLAN
VOLUME II - ENVIRONMENTAL IMPACT REPORT

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3.13-6 PROJECTED TRAFFIC VOLUMES, LANE REQUIREMENTS, CLASSIFICATION AND LEVEL OF SERVICE

5.1-1 TOWN OF PARADISE PROPOSED AND APPROVED PROJECTS

TABLE OF FIGURES

SUMMARY OF DRAFT EIR

MITIGATION MONITORING PROGRAM

PROJECT DESCRIPTION

The proposed project is the adoption of a revised *General Plan* for the Town of Paradise and surrounding Planning Area. The planning period for the proposed *General Plan* is 1992 through 2007. The Paradise Planning Area is located in eastern Butte County in the western foothills of the Cascade-Sierra Nevada Mountains.

MITIGATION MONITORING PROGRAM

The California Environmental Quality Act (CEQA) prohibits a public agency from carrying out or approving a project for which an EIR identifies significant environmental effects, unless findings relative to mitigation of those effects have been made. Section 21081.6 of the Public Resources Code (CEQA) requires the agency making those findings--in this case, the Town Council of the Town of Paradise--to adopt a reporting or monitoring program for adopted or required changes to mitigate or avoid significant effects. This program must be designed to ensure compliance during project implementation. This code section also requires an agency having jurisdiction over natural resources affected by a project, if requested by the Lead Agency, to submit a proposed reporting or monitoring program for changes required or incorporated into the project at its request.

The proposed mitigation monitoring program for the proposed *General Plan* has been integrated with the Summary of Potential Impacts and Proposed Mitigation Measures which is set out on the table which follows.

In addition to the mitigation monitoring program set forth in the chart, the State *General Plan Guidelines* recommend that cities and counties establish formal procedures for regularly monitoring the effectiveness of their general plans. When a monitoring program reveals a plan inadequacy, the Town should amend or, if necessary, totally revise the general plan to bring it up to date. The Town should annually review and

amend, as necessary, those portions of the plan having a short-term focus, such as the implementation measures. The review should take into account the availability of new implementation tools, changes in funding sources, and the feedback from plan monitoring activities. State law requires the local planning agency to provide an annual report to the legislative body on the status of the plan and progress in its implementation.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

The proposed *General Plan*, almost by definition, addresses a number of issues which are potentially controversial. Areas of controversy and issues to be resolved identified by residents of Paradise and interested agencies include the following:

- Rate, location and character of population growth and new development
- Residential lot sizes
- Loss of agricultural land
- Air quality impacts of growth
- Impacts of growth on wildlife and trees
- Institution of sewer service in the community
- Increased traffic
- Cost and need for new or expanded public services, including police and fire, schools, parks, sewage disposal and water service
- Aesthetics
- Annexation of developed areas such as Paradise Pines and the Lime Saddle area.

TABLE S-1
SUMMARY OF POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES
MITIGATION MONITORING PROGRAM

Impact Number	Impact	Mitigation Number	Mitigation Measures	Level of Significance After Plan Adoption/Mitigation	Monitoring Program
3.2.1-1	Excessive cuts and fills, excessive road grades, access hindered by topography		None required	Less than significant	None required
3.2.1-2	Modification of ridgelines, canyons or other significant land forms		None required	Less than significant	None required
3.3-1	Exposure of people and property to earthquakes		None available	Potentially significant	None required
3.3-2	Exposure of people and property to liquefaction, landslides, dam inundation hazards. Exposure of structures, roads and utilities to subsidence		None required	Less than significant	None required
3.4-1	Conversion of productive soils for timber production and grazing use to nonagricultural uses		None required	Less than significant	None required
3.4-2	Wind and water erosion and stream siltation due to soil disturbance from construction		None required	Less than significant	None required
3.5-1	Cumulative adverse impact on regional air quality	3.5-1	Installation and maintenance of air monitoring station in Paradise	Significant cumulative impact	To be requested from BCAPCD. Installation and maintenance by BCAPCD.
3.5-2	Emissions from heavy construction equipment and dust generation from grading activity		None available (construction equipment emissions) None required (dust generated)	Significant (construction equipment emissions) Less than significant (dust generation)	None required (construction equipment emissions) None required (dust generation)

TABLE S-1
SUMMARY OF POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES
MITIGATION MONITORING PROGRAM

Impact Number	Impact	Mitigation Number	Mitigation Measures	Level of Significance After Plan Adoption/Mitigation	Monitoring Program
3.5-3	Increased stationary source emissions from new business and industry		None required	Less than significant	None required
3.6-1	Exposure of people and property to onsite and offsite flooding. Increased runoff due to increase in impervious surfaces		None required	Less than significant	None required
3.6-2	Degradation of surface water quality and contamination of watershed	3.6-1	Compliance with NPDES standards. Design of stormwater treatment facilities to remove soluble, suspended and surface floating pollutants as well as sediments.	Less than significant	Monitoring by Town Engineering Office and Butte County Environmental Health Dept. Annual written reports submitted to Town and DFG for 5 years, with corrective recommendations
3.6-3	Degradation of groundwater quality		None required	Less than significant	None required
3.6-4	Potential to encounter unsafe drinking water		None required	Less than significant	None required

TABLE S-1
SUMMARY OF POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES
MITIGATION MONITORING PROGRAM

Impact Number	Impact	Mitigation Number	Mitigation Measures	Level of Significance After Plan Adoption/Mitigation	Monitoring Program
3.7-1	Loss of vernal pools, freshwater marsh, and riparian wetlands	3.7-1	Application for and receipt of federal Section 404 permits from U.S. Army Corps of Engineers	Less than significant	Issued by U.S. Army Corps of Engineers prior to Town approval of projects. Monitoring programs formulated through permit process.
		3.7-2	Application for and receipt of Streambed Alteration Permits from DFG		Issued by DFG prior to Town approval of projects. Monitoring by Town Engineering Office and DFG
		3.7-3	Setbacks and drainage restrictions for streams, lakes and wetlands		Annual written reports submitted to Town and DFG for 5 years, with corrective recommendations

TABLE S-1
SUMMARY OF POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES
MITIGATION MONITORING PROGRAM

Impact Number	Impact	Mitigation Number	Mitigation Measures	Level of Significance After Plan Adoption/Mitigation	Monitoring Program
3.7-2	Impact on wildlife resources, deer winter range, animal species of special concern (including bald eagle) due to loss of habitat	3.7-1 3.7-4	See above Biotic surveys, floristic studies, tree inventories of previously undeveloped sites prior to development. Setbacks and drainage restrictions as required	Potentially significant unavoidable impact	See above Study results submitted to DFG for review. Compliance monitored by Town Community Development Dept.
3.7-3	Loss of sensitive plant populations, including oak woodlands.	3.7-1 3.7-4	See above See above	Less than significant	See above See above
3.7-4	Impacts on fisheries in Butte Creek and Feather River due to erosion, sedimentation, siltation, streambed alteration and loss of riparian vegetation	3.7-2	See above	Less than significant	See above
3.8-1	Increased and continuing noise from major roadways		None required	Less than significant	None required
3.8-2	Increased noise or creation of new sources of noise from fixed noise sources		None required	Less than significant	None required
3.8-3	Increased noise due to increased operations at Paradise Skypark Airport		None required	Less than significant	None required

TABLE S-1
SUMMARY OF POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES
MITIGATION MONITORING PROGRAM

Impact Number	Impact	Mitigation Number	Mitigation Measures	Level of Significance After Plan Adoption/Mitigation	Monitoring Program
3.9-1	New sources of light and glare in previously undeveloped areas		None required	Less than significant	None required
3.10-1	Conversion of agricultural lands to nonagricultural use		See Impact 3.4-1	See Impact 3.4-1	See Impact 3.4-1
3.10-2	Substantial changes or alterations of present or planned land uses. See all other impacts		See all other mitigation measures		See all other monitoring programs
3.10-3	Land use conflicts between new and existing development		None required	Less than significant	None required
3.10-4	Growth-inducing impact. See all other impacts		See all other mitigation measures		See all other monitoring programs
3.11-1	Development of new housing compared to General Plan goals		None required	Less than significant	None required
3.11-2	Adverse impacts on existing housing		None required	Less than significant	None required
3.12-1	Exposure of people to potentially high levels of nuisance and disease vectoring mosquitoes and ticks; creation of new sources of vectors in planned wastewater treatment plant and stormwater retention basins	3.12-1	Proper design and maintenance of stormwater retention basins	Less than significant	Monitoring program requested from BCMAD
3.12-2	Traffic flow problems on evacuation routes in case of disaster		None required	Less than significant	None required

TABLE S-1
SUMMARY OF POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES
MITIGATION MONITORING PROGRAM

Impact Number	Impact	Mitigation Number	Mitigation Measures	Level of Significance After Plan Adoption/Mitigation	Monitoring Program
3.13-1	Traffic Generation at volumes that exceed Level of Service "C"	3.13-1	Development of additional east/west connector roadways	Less than significant	Road construction monitored by Town Engineering Office.
		3.13-2	Reconstruct intersection of Foster & Pearson Roads	Less than significant	Reconstruction monitored by Town Engineering Office
3.13-2	Cumulative impacts on Highways 70 and 99		None required	Less than significant	None required
3.14-1	Increased demand on police services		None required	Less than significant	None required
3.14-2	Increased fire protection demand		None required	Less than significant	None required
3.14-3	Increased structural and wildland fire hazard		None required	Less than significant	None required
3.14-4	Reduction of available landfill capacity		None required	Less than significant	None required
3.14-5	Need to extend solid waste collection services		None required	Less than significant	None required
3.14-6	Increased school enrollment		None required	Less than significant	None required
3.14-7	Increased demand on existing and for new public parks and recreational facilities		None required	Less than significant	None required
3.14-8	Increased water consumption, provision of adequate water supplies, and need for additional fire flow and peakload water supply		None available	Significant unavoidable cumulative impact	None required

TABLE S-1
SUMMARY OF POTENTIAL IMPACTS AND PROPOSED MITIGATION MEASURES
MITIGATION MONITORING PROGRAM

Impact Number	Impact	Mitigation Number	Mitigation Measures	Level of Significance After Plan Adoption/Mitigation	Monitoring Program
3.14-9	Impact of additional septic systems. See Impact 3.6-3		None required	Less than significant	None required
3.14-10	Construction of wastewater treatment, collection and disposal system		See Final EIR SCH #88041912	See Final EIR SCH #88041912	
3.15-1	Disturbance or destruction of cultural resources		None required	Less than significant	None required
3.15-2	Obstruction of scenic vistas or creation of aesthetically offensive sites		None required	Less than significant	None required

PREFACE

This Environmental Impact Report (EIR) has been prepared to address the potential effects of adopting and implementing a General Plan, referred to throughout this report as the *Paradise General Plan*, for the Town of Paradise and the surrounding Planning Area included in the General Plan. The EIR conforms to the requirements of the *California Environmental Quality Act of 1970 (CEQA)*, as amended, and the *State CEQA Guidelines*, as well as to the administrative procedures established by the Town of Paradise for the preparation and processing of EIRs. In accordance with Sections 15050 and 15367 of the *State CEQA Guidelines*, the Town of Paradise is designated as the lead agency for this report.

An EIR is an informational document intended to provide the general public and appropriate governmental decision-makers with a full understanding of the potential environmental effects of a proposed project. The EIR process is intended to enable public agencies to evaluate a project for determination of the significance of its effect(s) on the environment, to examine and institute methods of reducing and/or eliminating the severity of adverse impacts, and to consider alternatives to the project as proposed. CEQA requires that major consideration be given to preventing environmental damage. At the same time, it is recognized in CEQA that public agencies have obligations to balance other public objectives, including economic and social factors, in determining whether and how a project should be approved.

This EIR accompanies the *Paradise General Plan* Policy Document (including the seven mandatory elements), *Land Use Diagram* and *Circulation Diagram* (Volume I), which set out the proposed physical development and circulation system for the Planning Area. To an important extent, the considerations included in this EIR have influenced the content of, and direction established by, the General Plan. This EIR also incorporates by reference portions of the *Environmental Setting* document prepared for the *Paradise General Plan* (Volume III).

QUAD Consultants, a professional planning firm with offices in Sacramento, Visalia, Bakersfield and Fresno, California, assisted the Town with the preparation of this EIR and the *Paradise General Plan.*

CHAPTER ONE
INTRODUCTION

1.1 PROPOSED ACTION

A. The proposed actions for which this Environmental Impact Report (EIR) has been prepared include the following:

- Adoption and subsequent implementation of a General Plan for the Town of Paradise and the surrounding area, known as the *Paradise General Plan.*

- Subsequent Zoning and Subdivision Ordinance amendments and changes of zone to achieve consistency with the *General Plan.*

B. The objectives of this project are to:

- Identify the Town's land use, circulation, environmental, economic and social goals and policies as they relate to land use and development through the year 2007.

- Provide a basis for Town decision-making, including a nexus to support development exactions as required by *Nollan v. California Coastal Commission* (1987).

- Provide citizens with opportunities to participate in the planning and decision-making processes of local government.

- Inform citizens, developers, decision-makers, other cities and Butte County of the ground rules that will guide development within the Town.

The area encompassed by the *General Plan* is described as the Paradise Planning Area. The Paradise Planning Area consists of the Town of Paradise and the surrounding Secondary and Tertiary Planning Areas to the north and south, as shown in Figure 2-3. All future development activities within this area, as well as the continuation of existing

or established uses, would be carried out or sustained in accordance with the adopted *Paradise General Plan*. The Plan will be adopted by, and administered under the auspices of, the Town of Paradise. For the portions of the Planning Area which are in the unincorporated area of Butte County, the County will be requested to adopt and administer an identical or substantially similar plan and approach to land use decision-making.

1.2 PROCEDURES

This EIR has been prepared for the Town of Paradise by QUAD Consultants in accordance with applicable provisions of the *California Environmental Quality Act (CEQA)* and the *State Guidelines for Implementation of the California Environmental Quality Act* (California Administrative Code, Title 14, Division 6, Chapter 3). As provided in Section 15121 (a) of the *Guidelines*, this EIR is to serve as an informational document that will:

> ...inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify ways to minimize the significant effects, and describe reasonable alternatives to the project...

Although a general plan and an EIR on a general plan are legally distinct, they must address many of the same concerns, and the processes for preparing them are similar. According to the *State General Plan Guidelines* a thorough process for revising an entire general plan will cover "virtually every substantive requirement of an EIR... A well-prepared general plan EIR covering broad geographic areas can increase the possibility that negative declarations can be issued at a later time for specific project proposals within the planning areas." The *CEQA Guidelines* recognize that a general plan EIR will not be as specific as an EIR on an individual project.

CEQA and the *CEQA Guidelines* authorize the use of the general plan EIR for subsequent discretionary projects in order to streamline and simplify environmental review. Through "tiering", the environmental review for subsequent project is limited to the additional significant effects which were not examined in the general plan EIR or effects which may be mitigated by specific revisions in the project.

The adoption of the proposed *Paradise General Plan* is a discretionary action of the Town of Paradise. Consequently, the Town is defined under CEQA as the *lead*

agency for the project. In accordance with State Planning Law and with the *CEQA Guidelines*, the Town will adopt the Plan only after a minimum of one public hearing each before the Planning Commission and the Town Council.

The Town, following a forty-five day public review and comment period on the Draft EIR and public testimony on the environmental effects of the Plan, will address concerns raised by the public and by responsible and trustee agencies (as defined by CEQA) in a published Final EIR. The Town Council will certify this Final EIR preceding the adoption of the *Paradise General Plan*. Measures and programs prescribed in the Final EIR to mitigate potentially significant effects on the environment associated with carrying out the General Plan and related actions will be imposed by the Town upon future developers, upon itself, and upon other parties involved in implementing aspects of the Plan.

1.3 METHODOLOGY/SCOPE OF EIR

This EIR discusses and evaluates the potential effects of the approval, and subsequent implementation, of a General Plan for the Town of Paradise and the surrounding Planning Area included in the General Plan. Included in this environmental analysis are the direct effects of building out the portions of the Planning Area designated for development, as well as the cumulative and growth-inducing effects upon the community and regional environments. The EIR will also take into consideration the mitigating effects of many of the goals, objectives, policies and implementation measures which are a part of the General Plan.

In April 1991, the Town of Paradise distributed a Notice of Preparation (NOP) of the subject EIR, inviting responsible and trustee agencies and other interested parties to comment upon the appropriate scope of the environmental analysis. A copy of this NOP, and of the responses received by the Town, are included as Appendices A and B, respectively, of Volume II, *Environmental Impact Report*.

Based upon the Initial Study of the Plan's potential environmental effects and upon the comments received in response to the referenced NOP (see Appendices A and B), it has been determined that this EIR should be focused upon the following aspects of the environment:

- Topography

- Geology/Seismicity
- Soils
- Air Quality
- Hydrology
- Vegetation and Wildlife
- Noise
- Light and Glare
- Land Use and Population
- Housing
- Health Hazards and Safety
- Transportation and Circulation
- Public Facilities and Services
- Scenic and Cultural Resources

Aspects of the environment other than those listed and discussed above have been determined by the Town of Paradise to be unlikely to incur significant Plan related impacts. This EIR, therefore, will be confined to the topical areas referenced and to CEQA - mandated discussion of such general issues as the Plan's possible irreversible environmental effects, alternatives to the proposed Plan, and the comparative environmental superiority among such alternatives.

According to the *State General Plan Guidelines*:

> Because a general plan and its EIR overlap in content and should be prepared as part of a single planning process, local governments may want

to combine them into a single document or set of documents (*CEQA Guidelines*, Section 15166).

Three documents have been prepared which, taken together, constitute this Environmental Impact Report. Volume III, the *Environmental Setting*, contains information on the physical and environmental setting, including inventories of soils, geology, hydrology, air quality, vegetation, wildlife, energy, cultural heritage, ambient noise, existing land use, transportation, population, public services, and water quality, and a description of relevant local and regional plans. This document constitutes both the data and analysis out of which General Plan policies have evolved and the environmental setting section of the EIR.

The first document, Volume I, *Policy Document*, consists of the policies, plan proposals, standards and implementation program of the General Plan. In essence, this document is the project and constitutes the project description for purposes of CEQA. This document, Volume III, consists of the environmental assessment - the discussion of effects, mitigation measures, and alternatives which satisfies the requirements of an EIR. Ultimately, the three documents are to be certified as the EIR, while Volumes I and II are to be adopted as the General Plan.

The scope and analysis of the issues discussed above conforms to the *Standards for Adequacy of an EIR (CEQA Guidelines* Section 15151), which states:

> An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An analysis of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement, among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

The environmental effects of a change in an adopted plan and the range of discussion of potential impacts for issues such as police and fire protection and schools are guided in this EIR by the definition of "environment" in the *CEQA Guidelines*:

> Environment means the physical conditions which exist within the area which will be affected by the proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. (Section 15360)

Further, Section 15146 (b) states that "An EIR on projects such as the adoption or amendment of ...a local general plan should focus on the secondary effects that can be expected to follow from the adoption, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow. Accordingly, the impacts of the proposed *Paradise General Plan* and related actions are not evaluated in terms of change just in allowable land uses from the current Town General Plan and zoning plan, but rather in terms of the actual effects on the physical environment, as it exists now, attributable to Plan *implementation*. It should be noted that possible social and/or economic effects of a project are not considered environmental impacts under CEQA, unless they, in turn, result in adverse, identifiable effects on the *physical* environment.

The consideration of alternatives to the proposed project in this EIR has been conducted in conformance with Section 15126 (d) of the *CEQA Guidelines*, which prescribes:

> (3) The discussion of alternatives shall focus on alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance...
>
> (5) The range of alternatives required in an EIR is governed by "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The key issue is whether the selection and discussion of alternatives fosters informed decision-making and informed public participation.

The next chapter of this report describes the project in greater detail and summarizes the general characteristics of the Planning Area and vicinity. Chapter Three of this EIR describes specific characteristics of the Plan's environmental setting, organized within the framework of the topical areas of focus prescribed in response to the Town's Initial Study and responses to the Notice of Preparation. Chapter Three also identifies and discusses potentially significant project-related impacts on those selected aspects of the environment and sets forth mitigation measures for these impacts, as

appropriate. Chapter Four evaluates alternatives to the proposed Plan, including: the alternative of no Plan update, and alternative land use and circulation system scenarios. An alternative location for the Plan is evaluated only to the extent that alternative Planning Area boundaries have been considered.

The fifth and final chapter of this EIR summarizes significant environmental effects of the proposed Plan which cannot be avoided and evaluates the cumulative impacts and growth-inducement potential of the project. Following the text of this report, several appendices and references have been included to facilitate full environmental review of the Plan. Additional technical appendices referred to in this EIR document are included in Volume II, *Environmental Setting*, addressing in detail key aspects of the *Paradise General Plan's* environmental setting. Those technical appendices are to be regarded as an integral part of this EIR.

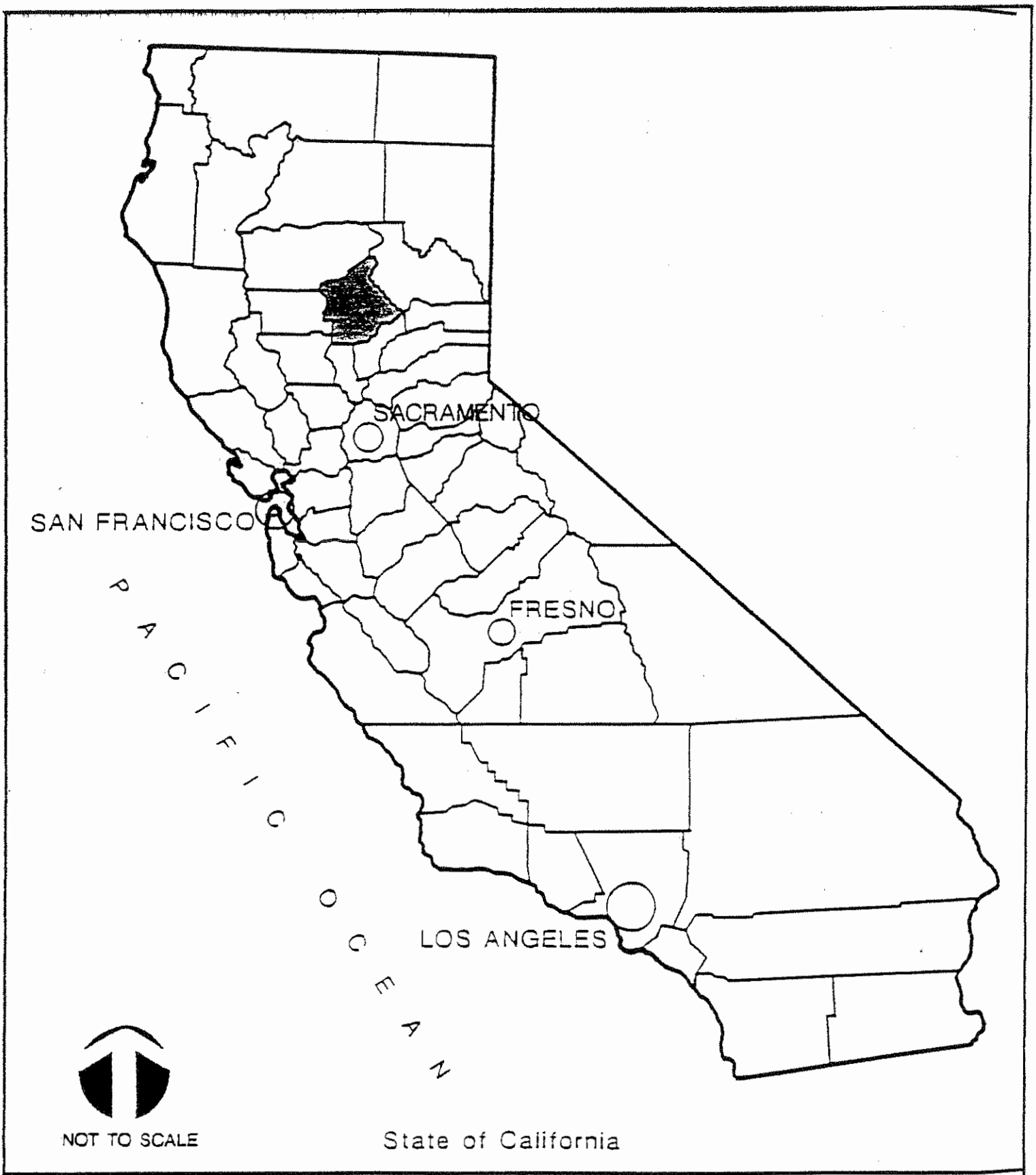
CHAPTER TWO
PROJECT DESCRIPTION

2.1 LOCATION

The Planning Area for the proposed *Paradise General Plan* is situated in eastern Butte County in the western foothills of the Cascade-Sierra Nevada Mountains and includes the Town of Paradise and surrounding unincorporated area of Butte County (see Figures 2-1 and 2-2). Located north of Paradise are the smaller unincorporated communities of Magalia, Paradise Pines, Nimshew and De Sabla; to the south of the Town is the Lime Saddle area. These areas are known as the Upper and Lower (Eden) Ridge, respectively. To the southeast is the City of Oroville (the County seat), and to the west is the City of Chico. State Route 191 and the Skyway are the primary access routes to the Town from State Highway 99. State Route 191 becomes Clark Road and bisects the community, ending near the northerly town limits. The South Fork of the Feather River flows through the Feather River Canyon along the easterly edge of the community.

Three study areas were established for the Town and surrounding areas for the purpose of the *General Plan*: the Primary Study Area, which reflects the existing Town limits; the Secondary Study Area, which encompasses the existing Sphere of Influence boundary adopted for the Town by the Butte County Local Agency Formation Commission (LAFCO); and the Tertiary Study Area, which extends to the south and west to Highway 99 and Pentz Road. The *Paradise General Plan* refers to these areas as the Primary, Secondary, and Tertiary Planning Areas respectively. These areas are shown on Figure 2-3. For purposes of the EIR, the terms "Study Area", "Planning Area" or "Plan Area" refer collectively to the Primary, Secondary and Tertiary Study Areas.

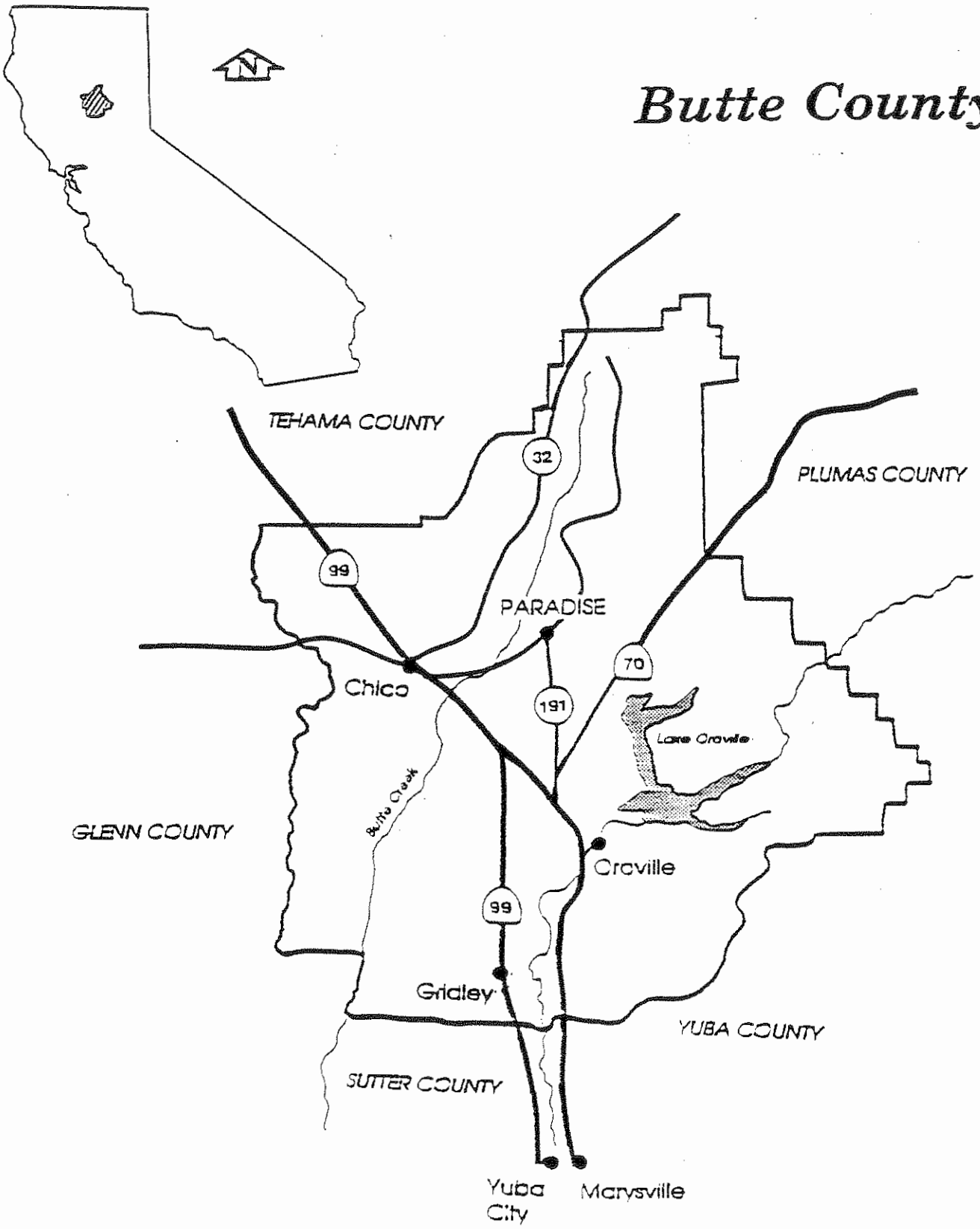
The Paradise town limits (Primary Study Area) encompasses approximately 11,820 acres, and the Secondary Study Area includes an additional 17,686 acres. The Planning Area includes all or portions of Sections 1, 2, 11, 12, 13, 14, 23, 24, 25, 26, 35 and 36, Township 23 North, Range 3 East; Sections 7, 18, 19, 30 and 31, Township 23 North, Range 4 East; Sections 1,2,3,9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35 and 36, Township 22 North, Range



QUAD

Butte County Location Map

Figure 2-1



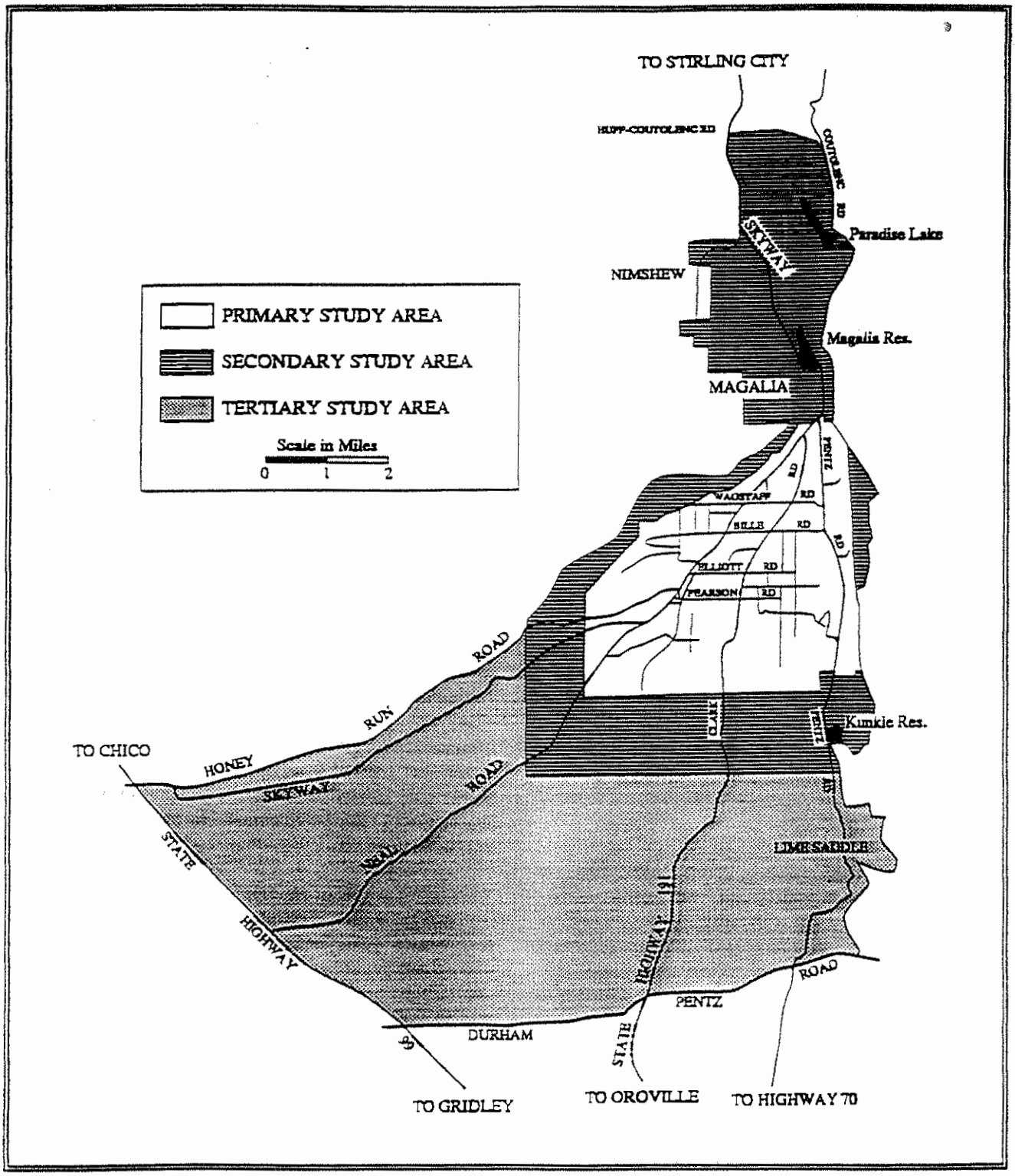
NOT TO SCALE

JAB CONSULTANTS

FIGURE 2—2

REGIONAL LOCATION

PARADISE, CA



PLANNING AREAS (GENERALIZED) FIGURE 2-3

3 East; Sections 6, 7, 18, 19, 30 and 31, Township 22 North, Range 4 East; Sections 1 through 31, Township 21 North, Range 3 East; Sections 6, 7, 8, 17, 18 and 19, Township 21 North, Range 4 East; Sections 25, 34, 35 and 36, Township 22 North, Range 2 East; Sections 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 25, and 26, Township 21 North, Range 2 East; Mount Diablo Base and Meridian; and a portion of the Esquon Rancho Spanish land grant, which has not been surveyed.

2.2 DESCRIPTION OF PROPOSED GENERAL PLAN

Chapter 1.0 of Volume I, the *Policy Document*, Section 1.1 explains the purpose and nature of the *General Plan.* Chapter 2.0 describes the *Land Use Diagram*, *Circulation Diagram* and *Land Use Constraints Diagram* and includes land use designations and standards, circulation system classifications, planned circulation system improvements and classifications, and a population density/land use and building intensity matrix. Chapter 6.0 contains the goals, objectives, policies, implementation measures, standards and programs which comprise the *Paradise General Plan.*

2.3 RELATED ACTIONS

Following adoption of the *Paradise General Plan*, the Town will undertake amendments to the Zoning and Subdivision Ordinances to achieve consistency with the *General Plan.* It is intended that this EIR will also be used by the Town as the environmental documentation for subsequent proposed Zoning and Subdivision Ordinance amendments.

CHAPTER THREE
ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

3.1 INTRODUCTION

As discussed in Chapter One, this EIR has been prepared to address the potential environmental effects of the adoption and implementation of a *General Plan* to guide land use, development and transportation systems in and around the Town of Paradise. Chapter One also identified the aspects of the environment which might be affected significantly by the Plan. In the following sections of this chapter, each of these aspects of the environment is discussed. For each topical area considered, reference is made to the relevant section(s) of Volume III, the *Environmental Setting*, for a description of the setting. Potential project-related impacts upon that setting are identified, and means of mitigating possible significant environmental impacts are outlined.

It should be noted that CEQA requires an EIR to suggest mitigation measures which will potentially offset any identified significant effects upon the environment, if such measures are available. It should also be noted that the *State CEQA Guidelines* mandate that mitigation measures proposed to be incorporated into the project must be distinguished from those proposed independently in the EIR. Finally, State law requires that the agency or other party responsible for carrying out identified mitigation measures be designated through the CEQA process. Accordingly, this EIR specifies, for each mitigation measure it proposes, the party responsible for its implementation.

Because this is an EIR for a general plan, the goals, objectives, policies, and implementation measures of the Plan itself are designed to mitigate or avoid impacts on the environment. Reference will be made to the pertinent Plan policy statement when that constitutes a mitigation measure. Additional mitigation measures may be incorporated into the Plan, if relevant, or simply incorporated into the *Mitigation Monitoring/Reporting Program* adopted for the Plan.

Table 3.1-1 which follows presents estimated acreage, square footage, dwelling units and population at *General Plan* buildout for the Primary and Secondary Planning Areas. This table will be referenced throughout this Chapter.

3.2 TOPOGRAPHY

Setting:

Please refer to Section 3.1 of Volume III, *Environmental Setting*, for a description of the topography of the Paradise Planning Area.

Impacts:

Impact Evaluation Criteria: The Uniform Building Code establishes standards with regard to construction on slopes. The Town of Paradise has amended Chapter 70 of the Uniform Building Code to impose additional requirements with regard to grading, slopes and erosion control. The significance of topographic-related impacts can be measured in comparison to these thresholds and a determination made as to whether the topographical features of the Planning Area impede compliance with these standards, or whether the Plan prescribes development which conflicts with these standards.

Impacts of Planning Area development must also be evaluated to determine the potential for site modifications to cause any impact to unique landforms such as ridgelines and canyons.

Impact #3.2.1-1: Potential for land development and construction or improvement of roads and other infrastructure in accordance with the *Paradise General Plan* which will create excessive cuts and fills or result in excessive road grades. Potential for topography to hinder adequate access.

Conclusion: The Planning Area contains excessively sloping lands (refer to Figure 3-1, Slope, of Volume III, *Environmental Setting*) and the potential exists for significant impacts to occur if development and construction were unregulated. However, the policy statements that are incorporated in the proposed *Paradise General Plan* and the regulations of the Town Subdivision Ordinance, Town Zoning Ordinance, Town Improvement

TABLE 3.1-1
GENERAL PLAN BUILDOUT
ACREAGE, DWELLING UNITS AND POPULATION

Primary Area							
Land Use Category	Existing Acreage by Land Use[1]	Existing Units/Sq. Ft.[2]	Potential New Acreage[3]	Potential New Units/Sq. Ft.[4]	Buildout Units/Sq. Ft.[5]	Total Persons	Acreage[6]
Agricultural Residential	-	-	1,587	317 u	317 u	748	1,587
Suburban Residential	-	-	1,454	2,181 u	2,181 u	5,147	7,942
Town Residential	5,348	10,883 u	58	87 u	10,970 u	25,889	317
Multi-Family Residential	146	796 u	72	540 u	1,336 u	2,565	479
Neighborhood Commercial	-	-	3	32,670 sf	32,670 sf	-	23
Central Commercial	-	-	4	87,120 sf	87,120 sf	-	128
Town Commercial	318	1,558,124 sf	42	457,380 sf	2,015,504 sf	-	436
Business Park	-	-	-	-	-	-	-
Light Industrial	30	310,500 sf	141	1,006,236 sf	1,316,736 sf	-	212
Community Service	56	195,000 sf	71	87,120 sf	282,120 sf	-	166
Public Institutional	414	666,405 sf	-	-	666,405 sf	-	175
Recreational	147	-	-	-	-	-	205
Open Space/Agriculture	145	-	-	-	-	-	175
Timber Production	-	-	-	-	-	-	-
Totals						**34,349**	**11,845**

Secondary Area					Full Buildout[7]			
Acreage[6]	Potential New Units/Sq. Ft.[4]	Existing Units/Sq. Ft.[2]	Buildout Units/Sq. F[1,5]	Total Persons [8]	Total Acres	Total Units	Total Persons	Total Sq. Ft.
3,392	678 u	-	678 u	1,600	4,979	995	2,348	-
2,586	1,124 u	4,906 u	5,220 u	12,319	10,528	7,401	17,466	-
-	-	-	-	-	317	10,970	25,889	-
-	147 u	12 u	159 u	305	479	1,495	2,870	-
1	-	10,890 sf	10,890 sf	-	24	-	-	43,560
-	-	-	-	-	128	-	-	87,120
330	-	99,350 sf	99,350 sf	-	766	-	-	2,114,854
280	896,819 sf	-	896,819 sf	-	280	-	-	896,819
-	-	10,000 sf	10,000 sf	-	212	-	-	1,326,736
63	108,900 sf	-	108,900 sf	-	229	-	-	391,020
1,398	-	121,737 sf	121,737 sf	-	1,573	-	-	788,142
262	-	-	-	-	467	-	-	-
8,811	-	-	-	-	8,986	-	-	-
588	-	-	-	-	588	-	-	-
17,711				**14,224**	**29,556**	**20,861**	**48,573**	

1. Based on Existing Land Use Survey.
2. Based on Housing Condition Surveys, March 1991 and February 1990, and documentation for the development of the Paradise Area Transportation Model Planning prepared for the Butte County Council of Governments, October 1990; Mobilehomes are included with single family units.
3. Based on land use designation and vacant land gross acreage.
4. Based on population density and building intensity ratios contained in Table 2-1. Residential densities are figured on the averaged allowable density; AR density is figured on 1 unit/5 acres. Commercial, Business Park and Industrial caluclations allow for property constraints.
5. Based on existing plus potential new, allowing for property constraints, and where data on existing square footage is available.
6. Based on total gross acres allocated to each land use category under General plan.
7. Primary Area plus Secondary Area.
8. Based on average household size of 2.36 for single family dwellings and 1.92 for multiple family dwellings.

Standards and the Uniform Building Code, as amended by the Town, will reduce these potential impacts to a level which is less than significant.

The proposed policy statements which are incorporated in the *General Plan* which will reduce impacts on topography are as follows:

Land Use Element

LUP-1 The limitations imposed on the Paradise area by topography, soils and other physical features shall be recognized in site-specific design as well as when establishing long-term growth objectives.

LUP-2 Building on slopes in excess of 30 percent shall not be permitted.

Safety Element

SP-18 The Town shall require all development proposals on sites which contain slopes exceeding 20 percent, and/or which border or include significant and sensitive streamcourses or natural drainageways, to include programs for replanting and slope stabilization, erosion control plans, and to incorporate designs which minimize grading and cut-and-fill.

SP-19 Building on slopes in excess of 30 percent shall not be permitted.

The Town has amended the Uniform Building Code to read as follows:

Section 7001. The purpose of this chapter is to safeguard life, limb, property and the public welfare, and to preserve and enhance

the natural environment by preventing and eliminating conditions of accelerated erosion and by regulating grading on private and public property in the incorporated areas of the Town of Paradise.

Section 7002. This chapter sets forth rules and regulations to control excavation, grading and earthwork construction, including fills and embankments, and erosion and sediment control; establishes the administrative procedure for issuance of permits; and provides for approval of plans and inspection of grading, erosion and sediment control operations.

Section 7003. No person shall do any grading, clearing or grubbing without first having obtained a grading permit from the Town Engineer except for the following:

1. An excavation which does not exceed two feet in vertical depth at its deepest point measured from the original ground surface and which does not create a cut slope greater than four feet in height and steeper than one and one-half horizontal to one vertical and does not exceed twenty-five cubic yards of material,

2. A fill that does not exceed one foot in vertical depth and is placed on natural terrain with a slope flatter than five horizontal to one vertical at its deepest point measured from the natural ground surface, or less than three feet in depth, not intended to support structures, which does not exceed twenty-five cubic yards on any one lot and does not change the existing drainage pattern,

3. Temporary excavations in a public street or right-of-way for which a permit has been issued by the Department of Public Works,

4. An excavation below finish grade for a basement, footing, retaining wall, swimming pool, or other structure authorized by a valid permit, which excavation will be completely occupied by and retained by the structure authorized by valid building permit,

5. A fill above existing grade, which fill will be retained by the exterior wall of a building, a retaining wall, swimming pool or other structure authorized by a valid building permit.

The Town has adopted design specifications for public and private roads and streets which include the requirement that public street or road grades shall not exceed ten percent except with written permission of the Town Engineer. The maximum grade for private roads or streets is thirteen percent. Under certain conditions where it is obvious the proposed roads will never serve more than six to eight lots, no hazardous traveling is envisioned, and it is deemed the health and safety of all who may use such roadway are not endangered with consideration given to road construction, erosion, surfacing and cross slope, the maximum grade may be greater than thirteen percent but not to exceed fifteen percent. Any grade in excess of thirteen percent is required to have an all-weather, non-skid surface.

Because all construction and development must be in compliance with these policies and regulations, this impact is found to be less than significant and no mitigation measures are required.

Impact #3.2.1-2: Potential for modification of ridgelines, canyons or other significant landforms during construction and development in accordance with the *General Plan.*

Conclusion: Ridgelines and canyons are dominant features of the topography of the Paradise Planning Area. The potential exists for significant impacts to occur if development and construction were unregulated. However, the policy statements which have been incorporated in the proposed *Paradise General Plan* and the regulations of the adopted Town Improvement Standards and Uniform Building Code, as amended, will reduce these potential impacts to a level which is less than significant.

The policies that are incorporated in the proposed *General Plan*, in addition to those listed in Impact #3.2.1-1 above, which will reduce impacts on significant landforms are as follows:

Open Space/Conservation/Energy Element

OCEP-17 Ridgeline development shall be carefully reviewed to assure a minimization of proposed structures that intrude into the view-line of nearby roadways and properties.

OCEP-27 Open space or resource conservation zoning shall be established for sensitive lands such as areas of resource production, steep canyons and stream corridors, and areas of significant natural resource value.

Because all construction and development must be in compliance with these policies and regulations, this impact is found to be less than significant and no mitigation measures are required.

Mitigation Measures: Because no significant impacts have been identified, no mitigation measures are required.

3.3 GEOLOGY/SEISMICITY

Setting: Please refer to Section 3.2 of Volume III, *Environmental Setting*, for a description of geology and seismicity of the Paradise Planning Area.

Impacts: **Impact Evaluation Criteria:** All of Butte County is situated in a UBC Risk Zone 3 and rated VIII by the Modified Mercalli Intensity Scale. A total of 3,125 new dwelling units and 1.67 million square feet of new commercial, industrial and other structures may be constructed in the Primary Planning Area at full buildout under the proposed *General Plan*, in addition to 1,949

new dwelling units and 1.01 million square feet in the Secondary Planning Area. Landslides, subsidence, liquefaction, dam inundation hazards and volcanic hazards are all potentially significant impacts, depending upon the likelihood that such events will occur. The assessments of risk related to these hazards in the Butte County *Safety Element* and the Paradise *Multihazard Disaster Plan* are used as impact evaluation criteria.

Impact #3.3-1: Potential to expose people and property to earthquakes.

Conclusion: All new structures must be constructed in compliance with the standards of the UBC and are less likely to suffer structural damage than existing structures built before such regulations were in place. According to the Paradise *Multihazard Disaster Plan*, while there are no known earthquake faults within the Planning Area, the Planning Area does encompass several active fault zones and is subject to earthquakes of the magnitude of 6.9 on the Richter scale. While the general seismic hazards experienced in the Paradise Planning Area are effectively addressed through the standards of the UBC in terms of structural damage, seismic events can also result in secondary impacts, including fires, disruption of water supply and utilities, and other hazards to which new development would be exposed. The *General Plan* would not, however, increase the hazards to which people and property are exposed. The *General Plan* does incorporate an implementation measure which will reduce impacts due to seismic activity; not, however, to a level which is less than significant due to the increased exposure of people and property to secondary impacts. This measure is as follows:

Safety Element

SI-8 Enforce and comply with the provisions of the Uniform Building Code and the Uniform Fire Code.

The impact is determined to be potentially significant and unavoidable if the *General Plan* is approved. No additional mitigation measures are available.

Impact #3.3-2: Potential to expose people and property to the effects of liquefaction, landslides and dam inundation hazards. Potential to expose structures, roads and utilities to the effects of subsidence.

Conclusion: According to the Butte County *Safety Element*, the Paradise Planning Area is rated as having a low landslide potential and is not within an area of potential subsidence. It is in an area with generally low potential for liquefaction. While dam inundation hazards are not addressed in the *Safety Element*, the two dams within the Planning Area are subject to annual safety inspections and were not identified as hazards in the *Multihazard Disaster Plan*. Impacts related to liquefaction, landslides, subsidence and dam inundation hazards are determined to be less than significant.

Impact #3.3-3: Potential to expose people and property to the hazards associated with volcanic eruption of Lassen Peak. At a distance of 70 miles, the most likely impact that would be experienced in the Paradise Planning Area is ashfall, which can cause damage to engines, stormwater and sewer systems, and sewage and water treatment plants; loss of visibility and associated impacts (such as vehicle accidents and impeded evacuation); collapse of flat-roofed structures due to weight; and respiratory illnesses.

Conclusion: According to the *Multihazard Disaster Plan*, though most of the eruptions in the Lassen Peak area have been small, it is believed that it is capable of much larger eruptions. An eruption could be expected within the next 100 years, with the severity unknown. The *General Plan* would not, however, increase the hazards to which people and property are exposed. The *Multihazard Disaster Plan* recommends several guidelines for

volcanic eruption planning, and the *General Plan* proposes to adopt the *Multihazard Disaster Plan* by reference. The *General Plan* does incorporate policy statements and implementation measures which will reduce impacts due to volcanic hazards; not, however, to a level that is less than significant. Those policy statements and implementation measures are as follows:

Circulation Element

CP-8 Creation of additional connections north to Paradise Pines; west to east to Feather River Hospital; and from west to east in the southern portion of the Town shall be studied.

Safety Element

SI-6 Educate residents regarding the dangers of seismic activity and wildland fires, and the Town of Paradise *Multihazard Disaster Plan.*

SI-7 Adopt the Town of Paradise *Multihazard Disaster Plan* by reference in the *General Plan.*

Mitigation Measures: No additional mitigation measures are available for Impact #3.3-1. Because no significant impacts have been identified for Impacts #3.3-2 and #3.3-3, no mitigation measures are required.

3.4 SOILS

Setting: Please refer to Section 3.3 of Volume III, *Environmental Setting*, for a description of the soils of the Paradise Planning Area.

Impacts: **Impact Evaluation Criteria:** Soil impacts fall into two general areas of concern:

- Impacts related to agricultural productivity of soils

- Impacts related to suitability of soils for development and erosion hazards

The significance of impacts on agricultural productivity can be measured by comparison of soil types to the U.S. Soil Conservation Service (SCS) Land Capability Classification System. Conversion of prime soils (Class I and II), those best suited for cultivation, should be considered significant. **A MODERN SCS SOIL SURVEY HAS NOT BEEN PREPARED FOR THE PLANNING AREA.** Information available from soil surveys of the Valley floor indicate that foothill lands in Butte County are generally of low agricultural capability (Classes VII and VIII). Although soil may not be prime, it may have other unique and beneficial uses.

A soil-vegetation survey prepared in 1980 by the California Department of Forestry did not rate the land for agricultural suitability, but rather for suitability for timber production and extensive range use. The potential for conversion of soils with a medium to high potential for timber production and range use to nonagricultural uses should be considered significant, provided that such soils are found in parcels of sufficient size to make timber production and range use (grazing) commercially viable.

Butte County, which currently has jurisdiction over the Secondary Planning Area, has established a minimum parcel size of 160 acres for grazing land and 160 acres for timber preserve. Where lands are used for grazing and such use and parcel size complies with County zoning, their conversion to other uses or division into smaller parcels should be considered significant.

Impact #3.4-1: The conversion of potentially productive soils for timber production and grazing use to nonagricultural uses.

Conclusion: Of the dominant soil types within the Primary and Secondary Planning Areas, the Aiken soils are rated as medium to very high suitability for timber production and unsuited to medium

suitability for range use; Toomes soils are rated as unsuited for timber production and low suitability for range use; Supan soils are rated as unsuited for timber production and medium suitability for range use; Pentz soils are rated as unsuited for timber production and high suitability for range use; Stover soils are rated as unsuited for timber production and medium suitability for range use; and Guenoc soils are rated as unsuited for timber production and low suitability for range use.

Based on these ratings, new development on Aiken, Supan and Pentz soils which precludes their use for timber production and grazing is potentially significant. Aiken soils, which are the predominant soil type (45%), are primarily found within the town limits (Primary Planning Area) and the portion of the Secondary Planning Area north of the town limits. New development is not proposed within the northerly Secondary Planning Area, and portions of the area are zoned Timber Preserve (TPZ) in Butte County and are proposed to be designated as "Timber Preserve" in the *General Plan*. The likelihood that timber production would be proposed within the town limits is remote, due to the built-up nature of the area and the small existing parcel sizes. Impacts on soils suitable for timber production are therefore determined to be less than significant, and no mitigation measures are required.

Pentz, Supan and Stover soils are the dominant soil types in the southerly Secondary Planning Area and are rated as high, medium and medium suitability, respectively, for grazing use. However, only one parcel within this area is 160 acres in size; all other parcels are less than 160 acres. The 160-acre parcel includes Stover and Pentz soils. This parcel is designated "Open Space/Agricultural" in the proposed *General Plan*. While the *General Plan* provides for the eventual conversion to nonagricultural use of the southerly Secondary Planning Area, no determination has been made as to the ultimate use of that particular 160-acre parcel. Slopes exceed 30 percent on portions of the site, and these areas would not be developed under the proposed *General Plan*. The *General Plan* (*Land Use Element*)

calls for preparation and adoption of a specific plan for the southerly Secondary Planning Area, which would include the assignment of specific land use designations. An environmental impact report will be prepared for the specific plan which will address the proposals and impacts expected to result from that plan.

Policy statements incorporated in the *General Plan* will reduce or delay the eventual conversion of lands to nonagricultural use by assuring that conversion occurs in an orderly and efficient matter and is not premature. These policy statements are as follows:

Land Use Element

LUP-5 The Town shall prepare a specific plan for the development of the Secondary Planning Area south of the town limits which will more precisely determine residential densities, roads, drainage, utilities and sewage disposal.

LUP-6 The "Open Space/Agriculture" classification shall be applied to most lands within the southerly Secondary Planning Area as a holding designation to prevent premature conversion to urban uses until such time as a specific plan is adopted and public facilities and services are available.

LUP-84 Encourage Butte County to maintain the Urban Reserve Policy for the area south of the Town limits and work with Butte County officials to develop an appropriate policy for the area north of Paradise.

Open Space/Conservation/Energy Element

OCEP-43 Significantly important agricultural and timber production lands, particularly those located in the

Secondary and Tertiary Planning Areas, shall be identified and protected from incompatible development.

OCEP-48 Timber production areas within the Planning Area shall be identified on the *Land Use Diagram.*

There are several small orchards remaining within the town limits. These parcels have been designated as "Open Space/Agriculture" or "Agricultural Residential", and the policies and implementation measures of the *General Plan* are designed to encourage their preservation. These policies and measures include the following:

Open Space/Conservation/Energy Element

OCEP-42 Retention of agricultural lands within the Town limits shall be encouraged while recognizing that changing circumstances may necessitate a change in use for some lands.

OCEI-24 Acquire conservation easements on important agricultural lands as funds are available to do so.

OCEI-25 If legally feasible, establish a Williamson Act program and execute Williamson Act contracts with interested property owners.

With the policy statements and implementation measures incorporated in the proposed *General Plan*, the impact on agricultural lands is found to be less than significant for the reasons stated above, and no mitigation measures are required.

Impact #3.4-2: The potential for soil disturbance during and following construction to lead to wind and water erosion and potential stream siltation.

Conclusion: The Planning Area contains excessively sloping land (refer to Figure 3-1, Slope, of Volume III, *Environmental Setting*), and some soils within the Planning Area have high to very high erosion potential and are adjacent to streamcourses (refer to Table 3-4 of Volume III). The potential exists for significant impacts to occur if development and construction were unregulated. However, the policy statements and implementation measures that are incorporated in the proposed *General Plan* and the regulations of the Town Subdivision Ordinance, Zoning Ordinance, Town Improvement Standards and the Uniform Building Code, as amended by the Town, will reduce these potential impacts to a level which is less than significant, and no mitigation measures are required.

The policy statements and ordinances set forth in the Conclusion for Impact #3.2.1-1, including the requirement for grading permits and erosion and sedimentation control plans in situations prescribed by Town ordinance, are also applicable to, and serve to reduce, this impact. In addition to those policies and ordinances, the proposed *General Plan* includes the following policy statements and implementation measures:

Safety Element

SP-17 Development projects shall be designed to minimize soil erosion, and shall be required to comply with all Town of Paradise adopted soil erosion standards maintained by the Town Engineering office.

Open Space/Conservation/Energy Element

OCEP-23 Streamcourses identified and designated as significantly important shall be carefully protected from the impacts of land use development, both within and outside the Town limits.

OCEP-25 Natural riparian vegetation along creeks shall be protected.

OCEP-27 Open space or resource conservation zoning shall be established for sensitive lands such as areas of resource production, steep canyons and stream corridors, and areas of significant natural resource value.

OCEI-1 Identify and map significantly important permanent and intermittent watercourses in the Planning Area on the *Land Use Constraints Diagram* and develop standards for their protection, including appropriate setbacks.

Because all construction and development must be in compliance with these policies, measures and regulations, this impact is found to be less than significant and no mitigation measures are required.

Mitigation Measures: Because no significant impacts have been identified, no mitigation measures are required.

3.5 AIR QUALITY

Setting: Please refer to Sections 4.2 and 16.4 of Volume III, *Environmental Setting*, for a description of air quality in the Paradise Planning Area and the Butte County *Air Quality Attainment Plan*, respectively.

Impacts: **Impact Evaluation Criteria:** The federal and State ambient air quality standards provide the basis for evaluating air quality impacts. These standards are shown in Table 3.5-1. Non-attainment of a federal or State emission standard for any pollutant is a significant impact. Because the State standards set forth under the California Clean Air Act of 1988 are more restrictive than federal standards, the State standards will be used for determination of significant impacts. It is unlikely that an individual development project consistent with the *General Plan* would, in itself, exceed a standard. However, almost every project will result in an incremental contribution to a condition in which standards are exceeded, and a significant cumulative impact will result.

Impact #3.5-1: Adoption of the *General Plan* will result in the accommodation of an increased population within the Planning Area over time and at buildout. The increase in population will result in increased vehicle traffic and increased emissions that will contribute to the cumulative regional degradation of air quality in the Paradise Planning Area and the Northern Sacramento Valley Air Basin. Refer to Table 3.1-1 for *General Plan* buildout figures and Table 3.13-3 for traffic generation figures. Based upon these figures, the estimated mobile source emissions which will result from adoption and implementation of the *General Plan* are shown in Table 3.5-2. These estimated emissions were calculated

TABLE 3.5-1

AMBIENT AIR QUALITY STANDARDS

POLLUTANT	AVERAGING TIME	CALIFORNIA STANDARDS[1]		NATIONAL STANDARDS[2]		
		CONCENTRATION[3]	METHOD[4]	PRIMARY[3,5]	SECONDARY[3,6]	METHOD[4,7]
Ozone	1 Hour	0.09 ppm (180 ug/m3)	Ultraviolet Photometry	0.12 ppm (235 ug/m3)	Same as Primary Std.	Ethylene Chemiluminescence
Carbon Monoxide	8 Hour	9.0 ppm (10 mg/m3)	Non-dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m3)	-	Non-dispersive Infrared Spectroscopy (NDIR)
	1 Hour	20 ppm (23 mg/m3)		35 ppm (40 ug/m3)		
Nitrogen Dioxide	Annual Average	-	Gas Phase Chemiluminescence	0.053 ppm (100 ug/m3)	Same as Primary Std.	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 ug/m3)		-		
Sulfur Dioxide	Annual Average	-	Ultraviolet Fluorescence	80 ug/m3 (0.03 ppm)	-	Pararosoaniline
	24 Hour	0.05 ppm (131 ug/m3)[8]		365 ug/m3 (0.14 ppm)	-	
	3 Hour	-		-	1300 ug/m3 (0.5 ppm)	
	1 Hour	0.25 ppm (655 ug/m3)		-	-	
Suspended Particulate Matter (PM_{10})	Annual Geometric Mean	30 ug/m3	Size Selective Inlet High Volume Sampler and Gravimetric Analysis	-	-	-
	24 Hour	50 ug/m3		150 ug/m3	Same as Primary Stds.	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	-	-	50 ug/m3		
Sulfates	24 Hour	25 ug/m3	Turbidimetric Barium Sulfate	-	-	-

POLLUTANT	AVERAGING TIME	CALIFORNIA STANDARDS[1]		NATIONAL STANDARDS[2]		
Lead	30 Day Average	1.5 ug/m3	Atomic Absorption	-	-	Atomic Absorption
	Calendar Quarter	-		1.5 ug/m3	Same as Primary Std.	
Hydrogen Sulfide	1 Hour	0.03 ppm (42 ug/m3)	Cadmium Hydroxide STRactan	-	-	-
Vinyl Chloride (chloroethene)	24 Hour	0.010 ppm (26 ug/m3)	Tedlar Bag Collection, Gas Chroma-tography	-	-	-
Visibility Reducing Particles	1 Observation	In sufficient amount to reduce the prevailing visibility[9] to less than 10 miles when the relative humidity is less than 70%		-	-	-
APPLICABLE ONLY IN THE LAKE TAHOE AIR BASIN						
Carbon Monoxide	8 Hour	6 ppm (7 mg/m3)	NDIR	-	-	-
Visibility Reducing Particles	1 observation	In sufficient amount to reduce the prevailing visibility to less than 30 miles when the relative humidity is less than 70%		-	-	-

Source: State of California, Air Resources Board, November, 1989.

1. California standards for ozone, carbon monoxide, sulfur dioxide (1 hour), nitrogen dioxide and particulate matter - PM_{10}, are values that are not to be exceeded. The sulfates, lead, hydrogen sulfide, vinyl chloride, and visibility reducing particles standards are not to be equaled or exceeded.

2. National standards, other than ozone and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above the standard is equal to or less than one.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parenthesis are based upon a reference temperature of 25° C and a reference pressure of 760 mm of mercury. All measurements of air quality are to be corrected to a reference temperature of 25° C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent procedure which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than three years after that state's implementation plan is approved by the Environmental Protection Agency.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time" after the implementation plan is approved by the EPA.

7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

8. At locations where the state standards for ozone and/or suspended particulate matter are violated. National standards apply elsewhere.

9. Prevailing visibility is defined as the greatest visibility which is attained or surpassed around at least half of the horizon circle, but not necessarily in continuous sectors.

utilizing the URBEMIS #3 computer model developed by the California Air Resources Board.

Conclusion: The mobile source emissions reported in Table 3.5-2 will contribute to local exceedances of State ozone standards, for which Paradise is a nonattainment area. Development in accordance with the *General Plan* will also contribute to regional emissions of ozone and PM_{10} which are currently not in compliance with State standards. In order to comply with the requirements of the California Clean Air Act, Butte County must reduce reactive organic gas emissions by 7.58 tons per day by 1994, with further reduction deadlines by 1997 and 2000 (*Air Quality Attainment Plan*, Northern Sacramento Valley Air Basin, 1991). Therefore, any increase in emissions will have a significant cumulative impact, even with the adoption and implementation of policy statements and implementation measures incorporated in the proposed *General Plan*. Additional mitigation measures are recommended, but will not reduce impacts to a level which is less than significant.

Policy statements and implementation measures incorporated in the *General Plan* which will reduce impacts on air quality include the following:

Circulation Element

CP-11 Establishment of a park-and-ride facility at the upper end of Paradise shall be pursued in order to reduce trips passing through Paradise on Skyway.

CP-13 The feasibility of a bicycle path and hiking system and a network of trails shall be explored, with access to schools, creeks, commercial and residential areas, parks, along canyons, and extending from Stirling City to Chico.

TABLE 3.5-2
ESTIMATED INCREMENTAL MOBILE SOURCE EMISSIONS ATTRIBUTABLE TO GENERAL PLAN BUILDOUT (LBS/DAY)

Emissions Source	Organic Gases		Carbon Monoxide	Nitrogen Oxides
Vehicle Trips	805.0		7809.9	1672.6
	PM_{10}		Sulfur Oxides	
	171.1		200.8	
Assumptions:				
	Residential		Commercial	
	Home-Work	Home-Shop	Home-Other	Work	Non-Work
Trip Length	10.9	8.0	9.3	10.6	9.0
% Started Cold	88.6	40.4	58.8	77.8	27.6
Trip Speed	35	35	35	35	35
Percent Trip	27.3	21.2	51.5		
Vehicle Fleetmix					
Vehicle Type		Percent Type	Leaded	Unleaded	Diesel
Light Duty Autos		72.8	0.0	97.5	2.5
Light Duty Trucks		14.3	0.0	97.4	2.6
Medium Duty Trucks		4.3	0.0	100.0	0.0
Heavy Duty Trucks		3.9	11.4	88.6	N/A
Heavy Duty Trucks		3.9	N/A	N/A	100.0
Motorcycles		0.9	100.0	N/A	N/A

CP-15 The Town shall consider the needs of bicyclists and pedestrians when approving new development.

CP-17 Explore the feasibility of establishing a trail system in the Secondary Planning Area. [Sphere of Influence].

CP-20 Automobile dependency within Paradise shall be reduced for local residents and visitors by implementing congestion management and trip reduction plan programs that decrease the number of vehicle miles travelled which, in turn, reduces air pollution and congestion and saves energy.

CP-21 As staff and funding become available, expanded transit services for seniors and the handicapped shall be promoted in accordance with the results of future studies.

CP-23 Expansion of public transportation services within Paradise and between Paradise and major employment centers shall be supported by BCAG actions.

CI-11 Coordinate with Butte County in the maintenance of a regional traffic model and region-wide congestion management program (as defined by AB 171, 1989).

CI-13 Require new development to provide a pedestrian pathway on at least one side of new public streets and new private roads (if feasible).

CI-16 Require transportation facilities such as bus stops to be incorporated into major new developments.

CI-17 Utilize transportation funds for selected alternative transportation facilities and/or programs.

Open Space/Conservation/Energy Element

OCEI-14 Adopt by reference the Butte County *Air Quality Attainment Plan.*

OCEI-15 Eliminate leaf burning and provide alternatives for disposing of yard debris.

OCEI-31 Future planning decisions shall assist in maintenance and improvement of air quality in the Paradise region.

Impact #3.5-2: Construction activities within the Planning Area will contribute to air pollution emissions from heavy construction equipment and from the generation of dust from grading activities.

Conclusion: Even though short-term or temporary in nature, an increase in pollutant emissions is a significant impact in an area which exceeds the State standards for ozone and particulate matter. Impacts of dust generated will be reduced to a level which is less than significant by practices already implemented by the Town of Paradise. These practices include the application of best management practices, including watering to control dust during construction or use of other acceptable dust palliatives, and the grading permit procedures and requirements and road construction requirements described in Sections 3.2 and 3.4 above. Regulation of emissions from construction equipment is outside the jurisdiction of the Town of Paradise, and such emissions cannot be mitigated.

Impact #3.5-3: The development of new businesses or industries which increase stationary source emissions.

Conclusion: All new businesses and industries which produce stationary source emissions must receive an air quality permit from the Butte County Air Pollution Control District. All permits issued must be in compliance with the *Air Quality Attainment Plan*, State and local standards and regulations, including consideration of cumulative regional emissions. Because all new businesses and industries must meet these requirements, it is determined that this impact will be less than significant, and no mitigation measures are required.

Mitigation Measures:

Mitigation Measure #3.5-1. The Butte County Air Pollution Control District (APCD) has recommended installation and maintenance of an air monitoring station in the Paradise area to monitor ozone, carbon monoxide and particulate matter. Applies to Impact #3.5-1.

Effectiveness of Measure: Air quality monitoring will assist the Butte County APCD and the Town in determining compliance with State and federal standards and the *Air Quality Attainment Plan*, but will not reduce air quality impacts.

Implementation/Monitoring: The Butte County APCD will be responsible for installing and maintaining the monitoring station. Public Resources Code Section 21081.6 provides that where the approving agency has received mitigation suggestions from an agency having jurisdiction by law over natural resources affected by a project, the latter agency must prepare and submit a reporting or monitoring program applicable to the proposed mitigation measure, if so requested by the approving agency. The Town of Paradise intends to submit such a request to the APCD.

3.6 HYDROLOGY

Setting:

Please refer to Section 5.0 of Volume III, *Environmental Setting*, for a description of surface hydrology, water quality, and Town

and district responsibilities, and Section 14.8 for a description of water service for the Paradise Planning Area.

Impacts:

Impact Evaluation Criteria for Flooding: The Planning Area includes several drainage basins and is traversed by several streamcourses which extend beyond the boundaries of the Planning Area. Flooding impacts relate to the potential to expose existing and future Planning Area residents to flooding, and the potential to cause additional flooding to occur on downstream properties as a result of Planning Area development in accordance with the proposed *General Plan*. If either circumstance exists, the impact is potentially significant. The Federal Emergency Management Agency (FEMA) has developed maps on a nationwide basis which identify flood hazard zones. Development within a FEMA-defined flood hazard zone should be considered a potentially significant impact.

Impact #3.6-1: Potential exposure of people and property to flooding onsite and offsite, and increased runoff due to construction which results in an increase in impervious surfaces.

Conclusion: All available sources of flooding information for the Paradise Planning Area conclude that the area is not subject to flooding from outside sources and that, because of the nature of the topography and the drainage basins in the Paradise Planning Area, any flooding that occurs is localized in nature, resulting from a temporary lack of capacity or blockage of a drainage basin. As described in Section 5.1 of Volume III, *Environmental Setting*, while the soils and subsoils of the Paradise area do not markedly aggravate the runoff situation, they also do not prove to be highly permeable. This often results in localized flooding which can be exacerbated by such land use activities as grading operations, vegetation clearance, inattention to storm runoff from construction sites during the peak winter rainfall period, large-scale paving and the lack of a collection system for most storm waters. None of the Paradise Planning Area is within a flood hazard zoned defined and mapped by FEMA.

The potential exists for significant temporary impacts to occur if development and construction were unregulated. However, the proposed *General Plan* incorporates policy statements and implementation measures which are designed to reduce impacts related to flooding and drainage. These policies and measures are as follows:

Safety Element

SP-9 The Town shall assure that increased runoff resulting from additional coverage of surface area on developing properties does not adversely affect surrounding properties, roads or stream courses.

SP-10 Natural drainageways shall be preserved.

SP-11 The Town shall assure that no new structures are located within potential floodways.

SP-12 Development shall not be permitted if identified or potential flooding and drainage impacts cannot be overcome by sound engineering practices.

SP-13 All new development must comply with the procedures and regulations of the *Master Storm Drain Study and Facilities Plan.*

SI-12 Constantly re-evaluate and continue to implement the *Master Storm Drain Study and Facilities Plan.*

The proposed *General Plan* also incorporates special permit zones identified in the *Master Storm Drain Study and Facilities Plan* on the *Land Use Constraints Diagram*, thus limiting development within these areas.

In addition to the policy statements and implementation measures listed above, the Town Subdivision Ordinance requires that storm

water runoff from new subdivisions shall be collected and conveyed in a manner consistent with the *Master Storm Drainage Study and Facilities Plan*, and with the requirements of the Town Engineer. The Town Zoning Ordinance also establishes coverage limitations on new development.

The policy statements and implementation measures that are incorporated in the proposed *General Plan* and the regulations of the Subdivision and Zoning Ordinances will reduce these potential impacts to a level which is less than significant, because all new construction and development must be in compliance with these policies and regulations; therefore, no mitigation measures are required.

Impact Evaluation Criteria, Water Quality: Water quality impacts can be associated with both surface and groundwater. If surface water courses and adjacent areas are disturbed, or if runoff contaminates the watershed or surface water courses, the impact should be viewed as potentially significant. The National Pollutant Discharge Elimination Standards (NPDES) established by the Environmental Protection Agency provide standards for stormwater discharge quality.

Groundwater impacts can be measured by the potential to encounter unsafe domestic water supplies, or for the Plan itself to adversely affect groundwater quality. If there are reports of unsafe groundwater in the Planning Area, or if Plan characteristics could potentially contribute to groundwater contamination, the impact should be viewed as significant.

Finally, State and federal drinking water standards have been established for public and private water systems, and compliance with these standards can be used to determine whether impacts are significant.

Impact #3.6-2: Degradation of surface water quality and contamination of the watershed. The impact of development and

construction in accordance with the *General Plan* on surface water quality may consist of erosion and silt carriage and deposition due to grading for roads and building pads. Increased motor vehicle residues and landscaping fertilizer and spraying residues will be washed into the watercourses draining the Planning Area during periods of runoff. Development which directly impacts streamcourses or occurs in proximity to streamcourses could exacerbate this impact.

Conclusion: Impacts related to erosion and silt carriage and deposition were addressed in Sections 3.2 and 3.4 and determined to be less than significant. Impacts on water quality due to runoff from new development are potentially significant if development were unregulated. However, the policy statements and implementation measures that are incorporated in the proposed *General Plan* and recommended mitigation measures will reduce these potential impacts to a level which is less than significant.

The proposed policy statements and implementation measures which will reduce impacts on water quality, disturbance of streamcourses and contamination of the watershed are as follows:

Open Space/Conservation/Energy Element

OCEP-22 Surface and groundwater quality shall be improved and preserved and the Paradise area watershed shall be protected.

OCEP-23 Streamcourses identified and designated as significantly important shall be carefully protected from the impacts of land use development, both within and outside the Town limits.

OCEP-24 The Town shall strive to influence activities within its watershed and outside the Town limits in order to protect and preserve the Town's water resources.

OCEP-25 Natural riparian vegetation along creeks shall be protected.

OCEP-27 Open space or resource conservation zoning shall be established for sensitive lands such as areas of resource production, steep canyons and stream corridors, and areas of significant natural resource value.

OCEP-38 The Town shall initiate annexation of the area between Neal Road and Butte College for future utilization as open space in conjunction with a future wastewater treatment plant, possible stormwater discharge areas and park lands.

OCEI-1 Identify and map significantly important permanent and intermittent watercourses in the Planning Area on the *Land Use Constraints Diagram* and develop standards for their protection, including appropriate setbacks.

OCEI-4 Prevent unauthorized discharges into creeks and enforce regulations regarding such discharges.

OCEI-5 Study and encourage annexation of areas within Magalia and Paradise Pines to provide greater control over development and activity affecting the Paradise watershed.

Safety Element

SP-16 Detrimental and toxic discharge into natural waterways shall not be permitted.

Impact #3.6-3: Degradation of groundwater quality. Increased development in accordance with the proposed *General Plan* will result in the installation of additional septic systems and contribute

to cumulative impacts of septic system failures on groundwater quality. Although a sewer system is planned, it will be several years before construction is completed, and only portions of the Planning Area will be sewered within the planning period (15 years). Annexation of all or portions of the northerly Secondary Planning Area may eventually require the Town to provide sewer service to this area.

Conclusion: Any groundwater contamination which currently exists is the result of existing septic system failures and other existing sources of contamination. The potential exists for significant impacts to occur resulting from new development on septic systems, if development were unregulated. However, in addition to formation of a wastewater design assessment district preliminary to construction of a wastewater collection, treatment and disposal facility, the Town is in the process of forming an on-site wastewater management district to monitor and care for existing and future septic systems. Maintenance of on-site septic systems will become a Town function. It is also anticipated that common leachfields will be constructed in some instances, with the Town maintaining the common areas. The on-site district will contain three or more zones, ranging from a zone requiring only simple on-site suitability determinations, to areas with high flow and/or marginal on-site suitability determinations. The latter areas may require community leach fields or other unique solutions. Developed areas annexed to the Town would most likely be included in one of the above-described zones.

The Town Subdivision Ordinance currently requires all new lots to meet the requirements of the Butte County Environmental Health Department regarding sewage disposal.

Formation and operation of the on-site wastewater management district, in conjunction with policy statements and implementation measures that are incorporated in the proposed *General Plan* and requirements of the Town Subdivision Ordinance, will reduce these potential impacts to a level which is less than significant, and no

mitigation measures are required. The annexation of developed areas, and provision of sewer service or inclusion in the onsite wastewater management district, would represent a beneficial impact on water quality. The proposed policy statements and implementation measures which are incorporated in the *General Plan* which will reduce impacts on groundwater quality, in addition to those included in the Conclusion to Impact #3.6-2 above, are as follows:

Land Use Element

LUP-15, LUP-60 Land use densities shall be based, in part, on the availability of sewage disposal services.

LUP-16 The Town shall attempt to implement all feasible steps to assure that sewer service is made available to the commercial area of the Town as expeditiously as possible.

LUI-7 Identify subareas, pipeline routes and priorities for the sewer system and complete construction of a sewer system to serve the central area of Paradise.

LUI-8 Establish an on-site wastewater management district for the remainder of the Town.

LUP-57 In unsewered areas of the Town, densities shall be consistent with standards for on-site wastewater disposal and shall provide for minimum lot sizes of up to one-half gross acre in new developments.

Open Space/Conservation/Energy Element

OCEI-40 Establish a time frame for implementing and enforcing the provisions of an on-site wastewater management district.

Impact #3.6-4: Potential to encounter unsafe drinking water. The predominant source of domestic water provided within the Planning Area is surface water supplies; however, development of a groundwater source is contemplated. In addition, it is estimated that there are approximately 300 privately-owned, relatively shallow wells in Paradise, some of which supply water for domestic use. According to Section 5.2 of Volume III, *Environmental Setting*, the upper portions of the Tuscan Formation may hold unconfined water which receives recharge from the Paradise area and could be subject to contamination by septic systems. However, septic tank/leach line failures in Paradise do not affect water supplies distributed by the Paradise Irrigation District, since its sources are outside the urbanized area.

Conclusion: As a practical matter, all new development within the Town is serviced by a community water system. The Paradise Irrigation District is the major supplier, serving 95 percent of the incorporated town; the Paradise Pines area is served by the Del Oro Water Company (refer to Figure 14-3 of Volume III, *Environmental Setting*). Public and private water systems, but not individual wells, are required to comply with State drinking water standards. The Paradise Irrigation District is planning to add, by June 1993, filtration capacity to enable the District to meet revised Federal and State water quality standards. The capacity will be increased from 6 to 25 million gallons per day (mgd). Because all new development on a community water system must be in compliance with State and federal standards, this impact is determined to be less than significant. Potential impacts of new development on water quality of existing wells is determined to be less than significant because the construction of the sewer system and the formation of the on-site wastewater management district will prevent new sources of groundwater contamination from being developed.

Mitigation Measures:

Mitigation Measure #3.6-1: Compliance of the Paradise stormwater collection and disposal system with NPDES standards

when applicable to the Town of Paradise, including basins and devices to prevent pollutants from entering streamcourses. The Department of Fish and Game has recommended that stormwater treatment facilities have the ability to remove soluble, suspended and surface floating pollutants in addition to sediments. Applies to Impact #3.6-2.

Effectiveness of Measure: Compliance with NPDES standards has been determined by the Environmental Protection Agency to assure water quality is not degraded.

Implementation/Monitoring: Monitoring of water quality discharge standards will be carried out by the Town Engineering Office and the Butte County Environmental Health Department. In addition, the Department of Fish and Game has recommended that the mitigation monitoring program for this measure include the following:

- Specific criteria to measure effectiveness of mitigation. However, Section 21081.6 of the Public Resources Code does not require mitigation monitoring programs to measure the effectiveness of mitigation measures.

- Annual monitoring for a minimum of five years. Annual written reports submitted to the lead agency and the Department of Fish and Game.

- Annual monitoring reports, each of which include corrective recommendations that shall be implemented in order to ensure that mitigation efforts are successful.

3.7 VEGETATION AND WILDLIFE

Setting: Please refer to Section 6.0 of Volume III, *Environmental Setting*, for a description of vegetation and wildlife in the Paradise Planning Area.

Impacts:

Impact Evaluation Criteria: At the State level, the Department of Fish and Game is responsible for implementing the California Fish and Game Code and the California Native Plant Protection Act, which include protection for rare and endangered species. The Department also has a policy protecting wetlands, which are defined in similar terms as those used by the U.S. Army Corps of Engineers. The State, like the federal government, supports the policy of "no net loss" of wetlands. The first statement in that policy reads:

> 1. California's remaining wetlands provide significant and essential habitat for a wide variety of important resident and migratory fish and wildlife species.

Finally, the Department manages an information program called the California Natural Diversity Data Base which records sightings of rare, threatened, endangered and otherwise sensitive species, as well as occurrences of natural communities. The Data Base considers natural communities as species equivalents in rating their status (i.e. rare, endangered, etc.). The basis for this practice is that natural communities have value in and of themselves, and that they may harbor sensitive species which have not yet been identified and which might not be identified and protected before they are eliminated. The Natural Diversity Data Base and other sources were consulted in the preparation of Section 6.0 of Volume III, *Environmental Setting*.

The *State CEQA Guidelines* state that a project may have a significant effect on the environment when any of a number of conditions occur including the following related to biological resources:

(a) The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number

or restrict the range of a rare or endangered plant or animal...(Section 15065)

Additionally, Appendix G of the *CEQA Guidelines* states that a project will normally have a significant effect on the environment if it will, among other things:

- Conflict with adopted environmental plans and goals of the community where it is located.

- Substantially affect a rare or endangered species of animal or plant or the habitat of the species.

- Interfere substantially with the movement of any resident or migratory fish or wildlife species.

At the federal level, both the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service are responsible for enforcing federal legislation, most notably the Endangered Species Act and the Federal Clean Water Act. A key issue with both agencies is wetlands protection. The federal administration has adopted a policy of "no net loss" of wetlands.

Impact #3.7-1: Loss of vernal pools, freshwater marsh, and riparian wetlands. Freshwater marsh and seeps, riparian areas, and possibly vernal pools are present within the Planning Area. It is possible that there are wetlands resources within the Planning Area that could be classified as jurisdictional wetlands. Development in accordance with the *General Plan* will potentially result in the elimination and/or alteration of wetlands. The loss of wetlands would eliminate habitat critical to the continued existence of plants and wildlife dependent on this resource.

Conclusion: Unregulated development and construction in the Planning Area have the potential to result in the elimination and/or alteration of wetland areas. Because wetlands may provide habitat for species of special concern, this elimination or alteration would

constitute a reduction in the habitat of these wildlife species. The threat of elimination of sensitive plant communities dependent upon a wetland environment, such as vernal pools, would also be significant. However, the policy statements and implementation measures that are incorporated in the proposed *General Plan* and recommended mitigation measures will reduce these potential impacts to a level which is less than significant.

The proposed *General Plan* does not propose development in the Tertiary Planning Area (most likely location for vernal pools) or additional development in the northerly Secondary Planning Area. Most of the southerly Secondary Planning Area is proposed to be designated "Open Space/Agriculture", and development is not proposed until a specific plan is adopted for the area, at which time environmental impacts must be addressed. All development which is proposed must comply with the policies of the *General Plan*. The proposed policy statements and implementation measures which will reduce impacts on wetlands are as follows:

Open Space/Conservation/Energy Element

OCEP-4 Existing, significantly important natural habitat areas having high value for birds and other wildlife shall be preserved for future generations through careful land use planning and public participation.

OCEP-23 Streamcourses identified and designated as significantly important shall be carefully protected from the impacts of land use development, both within and outside the Town limits.

OCEP-25 Natural riparian vegetation along creeks shall be protected.

OCEP-27 Open space or resource conservation zoning shall be established for sensitive lands such as areas of resource production, steep canyons and stream

corridors, and areas of significant natural resource value.

OCEI-1 Identify and map significantly important permanent and intermittent watercourses in the Planning Area on the *Land Use Constraints Diagram* and develop standards for their protection, including appropriate setbacks.

OCEI-3 Establish open space, resource conservation, or low density rural residential zoning on sensitive lands, such as areas of resource production, stream corridors and slopes greater than 30 percent.

OCEI-10 Require significantly important natural areas with high wildlife value to be set aside and preserved during land use development.

Impact #3.7-2: Impact to wildlife resources, including deer winter range, and animal species of special concern, including the endangered bald eagle, due to the loss of habitat and/or foraging areas as development occurs in accordance with the proposed *General Plan*. The Planning Area contains habitat which may support species of special concern, as described in Section 6.0 of Volume III, *Environmental Setting*. The vegetation communities within the Planning Area provide suitable habitat and foraging areas for numerous species of wildlife described in Volume III. According to the Department of Fish and Game, bald eagles winter around streams and reservoirs within the Planning Area, and it is probable that eastern portions of the Planning Area fall within the foraging territory of a nearby eagle breeding territory.

Conclusion: Additional development within the Planning Area will, over time, result in diminished wildlife habitat. Because the Planning Area may provide habitat for species of special concern, the reduction of this habitat is considered a potentially significant unavoidable impact. The northerly Secondary Planning Area,

which encompasses the reservoirs, is not proposed for any additional development in the *General Plan*. Policy statements and implementation measures incorporated in the proposed *General Plan*, the Town Tree Ordinance and mitigation measures will reduce this impact; not, however, to a level which is less than significant. The Town of Paradise is forested, and the proposed *General Plan* emphasizes preservation of existing trees and reforestation. Policy statements and implementation measures incorporated in the *General Plan* that will reduce impacts on habitat for wildlife resources and potential impacts on deer herds and species of special concern (in addition to those listed in the Conclusion for Impact #3.7-1 above) are as follows:

Open Space/Conservation/Energy Element

OCEP-1 Existing large heritage trees and oak woodlands shall be identified, protected, preserved and enhanced. Trees so identified shall only be removed as a last resort.

OCEP-2 Reforestation and maintenance of trees shall be encouraged along road corridors.

OCEP-3 Trees that are no longer living, and which do not pose a significant danger, shall also be given consideration for preservation if they possess significant wildlife habitat value.

OCEP-6 Where feasible, limit new development within the Secondary Planning Area to Designated Development Zones as established by the Department of Fish and Game to protect deer herd migration routes.

OCEP-7 Deer movement shall be considered when approving fencing and other improvements in new development.

OCEI-6 Create a Town arborist or tree specialist position at Town Hall to provide information and education concerning trees to Town residents.

OCEI-8 Amend the tree ordinance to assure that its administration and enforcement will sustain and enhance the present forested setting of Paradise, and to assure that trees are only removed as a last resort. Establish a mitigation program for tree removal.

OCEI-11 Incorporate deer herd migration routes (windows) into the *Land Use Constraints Diagram.*

Impact #3.7-3: Potential loss of sensitive plant populations, including oak woodlands. The type of vegetation communities which exist within the Paradise Planning Area provide habitat for several sensitive plant populations, as described in Section 6.0 of Volume III, *Environmental Setting*.

Conclusion: Areas designated for future development may contain sensitive plant populations. The loss of habitat for sensitive plant communities is a potentially significant impact. This impact can be reduced by mitigation measures, policy statements and implementation measures incorporated in the proposed *General Plan* to a level which is less than significant. The policy statements and implementation measures that will reduce impacts on sensitive plant species are listed in the Conclusions for Impacts #3.7-1 and #3.7-2 above.

Impact #3.7-4: Potential impacts on fisheries in Butte Creek and the Feather River due to erosion, sedimentation, siltation, streambed alteration and removal of riparian vegetation.

Conclusion: Potential impacts of erosion, sedimentation and siltation were addressed in Sections 3.2 and 3.4 above. The proposed *General Plan* does not propose development in the

canyons of the West Branch Feather River, but rather contains several policy statements and implementation measures designed to assure their protection. It was determined that these impacts will be less than significant due to proposed policy statements and implementation measures incorporated in the *General Plan* and existing Town ordinances, standards and regulations. Potential streambed alteration impacts are mitigated to a level which is less than significant by Mitigation Measure #3.7-2. Policy statements and implementation measures incorporated in the proposed *General Plan*, and listed in the Conclusion for Impact #3.7-1 and 3.7-2 above, as well as the following policy statement will reduce potential impacts of removal of riparian vegetation to a level which is less than significant, and no further mitigation measures are required.

Open Space/Conservation/Energy Element

OCEP-5 Area fisheries shall be protected, and the cooperation of responsible agencies shall be sought to assure minimum streamflow and restore fisheries.

Mitigation Measures:

Mitigation Measure #3.7-1: Application for and receipt of Section 404 permits pursuant to the Federal Clean Water Act for individual projects and public works projects that involve alteration of wetlands that cannot be avoided through project design or development in an alternative location. This process would include formal wetlands delineations of impacted areas and appropriate onsite or offsite compensation for wetlands that cannot be avoided, which may include enhancement of wetlands habitat. Applies to Impacts #3.7-1, 3.7-2 and 3.7-3.

Effectiveness of Measure: This measure will not avoid potential impacts, but does provide a formal mechanism for mitigating impacts through an established permitting procedure.

Implementation/Monitoring: Section 404 permits shall be applied for and received from the U.S. Army Corps of Engineers as a condition of approval of applicable private development projects and public works projects. Monitoring programs for wetlands enhancement or creation must be formulated once the nature of the actual compensation is determined.

Mitigation Measure #3.7-2: Application for and receipt of a Streambed Alteration Permit from the Department of Fish and Game for private projects and public works projects prior to any modification of streambeds or additional stream crossings. Applies to Impacts #3.7-1 and #3.7-2.

Effectiveness: By regulating streambed alterations, disturbance of streambed environments will be minimized, reducing impacts to fisheries and riparian habitat.

Implementation/Monitoring: Streambed alteration permits are issued by the Department of Fish and Game upon application by project proponents. Application will be made a condition of approval of applicable projects by the Town. Monitoring will be carried out by the Town Engineering Office during inspection of project improvements and by the Department of Fish and Game following issuance of a Streambed Alteration Permit.

Mitigation Measure #3.7-3: The Department of Fish and Game has recommended that setbacks and drainage restrictions be applied to impacts on streams, lakes and wetlands. Applies to Impact #3.7-1.

Effectiveness of Measure: The Department of Fish and Game has determined such measures to be effective.

Implementation/Monitoring: The Department of Fish and Game has recommended that the mitigation monitoring program for this measure include the following:

- Specific criteria to measure effectiveness of mitigation. However, Section 21081.6 of the Public Resources Code does not require mitigation monitoring programs to measure the effectiveness of mitigation measures.

- Annual monitoring for a minimum of five years. Annual written reports submitted to the lead agency and the Department of Fish and Game.

- Annual monitoring reports, each of which include corrective recommendations that shall be implemented in order to ensure that mitigation efforts are successful.

Mitigation Measure #3.7-4: Upon recommendation by the Department of Fish and Game, biotic surveys, floristic studies for plant species of special concern and/or tree inventories of previously undeveloped sites proposed to be developed or otherwise disturbed shall be conducted by qualified biologists during proper phenological periods or seasonal parameters. If species of special concern are found, measures, including setbacks and drainage restrictions, shall be taken to ensure their continued survival in conformance with State and federal law, including setbacks, open space designations and drainage restrictions. Applies to Impacts #3.7-2 and #3.7-3.

Effectiveness: Conducting such studies when necessary will ensure the identification of species of special concern and sensitive habitat so that projects can be redesigned, if necessary, to avoid significant impacts.

Implementation/Monitoring: Study results shall be submitted to the Department of Fish and Game for their review. The Community Development Department will be responsible for assuring that studies are completed and submitted, and that mitigation measures and conditions of approval are complied with.

3.8 NOISE

Setting:

Please refer to Section 7.0 of Volume III, *Environmental Setting*, for a description of the noise environment of the Paradise Planning Area.

Impacts:

Impact Evaluation Criteria: Noise impacts of the *General Plan* are evaluated by comparison of projected future noise levels to accepted noise standards. The *Noise Element* of the proposed *General Plan* establishes land use compatibility guidelines for various types of new development which may be proposed, ranging from 60 dB L_{dn} as acceptable, but up to 70 dB L_{dn} with inclusion of protective measures. The *Noise Element* also establishes performance standards for new projects affected by or including non-transportation sources and the maximum allowable noise exposure to transportation noise sources. Please refer to Figure 6.4-1 and Tables 6.4-1 and 6.4-2 of Volume I, *Policy Document*. These standards are widely applied in similar jurisdictions throughout the State. The intent of these standards is to provide a suitable environment for outdoor activities, indoor communications and sleep.

Impact #3.8-1: Increased and continuing noise from major roadways. Traffic noise impacts are expected to occur at noise sensitive land uses where existing or future exterior traffic noise levels exceed 60 dB L_{dn}. The Federal Highway Administration (FHWA) model was used with future traffic data (Table 3.13-3) to predict future traffic noise levels for development in accordance with the *General Plan*. Table 3.8-1 shows the predicted distances to future 60 and 65dB L_{dn} noise contours for major roadways. Figure 2-3, the *Land Use Constraints Diagram*, in Volume I, *Policy Document*, shows the contours in map form.

Conclusion: Impacts of development in accordance with the objectives and policy statements incorporated in the *Noise Element* will be less than significant because compliance with these objectives and policies will avoid potentially significant impacts. These objectives and policy statements are as follows:

NO-3 New development of noise-sensitive land uses will not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources which exceed the levels specified in Table 6.4-2.

NO-4 Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed the levels specified in Table 6.4-2 at outdoor activity areas or interior spaces of existing noise-sensitive land uses in either the incorporated or unincorporated areas.

NP-2 The feasibility of proposed projects with respect to existing and future transportation noise levels shall be evaluated by comparison to Figure 6.4-1, *Land Use Compatibility Guidelines*.

NP-3 Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 6.4-2 or the performance standards of Table 6.4-1, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

NP-8 The Town shall endeavor to preserve quiet residential areas by limiting traffic and noise-generating uses in such areas.

NP-9 Appropriate standards shall be established and enforced which control obtrusive noise in residential areas, including vehicle noise.

NP-10 The Town shall continue to designate and regulate truck routes in order to protect residential areas from unwanted noise and traffic.

TABLE 3.8-1

FUTURE NOISE CONTOUR DATA
DISTANCE (FEET) FROM CENTER OF ROADWAY
TO L_{dn} CONTOURS

Segment	Description	Distance to Contour	
		60 dB	65 dB
SR 191/Clark Road:			
1	South City Limits to Buschmann Rd.	248	115
2	Buschmann Rd. to Pearson Rd.	200	93
3	Pearson Rd. to Bille Rd.	175	81
4	Bille Rd. to Skyway	163	76
Skyway:			
5	West City Limits to Pearson Rd.	243	113
6	Pearson Rd. to Elliot Rd.	211	98
7	Elliot Rd. to Oliver Rd.	227	105
8	Oliver Rd. to Maxwell	215	100
9	Maxwell to Bille Rd.	204	95
10	Bille Rd. to Wagstaff Rd.	172	80
11	Wagstaff Rd. to Clark Rd.	140	65
12	Clark Rd. to Pentz Rd.	157	73
Pentz Road:			
13	South City Limits to Pearson Rd.	81	38
14	Pearson Rd. to Bille Rd.	85	39
15	Bille Rd. to Wagstaff Rd.	71	33
16	Wagstaff Rd. Skyway	71	33
Pearson Road:			

TABLE 3.8-1

FUTURE NOISE CONTOUR DATA
DISTANCE (FEET) FROM CENTER OF ROADWAY
TO L_{dn} CONTOURS

Segment	Description	Distance to Contour	
		60 dB	65 dB
17	Skyway to Clark Rd.	156	72
18	Clark Rd. to Pentz Rd.	116	54
Elliott Road:			
19	Skyway to Clark Rd.	128	59
20	Clark Rd. to Sawmill Rd.	83	39
21	Sawmill Rd. Pentz Rd.	47	22
Bille Road:			
22	Oliver Rd. to Skyway	111	51
23	Skyway to Clark Rd.	87	41
24	Clark Rd. to Sawmill Rd.	87	41
25	Sawmill Rd. to Pentz Rd.	73	34
Wagstaff Road:			
26	Oliver Rd. to Skyway	88	41
27	Skyway to Clark Rd.	88	41
28	Clark Rd. to Pentz Rd.	78	36

Source: Brown-Buntin Associates, 1992.

Impact #3.8-2: Increased noise or creation of new sources of noise from new fixed noise sources such as the expansion of existing and development of new industrial uses. A quantitative analysis of future noise levels generated by fixed noise sources is too speculative to produce, as the actual types of future fixed noise sources are not known at the time of *General Plan* approval. However, the potential for the introduction of new fixed noise sources increases with the amount of land designated for industrial use. The proposed *General Plan* designates 212 acres for Light Industrial and 280 acres for Business Park use, in comparison to approximately 30 acres of existing industrial uses within both the Primary and Secondary Planning Areas.

Conclusion: The potential for introduction of new fixed noise sources, and potentially significant noise impacts, increases with the amount of land designated for industrial uses in the *General Plan*. While these impacts are potentially significant, objectives and policy statements incorporated in the *Noise Element* will avoid potentially significant impacts. These objectives and policy statements are as follows:

NO-1 New development of noise-sensitive uses shall not be allowed where the noise level due to non-transportation noise sources will exceed the noise level standards of Table 6.4-1, as measured immediately within the property line of the new development, unless effective noise mitigation measures have been incorporated into the development design to achieve the standards specified in Table 6.4-1.

NO-2 Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 6.4-1 as measured immediately within the property line of lands designated for noise-sensitive uses. This objective does not apply to noise sources associated with

agricultural operations on lands zoned for agricultural uses.

NP-1 Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 6.4-1 at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

NP-3 Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 6.4-2 or the performance standards of Table 6.4-1, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

Impact #3.8-3: Increased noise due to increased operations at the Paradise Skypark Airport. Operations are expected to increase within the planning period. The 1988 California Aviation System Plan (CASP) estimates that the number of annual operations will increase from the existing 10,000 to 11,676 annual operations in the year 2005. Based upon the projected increase in annual operations, the CNEL values are expected to increase by less than one dB.

Conclusion: An increase of less than one dB over the planning period should not be viewed as significant. In addition, policy statements incorporated in the proposed *Noise Element* will avoid potentially significant impacts. These policy statements are as follows:

NP-6 New land uses within the projected 55 L_{dn} contour of Paradise Skypark Airport shall be compatible with aircraft-generated noise. Single family

residential and institutional land uses such as schools, hospitals, convalescent homes, and other inpatient health care facilities shall not be permitted.

NP-7 Multi-family residential land uses may be permitted within the 55 L_{dn} contour of the Airport subject to an acoustical analysis showing that all structures have been designed to limit interior noise level in any habitable room to 45 dB L_{dn} within the boundaries of the 55 L_{dn} contour as projected in the *Paradise Skypark Airport Land Use Plan.* Compliance with the acoustical analysis requirement shall be as specified in Table 6.4-3.

Mitigation Measures: Because no significant impacts have been identified, no mitigation measures are required.

3.9 LIGHT AND GLARE

Setting: Please refer to Section 8.0 of Volume III, *Environmental Setting*, for a description of light and glare in the Paradise Planning Area.

Impacts: **Impact Evaluation Criteria:** The impact of new sources of light and glare is potentially significant if the following criteria are met:

(1) The light and/or glare is continuous, rather than temporary in nature (example: a continuous stream of cars or regular pattern of lighting vs. occasional passing headlights).

(2) The level of light and/or glare is noticeably higher than the surrounding ambient level of light;

(3) The light and/or glare has the potential to shine directly into the interior and/or outdoor activity areas of existing or future residences; and

(4) The size of the affected parcels (larger parcels offer greater flexibility for siting of residences).

Impact #3.9-1: New sources of light and glare in previously undeveloped areas. This impact consists of interior and exterior residential lighting, headlights from automobiles and glare from additional paved surfaces and roofs.

Conclusion: New development in accordance with the proposed *General Plan* in previously undeveloped areas will create new sources of light and glare, including lighting of commercial and industrial areas, new residences, and schools. These impacts are potentially significant, but will be reduced to a level that is less than significant by policy statements and implementation measures incorporated in the proposed *General Plan*, proposed Plan densities and separation of incompatible land uses, and Town standards and ordinances which do not require street lighting in residential areas. The generally low residential densities proposed, distances between structures, forested setting, and lack of street lighting all assist in reducing impacts of light and glare. Individual projects which are proposed consistent with the *General Plan* are subject to environmental review when impacts are known, and any identified impacts of light and glare can be mitigated through project design and conditions of approval. The relevant policy statement and implementation measure incorporated in the proposed *General Plan* which reduce impacts of light and glare are as follows:

Circulation Element

CI-20 Attempt to provide street lighting for crosswalks on Skyway (using old-fashioned street lights).

Open Space/Conservation/Energy Element

OCEP-60 Internally illuminated commercial and industrial signs shall be discouraged.

Mitigation Measures: Because no significant impacts have been identified, no mitigation measures are required.

3.10 LAND USE AND POPULATION

Setting: Please refer to Section 9.0 of Volume III, *Environmental Setting*, for a description of the existing land use in the Paradise Planning Area; Figure 2-1, *Land Use Diagram*, of Volume I, *Policy Document* for a diagram of the planned land use; Section 11.0 of Volume III for a description of population; and Table 3.1-1 for General Plan buildout population.

Impacts: **Impact Evaluation Criteria:** Appendix G of the *CEQA Guidelines* states that a project will normally have a significant effect on the environment if it will conflict with adopted environmental plans and goals of the community where it is located; disrupt or divide the physical arrangement of an established community; convert prime agricultural land to nonagricultural use or impair the agricultural productivity of prime agricultural land; and/or induce substantial growth or concentration of population. A primary purpose of a general plan is the establishment of the types of plans and goals referred to above, against which the impacts of future development can be measured, and to prevent new land use conflicts from being created. Growth and development which is inconsistent with the established goals

should be considered potentially significant. The proposed environmental plans and goals, objectives, policies and implementation measures for growth, development and land use compatibility of the proposed *Paradise General Plan* include the following:

Land Use Element

LUG-1 Manage growth with a balance of land uses.

LUG-2 Accommodate growth consistent with the physical limitations in Paradise.

LUO-1 Attempt to maintain a level and pattern of residential growth that sustains the current quality of life.

LUG-10 Encourage compatible mixed uses in commercial areas.

LUG-17 Protect existing land uses from incompatible uses.

LUG-20 Protect residential neighborhoods from encroachment by incompatible land uses.

LUG-41 Assure that all land uses in the Town conform to the goals and policies of the *General Plan.*

LUP-55 New higher density land use development, including but not limited to multiple family structures, shall only be permitted in areas served by the community sewer system (upon its construction) when found to be compatible with surrounding land uses and established service levels.

LUP-92 Protect the location of the Town's future sewage disposal area from incompatible development.

LUP-93 Development projects proposed in the Tertiary Planning Area should not be approved if, after detailed analysis, it is revealed that the proposal would have long-term cumulative adverse environmental impacts on the Town of Paradise.

LUP-97 Development projects proposed in the Tertiary Planning Area should include significant open space buffers between the project area and the Town of Paradise.

LUI-29 Require findings to be made, on a case-by-case basis, that proposed new high density residential development is in accordance with the policies and will not exceed the standards established in the *General Plan.*

Circulation Element

CP-5 Potential impacts on existing residential neighborhoods shall be considered when approving extension of streets.

Noise Element

NG-1 Preserve the quiet, rural environment of the Town and surrounding areas.

NG-2 Protect Town residents from the harmful and annoying effects of exposure to excessive noise.

NG-3 Protect the economic base of the Town by preventing incompatible land uses from encroaching upon existing or planned noise-producing uses.

Safety Element

SP-14 Residential development and institutional uses shall not be permitted within the clear (Safety Area 1) or approach (Safety Area 2) zones of the Paradise Skypark Airport.

SP-15 The Town shall require all new development to comply with the airport height restriction policy, airport safety policy, and land use guidelines for safety compatibility of the *Paradise Skypark Airport Land Use Plan.*

Open Space/Conservation/Energy Element

OCEG-1 Assure that growth and land use development in Paradise is in harmony with nature.

OCEG-3 Protect unique and important naturally sensitive areas within the Planning Area.

OCEG-11 Encourage the retention of remaining agricultural lands and related uses whenever feasible.

OCEP-15 Views of development from other properties shall be considered when making decisions on compatibility of development.

Impact #3.10-1: Conversion of agricultural lands to nonagricultural use.

Conclusion: This impact was addressed in Section 3.4 (Soils) above and determined to be less than significant.

Impact #3.10-2: The proposed *General Plan* will result in substantial changes or alterations of present or planned land uses in some portions of the Paradise Planning Area.

Conclusion: Physical changes to the environment resulting from changes in present and planned land uses are addressed in other sections of this Chapter, and conclusions reached as to their significance and necessary mitigation measures. These sections include 3.2 Topography, 3.3 Geology/Seismicity, 3.4 Soils, 3.5 Air Quality, 3.6 Hydrology, 3.7 Vegetation and Wildlife, 3.8 Noise, 3.9 Light and Glare, 3.11 Housing, 3.12 Health Hazards and Safety, 3.13 Transportation and Circulation, 3.14 Public Facilities and Services, and 3.15 Scenic and Cultural Resources.

Impact #3.10-3: Land use conflicts between new development in accordance with the *General Plan* and existing development.

Conclusion: While land use conflicts currently exist within the Paradise Planning Area, new land use conflicts could be created between new development and existing uses if development were unregulated. Such conflicts could include noise, light and glare, odors, traffic, and aesthetic impacts, and are potentially significant. However, all new development must be consistent with the proposed *General Plan*, when adopted, in terms of both land use designations and policy statements, including the policy statements listed above under "Impact Evaluation Criteria". The Town Zoning Ordinance is also designed to reduce and avoid land use conflicts through separation of uses, setbacks, fencing requirements, and the requirement for conditional use permits for some uses which require compliance with conditions of approval. The *General Plan* also includes policy statements and implementation measures designed to mitigate existing land use conflicts by reducing the number of nonconforming uses which now exist in the community. These policy statements and implementation measures are as follows:

Land Use Element

LUP-85 The relocation of nonconforming uses to areas where such uses are permitted shall be encouraged.

LUP-86 The expansion of existing legally nonconforming uses shall be discouraged.

LUP-87 The Town shall consider exclusion of home occupations from neighborhoods where their presence is out of character with present development and use patterns.

LUP-88 The Town shall assure compatibility between home occupations or cottage industries and residential uses.

LUP-89 The Town shall endeavor to improve its present code enforcement program, including seeking ways to fund necessary personnel.

LUI-65 Zone properties consistent with their *General Plan* land use classification.

LUI-69 Consistently enforce the regulations of the Zoning Ordinance when alerted of illegal uses.

These policies and implementation measures and the Zoning Ordinance will reduce potentially significant impacts to a level which is less than significant.

Impact #3.10-4: Growth-inducing impact. The proposed *General Plan* is designed to accommodate a population of 34,349 within the Primary Planning Area by 2007, representing an annual growth rate of approximately 1.5 percent. Approval of the proposed *General Plan* may lead to increased applications for development projects consistent with the Plan, as well as requests to amend the *General Plan* to accommodate projects not consistent with the Plan.

Conclusion: A general plan which proposes any future development is by definition "growth-inducing". The proposed

General Plan, however, attempts to address all potentially adverse impacts of this growth through policy statements, implementation measures, programs, proposals for adequate infrastructure and services, and protection of environmentally sensitive resources. Impacts which cannot be reduced or mitigated to a level which is less than significant are identified in other sections of this Chapter.

Mitigation Measures: Because no significant impacts have been identified, no mitigation measures are required.

3.11 HOUSING

Setting: Please refer to Section 12.0 of Volume III, *Environmental Setting*, for a description of housing in the Paradise Planning Area.

Impacts: **Impact Evaluation Criteria:** The *Housing Element* of the proposed *General Plan* is required to identify housing needs and establish goals, policies, and quantified objectives for the preservation, improvement and development of housing. The Butte County Association of Governments (BCAG) is required to prepare a Regional Housing Allocation Plan which establishes Paradise's share of the regional housing need (see Table 12-15, Volume III), and the *Housing Element* is required to reflect that share in its goals and objectives. Failure to designate sufficient land to accommodate needed housing, designation of land far in excess of identified needs, or failure to provide public facilities and services to support housing in designated areas, would result in a general plan that is internally inconsistent, and would represent a potentially significant impact. The relevant *Housing Element* goals, quantified objectives and policies are as follows:

HG-1 Strive to provide the amount of affordable housing required by the State and BCAG.

HG-5 Develop, through public and private channels, sufficient new housing to assure that affordable

housing is available for working families and that housing opportunities are provided for all income levels of Paradise residents, according to the requirements of State law.

HG-6 Provide incentives for the construction of additional multifamily rental housing, including housing that is affordable to low-income residents.

HO-2 Maintain an adequate supply of residential land in appropriate land use designations and zoning categories to accommodate planned growth and to allow for a reasonable vacancy rate through 1997.

HO-3 Production of new housing units to accommodate the total number of households expected to reside in Paradise by 1997. Construction of 1,350 total new housing units by 1997, including 977 single family dwellings, 139 multi-family units and 234 mobile homes.

HP-3 Based upon appropriate levels of staff and funding resources, the Town shall maintain a sufficient inventory of developable land to accommodate timely development of needed new housing.

HP-4 The *General Plan* shall identify lands most suitable for multifamily development and strongly encourage multifamily development on these sites.

HP-12 The Town shall strive to provide adequate public facilities and services to meet the 1997 total new construction needs.

HP-15 The Town shall encourage the development of a full range of housing types within the Town by 1997, as physical and infrastructure constraints permit, in

proximity to existing and planned employment centers.

HP-19 New residential development shall be directed to areas of the community where essential public facilities and services can be provided.

Impact #3.11-1: Information on General Plan buildout in Table 3.1-1 estimates that the proposed *General Plan* will accommodate 3,125 new dwelling units within the Primary Area and 1,949 new dwelling units within the Secondary Planning Area.

Conclusiou: While these figures exceed new construction goals contained in the *Housing Element*, as listed above, the *General Plan* has a 15-year planning period, while the *Housing Element* time frame is only 5 years. It is estimated that these dwelling units will accommodate a population of 34,349 within the Primary Area, a figure which only slightly exceeds the 2007 population figure of 33,000 which the proposed *General Plan* is designed to accommodate. It is normally desirable to allow some flexibility in these estimates to account for physical constraints which may limit development (such as topography and availability of sewer service), to avoid undue restrictions on housing supply which may increase costs, and to allow for some variance in the actual densities constructed. Based on the impact evaluation criteria, this impact is determined to be less than significant and no mitigation measures are required.

Impact #3.11-2: Adverse impacts on existing housing due to policies and programs contained in the proposed *General Plan*.

Conclusion: The policies and programs of the proposed *General Plan* are designed to preserve, upgrade and protect existing housing, rather than result in adverse impacts such as deterioration which would result in substandard housing conditions. This impact is therefore determined to be less than significant, and no mitigation measures are required.

Mitigation Measures: Because no significant impacts have been identified, no mitigation measures are required.

3.12 HEALTH HAZARDS AND SAFETY

Setting: Please refer to Section 10.0 of Volume III, *Environmental Setting*, for a description of existing conditions related to health hazards and emergency response and evacuation. Other health and safety hazards are addressed in other sections of this Chapter: wildland fire hazards in Section 3.14, and seismic hazards in Section 3.3.

Impacts: **Impact Evaluation Criteria for Health Hazards:** The significance of vector-related impacts can be measured by comparison to the adopted "Guidelines, Checklist and Standards for Vector Prevention in Proposed Developments" of the Butte County Mosquito Abatement District (BCMAD), and a determination made as to whether the proposed *General Plan* impedes compliance with these standards and prevention practices. Full compliance with some adopted guidelines and standards may conflict with the preservation, maintenance and enhancement of wetlands within the Planning Area.

Impact #3.12-1: Exposure of residents of the Paradise Planning Area to potentially high levels of nuisance and disease vectoring mosquitoes and ticks, and creation of new sources of vectors within the planned wastewater treatment plant and stormwater retention basins. The BCMAD has indicated that storm water retention basins are known to breed mosquitoes if they are not properly maintained, and that created marshes associated with wastewater treatment plants pose a serious risk of mosquito production. The mosquito species are important vectors of diseases such as malaria, encephalitis and canine heartworm disease, and the local tick is a vector of Lyme disease.

Conclusion: If proper prevention practices are not applied, impacts related to identified health hazards are potentially

significant. Impacts of the planned wastewater treatment plant have been and will be further addressed in the environmental documentation prepared for that project (Final Environmental Impact Report for the Town of Paradise Central Area Wastewater Collection and Sewage Treatment Facilities System, September 1989, SCH# 88041912) Additional environmental documentation will be prepared for the actual construction of the system following system design, and the BCMAD will be consulted at that time. Mitigation measures are proposed that will reduce impacts of any stormwater retention basins to a level that is less than significant.

Mitigation Measures:

Mitigation Measure #3.12-1: The BCMAD has recommended that stormwater retention basins be properly designed and maintained so they do not breed mosquitoes, in consultation with the BCMAD. Applies to Impact #3.12-1.

Effectiveness of Measure: Compliance with this provision, which avoids conditions that contribute to vector breeding, has been determined to be effective by the BCMAD.

Implementation/Monitoring: It will be the responsibility of the Town Engineering Office to consult with BCMAD regarding the design and maintenance of stormwater retention basins. BCMAD has recommended this mitigation measure. Public Resources Code section 21081.6 provides that where the approving agency has received mitigation suggestions from an agency having jurisdiction by law over natural resources affected by a project, the latter agency must prepare and submit a reporting or monitoring program applicable to the proposed mitigation measure, if so requested by the approving agency. The Town of Paradise intends to submit such a request to the BCMAD.

Impacts:

Impact Evaluation Criteria for Emergency Response and Evacuation: Emergency response is addressed in Section 3.14 (Public Services and Facilities) below. With regard to evacuation, the Town has recently completed and adopted a *Multihazard*

Disaster Plan. The impact of the proposed *General Plan* will be significant if it impedes compliance with the recommendations of the *Multihazard Disaster Plan.*

Impact #3.12-2: The proposed *General Plan* will result in additional development within the Planning Area, which will contribute to identified traffic flow problems on existing evacuation routes when and if it is necessary to evacuate all or portions of the community.

Conclusion: The impacts of additional development on existing evacuation routes would be potentially significant if this issue were not considered in the planning process. However, policy statements and implementation measures incorporated in the proposed *General Plan*, as well as the land use and circulation system proposals depicted in the *Land Use Diagram* and *Circulation Diagram*, will reduce the impacts to a level which is less than significant. The proposed *General Plan* does not propose additional development in the northerly Secondary Planning Area, which is the area with only one evacuation route (Skyway). The Plan also proposes additional east-west through streets and improvements to existing roadways as shown in Table 2-3 of Volume I, *Policy Document*, as well as the additional east-west connectors indicated on the *Circulation Diagram.*

A policy statement and implementation measure which are incorporated in the proposed *General Plan* which reduce impacts on existing evacuation routes are as follows:

Safety Element

SI-2 Review existing standards for roadway widths, emergency access and road and structural identification and amend as necessary.

Circulation Element

CP-8 Creation of additional connections north to Paradise Pines; west to east to Feather River Hospital; and from west to east in the southern portion of the Town shall be studied.

Mitigation Measures: Because no significant impacts have been identified, no mitigation measures are required.

3.13 TRANSPORTATION AND CIRCULATION

Setting: Please refer to Section 13.0 of Volume III, *Environmental Setting,* for a description of the transportation and circulation setting for the Paradise Planning Area, and Figure 2-2, *Circulation Diagram*, of Volume I, *Policy Document* for a diagram of the planned circulation system. In addition, please refer to Appendix F of this document for transportation and circulation data tables.

Impacts: **Impact Evaluation Criteria:** The standard used to evaluate the functioning of the proposed circulation (roadway) system is level of service (LOS). Level of service is a scale that measures operating conditions or maximum design capacity at an intersection or along a roadway segment in relation to the projected traffic volume resulting from the planned circulation system. Levels range from A to F, with "A" representing the highest level of service and "F" roadway failure. Table 3.13-1 represents the average daily traffic criteria for each street classification type for levels of service "C", "D" and "E". The proposed *General Plan* has established level of service "D" or better as the standard for all roadway segments.

Impact #3.13-1: Normally, for a General Plan, a travel demand model is used to estimate peak hour and/or daily traffic volumes produced by existing and projected development. Unfortunately, the Butte County traffic model was not readily available for use in the General Plan analysis. Further, some of the preliminary results from prior application of the Butte County model did not appear logical. Therefore, an alternative approach was used to forecast future roadway traffic volumes.

Dowling Associates' TRAFFIX model was used to calculate existing and projected average daily traffic volumes for numerous roadway segments within the Paradise Planning Area. The following approach was used to generate the total traffic volumes.

- The existing PM peak hour turn movement volumes were divided by 10 percent for all analysis locations except along Skyway where 14 percent was used to estimate average daily traffic levels.

- The standard trip generation rates noted in Table 3.13-2 were applied to all of the projected development within the Primary and Secondary Planning Areas.

- All of the residential traffic was assigned to the street system. For the non-residential land uses only the non-home based (NHB) component was assigned. The NHB component equals 30 percent of the total. The assignment of the residential traffic generates trip ends both at the residential and non-residential ends of the trips. Therefore, only the non-home based component of the non-residential development needs to be added. In sum, 100 percent of the residential trip generation and 30 percent (NHB) of the non-residential trip generation were assigned to the surrounding street system to represent growth in traffic due to new development. The total daily traffic is the sum of existing plus new development traffic.

- The resultant average daily traffic volumes were compared to a set of roadway capacities (based upon number of lanes, roadway configuration and other parameters) to determine the appropriate street classification, number of lanes and level of service for each roadway segment.

Project Trip Generation: Standard trip generation rates were applied to the projected levels of growth within the Primary and Secondary Planning Areas. The resultant increments in new average daily traffic generated by the Plan are detailed in Table 3.13-3. The proposed plan is estimated to generate approximately 81,307 daily

trips. Of these, approximately 32,400 trips are associated with residential development, while 48,900 are created by non-residential land uses. Not all of the new trip generation was assigned to the street system. A factor of 30 percent was applied to the non-residential land uses to estimate the level of non-home based trips between the various non-residential land uses. The 30 percent value is based upon the average value found in many travel demand models. Non-home based trips include trips between office and school, office and shopping or other travel patterns. All of the residential traffic was assigned to the street system. The residential travel includes home-based work, home-based other (includes home to school and shopping) and some non-home based trips (mail and other deliveries). The total residential increment is an estimated 32,400 trips while the non-residential travel is an estimated 13,980.

Trip Distribution (Travel Pattern) Assumptions: The assignment of traffic within the traffic model was made by assigning the trip generation using the following set of trip distribution factors. As 100 percent of the residential land use change was assigned to the street system, an estimate of the distribution of total non-residential land use trip generation was used. The existing land uses and the trips they generate plus the proposed increases in non-residential land use intensities were added together and allocated to specific locations within the Planning Area. The destinations, called gateways, and the final trip distribution values are shown in Table 3.13-4.

While no growth was projected down Skyway (within the Secondary and Tertiary Planning Areas), an estimate of 6 percent growth in trips for destinations toward Chico was included. The proposed growth in Paradise includes extensive increases in Business Park and Light Industrial areas. If these occur, less home-to-work travel between Paradise and Chico will occur. An evaluation of the balance between residential and non-residential travel patterns suggests that the projected levels of Business Park and Light Industrial employment could discourage growth in home-to-work travel between Paradise and Chico, Oroville and other regional employment centers outside of Paradise.

A traffic zone system was developed for the TRAFFIX model. Figure 3-1 illustrates the traffic zone system. The Town of Paradise was divided into 80 traffic zones. Table 3.13-5 details the individual traffic zone land uses and trip generation assumptions.

The projected increases in average daily traffic were added to the estimated existing traffic volumes. These volumes were compared to the level of service criteria (see Table 3.13-1) to determine: 1) the number of required travel lanes, 2) the required street classification, 3) the roadway configuration for each of the linkages that was evaluated, and 4) the resultant level of service.

The results of this assessment are provided on Table 3.13-6. Table 3.13-6 defines the build-out requirements for the major roadway facilities within Paradise. Additional traffic projections are provided for State Routes 70, 99 and other regional facilities outside of the Paradise Planning Area under Impact #3.13-2.

In addition to the roadway segments listed in Table 3.13-6, the *Circulation Diagram* includes Residential Collectors which carry less traffic, but which function as collectors to adjacent arterials. These Residential Collectors include the following roadway segments:

- Bille Road west of Skyway
- Roe Road east of Foster Road
- Nunneley Road east of Sawmill
- Elliott Road west of Skyway
- Foster Road
- Valley View Road
- Wagstaff Road west of Skyway
- Oliver Road
- Lucky John Road
- Honey Run Road (portion)
- Scottwood Road
- Dean Road
- Merrill Road
- Stark Lane
- Moore Road
- Wayland Road

TABLE 3.13-1
AVERAGE DAILY ROADWAY CRITERIA FOR LEVELS OF SERVICE

Roadway Type	Daily Roadway Capacities by Level of Service		
	C	D	E
6 Lane Expressway	48,000	54,000	60,000
4 Lane Expressway	32,000	36,000	40,000
6 Lane Arterial Divided	36,000	40,000	45,000
4 Lane Arterial Divided	24,000	27,000	30,000
4 Lane Arterial Undivided	18,500	21,000	24,000
2 Lane Arterial Divided	12,000	13,000	15,000
2 Lane Arterial Undivided	9,000	10,500	12,000
3 Lane One-Way Arterial	17,000	19,000	22,000
2 Lane One-Way Arterial	12,000	13,000	15,000
4 Lane Collector Divided	15,000	17,000	19,000
4 Lane Collector Undivided	14,000	16,000	18,000
2 Lane Collector Divided	8,000	9,000	10,000
2 Lane Collector Undivided	7,000	8,000	9,000
2 Lane Residential	5,000	6,000	7,000
2 Lane Commercial	5,000	6,000	7,000

Source: Dowling Associates, 1992.

TABLE 3.13-2
AVERAGE DAILY TRIP GENERATION RATES FOR GENERAL PLAN LAND USES

Land Use Type	Trip Rate per Dwelling Unit	Trip Rate per 1,000 square feet
AR (Agricultural Residential)	9.55	
SR (Suburban Residential)	9.55	
TR (Town Residential)	9.55	
MF (Multi-Family Residential)	6.47	
NC (Neighborhood Commercial)		120.00
CC (Central Commercial)		140.00
TC (Town Commercial)		140.00
BP (Business Park)		14.37
LI (Light Industrial)		6.97
CS (Community Service)		15.00
Paradise Pines/Magalia Areas	3.76	

Sources: The Institute of Traffic Engineers (ITE) Fifth Edition; the City of San Diego; Dowling Associates.

TABLE 3.13-3
LAND USE INCREASES
AND AVERAGE DAILY TRIP GENERATION

Land Use	Dwelling Units	1,000 Square Feet	Average Daily Trips	Average Daily Trips
AR (Agricultural Residential)	1,057		6,864	
SR (Suburban Residential)	3,344		26,957	
TR (Town Residential)	69		659	
MF (Multi-Family Residential)	584		3,381	
NC (Neighborhood Commercial)		10.890		1,307
CC (Central Commercial)		87.120		3,485
TC (Town Commercial)		457.380		18,298
BP (Business Park)		2,776.940		39,905
LI (Light Industrial)		80.586		562
CS (Community Service)		196.020		2,941
Totals	**5,054**	**3,608.936**	**37,861**	**66,498**

Source: Dowling Associates, 1992.

- Kibler Road
- Forest Lane

Conclusion: Table 3.13-6 indicates that most of the roadways within Paradise will operate at LOS "C" or better. However, there are a number of exceptions. In addition, the street classifications and resultant design standards used for this analysis include arterial and collector streets which have center medians. Streets with center medians have higher daily and peak hour capacity due to the fact that left turn and through traffic volumes are separated. With a center median facility, left turn movements are not made from the same travel lane as normal through trips.

The roadway criteria for LOS "C", "D" and "E" from Table 3.13-1 were applied to the forecasted average daily traffic volumes. In all cases, the analysis attempted to maintain LOS "C" or better. Therefore, if a 4 lane divided arterial produced LOS "C" while a 4 lane undivided arterial achieved only LOS "D", the 4 lane divided facility was recommended. Along Skyway and Clark south of Neal and Pearson, arterial standards were used because it is assumed that these roadway segments would still have access opportunities.

LOS "D" or better is achieved within Paradise except along Skyway between Maxwell Drive and Neal Road where LOS "F" occurs. The actual level of service is dependent upon the number of travel lanes assumed for Skyway. If 4 lanes is assumed, LOS "F" occurs; if 6 lanes is assumed, LOS "D" - "E" is created along the highest volume segment. Selected roadway segments operated at LOS "D". Along these segments, if the number of lanes is increased, level of service would be improved.

Impacts of traffic on roadway segments which reflect projected levels of service below "D" ("E" OR "F") are potentially significant. However, the policy statement regarding level of service and assumptions for trip generation rate incorporated in the proposed *General Plan* will reduce impacts to a level that is less than significant. This policy statement and assumptions are as follows:

Circulation Element

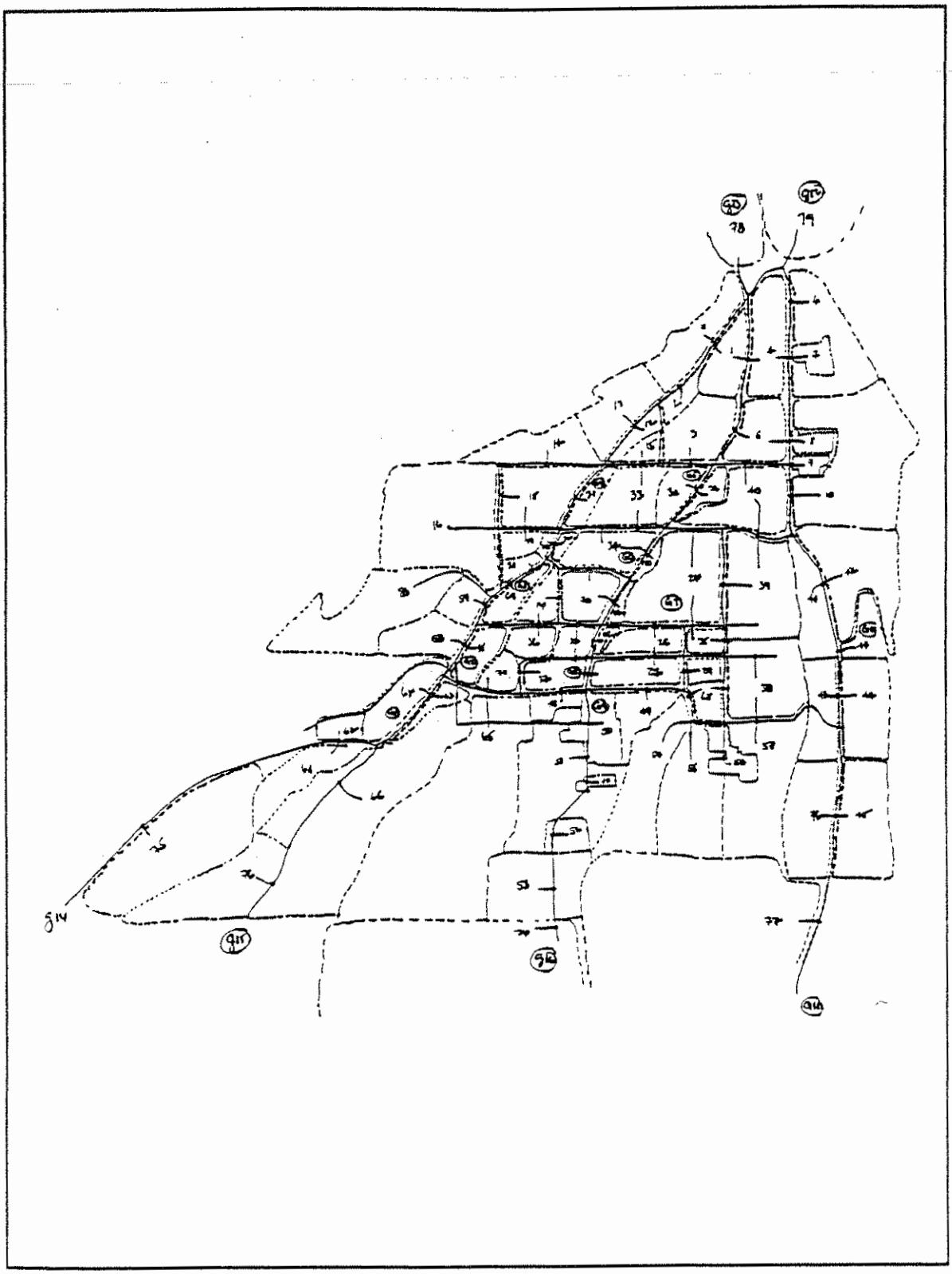


Figure 3-1
Traffic Impact Model (TRAFFIX) - Traffic Zone System

TABLE 3.13-4
TRIP DISTRIBUTION ASSUMPTIONS

Gateways	Total Non-Residential Development	
	Total Daily Trips	Percent
Skyway So. of Pearson	21777	8.90%
Skyway Pearson/Elliott	18149	7.40%
Skyway No. of Elliott	25692	10.50%
Skyway No. of Bille	22871	9.40%
Clark No. of Bille	30261	12.40%
Clark So. of Bille	21626	8.90%
Elliott E. of Clark	0	0.00%
Clark So. of Elliott	9365	3.80%
Clark No. of Pearson	2178	0.90%
Pentz near Hospital	31174	12.80%
Pentz So. of Town	751	0.30%
Skyway towards Magalia	3920	1.60%
Bader Mine Road	0	0.00%
Skyway So. of Town	13830	5.70%
Neal South of Town	17214	7.00%
Clark So. of Town	25534	10.40%
Totals	244342	100.00%

Source: Dowling Associates, 1992.

TABLE 3.13-5
DETAIL OF AVERAGE DAILY TRIP GENERATION

Traffic Zone	Land Use	Dwelling Units	1,000 Square Feet	Daily Trip Rate	Daily Two-way Trips
1	SR	20		9.55	191
1	TC		87.12	40.00	3485
2	SR	15		9.55	143
3	SR	20		9.55	191
4	SR	20		9.55	191
5	CS		65.34	15.00	980
5	SR	20		9.55	191
6	AR	10		9.55	96
6	SR	56		9.55	535
7				15.00	0
8				15.00	0
9				15.00	0
10	AR	9		9.55	86
10	SR	57		9.55	544
11	AR	6		9.55	57
11	SR	21		9.55	201
11	TC		21.78	40.00	871
12	SR	6		9.55	57
12	TC		10.89	40.00	436
13	SR	21		9.55	201
14	AR	28		9.55	267
14	SR	25		9.55	239
15	SR	3		9.55	29
16	AR	35		9.55	334
16	SR	165		9.55	1576
17	MF	15		6.47	97
17	TR	14		9.55	134
18	SR	10		9.55	96
19	SR	10		9.55	96

Traffic Zone	Land Use	Dwelling Units	1,000 Square Feet	Daily Trip Rate	Daily Two-way Trips
20	TC		10.89	40.00	436
21	TC		10.89	40.00	436
22	MF	12		6.47	78
22	SR	47		9.55	449
23	MF	11		6.47	71
23	SR	46		9.55	439
24	SR	6		9.55	57
25				15.00	0
26				15.00	0
27				15.00	0
28	MF	8		6.47	52
29	TR	17		9.55	162
30				15.00	0
31	TC		36.48	40.00	1459
32	TC		17.97	40.00	719
32	TR	8		9.55	76
33	SR	30		9.55	287
33	TC		38.115	40.00	1525
34	SR	29		9.55	277
35	CC		87.12	40.00	3485
35	TC		10.89	40.00	436
36	MF	75		6.47	485
37	TC		21.78	40.00	871
38	SR	50		9.55	478
39	SR	50		9.55	478
40	AR	10		9.55	96
40	NC		10.89	120.00	1307
40	SR	40		9.55	382
41	AR	3		9.55	29
41	SR	54		9.55	516
42	AR	3		9.55	29
42	SR	54		9.55	516

Traffic Zone	Land Use	Dwelling Units	1,000 Square Feet	Daily Trip Rate	Daily Two-way Trips
42	TC		21.78	40.00	871
43	AR	3		9.55	29
43	SR	54		9.55	516
44	AR	2		9.55	19
44	SR	54		9.55	516
46	SR	50		9.55	478
47	CS		21.78	15.00	327
48				15.00	0
49	SR	14		9.55	134
50	AR	10		9.55	96
50	MF	248		6.47	1605
51	SR	186		9.55	1776
51	TC		21.78	40.00	871
52	BP		729.63	14.37	10485
53	AR	32		9.55	306
53	BP		196.02	14.37	2817
54	AR	40		9.55	382
54	SR	67		9.55	640
55	AR	40		9.55	382
55	SR	70		9.55	669
56	MF	30		6.47	194
56	SR	20		9.55	191
57	AR	40		9.55	382
57	SR	90		9.55	860
58	SR	42		9.55	401
58	TC		10.89	40.00	436
59	AR	119		9.55	1136
59	MF	15		6.47	97
59	SR	41		9.55	392
59	TC		10.89	40.00	436
60				15.00	0
61	SR	96		9.55	917

Traffic Zone	Land Use	Dwelling Units	1,000 Square Feet	Daily Trip Rate	Daily Two-way Trips
62	AR	6		9.55	57
62	TR	3		9.55	29
63	TC		21.78	40.00	871
64	TC		10.89	40.00	436
65	SR	280		9.55	2674
66	AR	37		9.55	353
66	SR	281		9.55	2684
67				15.00	0
68				15.00	0
69	TC		43.56	40.00	1742
70	MF	23		6.47	149
70	TC		38.115	40.00	1525
70	TR	3		9.55	29
71	SR	5		9.55	48
72	AR			9.55	0
72	TC		10.89	40.00	436
72	TR	24		9.55	229
73	LI		80.586	6.97	562
74	BP		653.407	14.37	9389
74	CS		108.9	15.00	1634
74	SR	0		9.55	0
76	AR	58		9.55	554
76	BP		1197.883	14.37	17214
77	AR	8		9.55	76
77	SR	258		9.55	2464
78	AR			9.55	0
78	SR			9.55	0
78	MF			6.47	0
79	AR	558		9.55	5329
79	SR	861		9.55	8223
79	MF	147		6.47	951

Source: Dowling Associates, 1992.

CP-1 The Town shall strive to maintain a level of service (LOS) "D" or better as the standard for new and existing roadways in the Paradise Planning Area. LOS "D" or better shall be maintained on all local streets within the town limits, and LOS "C" or better shall be maintained whenever feasible. However, the Skyway between Bille and Neal Roads may be allowed to exceed this standard. The Town shall review average daily traffic volumes along Skyway between Bille and Neal Roads before and after any construction of Skyway as a 4-lane arterial with a center two-way left turn lane. If and when the LOS "D" threshold is reached, the Town shall determine whether to construct additional improvements to Skyway or to amend the *Land Use Element* designations and *Circulation Element* to maintain acceptable traffic volumes.

Trip Generation Assumptions

For the traffic generated in Paradise Pines and Magalia, the traffic consultant divided the number of existing two-way trips on Skyway just north of Pentz Road by the total number of dwelling units. The resultant trip rate was approximately 3.8 trips per dwelling unit. This rate is substantially lower than rates used for the residential growth in Paradise (7.66 trips per unit was used for all residential other than multi-family which used 6.47 trips per unit.) Surveys indicate that approximately 42 percent of the population is over 60 years of age. This would suggest that less travel on average may be generated by the housing in Paradise. A reduction in the average daily and peak hour trip generation rate would appear warranted. Reductions of 20 to 25 percent could be considered.

Mitigation measures listed below can further reduce impacts, but are not required to reduce impacts to a level that is less than significant.

Level of Service Considerations: This General Plan assessment used average daily traffic volumes to define the numbers of lanes and street classifications within Paradise. While the traffic volume criteria provides an estimate for average daily level of service, traffic impacts during peak hours could exceed LOS "C" at major intersections. Therefore, the recommendations for numbers of lanes and street type

TABLE 3.13-6
PROJECTED TRAFFIC VOLUMES, LANE REQUIREMENTS, CLASSIFICATION AND LEVELS OF SERVICE

Dowling Associates Average Daily Traffic Assignments

Roadway Segment		Daily Volume	Lanes	Center	Proposed Classification	LOS Threshold	LOS
Skyway	South of Neal	24,600	4	Undivided	Expressway	32,000	C or Better
	Neal to Pearson	45,000	6	Divided	Arterial	45,000	E
	Pearson to Elliott	38,300	6	Divided	Arterial	40,000	D
	Elliott to Oliver	39,600	6	Divided	Arterial	40,000	D
	Oliver to Maxwell	36,600	6	Divided	Arterial	40,000	D
	Maxwell to Bille	33,600	6	Divided	Arterial	36,000	C or Better
	Bille to Wagstaff	25,500	6	Divided	Arterial	36,000	C or Better
	Wagstaff to Clark	18,200	4	Undivided	Arterial	18,500	C or Better
	Clark to Pentz	21,100	4	Divided	Arterial	24,000	C or Better
	North of Pentz	21,700	4	Divided	Arterial	24,000	C or Better
Clark Road	South of Pearson	23,500	4	Undivided	Expressway	32,000	C or Better
	Pearson to Elliott	24,900	4	Divided	Arterial	27,000	D
	Elliott to Bille	26,500	4	Divided	Arterial	27,000	D
	Bille to Wagstaff	23,800	4	Divided	Arterial	24,000	C or Better
	Wagstaff to Skyway	11,700	2	Divided	Arterial	12,000	C or Better
Pentz Road	South of Pearson	7,800	2	Undivided	Collector	9,000	C or Better
	Pearson to Bille	9,600	2	Undivided	Arterial	10,500	D
	Bille to Skyway	6,600	2	Undivided	Collector	9,000	C or Better
Neal Road	South of Skyway	15,700	4	Divided	Collector	18,500	C or Better
Pearson Road	Skyway to Clark	24,500	4	Divided	Arterial	27,000	D
	Clark to Edgewood	15,200	4	Undivided	Arterial	18,500	C or Better
	Edgewood to Pentz	10,900	2	Divided	Arterial	12,000	C or Better

Dowling Associates Average Daily Traffic Assignments

Roadway Segment		Daily Volume	Lanes	Center	Proposed Classification	LOS Threshold	LOS
Elliott Road	Skyway to Clark	16,300	4	Undivided	Arterial	18,500	C or Better
	Clark to Sawmill	8,300	2	Undivided	Collector	9,000	C or Better
	Sawmill to Pentz	3,000	2	Undivided	Collector	9,000	C or Better
Bille Road	Skyway to Clark	13,400	4	Undivided	Arterial	18,500	C or Better
	Clark to Sawmill	10,200	2	Undivided	Collector	9,000	C or Better
	Sawmill to Pentz	7,100	2	Undivided	Collector	9,000	C or Better
Wagstaff Road	Skyway to Clark	9,000	2	Divided	Arterial	12,000	C or Better
	Clark to Pentz	7,900	2	Undivided	Collector	9,000	C or Better
Sawmill Road	Pearson to Bille	3,000	2	Undivided	Collector	9,000	C or Better
	South of Pearson	1,200	2	Undivided	Collector	9,000	C or Better
Rocky Lane	Wagstaff to Skyway	1,000	2	Undivided	Collector	9,000	C or Better
Maxwell Drive	Elliott to Skyway	3,400	2	Undivided	Collector	9,000	C or Better
Central Park Drive	Maxwell to Clark	2,700	2	Undivided	Collector	9,000	C or Better
Nunneley Road	Pearson to Sawmill	3,200	2	Undivided	Collector	9,000	C or Better
Buschmann Road	Foster to Clark	2,700	2	Undivided	Collector	9,000	C or Better
Roe Road	Neal to Foster	1,000	2	Undivided	Collector	9,000	C or Better
South Libby	South of Pearson	1,000	2	Undivided	Collector	9,000	C or Better
Edgewood Lane	South of Pearson	1,000	2	Undivided	Collector	9,000	C or Better

Source: Dowling Associates, 1992.

(classification) should not be used to discourage individual environmental review for specific development projects within Paradise.

Impact #3.13-2: While the traffic model for Paradise did not project land use changes outside of the Primary and Secondary Planning Areas, some traffic was assigned to all three of the major roadways leaving Paradise. The model forecasts that approximately 8,500 new daily trips will be added to these facilities. Of these trips, an estimated 3,100 will use Skyway, 5,200 Clark Road and 200 Pentz Road. It is assumed that most of the Skyway trips are destined for Chico, while the Clark Road traffic is destined for Routes 70 or 99, with the largest component allocated to Route 70. The Butte County *Congestion Management Plan* forecasts 90,000 daily trips on Route 99 between Skyway and Route 32 in Chico. The Plan recommends a 6 lane freeway operating at LOS "A".

Conclusion: Adding the 3,100 daily trips from Paradise will not significantly impact the level of service on Route 99. Route 70 south of Route 149 is projected to carry 62,300 daily trips at LOS "C" (4 lane freeway). Adding the entire 5,200 daily trips from Paradise would not change the LOS on this link during the peak hours. It is estimated that 620 additional peak hour trips would be added to the projected 5,600 volume for a total of 6,220 peak hour trips. Assuming a capacity of 8,000 vph, the resultant LOS would be .78 or "C", and the impact will be less than significant.

Mitigation Measures:

Mitigation Measure #3.13-1: A series of new east/west residential collector connector roadways could be developed in the southern portion of the Town of Paradise to divert traffic from Pearson Road. Roadways proposed on the *Circulation Diagram* include:

- Roe Road east of Foster to Clark and Anchor Way
- Wayland Road

Additional potential east-west connectors include:

- Buschmann westerly to Skyway

- Neal Road to Skyway

Applies to Impact #3.13-1.

Effectiveness of Measure: Of these options, the Buschmann and Roe Road connectors would divert the greatest number of peak hour and daily trips. In fact, the diversion could be significant enough to require a 2 lane divided collector along Roe Road. The easterly extension of Roe Road to Anchor Way would reduce the need to widen Pearson Road east of Clark Road. Of course, if the Business Park and/or Light Industrial uses south on Clark and Neal Road generate more traffic towards Chico and Oroville rather than Paradise, the need for these new connectors would be diminished.

Implementation/Monitoring: The Town Engineering Office is responsible for assuring that new road construction is accomplished in accordance with the General Plan and EIR.

Mitigation Measure #3.13-2: Reconstruct the intersection of Foster Road and Pearson Road to physically prevent traffic from crossing Pearson Road from one side of Foster Road to the other. Applies to Impact #3.13-1.

Effectiveness of Measure: This measure will reduce traffic volumes on Pearson Road to level of service "C".

Implementation/Monitoring: The Town Engineering Office is responsible for assuring that the necessary reconstruction takes place in accordance with the General Plan and EIR.

3.14 PUBLIC FACILITIES AND SERVICES

Setting: Please refer to Section 14.1 of Volume III, *Environmental Setting*, for a description of law enforcement in the Paradise Planning Area; Section 14.2 for fire protection; Section 14.3 for solid waste; Section 14.6 for schools; Section 14.7 for parks and recreation; Section 14.8 for water; and Section 14.9 for wastewater.

Impacts:

Impact Evaluation Criteria: Impacts on public facilities and services from the proposed *General Plan* can be considered significantly adverse if the cumulative impacts of development in accordance with the Plan will result in one or more of the following situations which would not be mitigated or offset by policy statements in the Plan or the existing standard tax or fee system:

- A need for new systems or services results;
- Substantial alterations to the existing systems or services are necessary;
- The providing agency is currently operating at or above capacity and the additional service need would create an additional burden.

Impact #3.14-1: Increased demand on police services. Additional development and population accommodated by the proposed *General Plan* will result in an estimated need for 5 to 6 additional officers (plus equipment and support personnel) during the planning period to maintain the existing staffing standard of one officer per 1,200 residents and response time of 5 minutes. If all or portions of the Secondary Planning area are annexed, the Town will be required to provide police protection services to these areas as well. At planned densities, it is estimated that an additional 11 to 12 officers would be required to serve existing developed areas and planned new development. If annexation of areas is formally proposed by the Town, feasibility studies concerning a plan for providing services and environmental documentation will be required prior to approval.

Conclusion: Based on the impact evaluation criteria, increased demand on police services is a significant impact. However, policy statements and implementation measures incorporated in the proposed *General Plan* closely tie development to the availability of law enforcement services, and will reduce this impact to a level which is less than significant. These policy statements and implementation measures are as follows:

Land Use Element

LUP-9 The character of future development shall be compatible with the Town's service delivery abilities and shall not result in service level declines.

LUP-10 The Town shall assure that the rate and character of growth is commensurate with or does not exceed the current level of public services, and shall assure that municipal services can be provided to areas planned for annexation and development.

LUP-12 The Town shall continue to investigate means to improve its public service delivery capacity to assure that future growth does not outstrip services.

LUP-18 New land use development shall not cause the levels of police protection to fall below the service levels established by this Plan.

LUP-20 Future development shall be designed and constructed to take maximum advantage of known fire and crime prevention siting, orientation and building techniques.

LUP-21 Establishment of assessment districts shall be considered in newly developing areas to assure that the longer term costs of land use development are adequately funded.

LUP-22 A system of fees shall be established sufficient to assure that future growth pays its equitable share of service delivery costs.

LUI-12 Establish law enforcement and fire protection impact fees for new land use development sufficient to assure that established levels of protection are maintained.

LUI-13 If feasible, establish law enforcement and fire protection service fees for existing land uses sufficient to assure that established levels of protection are maintained.

LUI-14 Establish standards for fire and crime prevention, orientation and building techniques in the Zoning and Subdivision Ordinances.

LUI-15 Establish a fee or fees to be collected upon issuance of permits for new development that will cover the cost of additional services and infrastructure not paid directly by the developer.

LUI-16 Utilize Mello-Roos and other forms of assessment district financing where the economics of new development permit.

Impact #3.14-2: Increased fire protection demand. As development occurs in accordance with the proposed *General Plan*, a cumulative increase in the demand for fire protection services will result. If all or portions of the Secondary Planning Area are annexed, the Town will be obligated to provide fire protection services to existing development and new development. If annexation of areas is formally proposed by the Town, feasibility studies concerning a plan for services and environmental documentation will be required prior to approval.

Conclusion: Based on the impact evaluation criteria, increased demand on fire services is a significant impact. However, policy statements and implementation measures incorporated in the proposed *General Plan* closely tie development to the availability of fire protection services, and will reduce these impacts to a level which is less than significant. Policy statements and implementation measures which will reduce these impacts are as follows:

Land Use Element

LUP-9 The character of future development shall be compatible with the Town's service delivery abilities and shall not result in service level declines.

LUP-10 The Town shall assure that the rate and character of growth is commensurate with, or does not exceed the

current level of public services, and shall assure that municipal services can be provided to areas planned for annexation and development.

LUP-12 The Town shall continue to investigate means to improve its public service delivery capacity to assure that future growth does not outstrip services.

LUP-19 New land use development shall not cause the levels of fire protection to fall below the service levels established by this Plan.

LUP-20 Future development shall be designed and constructed to take maximum advantage of known fire and crime prevention siting, orientation and building techniques.

LUP-21 Establishment of assessment districts shall be considered in newly developing areas to assure that the longer term costs of land use development are adequately funded.

LUP-22 A system of fees shall be established sufficient to assure that future growth pays its equitable share of service delivery costs.

LUP-25 The Town shall designate general locations for new schools and fire stations in the Planning Area and shall reflect the general location of these future facilities on the *Land Use Diagram.* The actual location of fire stations shall be in conformance with the criteria established in the *Safety Element.*

LUI-12 Establish law enforcement and fire protection impact fees for new land use development sufficient to assure that established levels of protection are maintained.

LUI-13 If feasible, establish law enforcement and fire protection service fees for existing land uses sufficient

to assure that established levels of protection are maintained.

LUI-15 Establish a fee or fees to be collected upon issuance of permits for new development that will cover the cost of additional services and infrastructure not paid directly by the developer.

LUI-16 Utilize Mello-Roos and other forms of assessment district financing where the economics of new development permit.

Safety Element

SP-7 New fire station(s) shall be located so that all areas within town limits are within a 5-minute emergency response time. New fire station locations shall be within a 1/2-mile radius of the symbols indicated on the *Land Use Diagram.*

Impact #3.14-3: Increased structural and wildland fire hazard. Additional development in areas subject to wildland fire hazard will result in the exposure of additional people and property to this hazard.

Conclusion: The potential exists for significant impacts to occur with regard to exposure of additional people and structures to wildland fire hazard if development and construction were unregulated. However, policy statements and implementation measures that have been incorporated in the proposed *General Plan*, Town Improvement Standards, and an existing Town ordinance which prohibits new shake roofs will reduce these impacts to a level which is less than significant. Impacts related to water supply are addressed in Impact #3.14-8 below. Policy statements and implementation measures incorporated in the *General Plan* which will reduce these impacts are as follows:

Land Use Element

LUP-20 Future development shall be designed and constructed to take maximum advantage of known fire and crime prevention siting, orientation and building techniques.

Safety Element

SP-2 Through the development review process, adequate roads shall be required to be constructed and/or improved for emergency vehicle access.

SP-5 The Town shall promote fire prevention by continuing to require brush removal and fuel load clearing as ongoing conditions of development approval and property maintenance.

SP-6 The Town shall adopt a recent Uniform Fire Code amended to reflect the unique needs of Paradise, and require compliance with its provisions.

SP-8 The Town shall encourage Butte County to enforce standards conforming to the fire safety standards established by the State Board of Forestry for State Responsibility Areas within the Paradise Secondary and Tertiary Planning Areas, including:

- Road standards for fire equipment access
- Standards for signs identifying streets, roads and buildings
- Minimum private water supply reserves for emergency fire use
- Fuel breaks and greenbelts
- Land use policies and safety standards that take into account the recurrent nature of wildland fires
- Design standards establishing minimum road widths and clearances around structures
- Emergency preparedness protocol and procedures
- Maximum length of cul-de-sac roadways.

SI-1 Review existing standards for roadway widths, emergency access and road and structural identification and amend as necessary.

SI-6 Educate residents regarding the dangers of seismic activity and wildland fires, and the Town of Paradise *Multihazard Disaster Plan.*

SI-7 Adopt the Town of Paradise *Multihazard Disaster Plan* by reference in the *General Plan.*

SI-8 Enforce and comply with the provisions of the Uniform Building Code and the Uniform Fire Code.

SI-9 Require adequate dry brush clearance around structures.

Impact #3.14-4: Reduction of available landfill capacity. Using an estimated solid waste generation rate of one ton per capita per year which is disposed to the landfill, as reported in the Paradise *Source Reduction and Recycling Elements*, approximately 11,672 additional tons of solid waste would be generated annually at buildout within the Primary and Secondary Planning Areas. This amount would contribute to cumulative regional impacts on landfill capacity. It is currently estimated that the Neal Road Landfill will reach capacity in 1999.

Conclusion: Based on the impact evaluation criteria, the potential exists for a significant cumulative impact on the landfill. However, policy statements and implementation measures incorporated in the proposed *General Plan*, along with adoption and implementation of the Paradise *Source Reduction and Recycling Elements*, will reduce impacts to a level which is less than significant. The *Source Reduction and Recycling Elements* have been prepared in compliance with State mandates which require reductions in solid waste disposed to landfills by 1995 and 2000. Policy statements and implementation measures in the proposed *General Plan* which will reduce impacts on the landfill are as follows:

Open Space/Conservation/Energy Element

OCEP-49 The Town shall support and develop programs to recycle useful materials, including composting as an alternative to vegetation burning.

OCEP-50 Active community involvement in solid waste management and recycling shall be encouraged.

OCEI-31 Adopt and implement the *Source Reduction and Recycling Elements* and *Household Hazardous Waste Element*.

OCEI-34 Work towards establishment of a composting/chipping program.

OCEI-35 Establish mandatory refuse disposal, including a curbside recycling program.

OCEI-36 Improve recycling operations to accept all recyclables and maintain convenient hours of operation.

OCEI-37 Eliminate leaf burning after establishing a program for disposing of yard waste in an environmentally sensitive manner.

Impact #3.14-5: Need to extend solid waste collection services. The Town is served by several private waste disposal companies, but service is not mandatory. If refuse collection is not assured for new development, there is a potential for illegal waste disposal, additional burning of waste vegetation, and failure to meet the State-mandated waste disposal reduction goals.

Conclusion: Based on the impact evaluation criteria, these impacts are potentially significant. However, policy statements and implementation measures listed in Impact #3.14-4 above which are incorporated in the proposed *General Plan*, and adoption and implementation of the *Source Reduction and Recycling Elements*, will reduce these impacts to a level which is less than significant.

Mandatory refuse disposal service is funded by fees for service, and will contribute to tipping fees collected at the landfill which are used by Butte County to offset the cost of landfill maintenance and expansion.

Impact #3.14-6: Increased school enrollment. The Paradise Unified School District is operating under conditions of overcrowding, as described in Section 14.6 of Volume III, *Environmental Setting*. Using the yield factors contained in the Paradise Unified School District *Developer Fee Facilities Plan* of: .24 elementary students per household, .06 intermediate students per household, and .09 high school students per household, planned *General Plan* buildout has the potential of ultimately increasing the District's enrollment by 1,978 students (1,217 elementary, 304 intermediate, and 457 high school students). Based on District criteria for school size, it is estimated that this will result in the need for four additional schools (two elementary, one intermediate, and one high school).

Conclusion: The cumulative impacts of development in accordance with the proposed *General Plan* are potentially significant. However, policy statements and implementation measures included in the *General Plan* closely tie new development to availability of school facilities, and will reduce impacts to a level which is less than significant. These impacts are further reduced by District implementation of year-round school. Policy statements and implementation measures which will reduce impacts on schools are as follows:

Land Use Element

LUP-13 Unless assurance is obtained that an adequate level of all public facilities, including schools, will be available to future residents, no discretionary residential project shall be approved [to increase density of use.] The assurance shall include details of how any impacts identified as a result of the proposed land use actions are to be mitigated.

LUP-14 The Town shall encourage the Paradise Irrigation District, Lime Saddle Community Services District, Paradise Recreation and Parks District, Paradise Cemetery District, and Paradise Unified School District to expand or enhance service capacity, consistent with the Town's General Plan.

LUP-25 The Town shall designate general locations for new schools and fire stations in the Planning Area and shall reflect the general location of these future facilities on the *Land Use Diagram.* The actual location of schools shall be in conformance with the criteria established in the *Education and Social Services Element.*

LUI-16 Utilize Mello-Roos and other forms of assessment district financing where the economics of new development permit.

LUI-19 Work closely with PID, PRPD and PUSD in monitoring housing, population and enrollment trends and evaluating their effects on future service, parks and school facility needs.

Education and Social Services Element

ESP-8 Proposed General Plan amendment(s), or zoning reclassification(s) to allow residential development shall not be approved if it is documented by the Paradise Unified School District to the Town of Paradise Planning Commission that adequate school facilities cannot be made available concurrently with the need for such facilities. This documentation shall demonstrate that:

- The Paradise Unified School District has imposed all school mitigation fees pursuant to Government Code Section 53080 or equivalent mitigation measures not otherwise prohibited by statute.

- The Paradise Unified School District has filed a current copy of its *School Facilities Plan* with the Community Development Department.

- The Paradise Unified School District's *School Facilities Plan* shall accurately document its existing facilities, provide future school facilities projections, both short and long term, and identify the use of the current and projected revenues which are anticipated to meet those needs. In addition, the *School Facilities Plan* shall document the District's reasonable good faith efforts to seek all available funding, without substantial prejudice to the Paradise Unified School District's reasonable historical educational standard(s), and a current representation regarding the prospects for seeking and/or obtaining funds in the reasonably foreseeable future.

- The Paradise Unified School District shall file any and all amended *School Facilities Plan(s)* with the Town of Paradise Community Development Department within thirty (30) days after their adoption.

ESP-9 The Town of Paradise shall cooperate with the Paradise Unified School District in establishing school funding mechanisms.

ESP-11 The Town shall route all requests for divisions of land, rezonings, annexations and General Plan amendments to the Paradise Unified School District for review and comment.

ESP-12 The Town shall make specific findings regarding school enrollment and service capacities when acting on applications for divisions of residential land, residential rezonings, annexations and General Plan amendments.

ESI-6 Explore the feasibility of establishing a specific development impact fee program to assist the Paradise Unified School District to offset the impacts upon their facilities resulting from residential growth.

Impact #3.14-7: Increased demand on existing and for new public parks and recreational facilities. The Town Subdivision Ordinance establishes a park acreage standard of 3 acres per 1,000 population, and the proposed *General Plan* increases that standard to 5 acres per 1,000.

Conclusion: Based on the impact evaluation criteria, increased demand for public parks would be considered potentially significant. However, objectives, policy statements and implementation measures incorporated in the proposed *General Plan*, and Town requirements for park land dedication or payment of in-lieu fees, will reduce potential impacts to a level which is less than significant. Objectives, policy statements and implementation measures which will reduce impacts on parks and recreation are as follows:

Open Space/Conservation/Energy Element

OCEO-5 Increase the standard ratio of park acreage to population to 5 acres per 1,000 population.

OCEP-19 Whenever feasible, trailways shall be established in conjunction with new development, to serve as buffers and corridors between development, linking existing trailways, parks and school sites.

OCEP-20 The Town shall work with Feather River Hospital to create a public park and trail system on their property overlooking the Feather River Canyon.

OCEP-33 The continued operation of the golf course shall be encouraged, possibly through acquisition.

OCEP-34 The feasibility of establishing a public campground near DeSabla and Paradise Lakes shall be explored.

OCEP-36 A linear park shall be established encompassing the Paradise Memorial Trailway which is natural in design.

OCEP-37 The Town shall designate general locations for new parks and recreational facilities on the *Land Use Diagram* as sites are identified or become available.

OCEP-39 The Town shall endeavor to acquire and/or establish additional open space, particularly in the eastern portion of town.

OCEI-20 Work with the Paradise Recreation and Park District to facilitate development of park and recreational facilities consistent with the *General Plan* and assist with identification and acquisition of funding sources.

Land Use Element

LUP-14 The Town shall encourage the Paradise Irrigation District, Lime Saddle Community Services District, Paradise Recreation and Parks District, Paradise Cemetery District, and Paradise Unified School District to expand or enhance service capacity, consistent with the Town's General Plan.

Impact #3.14-8: Increased water consumption, provision of adequate water supplies, and need for additional fire flow and peakload water supply. Based upon the estimated population at *General Plan* buildout, it is calculated that an additional 1.7 to 2.0 million gallons per day will be needed at buildout in the Primary Area and 1.1 to 1.3 million gallons per day in the Secondary Planning Area (based on PID figures for historical per capita water use in the District). It is also necessary to assure that adequate fire flow is available for fire protection purposes.

Conclusion: Based upon impact evaluation criteria, the impact on water supply will be a significant unavoidable cumulative impact. While the proposed *General Plan* closely links new development to

available water supplies, includes policy statements and implementation measures designed to reduce impacts by assuring an adequate water supply, and includes water conservation policies, it will still result in the depletion of water resources. In the context of provision of water service in Paradise (refer to Volume III, *Environmental Setting*), impacts on water supply are determined to be cumulatively significant, and no additional mitigation measures are available. Policy statements and implementation measures incorporated in the proposed *General Plan* which will reduce impacts on water supply are as follows:

Land Use Element

LUP-10 The Town shall assure that the rate and character of growth is commensurate with, or does not exceed the current level of public services and shall assure that municipal services can be provided to areas planned for annexation and development.

LUP-11 Growth and land use development shall be linked to the availability of public services and facilities.

LUP-14 The Town shall encourage the Paradise Irrigation District, Lime Saddle Community Services District, Paradise Recreation and Parks District, Paradise Cemetery District, and Paradise Unified School District to expand or enhance service capacity, consistent with the Town's General Plan.

LUP-24 The merging of Paradise Irrigation District water treatment and delivery systems with Town operations shall be considered.

LUI-10 Seek the cooperation of the Paradise Irrigation District and the Lime Saddle Community Services District to assure an adequate water delivery system for the community.

LUI-18 Request LAFCO to study consolidation of the Paradise Irrigation District and other special districts with Town government.

LUI-19 Work closely with PID, PRPD and PUSD in monitoring housing, population and enrollment trends and evaluating their effects on future service, parks and school facility needs.

Safety Element

SP-4 The Town shall work with the Del Oro Water Company, the Paradise Irrigation District and the Lime Saddle Community Services District to assure the adequacy of fire flow and peakload water supplies.

SP-6 The Town shall adopt a recent Uniform Fire Code amended to reflect the unique needs of Paradise and require compliance with its provisions.

SI-1 Establish standards for adequate fire flows for new development and expansion of existing development.

Open Space/Conservation/Energy Element

OCEP-40 The use of reclaimed ("gray") water shall be encouraged as permitted by law.

OCEP-41 New commercial development shall be strongly encouraged to use drought-tolerant landscaping, and the amount of new turf may be limited.

OCEI-38 Support the water conservation standards and programs of the Paradise Irrigation District, the Del Oro Water Company and the Lime Saddle Community Services District.

The Department of Fish and Game has indicated that the EIR should address increased water supply impacts caused by pumping,

diversions, dams, etc. on springs, lakes, streams, aquatic and wetland habitats and fisheries. Please refer to Section 3.7 (Vegetation and Wildlife)for a discussion of impacts on wetlands and fisheries. As described in Section 14.8 of Volume III, *Environmental Setting*, the Paradise Irrigation District is exploring both surface and groundwater sources for future water supplies, and no determination has been made to commence or increase pumping or diversions or to construct new or expand the capacity of existing dams and reservoirs. The location of these future water supplies is not even known. These impacts are too speculative to address in this EIR; the PID or other water provider will, however, be required to address such environmental impacts at such time that new or expanded facilities or actions are proposed.

Impact #3.14-9: Impact of additional septic systems. Impacts of additional septic systems on water quality were addressed in Section 3.6 (Hydrology) above, and it was concluded that impacts will be reduced to a level that is less than significant.

Impact #3.14-10: Impact of construction of a wastewater treatment, collection and disposal system which will serve portions of the community. The construction of such a system is a major assumption of the proposed *General Plan*. Some land use designations and density ranges are based upon this assumption (refer to Table 2-1, Volume I, *Policy Document*). If all or portions of the Secondary Planning Area are annexed, the sewer system will likely need to be expanded at some point to serve these areas.

Conclusion: The impacts of construction of this system are potentially significant; however, these impacts have been and will be addressed in environmental documents prepared for that project. A Final Environmental Impact Report was certified for the Central Area Wastewater Collection and Sewage Treatment Facilities System (SCH# 88041912) by the Town of Paradise, and additional environmental documentation will be required for approval of the actual design and construction of the proposed wastewater facilities.

Mitigation

Measures: Because no significant impacts have been identified, or no mitigation measures are available, no mitigation measures are required.

3.15 SCENIC AND CULTURAL RESOURCES

Setting: Please refer to Sections 3.1 and 3.15 of Volume III, *Environmental Setting*, for a description of the Town history and scenic and cultural resources of the Paradise Planning Area.

Impacts: **Impact Evaluation Criteria for Cultural Resources:** Appendix K of the CEQA Guidelines provides explicit guidance for determining the "archaeological importance" (i.e., significance) of cultural resources and suggestions for mitigating effects to them. Archaeological importance is generally a measure of the archaeological research value of a site. Archaeological sites, particularly those of the Historic period, are considered to be archaeologically important only if the archaeological or historical information they represent can be obtained solely through archaeological methods (i.e., systematic excavation). If the historically consequential information can be gathered by means of historical research rather than through archaeological excavation, the site is not archaeologically important under CEQA. Any unmitigated impact to an important archaeological resource is considered significant. Under Appendix K criteria, an "important archaeological resource" is one that:

A. Is associated with an event or person of recognized significance in California or American history or recognized scientific importance in prehistory.

B. Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable archaeological research questions.

C. Has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind.

D. Is at least 100 years old and possesses substantial stratigraphic integrity (i.e., it is essentially undisturbed and intact).

E. Involves important research questions that historical research has shown can be answered only with archaeological methods.

Federal guidelines for evaluating the significance of archaeological and historical resources are the criteria for inclusion in the National Register of Historic Places (36 CFR 800). These guidelines, codified in federal law (36 CFR 60.4), are summarized below:

> The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, materials, workmanship, feeling and association and:
>
> 1. That are associated with events that have made a significant contribution to the broad patterns of our history, or
>
> 2. That are associated with the lives of persons significant in our past, or
>
> 3. That embody the distinctive characteristics of a type, period, or method of construction, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
>
> 4. That have yielded or may be likely to yield information important in prehistory or history.

Both State and federal guidelines acknowledge that, aside from archaeological and historical values, cultural resources can be significant for their cultural or religious values (e.g., cemeteries and sacred places). The federal Native American Religious Freedom Act of 1979 provides protection for sites of Native American sacred significance, and State laws promulgated under SB 297 (1982) prescribe specific treatment for Native American human remains discovered during excavation.

Impact #3.15-1: Potential for disturbance or destruction of cultural resources within the Paradise Planning Area.

Conclusion: It is known that cultural resources exist within the Planning Area, and the potential exists for significant impacts to occur if development, redevelopment, and construction were unregulated. However, the policy statements and implementation measures that are incorporated in the proposed *Paradise General Plan*, and compliance with Appendix K of the *CEQA Guidelines*, will reduce these potential impacts to a level which is less than significant.

Appendix K of the *CEQA Guidelines* is fairly explicit on mitigation measures for cultural resources. It addresses treatment of human remains under State law and limits on archaeological excavation as mitigation. These limits do not apply to test excavations for evaluating significance. Mitigative excavations shall only be conducted by qualified professional archaeologists, who must prepare an excavation plan prior to the procedure to narrowly focus the excavation on recovery of data that will enable them to address specific, scientifically consequential research questions.

When human remains are excavated, either by archaeological procedures or during construction, the County coroner must be notified immediately to determine whether the remains require investigation of cause of death. Once it is determined that the remains are of Native American origin, the State Native American Heritage Commission must be notified immediately. The Commission will identify the Native American group or individuals who are the most likely descendants of the deceased Native Americans. The descendants will then negotiate with the landowner, archaeologists, and the lead agency to ensure dignified treatment of the remains according to the customs and wishes of the descendants. The Commission will mediate such negotiations, if necessary.

In accordance with the *CEQA Guidelines*, archaeological data recovery excavation as a mitigation measure should be reserved as a last resort. This is both because of the potential expense involved, and because it is the first responsibility of archaeologists to preserve and protect resources rather than disturb them through excavation.

Other means of mitigation include avoidance, redesigning a project to leave the resource in an undeveloped portion of the site, preservation easements or other land use set-aside, constructing a substantial enclosure (such as a locked fence) around the site, or covering the site with at least two feet of clean fill or pavement. If the site is to be covered, filling or paving should proceed from the perimeter of the site inward, so that heavy equipment will not directly contact the site surface. Compression will impact the site. Once an archaeological site is covered, any land use that will not entail excavating beneath the covering will be allowable. Other measures, as appropriate, will be recommended by a qualified, professional project archaeologist or historian.

The proposed policy statements and implementation measures which are incorporated in the *General Plan* which will reduce impacts on cultural resources are as follows:

Land Use Element

LUP-79 The Town shall encourage retention of identified historically important buildings and other resources of historic significance located in the Central Commercial area.

Open Space/Conservation/Energy Element

OCEP-44 The Town shall encourage retention of identified significant historic buildings and other important cultural resources.

OCEP-51 The *Land Use Constraints Diagram* identifies areas of potential archaeological sensitivity. Proposed development or public works projects within this area shall be required to undertake an archaeological survey prior to project approval. Proposed projects outside this area, in locations that have not been significantly disturbed, shall be referred to the California Archaeological Inventory, Northeast

Information Center, California State University, Chico to undertake an archaeological survey prior to project approval upon recommendation by the Center.

OCEI-26 Undertake a program of identification and cataloguing of historic resources, including those in the Central Commercial area, for use in future planning efforts.

- Establish a historic register and historical society.
- Provide tours and plaques for historic structures/sites.

OCEI-28 Amend the *General Plan* to include the list of historic structures, as appropriate.

OCEI-29 Require compliance of all development projects with Appendix K of the *Guidelines for Implementation of the California Environmental Quality Act.*

OCEI-30 When an archaeological survey is required by the Town or recommended by the California Archaeological Inventory, Northeast Information Center, the survey shall be undertaken by a qualified professional archaeologist who is certified by the Society of Professional Archaeologists or has equivalent qualifications.

OCEI-31 Should any historic or pre-historic artifacts be discovered during construction, all work shall cease until a qualified professional archaeologist views the site, provides recommendations and gives clearance to continue.

Because all construction, development and redevelopment must be in compliance with these policies, implementation measures and regulations, this impact is found to be less than significant and no mitigation measures are required.

Impact Evaluation Criteria for Scenic Resources: The Environmental Checklist Form in Appendix I of the *CEQA Guidelines* provides two criteria for evaluating impacts on scenic resources:

- Obstruction of any scenic vista or view open to the public
- The creation of an aesthetically offensive site open to the public view

Impacts which meet either or both of these criteria should be considered significant.

Impact #3.15-2: Potential for land development and construction, and construction or improvement of public works projects in accordance with the *General Plan* to obstruct scenic vistas or create an aesthetically offensive site open to the public view.

Conclusion: The Planning Area is rich in scenic resources and scenic vistas. The potential exists for significant impacts to occur if development and construction were unregulated. However, the policy statements and implementation measures that are incorporated in the proposed *General Plan* and the regulations of the Town Subdivision Ordinance, Improvement Standards, the Tree Ordinance and the Zoning Ordinance (sign ordinance) will reduce these potential impacts to a level which is less than significant.

The proposed policy statements and implementation measures which are incorporated in the *General Plan* which will reduce impacts on scenic resources are as follows:

Land Use Element

LUP-66 The Town shall revise and update appearance and architectural design guidelines/standards for land use development in the Central Commercial area.

LUP-67 Architectural compatibility with the adopted Town theme shall be required in the Central Commercial

area, including compatibility between new and old structures.

LUP-68 Commercial structures shall be limited to a height no greater than 35 feet.

LUP-69 Moderate and large-scale commercial parking areas shall be appropriately screened and landscaped utilizing native, drought-tolerant and low maintenance plant materials.

LUP-71 The Town shall endeavor to create scenic gateway areas that are eye-appealing and representative of the Town at general locations as depicted on the *Land Use Diagram.*

LUP-72 The Town shall support the retention of open space and natural features along Skyway between Paradise and Chico in order to maintain a scenic entrance to the community.

LUP-73 The Town shall establish a common design theme for gateway areas, including distinctive signing and a tie to the Town theme.

LUP-74 The Town shall direct its efforts toward elimination of unsightly collections of vehicles and other aesthetically adverse materials near the entrances to the community.

LUI-40 Revise and update design guidelines for architectural, site and landscaping design in the Central Commercial area, including parking lots.

LUI-43 Apply appearance guidelines/standards to existing development in the Central Commercial area when permits for remodeling or expansion are applied for.

LUI-44 Establish special land use controls in gateway areas to assure that development that is unsightly or out of character with Paradise is discouraged, and amend Town ordinances as necessary.

LUI-45 Identify funding sources and specific properties for establishment of scenic gateway areas.

Open Space/Conservation/Energy Element

OCEP-14 View sheds and natural areas along Skyway shall be protected.

OCEP-9 Pentz Road and State Highway 191 between the south town limits and the southern boundary of the Tertiary Planning Area shall be designated as scenic highways.

OCEP-10 The Skyway between the southwest town limits and the westerly boundary of the Tertiary Planning Area shall be designated a scenic highway.

OCEP-12 New billboards exceeding 100 square feet in size shall not be permitted within town limits. No new billboards shall be permitted within designated gateways or scenic highway corridors.

OCEP-15 Views of development from other properties shall be considered when making decisions on compatibility of development.

OCEP-16 The Town shall strive to locate new buildings and other structures, including utility lines, that would otherwise block vistas or degrade the natural landscape, outside of scenic view corridors.

OCEP-17 Ridgeline development shall be carefully reviewed to assure a minimization of proposed structures that intrude into the view-line of nearby roadways and properties.

OCEP-18 Well-designed development that will be harmonious with its setting and/or enhance the Town's image shall be encouraged.

OCEP-21 The undergrounding of existing utility lines shall be encouraged.

OCEP-35 The Town shall explore a cooperative venture with Butte County to enhance public access to Lookout Point along the Skyway.

OCEI-12 Prepare and adopt land use regulations and development standards intended to maintain the integrity of the scenic highway designation for Pentz Road and lower Skyway, and State Highway 191.

OCEI-13 Locate transmission and utility lines in designated gateways or scenic highway corridors where they may be concealed by vegetation or topographical features.

Mitigation Measures: Because no significant impacts have been identified, no mitigation measures are required.

CHAPTER FOUR
PROJECT ALTERNATIVES

4.1 ALTERNATIVE GENERAL PLAN CONCEPTS

An integral part of the early preparation of the *Paradise General Plan* was the identification and intensive consideration of four alternative land use and circulation concepts for the Paradise Planning Area. These alternatives were developed by the four subcommittees of the General Plan Revision Steering Committee. The purpose of this consideration was to identify reasonable alternative development and conservation possibilities for the area, in view of community priorities and values, and in relationship to identified issues, constraints and opportunities. CEQA and the implementing *State CEQA Guidelines* (Section 15126(d)) mandate that such alternatives to the proposed Plan be discussed in this EIR. The value of such discussion is to inform public decision-makers of the differential environmental impacts which might be associated with each potential alternative, and to enable a reasoned judgement to be made regarding whether some alternative to the proposed Plan might be environmentally superior.

The alternative land use proposals for the Planning Area which were considered during the early Plan formulation stages are conceptually illustrated in Figures 4-1, 4-2, 4-3 and 4-4 (inserted separately). These alternatives were considered prior to selection of a preferred alternative, which is the basis for the proposed *General Plan*. It encompasses some features from all four alternatives, but also incorporates some new features.

With respect to each of the aspects of the environment discussed in the preceding chapter of this EIR, the differential potential impacts of the various land use alternatives considered during the Plan preparation process have been described and evaluated to the extent possible, given the conceptual nature of these alternatives. Many of the proposals contained in these alternatives have been incorporated in the proposed *General Plan*. In addition, the "no-project" alternative and an alternative involving a different planning area are evaluated below. The final section of this chapter presents an assessment of the comparative environmental superiority of all the project alternatives.

4.2 THE NO PROJECT ALTERNATIVE

The *State CEQA Guidelines* mandate that the "no project" alternative be considered in an environmental impact report. The *Guidelines* further stipulate that when the no project alternative is environmentally superior, the EIR shall also identify an environmentally superior alternative among the others considered for the project. In this section, the environmental effects of the no project alternative are identified and discussed.

State law requires every city and county to adopt a general plan. If the proposed Plan or some alternative plan is not adopted, the existing *Paradise General Plan*, adopted in 1982 for a ten-year planning period, will remain in effect. As time passes, that Plan will become increasingly outdated and non-responsive to current needs. According to the *State General Plan Guidelines*:

> The general plan should be reviewed regularly regardless of its horizon, and revised as new information becomes available and as community needs and values change. Unless it is periodically updated, a plan will become obsolete in the face of community change. A general plan based upon outdated information and projections is not a sound basis for day-to-day decision making and may be legally inadequate... A jurisdiction is expected to make running changes to its general plan as they are necessary. (p. 13-14).

In addition, maintaining the existing Plan would cause the Town to forego the opportunity to preserve and enhance the environment through new Plan policies. While the Town of Paradise could choose not to adopt the proposed *General Plan* and maintain the existing Plan, such an approach would be inconsistent with State law and is not feasible or realistic.

4.3 ALTERNATIVE LOCATION

One CEQA reference (*Guide to the California Environmental Quality Act (CEQA)*, Remy, et. al., Solano Press, 1991) identifies several circumstances which might trigger the requirement to analyze alternative locations for the project, based on CEQA case law. These include instances where a legislative action is being sought to change the allowed use for the proposed project (such as a zone change); in cases where

development at an alternative site would substantially diminish or avoid significant impacts of the proposed project; and also, when policy decisions are being made about where to locate particular land uses in the context of large geographic areas. The latter circumstance clearly applies to adoption of a general plan.

Because the Town of Paradise is required by law to prepare and adopt a general plan, there is no question but that a plan must be adopted for the geographic area within the Town limits. However, the proposed *Paradise General Plan* encompasses a larger geographic area as its Planning Area. This discussion evaluates the selection of the proposed Planning Area, as opposed to an alternative Planning Area Boundary such as the existing Town limits. The existing *Paradise General Plan*, adopted in 1982, covered only the area within the Town limits at the time of adoption.

State law provides that, in addition to covering all territory within the municipal boundaries, the general plan must cover "any land outside its boundaries which in the planning agency's judgement bears relation to its planning" (government Code Section 65300), since certain issues are not confined to political boundaries. As stated in the *State General Plan Guidelines*, "Cooperative "extraterritorial" planning can be used to guide the orderly and efficient extension of services and utilities, ensure the preservation of open space, agricultural and resource conservation lands, and establish consistent standards for development in the plans of adjoining jurisdictions" (p.6).

The *Guidelines* further state that, when determining its planning area, each city should consider its sphere of influence. The Secondary Planning Area identified in the *Paradise General Plan* is the same as the Sphere of Influence adopted in 1985 for the Town of Paradise by the Butte County Local Agency Formation Commission (LAFCO). According to the *Guidelines*, although there is no direct statutory link between the sphere and the planning area, the former provides a convenient measure of the city's region of interest. The Secondary Planning Area includes, to the north, the unincorporated communities of Magalia and Paradise Pines, whose development impacts the Town of Paradise; and to the south, the existing airport and proposed site of portions of the future wastewater treatment infrastructure.

Alternative planning areas to the east and west are unrealistic due to extremely steep terrain and waterways. While the Planning Area could be limited to the Town limits, such an action would be contrary to the intent of State law and the *General Plan Guidelines*. It would also not assist with directing development occurring in the

unincorporated area; there would simply be less assurance that such development would provide for the "orderly and efficient extension of services and utilities, ensure the preservation of open space, agricultural and resource conservation lands, and establish consistent standards for development in the plans of adjoining jurisdictions."

The Tertiary Planning Area, while extending beyond the Secondary Planning Area to the southwest, is not an area proposed for growth and development in the *Paradise General Plan*, other than portions of the future wastewater treatment infrastructure. It is an area for which the Town is proposing to adopt policies regarding its potential development under the auspices of Butte County. Because of its proximity to Paradise, its function as a gateway to the community, and potential future opportunities, the Town is attempting to influence land use activity in this area through adoption of policy statements in the *Paradise General Plan.*

4.4 ALTERNATIVE GENERAL PLAN SCENARIOS

ALTERNATIVE PLAN #1

Description. The members of Subcommittee #1 agreed that the Town of Paradise should capitalize on its unique attributes, and that the *General Plan* should provide the tools to make that happen. No need was seen for any major changes in the existing *General Plan* land use map; rather, it should be built upon, and enhanced by, the issues highlighted in the goals, objectives and policies for this alternative (refer to Working Paper #2, *Issues, Goals, Objectives and Policies*, Chapter 1). Please refer to Figure 4-1, Alternative Plan #1, for a map of this alternative.

This alternative identified the selection and implementation of a Town theme as the most important outcome of the *General Plan.* It would apply to new and remodeled commercial structures, as well as public facilities and improvements. This theme would focus upon the Town's unique rustic and historical features (including the Paradise and Magalia railroad depots, and the old Victorian hotel on Birch Street). This theme should be implemented through a cooperative, incentive-based program (such as redevelopment), rather than a punitive or authoritarian approach. Promotion of this theme would help to promote the economic development of the Town and tourism. Related to this was a strong interest in the preservation of trees and a reforestation program, and the creation of a Town arborist or tree specialist position at Town Hall, enhancing one of the Town's

unique features. Other features to be protected included canyons, watercourses, vistas, scenic highways, ridgelines, and access to rivers and streams.

This alternative assumed a slow, managed rate of growth. New development must pay its own way and be linked to the availability of public services and facilities. Toward this end, this alternative recommended that consolidation or acquisition of the library, Paradise Irrigation District, and other special districts be studied. No consensus was reached regarding a preferred direction or boundaries for any new growth that did occur. However, this alternative provided for the annexation of developed areas of Paradise Pines to the Town of Paradise, and initiation of a "tiered" annexation of all land within the current Sphere of Influence (Secondary Planning Area) within one year, in the following manner:

> **TIER #1.** Annexation of developable lands along the three major roadways serving the Town from the south.
>
> **TIER #2.** Annexation of all other lands within the southern portion of the current Sphere of Influence.

In addition, this alternative called for initiating the expansion of the current Sphere of Influence to coincide with the Tertiary Planning Area boundary.

New commercial development was proposed to occur in centers or nodes, although it was recognized that existing strip commercial development would remain, for the most part. Infill development should be promoted (through redevelopment and other means) in what was defined as the "heart" of the Town: the area between Skyway, Bille, Clark and Elliott. High density residential development (including residential care facilities and senior citizen housing) should occur on available sites in proximity to commercial development, allowing residents to walk and bike to commercial centers.

Areas proposed for industrial development included an expansion of the existing industrial park along Clark Road, the airport, and an area along Neal Road. Other notable features of this alternative included protection of the airport from encroachment by incompatible uses, continued operation of the golf course (possibly through acquisition), creation of attractive southern gateways into the Town, and conversion of the junkyard along lower Skyway to a Park and Ride facility. To promote safety,

recreation and an alternative to the automobile, this alternative proposed a continuous system of bike paths and trails linking schools, parks, commercial and residential areas.

With regard to circulation system improvements, this alternative called for studies to be performed to determine the feasibility and appropriateness of the following improvement projects:

- Extension of Buschmann Road to Skyway
- Extension of Forest Service Road to Skyway
- Conversion of Almond Street and Skyway to one way streets
- Creating additional connections north to Paradise Pines, from the west side area to Skyway, and from the southern portion of Town to a major Town-owned street.
- Within 3 to 5 years, study the area between Bille Road and Pearson Road for a possible connection to Pentz Road.

Evaluation. Given the constraints presented by existing development, topography, and other characteristics of the physical environment, which would be difficult to alter, Alternative Plan #1 represented a pragmatic approach to the future physical development of the community. By proposing to build upon and enhance existing community strengths, this Plan would minimize potential disruptions and costs which might result from implementing major changes in land use patterns. Many of the proposals contained in this alternative have been incorporated in the proposed *General Plan*.

The alternative assumed a slow, managed rate of growth commensurate with the Town's and special districts' ability to provide necessary services. However, this alternative did not provide a recommended direction(s) for growth. Not establishing a preferred direction theoretically allows for a maximum of development opportunities. However, it does not provide for potential cost savings or minimizing environmental impacts which could be achieved by planning for growth. The Town and other service providers could potentially provide infrastructure and services more efficiently and in a more environmentally sound manner by planning the location of sewer and water lines,

storm drainage facilities, roads, schools, etc. One of the expressed goals of this alternative was to "Provide cost-effective public services in the community", and it was recommended that a feasibility study be undertaken regarding consolidation or acquisition of special districts.

A feasibility study for the annexation of the Paradise Pines area was also proposed, but it was recognized that annexation would be difficult to achieve. The proposal to initiate annexation of the entire Sphere of Influence within one year would represent a large commitment of Town staff time and resources. Because the Town would have to demonstrate to the Local Agency Formation Commission that it had the ability to provide services to the area proposed to be annexed, it is probably also infeasible to annex the entire area at this time. However, increasing the size of the Town's Sphere of Influence ("ultimate growth boundary") would represent a first step in planning for eventual annexation of these areas.

Alternative Plan #1's proposal to capitalize on and enhance the Town's assets could be implemented through a variety of methods. Adherence to a theme suggests a design/architectural/sign review and enforcement process, which would require additional staff time and a new citizens committee. Economic development, infill development and downtown revitalization would have the potential to increase payrolls and stimulate additional spending in the Town. Redevelopment could simultaneously function as a means of implementing these activities and as a source of additional tax revenues. This alternative also included some specific recommendations regarding properties for which redevelopment would be suitable. The alternative assumed that a stronger Chamber of Commerce, with better funding, was a key to implementing many of its proposals.

This alternative proposed that single family residential lot sizes range from 1/3 to 2/3 acre. While such a density is low in the context of most California cities, it is compatible with existing development and the topography of Paradise. The larger the lot size, the greater costs will be associated with residential sewer service. It was also proposed that high density residential development (including residential care facilities and senior citizen housing) be located on available sites near commercial development. This would allow residents to walk and bike to shopping areas, and assure that the sites could support this density of development by having access to sewer service and roads to accommodate that volume of traffic. The difficulty with such locations involves the small number of available sites and the opposition frequently encountered from established neighborhoods.

The areas proposed for industrial development probably represent the only realistically available areas within the Primary and Secondary Planning Areas. Development along Neal Road would result in substantial traffic impacts and could require widening or, at a minimum, requiring Neal Road to be improved to major collector or arterial roadway standards. The intersection of Neal Road and Skyway would require realignment and signalization.

Redevelopment/infill of the Clark/Skyway/Elliott/Bille "superblock" could provide opportunities for developing improved off-street parking and circulation, thus solving some of the current circulation problems along these roadways. If the proposed one-way couplet of Skyway and Almond Street were considered for implementation, its impacts on the circulation system for the entire superblock should be studied. Internal access would need to be provided (Oakwood, Beech, Fir and Foster should be studied) and Foster Street should be cul-de-sacced at its north and south ends in order not to interfere with the circulation of the one-way couplet. The one-way couplet proposal is further evaluated below. The concept of internal access between adjoining commercial uses, with limited access to major roadways, offers opportunities for additional circulation improvements. As this concept could be applied along Skyway and Clark Road, existing on-street parking could be eliminated to provide room for new roadway capacity, without reducing circulation and/or joint use of parking facilities provided off-site under current Town off-street parking regulations.

With regard to the natural environment, this alternative proposed to preserve and enhance the Town's natural assets. It proposed reforestation and preserving and restoring stream courses to their natural state. The alternative also recommended that development, improvement and landscaping standards take into account Paradise's unique environmental, physical and historical character. This alternative proposed to improve the natural environment by prohibiting leaf burning and establishing mandatory refuse collection and recycling.

To provide a continuous system of bike paths and trails could require widening some of the major arterial and collector streets within Paradise. Linkages with the north/south Paradise Memorial Trail might require sidewalks and/or expanded roadway shoulders to provide adequate space and separation between bicycles and vehicles. Alternatively, a set of bike routes (linkages within the bike system which use public streets) could be adopted. Bike routes allow for joint use of travel lanes by automobiles and bicycles. Additional parks and recreational programs are proposed; such services

and facilities are now provided by the Paradise Recreation and Parks District. Use of trails and pathways for a combination of pedestrian, bicycle and equestrian traffic may create conflicts and be difficult to manage and regulate.

Conversion of the "junkyard" along Skyway to a park-and-ride facility offers a real opportunity to enhance public transit use. Any intercity public transit services should be modified to serve the new park-and-ride lot. A proposed bypass to Skyway at the northern end of Paradise (e.g. northwest from the intersection of Skyway and Clark Road) might prove beneficial in splitting traffic between Skyway and Clark Road south of this point. There does not appear to be another bypass option to the south of the Skyway/Clark intersection unless a designation of Skyway to Clark Road to Pearson Road to Skyway were adopted, with substantial traffic control measures along Skyway and the east-west streets serving the downtown.

The proposed one-way Skyway/Almond Street couplet offered an opportunity to increase the directional capacity of the two streets in the downtown area, and also afforded the opportunity to create diagonal on-street parking on Almond Street if desired. The northbound traffic should use Almond Street and Skyway should accommodate southbound traffic. In order for the couplet to work, modifications would need to be made to the existing street system to connect the two streets at the north and south ends of downtown. Options at the north end included creation of a "Y" intersection connecting with Luther Drive, or use of Elliott Road as a connector. Elliott Road was a less optimal alternative due to its current function as a major arterial and the need to make modifications to the northeast corner of Elliott and Skyway for the connection to function properly. At the south end, the connection could be made either at Pearson Road or Black Olive; however, the Black Olive option would require some extensive right-of-way acquisition and intersection modifications. The Pearson Road alternative would also require some prioritizing of turn movements from Skyway to Pearson to accomplish this.

Possible westerly connections from Crestview or Pinewood should only be provided if Oliver Road and/or Valley View Drive were over capacity. New connections would be expensive to build and could encourage development to the south along the ridges these roads serve. They both would need to connect to Honey Run Road, which currently has constrained capacity, and connection to Elliott Road might prove more feasible.

ALTERNATIVE PLAN #2

Description. The members of Subcommittee #2 emphasized the importance of preserving Paradise's physical environment, while at the same time promoting the economic development of the Town. Please refer to Figure 4-2, Alternative Plan #2, for a map of this alternative. While there was no need for major changes in the existing *General Plan* land use map, the amount of parks and open space should be increased, especially in areas which are already developed where there are few parks. Areas unsuitable for septic systems might be candidates for parks and open space. Additional small parks should be developed throughout the Town within the next 15 years. There was a strong interest in the protection of stream courses and the watershed. Remaining agricultural lands should also be preserved.

This alternative included a number of proposals for enhancing the economic development of the Town, consistent with the protection of the environment, as outlined in Working Paper #2, *Issues, Goals, Objectives and Policies*. There should be a townwide theme applied to new and remodeled commercial structures, based on the Town's rustic character. This theme should be enforced through design standards and a process of review and approval of architectural styles, signs and colors. Other proposals included development of a conference center/destination resort, events that attract tourists, expanded shopping opportunities, and a farmers market. A gateway concept was proposed that would include the establishment of a scenic information park, complete with canyon viewing areas, parking, and a visitor center with information about the Town of Paradise and the surrounding area. A Redevelopment Plan should be adopted to assist with economic development, and the Town should consider participation in the Main Street program.

Growth should be linked to the availability of services and facilities, especially the available water supply, and should not exceed an annual rate of 1.5 percent. New growth and development should occur to the south (including the Lime Saddle area) and be annexed to the Town. Services would need to be provided, including schools, a new fire station, and an adequate water supply. The sewer system should be planned to serve the entire Town within 15 years. This alternative also proposed the annexation of developed areas in Paradise Pines, while recognizing the potential difficulty of obtaining the support of the residents for annexation.

This alternative proposed several modifications to improve the existing circulation system. These included the extension of a number of east-west roads (Elliott, Buschmann, Nunneley, Roe, Wayland, downtown streets) to connect to Clark and/or Skyway, and the creation of a bypass to Skyway (at least for emergency use). Pentz Road should be designated a scenic highway. The Town should explore ways to recover costs associated with use of the roadways by residents of the Upper Ridge if annexation is not feasible. Sidewalks in selected areas and other safe pathways for bicyclists and pedestrians on Town-maintained streets were of special concern. A trail system should be established in the southerly portion of the Secondary Planning Area to take advantage of the canyons and significant cultural resources in that area. Alternative forms of transportation should be encouraged and supported over the next 15 years to improve traffic circulation and air quality in the Town and the region.

While recognizing that most existing commercial uses along Skyway and Clark would remain, this alternative proposed that new commercial development should occur in centers, and as infill in older areas. Infill, including second story "mixed uses", should be encouraged in the area between Pearson, Elliott, Skyway and Black Olive. New commercial development should be architecturally compatible with the Town theme.

Areas proposed for industrial development included the airport (which should not be permitted to expand), along Highway 99 (in the long term), and in suitable locations along Neal Road (protecting archaeologically sensitive areas) and Clark Road. High density residential development should be located where roads can accommodate the traffic generated by such developments, and retirement facilities should be located close to services. Multiple family developments should be low density in nature (duplexes, triplexes and fourplexes).

Evaluation. Alternative Plan #2 can be characterized as focusing upon two major issues: preservation of the environment and economic development. Although it might be argued that the two concepts are mutually exclusive, the proposals in this alternative were, for the most part, internally consistent. In fact, the economic development proposals can be viewed as a means of increasing Town revenues in the long term, which can potentially be used to fund proposed environmental protection measures. As with Alternative Plan #1, many of the proposals of this alternative have been incorporated in the proposed *General Plan*.

The major changes proposed, in comparison with the existing *General Plan*, included the designation of protective vegetative buffers along all streamcourses, trails and bikepaths. The Plan also called for increased parks and open space, linked by trails. The map which accompanies this Plan is very conceptual; feasible locations for such features would need to be determined based on existing development, topography and property lines.

Constructing bicycle lanes on Skyway would require eliminating parking or widening of the roadway. Widening of Clark Road might also be needed to establish bicycle lanes. The costs associated with establishing bike lanes on all Town-maintained roads might also be a concern. The use of trails and pathways for a combination of pedestrian, bicycle and equestrian traffic may create conflicts and be difficult to manage and regulate.

This alternative bears some similarity to Alternative Plan #1 in that it also proposed a Town theme, design review, a redevelopment plan, as well as several specific recommendations, including a destination resort/conference center and gateway/visitor center. Proposals regarding infill development in older areas (defined as the area between Pearson/Elliott/Skyway/Black Olive) and commercial centers, rather than new strip commercial development, were also similar to Alternative Plan #1. Redevelopment and/or infill could provide opportunities for developing improved off-street parking and circulation, thus solving some of the current circulation problems in this area. As a key element of economic development, the Plan recommended that a full sewer system be in place within 15 years, which may not be entirely feasible.

This Alternative Plan also assumed a slow, managed rate of growth (not to exceed 1.5% annually). It was proposed that the area to the south of the existing Town limits, within the Secondary Planning Area, be designated for new growth and development. The advantages of development to the south include its proximity to the proposed sewage treatment plant and the availability of water within the Lime Saddle Community Services District (CSD) boundaries. The Plan recognized that services must be provided to the area as development occurs, such as schools, sewer and water, and an additional fire station. Development to the south would produce a need for expanded or additional capacity along the roadways serving the new development. By annexing this area, the Town would control the development options, access, and of funding the improvements necessary to mitigate impacts.

In addition to the area to the south, this alternative recommended studying the feasibility of annexing Paradise Pines, while recognizing that it may not be possible. With regard to traffic impacts on the Town of Paradise from existing and future development of this area, a joint powers agreement could be developed with Butte County to pay for transportation improvements and create joint benefit traffic impact fees. It was also proposed that Lookout Point be annexed in order to develop it as a parkway and protect it from inappropriate development.

Several potential roadway extensions or connections were proposed, which are described and evaluated as follows:

- The extension of Elliott to Pentz Road should not be linked to Ficket; rather, a potential extension to the northeast should be considered.

- The westerly extension of Buschmann to Skyway should be considered to relieve traffic congestion on Pearson Road between Skyway and Scottwood Road.

- The extension of Roe Road may not provide any overall traffic benefit except to increase the development potential for the areas served by the new connector. The potential for the Roe Road extension to reduce traffic along Pearson Road is questionable due to its width and configuration.

- A bypass to Skyway at the northern end of Paradise (e.g. northwest from the intersection of Skyway and Clark Road) might prove beneficial in splitting traffic between Skyway and Clark Road south of this point. There does not appear to be another bypass option to the south of the Skyway/Clark intersection unless a designation of Skyway to Clark Road to Pearson Road to Skyway is adopted, with substantial traffic control measures along Skyway and the east-west streets serving the downtown is adopted.

This alternative also strongly recommended construction of sidewalks and pedestrian pathways for safety reasons. The Town currently has street standards which include sidewalks and other pedestrian amenities. Streets which need to be brought up to current standards include Skyway north of Bille; Sawmill; Wagstaff; Bille west of Skyway; Oliver Road; Central Park; Elliott east of Clark; Nunneley west of Sawmill; Neal Road south of Skyway; Roe Road; Scottwood; portions of Porter Road; Libby Road and Edgewood Road south of Pearson Road. The proposed expansion of public transit

might require funding by the Town of Paradise or additional allocations of State Gas Tax funding from roads to transit projects.

Alternative Plan #2 proposed industrial development along Highway 99 as a long-term strategy. Due to that area's distance from the existing Town limits, and the statutes and criteria governing annexation, it would be difficult for the Town to gain control of this area within the time frame of the General Plan. However, as a first step, the Town could request that LAFCO amend their Sphere of Influence for Paradise to include this area. Other proposed industrial sites included Neal Road, Clark Road and the airport. Development along Neal Road could result in substantial traffic impacts, and could require widening or, at a minimum, requiring that the road be improved to major collector or arterial roadway standards. The intersection of Neal Road and Skyway will require realignment and signalization.

If Pentz Road were designated as a scenic highway, as proposed, appropriate land use and development controls should be incorporated into the General Plan to implement that designation. This alternative also generally recommended strengthening standards and enforcement of existing Town ordinances regarding home occupations, signs and noise. In order to improve the local environment, the Plan recommended mandatory refuse disposal and recycling and a prohibition on leaf burning, accompanied by a community composting program.

The single family residential density proposed under this alternative was two dwelling units per acre if sewer was not available, and four dwelling units per acre if sewer is available. The latter density is feasible to serve with a sewer system. The Plan recommended that new multiple family development occur at fairly low densities (duplexes, triplexes and fourplexes). This density of development would make excellent infill projects in low density areas and would provide some needed rental housing. However, there is probably a need for some higher density development as well, to take advantage of sewer availability and to make public transit more feasible.

Alternative Plan #2 recommended the preservation of remaining agricultural lands. Preservation limits the development options of property owners and reduces the sites available for development which the Town may want to encourage. However, it does preserve open space, historical associations, and has the potential to draw tourists if promoted (similar to the harvest in the Apple Hill area outside Placerville).

ALTERNATIVE PLAN #3

Description. Subcommittee #3 wished to carefully manage growth to assure that the Townwide infrastructure was in place to adequately serve it. There was also a strong desire that development pay its own way and that planning tools such as development impact fees, assessment districts, and payback strategies be explored and used to assure that adverse impacts to existing service levels did not occur. Infill was encouraged while protection of the physical environment within the community was given a high priority. This included such things as trees, small animals, views, water courses and steeply sloping lands. Present orchards and agricultural uses, however, were not targeted for preservation; instead, such areas were seen as opportunities for community infill. Please refer to Figure 4-3, Alternative Plan #3, for a map of this alternative.

Substantial areas both north and south of Town were proposed for annexation during the planning period in order to facilitate orderly growth and decision-making in the Paradise region. To the north, annexations would encompass areas already largely developed, as well as the Paradise watershed area, and would allow for consolidation of action by government to assure that decisions in one area did not burden another unnecessarily. Such action would also allow for a fairer sharing of the cost of services. To the south, a large and substantially undeveloped area stretching from Neal Road to the Feather River was proposed for annexation, including the Lime Saddle Community Services District.

An area was suggested as an "open classroom" and park adjacent to Butte College. The area would provide an outdoor study area for students studying archaeology, biology, natural resources conservation and other disciplines. It was envisioned that the area would be open to all levels of education, including elementary, high school and college students. It was also proposed that the community's sewage treatment facility be located in this general area in order to put the effluent to beneficial use on the public open space, including creation of wetlands. A nature trail system for pedestrians and equestrians was also suggested.

A Scenic Overlook was proposed below the community along Skyway to contain a small parking lot, guard rails along the cliff areas, short trails to scenic points, and a small sign. An artisans and tourist center containing small shops and crafts was suggested as part of a revitalized central area which was to be located east of Skyway between Pearson and Elliott Roads.

Other commercial activity was to be contained in crossroads centers located at major intersections along Clark and Skyway. Existing strip commercial zoning was to be maintained where it presently exists; however, new strip commercial zoning was to be discouraged. No distinction was to be made between commercial types, with a full range of commercial uses, including professional office, implied by the commercial designation.

Multiple industrial sites were proposed in order to provide opportunities for job generating businesses to locate in Town. These sites included an area along Neal Road likely to be served by a future community sewer and two areas along lower Clark Road within the current Town Sphere of Influence.

Retention of existing single family residential development patterns and densities was viewed as desirable. Multiple family densities were to be targeted into an area in close proximity to the center of the community and accessible to the future community collection sewer system. It was proposed that properties presently designated for multiple family use but which remained undeveloped and were outside the formal sewer system target area, be redesignated for another use.

This alternative suggested that certain actions be taken with regard to circulation, but cautioned that the effect such changes will have on existing residential neighborhoods should be carefully studied. Studies should be performed to determine the feasibility and appropriateness of extending/connecting Buschmann Road to Skyway, and extending Nunneley Road, Elliott Road, or another main east-west street to Pentz Road. It was also proposed that Skyway be rerouted between Bader Mine Road and South Park Road to eliminate an existing dangerous and slow stretch of major road. Finally, the Subcommittee proposed the closure to vehicular traffic of Honey Run Road between Honey View Terrace and the McEnespay Ranch in order to eliminate a poorly maintained and dangerous roadway.

It was proposed that Honey Run Road remain open to pedestrian, bicycle and equestrian traffic and be accessible to emergency vehicles. In general it was proposed that all pathways be equally accessible to equestrians and runners, as well as pedestrians and bicycles.

Evaluation. This alternative placed considerable importance on the availability of necessary services prior to approval of new development. Equal weight was placed on

new development paying its own way. The importance placed on services and cost is sustainable through the *General Plan* process as long as the Plan is carefully crafted to clearly set out the level of service necessary for growth. The methodology for determining future development's "fair share" should also be incorporated into or spelled out in the *General Plan*. Improvement of services may be tied to the revenues generated by future growth, therefore, the community must remain sufficiently flexible to allow enough growth to support the cost of expanded or improved services. **The desire to limit growth may in fact be an impediment to improved service levels.**

The Subcommittee felt it was desirable to explore consolidation of the Town and the Paradise Irrigation District in order to assure consistency in decision making and the long term availability of an adequate water supply. The Town could be well served by such consolidation which could also give the Town greater influence over activities occurring in the Town's watershed.

Infill was given considerable encouragement even though it might result in the loss of existing in-town orchards. From the perspective of efficiency in land use and service delivery, such an approach is to be commended. The orchards involved are of limited expanse and their long-term viability is problematic. Elimination of orchards, however, does reduce open land and green-space within the community, also a Subcommittee priority.

The annexation of surrounding areas, both developed and undeveloped, is a desirable goal. Annexation of already developed areas to the north might, however, prove exceedingly difficult unless the Town can offer something residents of the area do not already have. The opportunity to share equitably in the cost of services is seldom a motivator for people considering annexation. Vacant lands to the south might be more easily annexable and the community should pursue this as a high priority.

The prospect of creating an "open classroom" and park south of the Town might attract considerable interest. Key to its implementation would be finding a method for financing the venture. Any effort should involve the active participation of Butte College and other educational facilities.

An artisans and tourist area in central Paradise might be the most viable approach for the "redevelopment" of the central area. It is very unlikely that a conventional commercial project has much potential given competing commercial areas and the present

physical configuration of the central area. A properly designed and marketed center of small shops and crafts would be unique in the Butte County region and could draw from more distant areas of California. The concept would also support the Subcommittee's interest in tourism promotion as an economic development tool.

Retention of all existing strip commercial zoning would discourage aggregation of future commercial uses in centers. Additional consideration should be given to limiting strip commercial opportunities by distinguishing between commercial and professional office use, allowing for exclusive designation of some areas for offices. Retail commercial, service commercial and office uses generate substantially different traffic patterns and peak hour impacts. It is desirable to group such uses in order to avoid design incompatibilities and conflicts.

The designation of more than one area for future small industrial activity is a desirable feature. The absence of community sewers might, however, limit the development potential of such sites. The major site shown on Neal Road has considerable potential given its size and future community sewer access. Vehicular access to the site may prove to be a considerable obstacle due to the present character of Neal Road and the distance to other thoroughfares. The proposed industrial development, along with other development, would produce substantial traffic impacts and could require widening Neal Road. The intersection of Neal Road and Skyway would require realignment and signalization.

Policies concerning multiple family and single family development were compatible with other community goals, placing concentrations of people in proximity to the future community sewer while protecting existing neighborhoods. A minimum parcel size was not established for residential use in unsewered areas nor was one established for sewered areas. Parcel size standards and densities need to be expressed in the *General Plan.*

With regard to the natural environment, this alternative places emphasis on the preservation of trees and habitat for small animals but contains few mechanisms for accomplishing this. Two suggestions included in the Plan were that the Town review its present tree preservation regulations to assure that they will sustain and enhance the present forested setting, and the establishment of stream protection zones. The stream protection zone concept is relatively loosely defined and would require more attention.

This alternative also placed emphasis on views and recommended a scenic overlook on Skyway and close review of ridgeline development. Junkyards were also slated for cleanup. All of theses actions were compatible with the Subcommittee's desire to promote Paradise as a tourist destination. Additional regulations would be necessary to fully implement these ideas. The scenic overlook area is presently in the County and would require County cooperation or annexation for implementation.

The extension of existing residential streets to provide more east-west connections is desirable from a circulation improvement perspective. The subcommittee, however, limited such connections, fearing the impact additional traffic would have on existing neighborhoods. The Subcommittee did suggest improvements to north-south circulation through realignment of Skyway between Bader Mine Road and South Park Road. In addition to bypassing a dangerous curve, the alternate route might also prove beneficial in splitting traffic between Clark and Skyway south of this point. There appeared to be no other bypass options south of the Skyway/Clark Road intersection.

With regard to the other roadway extensions suggested for study, the following comments are offered:

- The extension of Elliott to Pentz should not be linked to Ficket, rather a potential northeast extension should be considered. This extension appears more feasible than Nunneley to Pentz and provides a more direct linkage with the hospital.

- The westerly extension of Buschmann to Skyway is very desirable and will help relieve congestion on Pearson Road between Skyway and Scottwood.

The closure of Honey Run Road south of Honey View Terrace appears desirable. The road is substandard and serves a limited number of destinations. Bringing the road up to standard and maintaining it at that level would prove to be cost prohibitive. There would also be expense associated with maintaining it for non-vehicular access.

Several east-west pathways were proposed along existing roads which would link up with the Paradise Memorial Trailway. It was intended that existing shoulder areas be improved and widened. This is a very desirable feature of the Plan but will have improvement costs associated with it.

Pathways within the community are proposed to be accessible to a variety of users: equestrians, runners, bicycles and pedestrians. Such a mix could be hard to manage. Pedestrians, bicycles and equestrians are not necessarily compatible uses.

Within the proposed *Safety Element*, the Subcommittee established service levels for both police and fire protection, linking approval of new development to maintenance of those levels. Providing a measurable service level standard in the General Plan for all services should be a goal of the Town's planning effort in order to avoid future disagreements over what is meant by "adequate levels" of service.

ALTERNATIVE PLAN #4

Description. Subcommittee #4 viewed the Town's growth opportunities as being limited until infrastructure was in place to serve any development. An "Urban Reserve" area was shown south of Town; however, there was significant resistance to continuing growth and greater emphasis was placed on preserving the community as it is. The 1.5 percent per year growth cap was viewed in the context of the entire ridge area and not just the Town of Paradise with some feeling that it would not be undesirable if the growth occurred outside the Town proper. Please refer to Figure 4-4, Alternative Plan #4, for a map of this alternative.

It was believed by some that Paradise is a "bedroom community" to Chico. It was also expressed that tourism should not be promoted but that the Town should promote cultural events that may attract tourists. Most importantly it was felt that Paradise should promote a sense of community for those already here. In this vein, it was proposed that Paradise identify "Gateways" on major roads where signage and a sense of what Paradise is can be reflected. These would be areas with special land use controls to assure that development that was unsightly or out of character with Paradise would be discouraged. Stream protection areas were also identified in which development should be carefully monitored and controlled in order to protect the watershed and character of Paradise.

It was suggested that development for both older and younger age groups be promoted so that a full range of age groups was present. Rather than annex outlying areas, it was suggested that the community work with Butte County to create joint planning and decision-making for the ridge area, possibly through an area Planning Commission or some similar mechanism. There was considerable interest in assuring that decisions were not made by Butte County that frustrate efforts by Paradise to control growth.

Commercial development patterns were to be maintained under this alternative and infill was to be encouraged in existing strips along Clark and Skyway. A substantial area was shown, generally bounded by Skyway, Clark, Elliott and Pearson, as a central commercial area which would allow for some concentration of commercial use in the center of the community. This area formed the center of an "H" with Clark and Skyway forming the verticals. As an alternative to mixed commercial infill along the strips, it

was proposed that some areas be designated as exclusive professional office development areas. Mixed uses (e.g. residential apartments over retail shops) should be permitted and encouraged in the commercial areas, provided no significant adverse impacts would result. No new strips were to be entertained under this alternative.

A single new industrial area was shown along Neal Road south of Town. The site was intended to accommodate industry, if industry sought to locate in Paradise. The site would have access to the future community sewer.

Present residential patterns were to be maintained with higher density areas to be focused along the route of the future sewer and around the central commercial area. The minimum parcel size Townwide in unsewered areas was proposed to be one-half acre, and the maximum height for buildings 35 feet.

A number of suggestions were made concerning circulation and access, including the creation of public access to the Miocene Canal. It was suggested that the Town negotiate with PG&E for such access and propose to pay for the improvements to make access feasible and safe. The Canal was viewed as a prime recreational asset for the Town.

Another circulation suggestion was the creation of a Park and Ride at the upper end of Paradise to reduce through traffic on Skyway from the Upper Ridge.

Road improvements included the connection of several in-Town streets:

- Elliott to Pentz Road
- Buschmann to Skyway
- Roe Road to Bennett Road
- Circle Lane to Edgewood Lane
- Crestview Drive to Skyway
- Newland to Clark Road

Pathways accessible to the public were encouraged and it was proposed that future developments have pedestrian walkways on at least one side of the street.

Evaluatiou. This alternative could be described as the "existing conditions" alternative, promoting the retention of Paradise as it is. To counter outside pressures that may impose growth on the Paradise region, the alternative suggested a strong working relationship with Butte County to create joint planning and decision-making for the ridge area. It is always difficult to maintain things as they are and it is particularly difficult when dealing with more than one political jurisdiction. The concept of developing a strong working relationship with Butte County, including joint planning and decision-making, is commendable and progressive. Implementation will require hard work and a consensus within the Paradise area.

The alternative did not promote economic activity, viewing Paradise continuing as a place for people to reside, with new job and shopping opportunities probably locating in more distant communities. Although this might maintain the present character of Paradise, it would exacerbate traffic congestion and air quality problems without providing Paradise with important property tax and sales tax revenues to pay for solutions. The approach is also unlikely to result in the establishment of a General Plan and EIR that address issues of housing accessibility, jobs/housing balance and feasible financing programs to pay for the services Town residents desire.

A large mixed use commercial area was shown in the center of the community which was ascribed a community-wide goods and services role and as a focus for visitors. A redevelopment project was also suggested to support the central commercial area concept and a distinctive identity and character was proposed for the central area. It was uncertain, however, what would drive the creation of the central commercial area, particularly since the Subcommittee did not envision an active tourism industry in the community. It is likely that competition from other centers along Skyway and Clark would inhibit the creation of a central commercial area unless a more specific market were identified.

The suggestion that professional office development replace some of the mixed use strip commercial areas could have beneficial impacts on through traffic as well as creating less noise intrusion into abutting residential neighborhoods. The proposal that residences be permitted in conjunction with retail shops in commercial areas (possibly on a second floor) was also worthy of consideration. Placing dwelling units in

proximity to services and in lively and eclectic environments is gaining increasing acceptance. Such development would reduce dependence on the automobile, improving traffic congestion, air quality and community noise levels.

Maintenance of existing residential patterns while focusing higher density areas along the future sewer line and in the community center is consistent with good planning practice and should be supported by the *General Plan*. A one-half acre minimum parcel size was proposed for unsewered areas, while no specific density standard was established for multiple family areas. One-half acre parcels would assist in protecting the health and safety of Town residents in unsewered areas but would have a negative impact on housing affordability. It would be necessary to establish multiple family density standards as a part of further plan deliberation.

The Subcommittee proposed that home occupations be excluded from some neighborhoods where they are clearly incompatible and that present home occupation regulations be reviewed. The Town might have difficulty distinguishing adequately between neighborhoods to exclude home occupations totally while permitting them in other neighborhoods. Zoning categories must also apply equally to all properties, however, an exclusion could be handled through an overlay zone.

If Paradise continued to grow residentially without providing additional jobs and shopping opportunities, traffic levels on a daily and peak hour basis along Skyway, Clark Road and Pentz Road would increase. This in turn would increase demand to widen facilities. Provision of park-and-ride lots, such as the one proposed at the northern end of Paradise, would partially mitigate traffic impacts and should be encouraged.

The Subcommittee proposed to preserve and enhance the Town's natural assets through streamcourse protection areas and through policies protecting trees and wildlife. Additional refinement of these ideas must be carried out and the associated costs ascertained.

Community appearance standards were proposed for signs and commercial and industrial development. No specific theme was suggested for structures, although it was recommended that "gateway areas" have a common design theme which could be tied to a common theme for the central commercial area. Design regulations would require the input of a wide range of community members as well as professionals in the field of construction, design and architecture. If precise enough standards could be written, a

review committee might not be necessary; however, it is more than likely that considerable discretion would still need to be exercised at the time of project review.

The following discussion relates to roadway extensions suggested by the Subcommittee:

- The extension of Elliott to Pentz should not be linked to Ficket, rather a potential extension to the northeast should be considered.

- Connecting Buschmann to Skyway is an important road link that will help relieve traffic congestion on Pearson between Skyway and Scottwood.

- The extension of Roe Road might not provide any overall traffic benefit except to increase the development potential for the areas served by the new connector. The potential for the Roe Road extension to reduce traffic along Pearson Road is questionable.

- The connection of South Libby Road to Edgewood Lane appeared to provide a more contiguous circulation system than a connection from Circle Lane. Circle Lane could be used as an alternate if access from South Libby Road were found to be infeasible.

- A connection from either Crestview or Pinewood Drive to Skyway should only be provided if Oliver Road and/or Valley View Drive are over capacity. These connections would be expensive to build and could encourage development to the south along the ridges they serve. They both would need to connect to Honey Run Road which currently has a constrained capacity. A connection to Elliott would appear more practical if it is feasible to construct.

- Extending Newland Road to Clark Road should be undertaken to relieve traffic along Pearson Road to the east of Clark Road. The connection should be made to Noffsinger Lane rather than a new access point.

A continuous bicycle path system was proposed for the community linking to the existing Paradise Memorial Trailway. To provide a continuous system could require widening of some of the major arterial and collector streets in Paradise to provide adequate room for the pathway. The Subcommittee gave the needs of bicyclists and

pedestrians a high priority recommending greater attention to road shoulders, sidewalks and crosswalks.

Another proposal which might have high community value is public pedestrian access to the Miocene Canal. The outcome would be very dependent on PG&E's cooperation. In addition to access and improvement costs, the subject of safety and liability would undoubtedly need to be addressed.

Within the proposed *Safety Element*, the Subcommittee established service levels for both police and fire protection, linking approval of new development to maintenance of those levels. Providing a measurable service level standard in the *General Plan* for all services should be a goal of the Town's planning effort in order to avoid future disagreements over what is meant by "adequate levels" of service. This alternative also recommends adoption of the full Uniform Fire Code. Compliance and enforcement of the Code would have additional costs associated with it, for both government and property owners; however, these costs would be repaid to the community through reduction in fire hazard and loss.

4.5 COMPARATIVE ENVIRONMENTAL SUPERIORITY OF ALTERNATIVES

In accordance with the *State CEQA Guidelines*, all reasonable project alternatives have been evaluated to determine their comparative environmental superiority. Based upon this evaluation, it has been concluded that Alternative Plan #4 is the environmentally superior alternative, with some qualifications. Although all four alternative plans developed by the subcommittees incorporated a managed rate of growth and environmental concerns, Alternative Plan #4 proposes the least amount of new growth and development within the Town, and places the greatest emphasis on preservation and enhancement of the natural environment. However, the Town of Paradise does not control growth and development in the unincorporated area surrounding the Town. Adoption of a *General Plan* based upon Alternative Plan #4 would not prevent incompatible or increased growth from occurring in the northerly and southerly Secondary Planning Area, which could actually result in greater environmental impacts than the proposed *General Plan*. Development in the unincorporated area would occur without the safeguards, standards and mitigation measures built into the proposed *General Plan*. For this reason, the proposed *General Plan* should be considered the environmentally superior alternative.

CHAPTER FIVE
MANDATORY CEQA SECTIONS

5.1 INTRODUCTION

The California Environmental Quality Act and the *State CEQA Guidelines* require that EIRs include discussion of the following issues:

- The relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity (Section 15126(e))
- Any significant irreversible environmental changes which would be involved in the proposed action should it be implemented (Section 15126(f))
- Growth inducing impact of the proposed action (Section 15126(g))
- Cumulative impacts (Section 15130)

5.2 SHORT-TERM VERSUS LONG-TERM USES

A general plan is by definition a comprehensive, long-term plan for the physical development of the community. According to the *State General Plan Guidelines,* it is long term in two senses: (1) it establishes goals and projects conditions and needs into the future as a basis for determining objectives; and (2) it establishes long-term policy for day-to-day decision making based upon those objectives. The proposed *Paradise General Plan* has established a planning period of fifteen years. The EIR for the *General Plan* is in fact an assessment of the long-term cumulative impacts of development on the environment in accordance with the Plan.

As discussed in Chapter Three of this EIR, the conversion of undeveloped land and open space to urban uses represents a long-term commitment to a change in use as specified in the Plan. All such development must take place in accordance with the policies of the *General Plan* and mitigation measures approved as part of this EIR.

5.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

As noted in Section 5.2 above, adoption and implementation of the proposed *Paradise General Plan* would result, over time, in the conversion of currently undeveloped land and open space to urban uses, although significant areas of open space will remain within the Planning Area. While generally considered permanent, such conversion is not a direct adverse impact. The secondary environmental impacts of such changes in use are analyzed in Chapter Three. Secondary impacts which are generally considered irreversible and significant include loss of wildlife habitat and increased water consumption.

5.4 GROWTH-INDUCING IMPACTS

Any general plan which plans for and accommodates future urban development may be considered "growth-inducing". Table 3.1-1 provides information regarding future population and dwelling units upon buildout of the *General Plan* at prescribed population density and land use and building intensity. The impacts of such buildout are assessed in Chapter Three. The *Paradise General Plan* is intended to be growth-accommodating, as opposed to growth-generating. The *General Plan* has been designed to maintain and enhance the environment as growth occurs through policy statements regarding adequate public facilities and services and protection of natural resources.

5.5 CUMULATIVE IMPACTS

As noted in Section 5.2 above, this EIR is by definition an assessment of the cumulative impacts of development in accordance with the proposed *Paradise General Plan.* It is an assessment of the environmental effects of full buildout of the *General Plan*, including existing and proposed development, and future development in accordance with the Plan. Because the actual nature of future developments cannot be known at this time, the EIR is by necessity not as detailed as an EIR on the specific construction projects that might follow, but instead focuses on the secondary effects that can be expected to follow from *General Plan* adoption (*State CEQA Guidelines* Section 15146(b)). This EIR identifies the following significant cumulative impacts:

- Air quality
- Increased water consumption

Table 5.1-1 identifies those projects in the Town of Paradise that have already been approved (but not constructed) or that are currently under consideration. The environmental documents for the previously-approved projects are incorporated by reference in this EIR.

In addition to planned projects within the Town of Paradise, development in the unincorporated area of Butte County and in the cities of Chico and Oroville is addressed

TABLE 5.1-1
TOWN OF PARADISE
PROPOSED AND APPROVED PROJECTS

Project Name		Acreage/Lots/ Units	Status	Date Approved
S-1-87	Fraser	11 lots	Expired	3-14-88
S-1-88	Hoilland	9 lots	Map Recorded	6-13-88
S-2-88	Feather River Hospital	32 condos (commercial)	Map Recorded	5-9-88
S-3-88	Schott	9 lots	Map Recorded	9-12-88
S-4-88	Miracle Construction	2 lots	Expired	10-24-88
S-2-89	Hall	6 lots	Map Recorded	8-28-89
S-3-89	Strauss	13 lots		12-11-89
S-4-89	Thacker	9 lots	Map Recorded	1-8-90
S-5-89	Bolin	36 lots	Map Recorded	3-12-90
S-6-89	Donaldson	15 lots	Map Recorded	2-26-90
S-7-89	Point West	13 lots		10-16-90
S-8-89	Marjama	6 lots		7-9-90
S-1-90	Freestone	10 lots	Map Recorded	4-23-90
S-2-90	Kasza	41 lots		4-8-91
S-3-90	Paradisewood Estates	21 lots		

Project Name		Acreage/Lots/ Units	Status	Date Approved
S-4-90	Acorn Ridge Units 4-7	32 lots		6-25-90
S-5-90	Canterbury	11 lots		7-9-90
S-6-90	Perko	10 lots		12-10-90
S-7-90	Cobblestone	Condo conversion	Map Recorded	12-10-90
S-1-91	Paradise Partners	177 lots		
UP-20-88	Paradise Manor Senior Care	114 living units		1990
SPR-5-89	Oak Knoll Estates Retirement Home			9-11-89
UP-12-90	West Recreation Center	N/A		4-22-91
SPR-13-90 UP-15-91	K-Mart Expansion	N/A	Under construction	2-25-91 11-18-91
SPR-2-89 SPR-10-91	Albertson's Expansion	N/A		2-27-89 6-10-91
UP-24-87	Plantation Mobile Home Park	100 spaces (Mobilehome units)		
SPR-11-91	Sierra Builders	10 units		8-26-91

in their respective general plans. The Butte County *General Plan* is summarized in Section 16.1 of Volume III, *Environmental Setting*. Butte County is in the process of a comprehensive general plan update. Current policy has established an Urban Reserve policy south of the town limits, in the Secondary Planning Area. This policy limits development and provides for coordination with the Town regarding land use, zoning, subdivision of land and development standards. North of the town limits, in the Paradise Pines area, there is currently a moratorium in effect on new divisions of land. However, "buildout" development of existing lots of record continues to impact water quality and the circulation system of the Town of Paradise, as described in Chapter Three.

The City of Chico is also beginning the process of a comprehensive general plan update. The impact of development in the City of Chico on the Town of Paradise is largely related to the extent that Paradise residents travel to Chico for employment and shopping. The policies of the proposed *Paradise General Plan* have been designed to create more shopping and employment opportunities in Paradise, and to encourage use of alternative modes of transportation for those trips which are made. The other issue which involves the City of Chico is the proposal which has surfaced previously for a large-scale development of Nance Canyon, which is within the Tertiary Planning Area. This development was initially proposed within the Butte County unincorporated area and may now be under consideration for annexation to the City of Chico.

The City of Oroville is currently in the process of revising its General Plan and adoption is anticipated in late summer of 1992. Although still in the process of formulating the plan, the City's steering committee has proposed design of a plan that would accommodate approximately 70,000 people by the year 2010. This would approximately double the existing holding capacity of between 34,000 and 36,000. There are five residential development projects currently under review by the City: an annexation and 249-lot single family subdivision on 73 acres on the north side of Table Mountain Boulevard; a specific plan that has been placed on hold by the developer; a 47-lot subdivision on 12 acres on 4th Street, north of Grand Avenue; a 49-lot subdivision on 10 acres on Feather Avenue at 20th Street; and a 136-lot subdivision on 30 acres on the south side of Feather Avenue between 18th and 20th Streets.

TOWN OF PARADISE

GENERAL PLAN

VOLUME II
DRAFT ENVIRONMENTAL IMPACT REPORT

SCH NO. 91043055

6.0 APPENDICES

TOWN OF PARADISE

GENERAL PLAN

VOLUME II
DRAFT ENVIRONMENTAL IMPACT REPORT

SCH NO. 91043055

A. INITIAL STUDY AND NOTICE OF PREPARTION

NOTICE OF PREPARATION

TO: State Clearinghouse and All Responsible, Trustee and Interested Agencies/Organizations

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report and Announcement of Environmental Issues Scoping Session

LEAD AGENCY: Town of Paradise Planning Department
5555 Skyway, Paradise, CA 95969

CONTACT: Charley Stump, Senior Planner

The Town of Paradise will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the concerns and views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when reviewing and commenting on the revised Paradise General Plan document.

The project description, location and the potential environmental effects are contained in the attached materials. A copy of the initial study is attached and/or available for review at the Paradise Planning Department, RM 3, Town Hall - 555 Skyway, Paradise.

Due to the time limits mandated by state law, your response must be sent at the earliest possible date, but not later than thirty (30) days after receipt of this notice.

There will be a formal environmental review scoping meeting for the proposed project on April 10, 1991 at 1:30 p.m. The meeting will be held in the Paradise Town Hall at 5555 Skyway, Paradise, CA. All agencies are strongly encouraged to attend.

Please send your response to Charley Stump, Senior Planner, at the address shown above. We will need the name of a contact person from your agency.

PROJECT TITLE: Town of Paradise General Plan Revision

PROJECT LOCATION: Town of Paradise, Butte County

PROJECT DESCRIPTION: Revision to all Elements of the Paradise General Plan

DATE: MARCH 28, 1991

Charley Stump, Senior Planner

Source: CA Admin. Code, Title 14, Sections 15082(a), 15103, 15375

INITIAL STUDY

PROJECT DESCRIPTION

The proposed project is an update to the General Plan for the Town of Paradise, consisting of the Land Use, Circulation, Conservation, Open Space, Safety and Noise elements (adopted in 1982) and the Housing Element (adopted in 1985). The anticipated time frame for the document is 15 years, or through the year 2007 (with the exception of the Housing Element, which must be updated every five (5) years in accordance with the provisions of State law). The existing General Plan consists of Natural Resources, Natural Hazards, Life Enrichment, Environmental Quality, Housing, Community Development, and Regulatory Devices elements.

LOCATION/ENVIRONMENTAL SETTING

The Town of Paradise is located in eastern Butte County, in the western foothills of the Sierra Nevada Mountains. The location is shown on the vicinity map included with this Notice of Preparation and Initial Study. The boundaries of the Paradise Study Areas are indicated on the attached map. The Primary Study Area reflects the existing Town limits, and the Secondary Study Area reflects the existing Sphere of Influence. The Tertiary Study Area extends to the south and west to Highway 99 and Pentz Road. The Tertiary Study Area is an area of interest to the Town of Paradise, in terms of open space and development activity, and the General Plan will address this area at a very generalized level. This General Plan update may or may not plan for additional urban development, and it is not anticipated that all of these areas will be designated for urban growth and development in the Paradise General Plan. For purposes of this Initial Study, the term "Study Area" refers collectively to the Primary, Secondary and Tertiary Study Areas.

Located north of Paradise, within the Secondary Study Area, are the smaller unincorporated communities of Magalia and Paradise Pines. To the southeast is the City of Oroville (the County seat), and to the west is the City of Chico. The topography of Paradise is characterized by intervening ridges and valleys sloping to the southwest (elevation ranges from 1080 to 2320 feet), and the west branch of the Feather River and Little Butte Creek border the town on the east and west, respectively. The primary entrances to the community are State Highway 191 (Clark Road) and the Skyway.

COMPATIBILITY WITH EXISTING ZONING AND PLANS

The Secondary and Tertiary Planning Study Areas, which are outside the current Town limits, are planned for in the Butte County General Plan, as well as the Town's General Plan. The Town of Paradise is also included in the Butte County Association of Governments' Regional Transportation Plan and air quality planning is performed by the Butte County Air Pollution Control District. Any inconsistencies between the proposed Paradise General Plan and existing Town and County plans are proposed to be addressed through this General Plan update. Zoning ordinance amendments will be undertaken by the Town of Paradise as necessary following adoption of the Plan to conform to adopted land use designations and policy considerations.

TOWN OF PARADISE

ENVIRONMENTAL CHECKLIST FORM

I. Background

1. Name of Proponent Town of Paradise

2. Address and Phone Number of Proponent
5555 Skyway, Paradise, CA 95969
(916) 872-6284

3. Date of Checklist Submitted

4. Zoning and General Plan Designation Community Wide

5. Name of Proposal, if applicable Paradise General Plan Revision

II. Environmental Impacts

(Explanations of all "yes" and "maybe" answers are required on attached sheets.)

	Yes	Maybe	No
1. Earth. Will the proposal result in:			
a. Unstable earth conditions or in changes in geologic substructures?			X
b. Disruptions, displacements, compaction or overcovering of the soil?	X		
c. Change in topography or ground surface relief features?		X	
d. The destruction, covering or modification of any unique geologic or physical features?		X	
e. Any increase in wind or water erosion of soils, either on or off the site?		X	
f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?		X	

	Yes	Maybe	No
g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?		X	
2. Air. Will the proposal result in:			
a. Substantial air emissions or deterioration of ambient air quality?		X	
b. The creation of objectionable odors?		X	
c. Alteration of air movement, moisture, or temperature, or any change in climate, either locally or regionally?		X	
3. Water. Will the proposal result in:			
a. Changes in currents, or the course of direction of water movements, in either marine or fresh waters?			X
b. Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?		X	
c. Alterations to the course or flow of flood waters?		X	
d. Change in the amount of surface water in any water body?		X	
e. Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?		X	
f. Alteration of the direction or rate of flow of ground waters?			X
g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?		X	
h. Substantial reduction in the amount of water otherwise available for public water supplies?		X	
i. Exposure of people or property to water related hazards such as flooding or tidal waves?			X

		Yes	Maybe	No
4.	**Plant Life.** Will the proposal result in:			
	a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?	____	X	____
	b. Reduction of the numbers of any unique, rare or endangered species of plants?	____	X	____
	c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	____	X	____
	d. Reduction in acreage of any agricultural crop?	____	X	____
5.	**Animal Life.** Will the proposal result in:			
	a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms or insects)?	____	X	____
	b. Reduction of the numbers of any unique, rare or endangered species of animals?	____	X	____
	c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	____	X	____
	d. Deterioration to existing fish or wildlife habitat?	____	X	____
6.	**Noise.** Will the proposal result in:			
	a. Increases in existing noise levels?	____	X	____
	b. Exposure of people to severe noise levels?	____	X	____
7.	**Light and Glare.** Will the proposal produce new light or glare?	____	X	____
8.	**Land Use.** Will the proposal result in a substantial alteration of the present or planned land use of an area?	____	X	____
9.	**Natural Resources.** Will the proposal result in:			
	a. Increase in the rate of use of any natural resources?	____	X	____

	Yes	Maybe	No
b. Substantial depletion of any nonrenewable natural resource?			X
10. Risk of Upset. Will the proposal involve:			
a. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?			X
b. Possible interference with an emergency response plan or an emergency evacuation plan?		X	
11. Population. Will the proposal alter the location, distribution, density, or growth rate of the human population of an area?		X	
12. Housing. Will the proposal affect existing housing, or create a demand for additional housing?		X	
13. Transportation/Circulation. Will the proposal result in:			
a. Generation of substantial additional vehicular movement?		X	
b. Effects on existing parking facilities, or demand for new parking?		X	
c. Substantial impact upon existing transportation systems?		X	
d. Alterations to present patterns of circulation or movement of people and/or goods?		X	
e. Alterations to waterborne, rail or air traffic?			X
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?		X	
14. Public Services. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
a. Fire protection?		X	
b. Police protection?		X	
c. Schools?		X	

		Yes	Maybe	No
d.	Parks or other recreational facilities?	____	X	____
e.	Maintenance of public facilities, including roads?	____	X	____
f.	Other governmental services?	____	X	____
15.	**Energy.** Will the proposal result in:			
a.	Use of substantial amounts of fuel or energy?	____	X	____
b.	Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?	____	X	____
16.	**Utilities.** Will the proposal result in a need for new systems, or substantial alterations to the following utilities:			
a.	Power or natural gas?	____	X	____
b.	Communications systems?	____	X	____
c.	Water?	____	X	____
d.	Sewer or septic tanks?	____	X	____
e.	Storm water drainage?	____	X	____
f.	Solid waste and disposal?	____	X	____
17.	**Human Health.** Will the proposal result in:			
a.	Creation of any health hazard or potential health hazard (excluding mental health)?	____	X	____
b.	Exposure of people to potential health hazards?	____	X	____
18.	**Aesthetics.** Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?	____	X	____
19.	**Recreation.** Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?	____	X	____
20.	Cultural Resources.			
a.	Will the proposal result in the alteration of or the destruction of a prehistoric or historic archaeological site?	____	X	____

	Yes	Maybe	No
b. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?	____	X	____
c. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?	____	X	____
d. Will the proposal restrict existing religious or sacred uses within the potential impact area?	____	X	____
21. Mandatory Findings of Significance.			
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	____	X	____
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)	____	____	X
c. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)	____	X	____
d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	____	X	____

III. DISCUSSION OF ENVIRONMENTAL EVALUATION

Earth

1(b)	Yes	Impacts. If new urban development, including residential development, occurs in previously undeveloped areas, changes in the condition of the soil, including leveling, compaction and overcovering of soil will result. Soils in Paradise are not generally considered highly permeable. Changes in the condition of the soil are an unavoidable adverse impact of the proposed General Plan update, if new areas are designated for urban development. Mitigation Measures. The proposed General Plan will attempt to minimize adverse impacts on soils, through consideration of policies which ensure that soil resources are used in the most efficient manner possible, minimizing the cumulative impact on soils, and encouraging soil conservation outside the Plan boundaries. Policies promoting infill development and redevelopment of vacant or underutilized lands already within Town limits will be considered during Plan formulation. The General Plan will also incorporate a planning boundary or boundaries which will define the area within which growth and development may occur during the time frame of the Plan.
1(c,d,e)	Maybe	Impacts. If additional development occurs in areas with sloping topography, grading and relatively permanent alteration to the natural topography of the area will be required. If grading or cut-and-fill is done improperly, or development is attempted on extremely steep slopes, it is possible that erosion, siltation and other adverse impacts, including subsidence, could occur. It is possible that destruction, covering or modification of unique geologic or physical features could occur, including impacts on former gold mining areas and natural drainage swales and basins. Mapping of Mineral Resources Zones by the California Division of Mines and Geology has not been completed in and around the Town of Paradise. Mitigation Measures. The General Plan will consider policies which address restrictions on development on slopes greater than a certain degree, such as 30%, and consider the establishment of guidelines for development in areas formerly mined, development in areas with unique geologic or physical features, and for grading and cut-and-fill. Policies of this nature can be implemented through adoption and amendment of the local zoning and other ordinances.

1(f)	Maybe	Impacts. If new areas are planned for urban development, changes in siltation, deposition or erosion which may modify the channel of local rivers or streams and drainage swales may result. Mitigation Measures. It is anticipated that the General Plan will attempt to minimize adverse impacts on rivers, pockets of wetlands, and streams through consideration of policies which address grading and storm drainage and proximity of development to such features.
1(g)	Maybe	Impacts. Previous studies suggest that seismic activity does not present a significant hazard in the Paradise Planning Study Area. However, some past seismic activity and the existence of known fault zones in proximity to Paradise suggest the potential for earthquake damage at some future point. Mitigation Measures. The project includes an update of the Safety Element of the General Plan, which will include policies designed to minimize impacts of seismic hazards. Consultation with the State Division of Mines and Geology shall occur during the General Plan revision process. Continuing enforcement of the requirements of the Uniform Building Code in all new and remodeled structures will help to minimize potential damage resulting from seismic activity.
Air		
2(a,b,c)	Maybe	Impacts. If additional population concentrations and urban development are planned, more vehicle traffic, increased emissions, and contribution to the cumulative deterioration of ambient air quality will result. Intermittent impacts will also result from grading and construction during Plan buildout if new areas are planned for development, or for improvements to the existing road system. The mandate of the State Clean Air Act to reduce emissions countywide from 1987 levels suggests that any net increase in air pollutant emissions may have a significant effect on the environment. Butte County is designated a nonattainment County for ozone, and the Paradise area is designated as an attainment area for carbon monoxide and nitrogen dioxide (it is unclassified for all other categories). Butte County does not meet State and Federal standards for particulate matter smaller than 10 microns in diameter (PM_{10}). The Butte County Air Pollution Control District (BCAPCD) does not operate any monitoring stations in Paradise. Factors in the Paradise area which may contribute to adverse air quality include burning of waste vegetation, use of wood stoves, automobile emissions, agricultural

burning on the Valley floor and pesticide and herbicide application, all of which contribute to hydrocarbon emissions. However, relative to other nonattainment areas of California, emissions inventories for Butte County show low to moderate emissions of total organic gases and nitrogen dioxide.

If new residential development is planned in proximity to certain types of commercial uses and industrial operations, residents may be exposed to unpleasant odors.

The burning of leaves and other waste vegetation, in substantial amounts, may have a localized effect on air movement, causing updrafts and directional changes which would not otherwise occur.

Mitigation Measures. Short-term impacts caused by construction-related dust attributable to General Plan buildout over time can be mitigated by proper dust suppression practices. While impacts caused by emissions from construction equipment are generally unmitigable, it is not anticipated that they would be significantly adverse.

The General Plan will attempt to separate and locate residential uses away from areas and facilities that may generate unpleasant odors.

The General Plan will be coordinated with the policies and regulations adopted by the BCAPCD, including indirect source rules and transportation control measures, to the extent that those are available within the time frame for General Plan adoption. Circulation system improvements which will be recommended in the General Plan will be intended to reduce traffic congestion and improve air quality in the region. The General Plan will also consider policies which encourage increased transit ridership and other forms of alternative transportation. Mandatory solid waste collection and disposal and/or alternative methods of disposal of waste vegetation would mitigate impacts resulting from burning of such vegetation. Please refer to item 16(f) for further discussion of potential mitigation measures.

Water

3(b) Maybe

Impacts. If new urban development is planned in previously undeveloped areas, changes in soil drainage patterns, absorption or percolation rates, and the rate and amount of surface runoff, due to grading and an increase in impermeable surfaces (paved streets, structures, parking areas, etc.), will result. Soils in the

Paradise area are not generally considered to be highly permeable. Improperly planned development and/or individuals alterations may adversely impact natural drainage swales and basins, creeks and streams.

Mitigation Measures. The impacts related to drainage and runoff may be mitigated through implementation of the recommendations of the Town's Master Storm Drainage Study and Facilities Plan (McCain Associates, 1980), policies and implementation standards included in the General Plan update, and the Town's existing subdivision and site plan review processes. The Plan should attempt to designate the future general locations for storm water retention basins, if these are determined to be necessary. The subdivision and site plan review processes assure that grading will result in proper drainage and that the appropriate storm drainage facilities are installed.

The Master Storm Drainage Study and Facilities Plan recommended that detention storage be considered for all new development and the location of detention reservoirs. It also recommended establishment of "special permit zones" where special clearance would be required prior to constructing improvements to make adequate provision for design flows. Further recommendations included establishment of storm drainage fees and assessment districts, a comprehensive grading ordinance, easement dedications, some piping of storm drains, improvements to open channels and some culvert replacement. Please refer to item 3(e) for further discussion of discharge requirements.

3(c) Maybe

Impacts. It is possible that if additional, improperly-planned urban development occurs, alterations to the course or flow of floodwaters resulting in inundation of areas not previously subject to flooding could occur. Localized stream flooding may result from individual and project-related alterations to natural drainage courses.

Mitigation Measures. Impacts which are identified may be mitigated through policies and implementation standards included in the General Plan regarding hydrology, grading, drainage and development standards, and implementation of the Master Storm Drainage Study and Facilities Plan.

3(d,h) Maybe

Impacts. If additional urban development, including residential development, is planned, consumption of additional surface water from Magalia Reservoir and Paradise Reservoir, and possible development of other water sources, for domestic use may result; the quantity is unknown at this time.

Mitigation Measures. Impacts which are identified may be mitigated through policies included in the General Plan regarding growth management, coordination between water service capacity and new development, and water conservation measures. Also, improved coordination of planning and administration between the Town and local water purveyors may help to mitigate potential impacts.

3(e) Maybe

Impacts. If new urban development is planned in previously undeveloped areas, the amount of stormwater runoff discharge may increase, which may result in adverse impacts on surface water quality. Specific water quality information for surface waters is not available. The existing network of drainage basins and swales, which collects runoff and directs it to downslope stream courses, is inadequate during lengthy winter storm activity.

Mitigation Measures. The General Plan should review and discuss modifications to traditional methods of storm water discharge. Alternatives may include detention and/or retention basins and other, nontraditional solutions. National Pollutant Discharge Elimination System (NPDES) permitting requirements for non-point-source discharges into waterways, including stormwater discharge, have been delayed for cities of less than 100,000 population, but are expected to be required of cities the size of Paradise in 1992. These regulations may require pretreatment of discharged stormwaters.

3(g,h) Maybe

Impacts. If additional urban development is planned, increased demands upon groundwater supplies may result. Increased demand for domestic water supplies may contribute to groundwater overdraft, especially during drought years.

Mitigation Measures. The General Plan will address water quantity and quality and water system capacity needed to serve the proposed General Plan buildout. Policies regarding water conservation, drought-tolerant landscaping, and coordination of any planned growth with service capacity could reduce or delay the need for additional facilities. (Please refer to mitigation measures for item 3(d) above).

Plant Life

4(a,b,c) Maybe

Impacts. If additional urban development is planned, the replacement of some native vegetation with structures, roads and landscaping will occur. The California Natural Diversity Data Base (CNDDB)

indicates that special-status plants with reported occurrences in the Planning Study Area include the following: California Hibiscus (*Hibiscus californicus*, Federal-Candidate Category 2; State-None); and Butte County Checkerbloom (*Sidalcea robusta*, Federal-Candidate Category 2; State-None). No occurrences have been reported within the Primary or Secondary Study Areas.

Other special status plant species with potential to occur in the Study Area include Butte County fritillary (*Fritillaria eastwoodiae*), Red Bluff rush (*Juncus leiospermus*), Bidwell's knotweed (*Polygonum bidwelliae*), Butte morning glory (*Calystegia atriplicifolius*) and clustered lady slipper orchid (*Cypripedium fasciculatum*).

A field reconnaissance will be conducted during preparation of the Open Space and Conservation Elements which will provide more detailed information regarding existing conditions and impacts.

Mitigation Measures. The General Plan land use designations and policies should be designed to assure protection of, and mitigate impacts upon, special-status plant species and habitat. Measures may include conservation or open space easements, requirements for site-specific biotic surveys, enhancement of the riparian corridors along the Feather River and/or Little Butte Creek, habitat acquisition, and/or dedications of land. Additional mitigation measures may be identified during the environmental review process.

4(d) Maybe

Impacts. If land which is currently in agricultural production is designated for urban development in the General Plan, a reduction in acreage of agricultural crops may result.

Mitigation Measures. The potential loss of agricultural resources will be evaluated in the Environmental Impact Report to determine whether it meets accepted thresholds for significance. Policies can be included in the General Plan which prevent premature conversion of agricultural lands and which promote preservation of agricultural areas in the community.

Animal Life

5(a,b,c,d)Maybe

Impacts. The CNDDB indicates no reported occurrences of ET&C animal species within the Study Area. Information obtained from the DFG indicates that additional development may impact deer herd migration through the Study Area. A field reconnaissance will be conducted during preparation of

the Open Space and Conservation elements which will provide more detailed information regarding existing conditions and impacts.

Changes in land use and increased levels of human activity may restrict uninterrupted open space around or through the Planning Study Areas which may serve as foraging areas for certain species.

Mitigation Measures. The General Plan land use designations and policies should be designed to assure protection of, and mitigate impacts upon, special-status animal species and habitat. Measures may include conservation or open space easements, requirements for site-specific biotic surveys, restrictions on fence construction, enhancement of riparian corridors, habitat acquisition, and/or dedications of land. Additional mitigation measures may be identified during the environmental review process.

Noise

6(a,b) Maybe

Impacts. If additional urban development is planned, especially certain types of commercial and industrial development and new or expanded roadways, increased noise levels due to increased traffic and noise-generating land uses will result. If areas are designated for noise-sensitive land uses (e.g. residential, school, hospitals) adjacent to noise-generating land uses (Highway 191, Skyway, other major roadways, the airport), potentially severe noise impacts could occur.

Mitigation Measures. The General Plan update will include an updated Noise Element which will contain existing and projected noise exposure contours for major roads and other major noise generators. The updated Noise Element will provide policies and standards for any planned new development, and subsequent individual projects will be evaluated for consistency with the Noise Element. Land use patterns will be consistent with these policies as well. Individual projects will also be subject to the environmental review process.

Light and Glare

7 Maybe

Impacts. If additional urban development is planned, especially certain types of commercial and industrial development, new sources of light and glare in the surrounding area may result. Exact locations or intensities are unknown at this point, until specific development proposals are received.

Mitigation Measures. The General Plan will attempt to avoid these impacts when assigning land use designations by buffering or otherwise separating light-sensitive uses from sources of light and glare. As property is developed, Town development standards and conditions of approval will be applied to mitigate potential impacts of light and glare upon surrounding properties. Town standards do not normally require the installation of street lights, thus limiting the extent of adverse impacts. Individual discretionary projects will be subject to Town project review processes prior to approval.

Land Use

8 Maybe

Impacts. Adoption of the General Plan update may result in substantial changes from the present and/or planned land use in areas with existing development, and if areas which are not now developed or designated for urban development are so designated.

Mitigation Measures. The proposed project is a General Plan update, which involves changing present and/or planned land uses in many instances; including, but not limited to, potential open space designations. The impacts associated with proposed land use designations, and related mitigation measures, are addressed under the appropriate subject headings above and below.

Natural Resources

9(a) Maybe

Impacts. If additional urban development, including residential development, is planned, this development will consume natural resources both during construction and through continued maintenance of facilities and industrial production, if industries are involved.

Mitigation Measures. Because any new development in the Plan area will consist of new residential structures, businesses and industries, modern energy-conservation practices, design and materials will be incorporated which will minimize the use of natural resources to the extent possible.

Risk of Upset

10(b) Maybe

Impacts. If additional urban development is planned and/or densities are increased, evacuation made necessary by wildland fires or other emergencies may become more difficult.

Mitigation Measures. The General Plan includes an update of the Safety Element which will address

emergency evacuation plans. The Town is also in the process of preparing an Emergency Operations Plan, of which relevant portions will be incorporated in the Safety Element.

Population and Housing

11,12 Maybe

Impacts. Adoption and implementation of the General Plan may result in increased population densities in specified areas, and may result in the location of population clusters in currently undeveloped areas. Population projections will be included in the General Plan update. The Plan may result in creating new demand for Town services in areas which currently do not receive such services to full urban standards.

The General Plan may designate new areas for residential development, in proportion to areas designated for commercial and/or industrial development. If new commercial and industrial development are planned, that development and the Town's physical attributes may result in increased demand for housing in the community. Additional characteristics of the local housing market include the community's attractiveness as a retirement and second home community, which may generate additional housing demand.

Plan implementation may, over time, create a substantial additional supply of housing to the existing stock if new areas are planned for development. Installation of a sewer system may broaden housing opportunities in the Town by permitting construction of additional multifamily housing and the potential for higher residential densities.

The General Plan will include an update to the Housing Element, which will address housing needs and all housing-related issues required by law.

Mitigation Measures. It is anticipated that the policies and programs contained in the Land Use and Housing elements will mitigate adverse impacts on housing which may result from the Plan. The Town is also considering adoption of a Redevelopment Plan, which would provide a 20% set-aside of redevelopment funds to be used for housing-related purposes.

Transportation/Circulation

13(a,b,c,d,f)Maybe

Impacts. If new urban development of currently undeveloped areas is planned, construction of new or extended arterial, collector and local streets and increased traffic volumes and attendant impacts, i.e.

congestion, increased vehicle emissions, increased noise levels, lack of parking, safety hazards and alteration of existing circulation patterns will result. New road construction and improvements to the existing road system would be required as development occurs. Specific issues which have been identified include anticipated transportation control measures and coordination of air quality planning; alternative transportation needs of senior citizens; need for additional cross streets connecting Skyway, Clark and Pentz Magalia roads; and need for additional travel lanes in major roadways.

Mitigation Measures. The General Plan, which will provide for comprehensive planning of any areas designated for urban development, will attempt to mitigate potential traffic problems through measures such as appropriate street system design, traffic controls, promotion of increased transit ridership, pedestrian and bicycle safety considerations, and plans for improvements to existing roadways. The Plan update includes an update of the Circulation Element. The existing transit system will need to serve an expanded area if annexation and new development occur. Increased transit use will help mitigate impacts associated with increased traffic.

Public Services

14(a,b) Maybe

Impacts. If additional urban development is planned, increased demand for, and possible dilution of, police and fire protection services will result as buildout occurs. The topography and vegetation of the Paradise region make areas of the community susceptible to wildland fire hazards and limit potential emergency evacuation routes.

Mitigation Measures. It is anticipated that the implementation portion of the General Plan update will address means of providing police and fire service. The General Plan should also establish a reasonable geographic area for provision of urban services. A Capital Improvement Study currently in preparation for the Town will identify needed facilities and services, maintenance of public facilities, and potential financing methods, such as assessment districts, community facilities districts, developer/subdivision fees, and other user fees. The project includes an update of the Safety Element of the General Plan, which will include, but not be limited to, policies designed to minimize wildland fire hazards and designate emergency evacuation routes.

14(c) Maybe

Impacts. If new urban development is planned, adoption of the General Plan will eventually result in increased enrollment in the local school district, which will contribute to overcrowding of existing facilities, need for additional sites and facilities, and/or need for additional student transportation. Anticipated State budget cuts may exacerbate this situation.

Mitigation Measures. Future school location planning in coordination with Town Planning staff and the General Plan, coordination regarding future development proposals, and identification of future school sites, will help mitigate impacts on schools. Other mitigation measures include continued implementation of developer impact fees and year-round school, which has already been implemented at one of the two elementary schools in the Town and is planned for the other school in 1992.

14(d) Maybe

Impacts. If additional urban development is planned, new demand for park and recreational facilities will be created in the Town, and increased use of regional park facilities and public trails, and impacts on the Paradise Recreation and Parks District may also result.

Mitigation Measures. It is anticipated that the implementation portion of the General Plan will address future park sites and means of providing and paying for parks and recreational services. The Town already administers a "Quimby" provision within the Town Subdivision Ordinance which provides for the collection of fees and/or dedication of land prior to the filing of all parcel and subdivision maps.

14(e,f) Maybe

Impacts. If additional urban development is planned, increased demand for community facilities and services will result, including construction and maintenance of roads.

Mitigation Measures. The General Plan, as well as a Capital Improvement Study currently in preparation for the Town, will identify needed community facilities and services, maintenance of public facilities, including roads, and potential methods of financing such facilities and services.

Energy

15(a,b) Maybe

Impacts. If additional urban development is planned, increased demand for, and consumption of, natural gas, electricity and other power sources will occur. However, it is likely or possible that an equivalent level of development, and corresponding consumption of

resources, would occur elsewhere in the region if the development does not occur in Paradise.

Mitigation Measures. Utility companies will be consulted during formulation of the General Plan/EIR to determine impacts upon their service capabilities. Because any new development in the Plan area will consist of new residential structures, businesses and industries, modern energy-conservation practices, design and materials will be incorporated which will minimize the use of energy resources to the extent possible.

Utilities

16(a) Maybe

Impacts. Please refer to item 15(a) above.

Mitigation Measures. Please refer to item 15(a) above.

16(b) Maybe

Impacts. If additional urban development is planned, increased demand for telephone, cable television, and other communications systems will occur.

Mitigation Measures. Communications system providers will be consulted during formulation of the General Plan/EIR to determine impacts upon their service capabilities. Proposed development projects will be reviewed to assure that such services can be provided.

16(c) Maybe

Impacts. If additional urban development is planned, additional domestic water service and supply facilities will be needed as buildout occurs. Water service is currently provided in the Town and surrounding areas by three special districts: Paradise Irrigation District, Magalia County Water District and Lime Saddle Community Services District, from a combination of surface and groundwater sources, including Magalia and Paradise Reservoirs on Little Butte Creek. Extension of one or more of the systems would be required. The service capacity of one or more of the districts may not be adequate to serve future urban development if such development is planned. Water system improvements under consideration include new wells, acquiring water rights from PG&E, raising Magalia Dam and a proposed filtration plant to improve water quality.

Mitigation Measures. It is anticipated that the General Plan will consider policies which address alternative methods of providing domestic water service and policies coordinating new development with the availability of water service capacity. The General Plan/EIR will address water service capacity, the districts' ability to provide additional water service and

fire flow and potential facilities and methods for provision of domestic water service and fire flow. Proposed subdivisions and other new development will be required to meet standard Town conditions for the provision of both domestic and fire protection water service.

16(d) Maybe

Impacts. If additional urban development is planned, increased demand for wastewater disposal will result. The Town does not currently have a wastewater collection, treatment and disposal system; all development relies on individual septic systems. Buildout of any new areas selected for growth and development without installation of a sewer system may result in significant impacts with regard to health hazards and water quality, and is probably not possible. The Regional Water Quality Control Board has advised the Town to correct the problem of potential groundwater contamination from septic systems.

Mitigation Measures. The Town has adopted an on-site systems ordinance restricting the density of development within town limits to a level commensurate with the estimated assimilative capacity of area soils. The Town has formed a Wastewater Design Assessment District and is in the process of forming a Sewer Assessment District and issuing bonds to fund construction of a sewer system in a portion of the Town. Litigation is currently in progress by some local property owners to prevent implementation of the "Design District".

According to the "Sewer Project Feasibility Study" prepared by Kennedy/Jenks/Chilton, the State can impose a sewer system on the Town. Significant improvements in groundwater quality can be expected upon construction and operation of a central wastewater facility. Assumptions regarding wastewater collection, treatment and disposal will be a basic factor in the formulation of the General Plan, since it affects and limits population growth, densities and the types of development which can be permitted. Regular septic tank inspections can help mitigate impacts caused by individual systems.

16(e) Maybe

Impacts. Please refer to item 3(b).

Mitigation Measures. Please refer to item 3(b).

16(f) Maybe

Impacts. If additional urban development is planned, the need for solid waste disposal and potential demand for solid waste collection service will increase. The General Plan/EIR will discuss the capacity of the Neal

Road landfill facility and future plans for solid waste disposal and recycling.

Mitigation Measures. It is anticipated that the General Plan will consider policies regarding mandatory solid waste collection and disposal and recycling. A recycling study is currently being prepared for the Town, and the Town, in cooperation with a private company, has already initiated a pilot curbside recycling program. Other potential programs include educational programs, additional recycling centers, and possible wood waste recycling and composting programs.

Human Health

17(a,b) Maybe

Impacts. Urban development on septic systems without regard to impacts on water quality and proper operation of septic systems could create health hazards and expose people to potential health hazards.

Mitigation Measures. Please refer to item 16(d) above.

Aesthetics

18 Maybe

Impacts. If additional urban development is planned, the types of vistas which now characterize the area, which are rustic, hilly and lush with trees, as well as valley panoramas, may be altered.

Mitigation Measures. It is anticipated that the General Plan will consider policies which address maintenance and enhancement of the community's aesthetic character through measures such as tree planting, management and preservation (implementation of the current tree ordinance); proper site planning and design review; maintenance of a relatively low density of development; and restrictions on development on ridgelines and on slopes of greater than 30 percent. The Conservation and Open Space elements will take into consideration preservation of areas of scenic beauty, maintenance of appropriate open space, park development and landscaping standards.

Recreation

19 Maybe

Impacts. Please refer to item 14(d).

Mitigation Measures. Please refer to item 14(d).

Cultural Resources

20(a,b,c,d)Maybe

Impacts. The Northeast Information Center at California State University, Chico has identified areas in the community with a possible high sensitivity for

archaeological or historical resources. Two structures in the community have been surveyed which may be significant historical resources, and several historical landmarks are located in the area. Numerous identified and recorded archaeological sites exist within the Paradise Town limits.

Mitigation Measures. It is anticipated that the General Plan will include policies to address preservation of cultural resources. In areas of high sensitivity, it is anticipated that these policies will provide for compliance with Appendix K of the CEQA Guidelines, including provisions that a qualified professional archaeologist be contracted to conduct a field survey as part of the environmental review process for development permits.

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SUGGESTED DISTRIBUTION LIST
PARADISE INITIAL STUDY

Butte Community College District
Butte County:
- Airport Land Use Commission
- Air Pollution Control District
- Agricultural Commissioner
- Board of Supervisors
- Environmental Health Dept.
- LAFCO
- Planning Dept.
- Public Works Dept.
- Sheriff's Dept.

Butte County Library (Paradise Branch)
Butte County Association of Governments
Butte County Mosquito Abatement District
Butte County Housing Authority
Butte County Farm Bureau
California Division of Forestry
California Highway Patrol (Long Range Planning Division)
California State University, Chico Archaeological Inventory Northeastern Information Center
Caltrans (District –)
Chico Unified School District
City of Gridley
City of Oroville
City of Chico
City of Biggs
Dept. of Parks and Recreation
Dept. of Fish and Game
Dept. of Housing and Community Development
Dept. of Conservation
Division of Mines and Geology
Durham Unified School District
Feather River Hospital
Kimshew Cemetery District
Lime Saddle Community Services District
Magalia County Water District
Native American Heritage Commission
Office of Noise Control
Pacific Bell Telephone Company
Pacific Gas and Electric Company
Paradise Chamber of Commerce

Paradise Senior Citizens Center
Paradise Pines Property Owners Assn.
Paradise Irrigation District
Paradise Recreation and Park District
Paradise Board of Realtors
Paradise Cemetery District
Paradise Sky Park (owners)
Paradise Unified School District
Public Utilities Commission
Regional Water Quality Control Board
Resources Agency
Sierra Club, Paradise Ridge Chapter
State Clearinghouse
State Office of Historic Preservation
State Lands Commission
Town of Paradise Departments

TOWN OF PARADISE

GENERAL PLAN

VOLUME II
DRAFT ENVIRONMENTAL IMPACT REPORT

SCH NO. 91043055

B. RESPONSES TO NOP

STATE OF CALIFORNIA—THE RESOURCES AGENCY

Pete Wilson, Governor

DEPARTMENT OF CONSERVATION
DIVISION OF MINES AND GEOLOGY
SACRAMENTO DISTRICT OFFICE
630 BERCUT DRIVE
SACRAMENTO, CA 95814-0189
Phone (916) 324-7299

February 26, 1991

RECEIVED
MAR - 4 1991
TOWN OF PARADISE
PLANNING

Mr. Charley Stump
Senior Planner
Town of Paradise
5555 Skyway
Paradise, CA 95969

Dear Mr. Stump:

SUBJECT: Revisions of Town of Paradise General Plan

Thank you for your letter requesting geologic and seismic information for the revisions to the General Plan of the Town of Paradise. The Department of Conservation's Division of Mines and Geology (DMG) has special expertise in evaluating geologic and seismic hazards, as well as mineral resource issues.

1. Our review of the Safety Element of your existing General Plan finds it reasonably complete. However, we would recommend that the map identifying active and potentially active faults should be updated. In particular, the Magalia and Paradise faults should be identified on the fault map (see Harwood and Helley, 1982). While there is no current evidence for recent (Holocene) surface displacement on these faults, some evidence suggests geologically recent displacement (Dudley, 1988). Additional data on the faults in the area of the Town of Paradise are discussed by the California Department of Water Resources (1979), Woodward-Clyde Consultants (1978), Hart and others (1984). General geologic data of the area of the Town of Paradise are presented in Burnett (1961), Division of Mines and Geology (1965), and Jennings (1975). A copy of a geologic map index for the area of Paradise is enclosed. These publications are available for purchase and/or review at DMG's Publications Office and Library, located at 660 Bercut Drive, Sacramento, California, 95814.

2. Ideally, the General Plan should contain, among other things, geologic hazards maps showing the general location of a number of hazards, including zones of slope instability, seismic ground shaking, potential liquefaction, and areas subject to flooding from storm waters and dam inundation. These maps should be of sufficient scale and detail to easily locate specific lots or sites relative to areas of known geologic hazards. We suggest that existing

data from the records of your building and planning department and any data that exists on geologic hazards, such as areas of liquefaction or expansive soils, be compiled onto these hazard maps. In addition, we have enclosed copies of DMG Note 46, "Guidelines for Geologic/Seismic Considerations in Environmental Impact Reports", and DMG Note 43, "Recommended Guidelines for Determining the Maximum Credible and the Maximum Probable Earthquakes". These documents may aid in the determination of potential impacts from earthquakes on nearby active faults, and other geologic hazards in the General Plan area.

I hope this brief information will be of value to you. If you have further questions, please contact me at (916) 322-2562. We look forward to reviewing a draft of your revised Safety Element.

Sincerely,

Roger C. Martin
Project Manager
Environmental Review Project

RCM:KC:skk

Enclosures

cc: Dennis O'Bryant, Department of Conservation
Kit Custis, Division of Mines and Geology

<u>References</u>:

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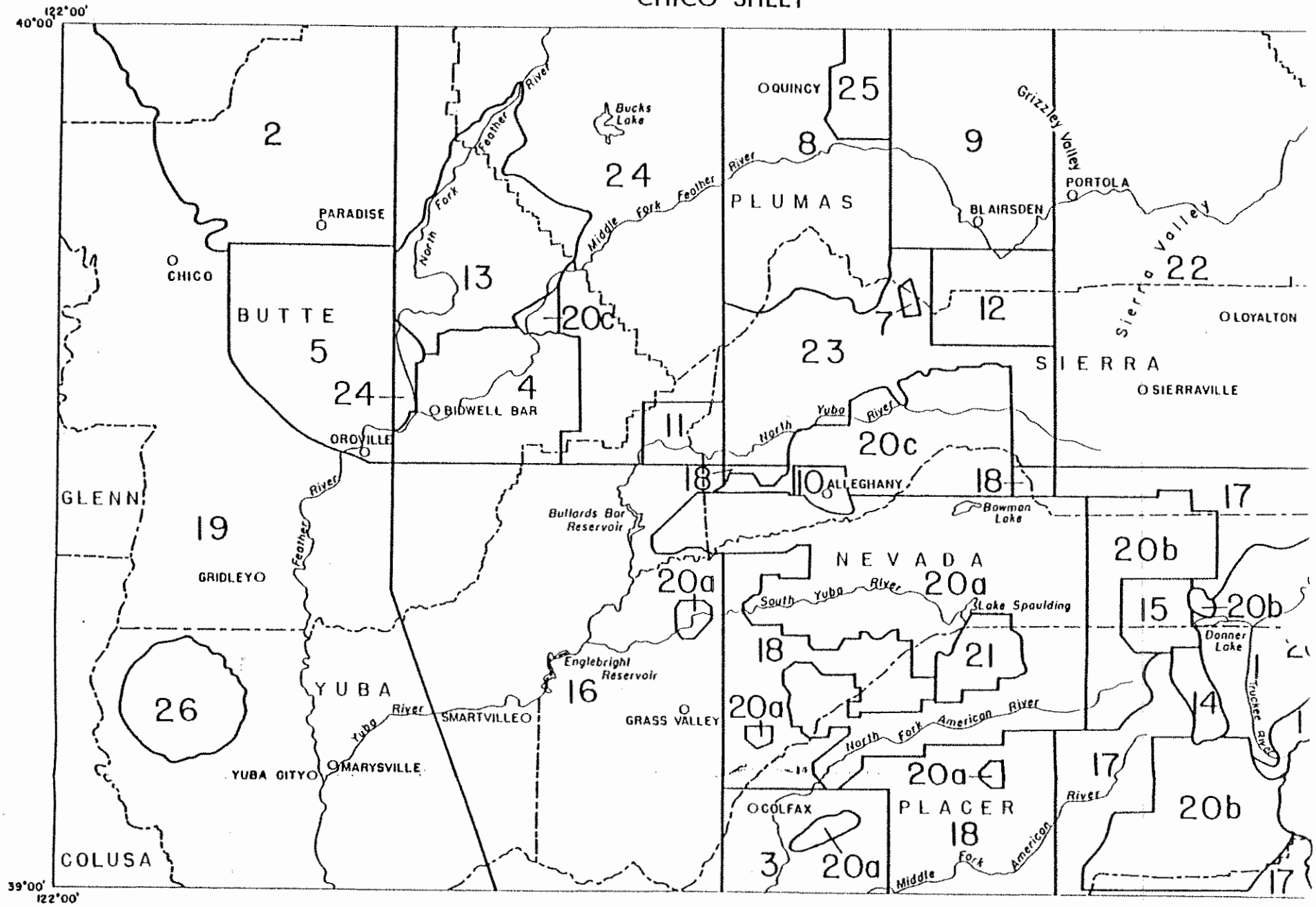
Reviewed by:

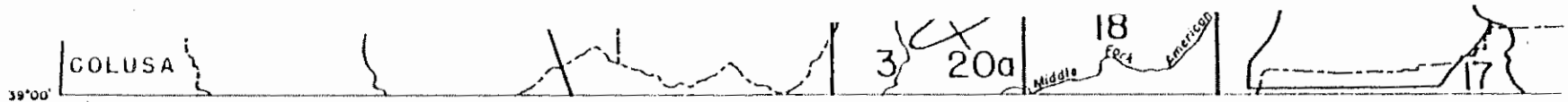
Thomas K. Howard, CEG 1220 for
Trinda L. Bedrossian
Supervising Geologist
RG 3363, CEG 1064

Date:

INDEX TO GEOLOGIC MAPPING

USED IN THE COMPILATION OF THE CHICO SHEET





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26. Williams, H., 1929, Geology of the Marysville Buttes, California: California Univ. Dept. Geol. Sci. Bulletin vol. 18, pp. 101-120, Map: Geologic Map of the Marysville Buttes, California, scale 1:62,500.

    Johnson, H. R., 1941, Marysville Buttes (Sutter Buttes) gas field: in California Div. Mines Bulletin 118, pp. 610-615, Fig. 270: Marysville (Sutter) Buttes gas field, scale 1:100,000. Also Buttes Gas and Oil Company map of Sutter Buttes, scale 1" = 400', in Geological Society of Sacramento Annual Field Trip Guidebook, East-Central Sacramento Valley, 1961.

    Garrison, L. E., The Marysville Buttes, Sutter County, scale 1:62,500, in California Div. Mines and Geology Bulletin 181, in preparation 1961.

*Fault additions and minor modifications by L. D. Clark, personal communication, September 13, 1961; and L. D. Clark, 1960, Foothills fault system, western Sierra Nevada, California: Geological Society America Bulletin, vol. 71, pp. 483-496.

For a complete list of published geologic maps of this area see Division of Mines Special Report 52

II. CHECKLIST OF GEOLOGIC REPORT ELEMENTS

REPORT ELEMENTS	YES	NO
A. General Elements Present		
Description and map of project.		
Description and map of site.		
Description and map of pertinent off-site areas.		
B. Geologic Element (refer to checklist)		
Are all the geologic problems mentioned?		
Are all the geologic problems adequately described?		
C. Mitigating Measures		
Are mitigating measures necessary?		
Is sufficient geologic information provided for the proper design of mitigating measures?		
Will the failure of mitigating measures cause an irreversible environmental impact?		
D. Alternatives		
Are alternatives necessary to reduce or prevent the irreversible environmental impact mentioned?		
Is sufficient geologic information provided for the proper consideration of alternatives?		
Are all the possible alternatives adequately described?		
E. Implementation of the Project		
Is the geologic report signed by a registered geologist?*		
Does the report provide the necessary regulations and performance criteria to implement the project?		

*Required for interpretive geologic information.

III. PUBLISHED REFERENCES (selected)

A. California Division of Mines and Geology Publications

1. Alfors, J.T., et al., 1973, Urban geology master plan for California: Bulletin 198.
2. Greensfelder, R.W., 1974, Maximum credible rock acceleration from earthquakes in California: Map Sheet 23.
3. Jennings, C.W., 1975 Fault Report 13 of California, GDM No. 1.
4. Oakeshott, G.B., 1974, San Fernando, California, earthquake of 9 February 1971: Bulletin 196.
5. Note No. 37, Guidelines to geologic/seismic reports, 1973.
6. Note No. 43, Recommended guidelines for determining the maximum credible and the maximum probable earthquakes, 1975.
7. Note No. 44, Recommended guidelines for preparing engineering geologic reports, 1975.
8. Note No. 46, Recommended guidelines for preparing mine reclamation plans, 1975.
9. Parke, D.L., Real, C.R., Toppozada, T.R., 1978, Earthquake Epicenter Map of California, showing events from 1900 through 1974.
10. Real, C.R., Toppozada, T.R., and Parke, D.L., 1978, Earthquake catalog of California, January 1, 1900-December 31, 1974 (microfiche).

B. Other Publications

1. Allen, C.R., et al., 1965, Relationship between seismicity and geologic structure in the southern California region: Bulletin of the Seismological Society of America, v. 55, no. 4.
2. Bolt, B.A. and Miller, R.D., 1971, Seismicity of northern and central California, 1965-1969: Bulletin of the Seismological Society of America, v. 61, no. 6.
3. California Department of Water Resources, 1964, Crustal strain and fault movement investigation: Bulletin No. 116-2.
4. Coffman, J.L. and von Hake, C.A., ed., 1973, Earthquake history of the United States: U.S. Department of Commerce, Publication 41-1.
5. Hileman, J.A., et al., 1973, Seismicity of the southern California region, 1 January 1932 to 31 December 1972: California Institute of Technology, Contribution 2385. Periodical updates to this are available.

IV. PUBLIC AGENCIES WITH GEOLOGIC DATA

Source	Data Available			
	Seismicity	Geology	Ground Water	Soils
Libraries and Geology and Engineering Departments of California Universities	X	X	X	X
California Institute of Technology	X			
California Division of Mines and Geology (Sacramento, San Francisco, Los Angeles, CA)	X	X		
California Department of Water Resources (Sacramento, CA)		X		X
California Department of Transportation (District Offices)				X
County Soil & Water Conservation Districts				X
County Engineer and Departments of Building and Safety	X	X		X
County Highway Department				X
County Flood Control District				X
U.S. Geological Survey (Menlo Park, CA)		X		
U.S. Corps of Engineers (District Engineer)		X		
U.S. Bureau of Reclamation (Regional Offices)		X		
U.S. Soil Conservation Service and Forest Service				X

CALIFORNIA DIVISION OF
MINES AND GEOLOGY

CDMG
NOTE 46

GUIDELINES FOR GEOLOGIC/SEISMIC CONSIDERATIONS IN ENVIRONMENTAL IMPACT REPORTS

The following guidelines were prepared by the Division of Mines and Geology with the cooperation of the State Water Resources Control Board to assist those who prepare and review environmental impact reports.

These guidelines will expedite the environmental review process by identifying the potential geologic problems and by providing a recognition of data needed for design analysis and mitigating measures. All statements should be documented by reference to material (including specific page and chart numbers) available to the public. Other statements should be considered as opinions and so stated.

1. CHECKLIST OF GEOLOGIC PROBLEMS FOR ENVIRONMENTAL IMPACT REPORTS

GEOLOGIC PROBLEMS		Could the project or geologic event cause environmental problems?			Is this conclusion documented in attached reports?	
PROBLEM	ACTIVITY CAUSING PROBLEM	NO	YES	ENVIRONMENTAL PROBLEMS	NO	YES
EARTHQUAKE DAMAGE	Fault Movement					
	Liquefaction					
	Landslides					
	Differential Compaction/ Seismic Settlement					
	Ground Rupture					
	Ground Shaking					
	Tsunami					
	Seiches					
	Flooding Due to Failure of Dams and Levees					
LOSS OF MINERAL RESOURCES	Loss of Access					
	Deposits Covered by Changed Land-Use Conditions					
	Zoning Restrictions					
WASTE DISPOSAL PROBLEMS	Change in Groundwater Level					
	Disposal of Excavated Material					
	Percolation of Waste Material					
SLOPE AND/OR FOUNDATION INSTABILITY	Landslides and Mudflows					
	Unstable Cut and Fill Slopes					
	Collapsible and Expansive Soil					
	Trench-Wall Stability					
EROSION, SEDIMENTATION, FLOODING	Erosion of Graded Areas					
	Alteration of Runoff					
	Unprotected Drainage Ways					
	Increased Impervious Surfaces					
LAND SUBSIDENCE	Extraction of Groundwater, Gas, Oil, Geothermal Energy					
	Hydrocompaction, Peat Oxidation					
VOLCANIC HAZARDS	Lava Flow					
	Ash Fall					

(over)

For a list of geologic maps and reports available from the California Division of Mines and Geology, write to the California Division of Mines and Geology, P.O. Box 2980, Sacramento, CA 95812, or visit our District offices in SACRAMENTO, 2815 "O" Street, (916) 445-5716; SAN FRANCISCO, Room 2022, Ferry Building, (415) 557-0833; LOS ANGELES, Room 1065, 107 South Broadway, (213) 620-3560.

CALIFORNIA DIVISION OF
MINES AND GEOLOGY

CDMG
NOTE 43

RECOMMENDED GUIDELINES FOR DETERMINING THE MAXIMUM CREDIBLE AND THE MAXIMUM PROBABLE EARTHQUAKES

The following guidelines were suggested by the Geotechnical Subcommittee of the State Building Safety Board on 3 February 1975 to assist those involved in the preparation of geologic/seismic reports as required by regulations of the California Administrative Code, Title 17, Chapter 8, Safety of Construction of Hospitals. CDMG is currently using these guidelines when reviewing geologic/seismic reports.

Maximum credible earthquake

The maximum credible earthquake is the maximum earthquake that appears capable of occurring under the presently known tectonic framework. It is a rational and believable event that is in accord with all known geologic and seismologic facts. In determining the maximum credible earthquake, little regard is given to its probability of occurrence, except that its likelihood of occurring is great enough to be of concern. It is conceivable that the maximum credible earthquake might be approached more frequently in one geologic environment than in another.

The following should be considered when deriving the maximum credible earthquake:

(a) The seismic history of the vicinity and the geologic province;
(b) the length of the significant fault or faults which can affect the site within a radius of 100 kilometers; (See CDMG Preliminary Report 13);
(c) the type(s) of faults involved;
(d) the tectonic and/or structural history;
(e) the tectonic and/or structural pattern or regional setting (geologic framework);
(f) the time factor shall not be a parameter.

Maximum probable earthquake (functional-basis earthquake)

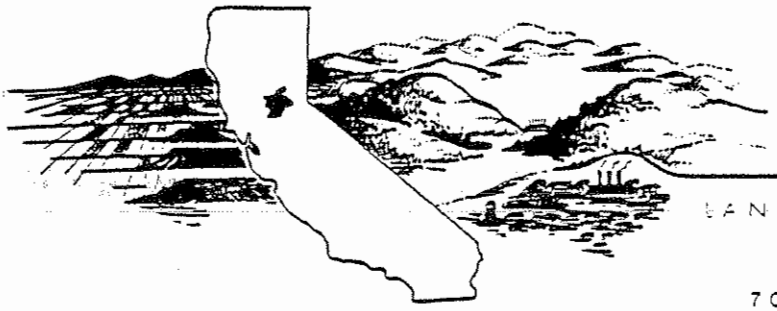
The maximum probable earthquake is the maximum earthquake that is likely to occur during a 100-year interval. It is to be regarded as a probable occurrence, not as an assured event that will occur at a specific time.

The following should be considered when deriving the "functional-basis earthquake":

(a) The regional seismicity, considering the known past seismic activity;
(b) the fault or faults within a 100 kilometer radius that may be active within the next 100 years;
(c) the types of faults considered;
(d) the seismic recurrence factor for the area and faults (when known) within the 100 kilometer radius;
(e) the mathematic probability or statistical analysis of seismic activity associated with the faults within the 100 kilometer radius (the recurrence information should be plotted graphically);
(f) the postulated magnitude shall not be lower than the maximum that has occurred within historic time.

PYA, JES, RWS 2/75

For a list of geologic maps and reports available from the California Division of Mines and Geology, write to the California Division of Mines and Geology, P.O. Box 2980, Sacramento, CA 95812, or visit our District offices in SACRAMENTO, 2815 "O" Street, (916) 445-5716; SAN FRANCISCO, Room 2022, Ferry Building, (415) 557-0633; LOS ANGELES, Room 1065, 107 South Broadway, (213) 620-3560.



Butte County

LAND OF NATURAL WEALTH AND BEAUTY

PLANNING DEPARTMENT
7 COUNTY CENTER DRIVE - OROVILLE, CALIFORNIA 95965-3397
TELEPHONE: (916) 538-7601

April 2, 1991

Town of Paradise, Planning Department
5555 Skyway
Paradise, California 95969
Att: Charley Stump/Senior Planner

RE: Response to Notice of Preparation of a Draft EIR for Paradise General Plan Update.

Dear Mr. Stump:

Thank you for the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report for the Town of Paradise General Plan Update. The Butte County Planning Department has the following comments and concerns in addressing the impact areas identified by the initial study:

1. Soils and development suitability

   * A soil survey might be considered to guide site selection for residential, industrial, and commercial development that involves surface and subsurface structures.

   * EIR should determine texture and composition of soils and identify bearing capacity, internal drainage, erosion pctential, and slope stability.

2. Hydrology

   * EIR should provide analytical forecasts of the changes of overland flow and stream discharge expected from the proposed development and evaluate the performance of the entire watershed that is subject to any development.

   * EIR should estimate the concentration time by making separate estimates for:
   (1) the time overland flow; and

-continued-

(2) the time of channel flow and then summing the two.

* Utilize the ten year and hundred year storms of sixty minutes duration for storm water computations.

* EIR should develop performance goals for the watershed on the Town of Paradise which reflect local values, policies pertaining to development intensity, storm water retention, wetlands, open space and the like.

* EIR should develop performance standards and controls or the specific levels of performance that must be met if goals are to be achieved.

* EIR should recommend performance controls to enforce the standards and goals. Controls may be specific ordinance or site plan review criteria within General Plan.

* EIR should map precisely areas prone to flooding, taking into account development and runoff factors.

* EIR should map the drainage network and supply the following data: number of streams, bifurcation ratio, drainage basin order, drainage area, and drainage density.

* EIR should estimate nutrient loading of any impacted water body by identifying the various land uses proposed by the General Plan and major cover types in each land use category, noting the relationship to the drainage system and water features, what kinds of pollutant each land use category is apt to contribute (both nutrients and other types), and the locations of critical entry points.

3. Vegetation and Wildlife

* EIR should document the distribution and makeup of the vegetative cover utilizing a scheme which outlines:
  (1) vegetative structure,
  (2) dominant plant types,

-continued-

(3) plant size and density,
(4) site and habitat or associated use, and
(5) special plant species
Vegetative scheme should grant an understanding of both the biological phenomenon as well as the physical component of landscape having height, volume, texture, color, and functional ties with soil, water, air and land use.

* EIR should determine use of properties within study area by deer herds and identify the consequences of development as it relates to the deer herds.

4. Land Use

* EIR should conduct a careful evaluation of demographic and economic trends to predict the nature and future character of the Town of Paradise.

* EIR should inventory cultural resources available to the Town of Paradise and how the General Plan will impact future opportunities for the Town to expand these opportunities.

* EIR should develop projections of needs for land use and probable phasing of development and analyze how it might impact other environmental goals.

* EIR should identify scenic areas within the study area which may be disturbed or adversely effected by urban developments.

* EIR should evaluate the relationship between the County's General Plan, the newly required Congestion Management Plan, and the Towns General Plan.

5. Recreation

* EIR should describe and inventory the current recreational resources of the study area by classifying resources and opportunities,

-continued-

inventorying existing land, facilities, and programs.

* EIR should evaluate the cost of providing recreational resources and programs for the build out population of the Town of Paradise.

* EIR should analyze the demand/supply relationship and describe the deficiencies created by the allowed development under the new general plan.

6. Traffic and Circulation

* EIR should evaluate the land use scenarios with transportation infrastructure and improvement program to ensure balance and desired level of service will be maintained.

* EIR should review land use proposal to ensure compliance with the required Congestion Management Plan.

* EIR should discuss future volume to capacity ratios and what it means in terms of level of service.

* EIR should discuss traffic safety problems which will be associated with the projected traffic generated by the new General Plan.

* EIR should discuss short and long range transportation improvement alternatives and the benefits of each alternative in meeting the projected traffic demands.

* EIR should make recommendations for possible financial strategies to implement the transportation improvement plans and the pros and cons of each financial strategy.

8. Socio/Economic

* EIR should evaluate and analyze the housing needs by considering the following items:
(1) The market area - the within which dwelling units compete with one another; will General Plan and development policies exert pressure for housing development in the Upper Ridge?

-continued-

(2) Demand - employment, incomes, population, total households, family and household size.
(3) Supply - Housing inventory, residential construction activity.

* EIR should analyze the fiscal impacts of the General Plan and estimate all costs and revenues associated with future development.

* EIR should estimate the income potential for the Town of Paradise from all revenue sources for each year in the life of the plan.

* EIR should evaluate the level of service to be provided for all governmental services.

If you have any questions concerning the above comments, please advise.

Sincerely,

B.A. Kircher
Director of Planning

Brent L. Moore

Brent L. Moore
Associate Planner

BAK:BLM:tma

BUTTE COUNTY MOSQUITO ABATEMENT DISTRICT

DISTRICT OFFICE AT
N. E. CORNER OF OROVILLE AIRPORT
ON LARKIN ROAD
PHONE (916) 533-6038
342-7350

5117 LARKIN ROAD
OROVILLE, CALIFORNIA 95965

WILLIAM E. HAZELTINE, P
MANAGER - ENVIRONMENTA

April 10, 1991

RECEIVED
APR 16 1991
TOWN OF PARADISE
PLANNING

Charley Stump, Senior Planner
Paradise Planning Department
555 Skyway
Paradise, CA 95969

RE:Draft EIR for the Paradise General Plan Revision

Dear Charley:

As mentioned at your scoping meeting today we have reviewed your initial study for this project and have three concerns that we would like addressed in your draft EIR. They are as follows:

1. Under the general description of "water" there is a proposal to use "storm water retention basins". Storm water retention basins are known to breed mosquitoes if they are not properly maintained, and therefore we request that the condition for use of such basins be that they are properly designed and maintained so they do not breed mosquitoes.

2. We are concerned that the proposed sewer system may produce mosquitoes (see attached letter) and request that there be some written assurance or mitigation that the proposed sewer system will be managed so it will not create a mosquito breeding problem. Such assurance should address the design of the system and contingency control plans to prevent the creation of a public nuisance.

3. We commend you on including a Human Health element, and we request that a section be added on mosquitoes and mosquito borne disease. This should include information on the species that are important vectors of diseases such as Malaria, Encephalitis and Canine Heartworm disease, which may be found in Paradise.

We also request that a section under the Health element include information on Lyme Disease and the local tick vector of this disease.

We are willing to consult with you on the design of the storm water retention basins and the sewer system so that the likelihood of mosquito problems is reduced. We will also try to provide any information you need on mosquitoes or ticks and the diseases associated with them.

Sincerely,

James A. Camy
Assistant Manager

JAC:dm
Attachment

UTTE COUNTY MOSQUITO ABATEMENT DISTRICT

DISTRICT OFFICE AT
CORNER OF OROVILLE AIRPORT
ON LARKIN ROAD
PHONE (916) 533-4038
342-7350

5117 LARKIN ROAD
OROVILLE, CALIFORNIA 95965

WILLIAM E. HAZELTINE, PH.D.
MANAGER - ENVIRONMENTALIST

July 27, 1990

Planning Department
Town of Paradise
5555 Skyway
Paradise, Ca 95969

RE: Proposed Use of Wastewater for Wetlands

Dear Planners:

I have read the Paradise Post article of 7/24/90 regarding the possible use of treated sewer effluent as a water source for a created wetland. Reference was made to the created marshes in Arcata.

You should be aware of the serious risk of mosquito production in ponds of this sort. Experts who have looked at the Arcata ponds found consistently high numbers of Culex tarsalis mosquito larvae. These may not be a problem in Arcata, because of the cooler temperatures, but in Butte County, such a mosquito breeding source would be an extreme liability for the owner/operator of such a facility.

If you are seriously considering such a facility, we urge you to understand the operational costs which would include the extensive use of pesticides. Culex tarsalis mosquitoes are a major vector species for encephalitis. Costs for abatement of mosquitoes in this source would be the responsibility of the facility operator.

If you plan to pursue this type of sewage treatment facility, we would be happy to review the risks and costs for you, in order to be sure your decision is based on a complete evaluation of the risks involved.

Sincerely,

William E. Hazeltine, Ph.D.,R.P.E.
Manager - Environmentalist

WEH/km

cc: Dr. Chester Ward, Butte Co. Health Dept.
Tom Kurtz, Paradise Post

Butte County
AIR POLLUTION CONTROL DISTRICT
9287 MIDWAY, SUITE 1A
DURHAM, CALIFORNIA 95938 (916) 891-2882

April 10, 1991

Charley Stump, Senior Planner
Town of Paradise Planning Department
5555 Skyway
Paradise, CA 95969

Subject: Draft EIR for Paradise General Plan

Mr. Stump,

Thank you for forwarding to us the Notice of Preparation for the Paradise General Plan revision. The Butte County Air Pollution Control District (APCD) has reviewed the information and we have concerns with how your department is dealing with the "build out" of the Paradise area and the air quality concerns. You have not adequately addressed the concerns from our point of view, consequently we have the following comments.

While the environmental checklist only has a small portion for the air quality concerns, checking the "maybe" column for each question does not alleviate the problems that are going to be created by the "build out". In the impacts/mitigation section, you blend all three of the questions into one.

The "build out" will lead to an increased population, consequently increased vehicle traffic and increased emissions that will lead to a degradation of the air quality in the Paradise area and in Butte County. Paradise is a part of Butte County and is therefore included in the non-attainment status designated by the State of California Air Resources Board. As is stated in this draft plan, the non-attainment designation is for ozone, carbon monoxide, and particulate matter. As you mentioned, the APCD does not operate any monitoring stations in the Paradise area. If there is going to be revision to the general plan that will lead to increased growth, than the APCD is going to require that the City of Paradise install and maintain an air monitoring station. The aforementioned pollutants are what are to be monitored.

Any residential development should address congestion management planning and traffic control measures before the building is allowed to commence. This will help mitigate the impacts of the development and offer alternate transportation measures to the population.

In addition, the burning of leaves and other waste vegetation in any quantity will have more of an effect on the air quality of the area, especially in residential areas, than it will on air movement. The APCD requests that the Town of Paradise follow the example set by the City of Chico and ban all waste, vegetation and leaf burning.

The APCD appreciates the opportunity to comment on the proposed revision to the General Plan of the Town of Paradise. If you have any comments or questions in this matter, please feel free to call me at 891-2882.

Sincerely,

Gina Facca
Air Pollution Control Officer

GF:gf

STATE OF CALIFORNIA—THE RESOURCES AGENCY PETE WILSON, Gover

DEPARTMENT OF FISH AND GAME
REGION 2
1701 NIMBUS ROAD, SUITE A
RANCHO CORDOVA, CALIFORNIA 95670
(916) 355-7020

April 11, 1991

Mr. Charley Stump
Town of Paradise Planning Department
5555 Skyway
Paradise, CA 95969

Dear Mr. Stump:

The Department of Fish and Game (DFG) has reviewed the Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Town of Paradise General Plan Revision. Seven elements of the General Plan will be updated: Land Use, Circulation, Conservation, Open Space, Safety, Noise, and Housing. In addition to the present town limits Primary Study Area, the Draft EIR will address a Secondary Study area reflecting the Town's Sphere of Influence and a Tertiary Study Area reflecting a general interest of the Town of Paradise (Town).

Significant adverse impacts on habitat and wildlife will occur because of the increased Town size implied by the NOP. The DFG recommends that the Draft EIR address these concerns:

1. Storm drainage and sewage impacts on water quality, including those areas outside of and downstream of affected water sheds. Specific mitigation measures should provide that water treatment facilities have the ability to remove soluble, suspended, and surface floating pollutants in addition to sediments.

2. Sedimentation impacts caused by construction activities. Specific mitigation measures in the form of grading ordinances, slope constraints, revegetation, etc., should be provided.

3. Increased water supply impacts (including downstream of the watershed) caused by pumping, diversions, dams, etc. These impacts will affect springs in addition to lakes and streams. Aquatic and wetland habitat impacts should be fully discussed, with special emphasis to the effects on fisheries.

4. Potential impacts on all sensitive plant species given Federal, State, or California Native Plant Society listings. There may be more than 20 species occurring within the study areas. Specific

mitigation measures such as setbacks, open space designations, etc. Should be provided.

5. Riparian and wetland (including vernal pools) impacts beyond those mentioned in concern #3, including all streams, lakes, and wetlands.

   Specific mitigation measures such as setbacks, open space designations and drainage restrictions should be provided.

6. Impacts on deer winter range. The DFG recommends that the mitigation measures and actions proposed to the Butte County Board of Supervisors for land use encroachment impacts on deer winter range be adopted by the Town.

7. Impacts on the endangered bald eagle. Eagles winter around streams and reservoirs within the study area. It is probable that eastern portions of the study areas fall within the foraging territory of a nearby eagle breeding territory.

8. Impacts on wildlife species of special concern. More than 20 such species of amphibians, reptiles, birds, and mammals may occur in the study areas.

9. Impacts on all habitats and species, in addition to those specially emphasized above.

Equal consideration to indirect impacts should be given when discussing these concerns. An increased Town population will have impacts extending well beyond the study areas; such impacts may exceed the direct impacts occurring in Town.

In order to comply with Public Resources Code Section 21081.6, a detailed monitoring program must be developed for all required mitigation conditions. The monitoring program should include the following:

a. Specific criteria to measure effectiveness of mitigation.

b. Annual monitoring for a minimum of five years. Annual written reports submitted to the lead agency and the DFG.

c. Annual monitoring reports, each of which include corrective recommendations that shall be implemented in order to ensure that mitigation efforts are successful.

Pursuant to Public Resources Code Sections 21092 and 21092.2, the DFG requests written notification of proposed actions and pending decisions regarding this project. Written notifications should be directed to this office.

If the DFG can be of further assistance, please contact Mr. Ron Bertram, Associate Wildlife Biologist or Ms. Patricia Perkins, Wildlife Management Supervisor at (916) 355-7010.

Sincerely,

James D. Messersmith
Regional Manager

CHIEF ADMINISTRATIVE OFFICE
COUNTY OF BUTTE
25 COUNTY CENTER DRIVE
OROVILLE, CALIFORNIA 95965-3380
Telephone: (916) 538-7631
Fax: (916) 538-7120

WILLIAM H. RANDOLPH
CHIEF ADMINISTRATIVE OFFICER

MEMBERS OF THE BOARD:
HASKEL A. McINTURF
JANE DOLAN
KEVIN CAMPBELL
ED McLAUGHLIN
LEN FULTON

April 18, 1991

RECEIVED
APR 24 1991
TOWN OF PARADISE
PLANNING

Town of Paradise Planning Department
5555 Skyway, Paradise, CA 95969

Attn: Charley Stump, Senior Planner

Subj: Notice of Preparation of a Draft Environmental Impact Report for Town of Paradise General Plan Revision

Dear Mr. Stump:

With regard to the matter referenced above, thank you for the opportunity to make known some County concerns. It is important that the issue of Public Services (Item 14) be carefully studied with regard to fiscal ramifications on Butte County government.

Obviously development means people and people mean services. In the case of population growth within incorporated areas, the impact stretches far beyond the town limits.

Butte County's fiscal crisis is widely known and well documented. The level of services provided by Butte County to its citizens is substandard, due to understaffing, deteriorating equipment, and aging and overcrowded facilities, among other things. All have been stretched to their limits.

Services provided by the County, directly benefitting the dual citizenry of town and county, include superior and municipal courts, criminal prosecution, family support, court mediation, probation, juvenile hall, incarceration, coroner, civil disaster, veterans services and halls, public guardian, libraries, public health, mental health, adult and youth alcohol and drug programs, environmental health, fire suppression (in the close in unincorporated but urbanized areas of the town), transportation, elections, clerk-recorder, public defender, grand jury, social services, LAFCo, public works in access to the town, assessor, treasurer-tax collector, landfill, farm and home advisory, and all of the administrative, personnel, legal, and financial activities necessary to support these.

Any project, program, or activity that does not address its fiscal impact on these services and the means by which the costs of such will be borne, is incomplete in its proposal.

Therefore, please consider this letter as an expression of concerns pertinent to the General Plan Revision for the Town of Paradise. I sincerely hope that the revision, when completed, will adequately address the means for financing the ever increasing need for countywide government services. Again, thank you for the opportunity to comment.

Sincerely,

Emmett Pogue, Deputy Administrative Officer
County of Butte

cc: Bettye Kircher, Butte County Planning Director

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY PETE WILSON, Governor
DEPARTMENT OF TRANSPORTATION
DISTRICT 3
P.O. BOX 942874-MS41
Sacramento, CA 94274-0001
TDD 916-741-4509
FAX 916-323-7669
916-327-3859

April 25, 1991

03-But-191
General Plan Revision
Town of Paradise
NOP
CBUT026

Mr. Charley Stump
Town of Paradise Planning Department
555 Skyway
Paradise, CA 95969

Dear Mr. Stump

Thank you for the opportunity to review and comment on the above referenced document.

COMMENTS:

The DEIR should address impacts the General Plan growth will have on State Route 191. Any needed improvements should be identified.

The DEIR should also consider cumulative growth impacts from developments of neighboring jurisdictions on State Routes 99, 149E, and 70.

A detailed financial and transportation analysis should be developed to allow local roadway and mass transportation improvements be in place as development occurs.

The DEIR should consider Park and Ride lots in the transportation mitigation measures. The following Rideshare measure should also be considered:

- An on-site transportation coordinator at each employment site.

RECEIVED
APR 29 1991
TOWN OF PARADISE
PLANNING

If you have any questions regarding this comment, please contact Lib Haraughty at 916-741-4539.

Sincerely,

for L. Haraughty
ROBERT M. O'LOUGHLIN
Chief, Planning Branch C

STATE OF CALIFORNIA PETE WILSON, Governor

DEPARTMENT OF FOOD AND AGRICULTURE

1220 N Street
Sacramento, CA 95814

May 6, 1991

RECEIVED
MAY 14 1991
TOWN OF PARADISE
PLANNING

Mr. Charley Stump
Town of Paradise
5555 Skyway
Paradise, California 95969

Dear Mr. Stump,

Thank you for the opportunity to comment on the forthcoming Draft Environmental Impact Report (DEIR) for Paradise General Plan Revision (SCH# 91043055). This project involves revision to all Elements of the Paradise General Plan.

The California Department of Food and Agriculture (CDFA) would appreciate a discussion of the following issues in the DEIR:

1. A completa description of the planning area. This should include current and planned land use designations, the number of acres in agricultural production, soil classifications and acreages, and cropping history.

2. Whether any land under a Williamson Act contract or in an Agricultural preserve is part of, or near to the planning area. How will development affect these designations?

3. The possible mitigation measures to ensure that agricultural land is not prematurely or unnecessarily converted to non-agricultural uses. These measures can include use of the Williamson Act, deed disclosures, a Right-to-Farm Ordinance, phased development, clustered development, transfer of development rights, and requiring infill development of vacant land prior to urban expansion.

4. The interface conflicts which can arise from adjacent agricultural and urban uses. Problems can arise due to noise, dust, chemical usage, trespassing, and traffic conflicts. Include any buffering measures (ie. buffers, setbacks, berms, fencing, etc.) proposed for the development.

5. The pressure this project could create to convert surrounding agricultural land to non-agricultural uses. Does this project have the potential to be precedent setting?

6. Whether development of the area will create patterns of discontiguous growth. If so, is development necessary at this time?

7. Given the projected need for residential and urban development, what is the cumulative impact to agriculture from

this and other projects in the region?

Since the above issues are not necessarily comprehensive, the lead agency should also request comments from concerned local agencies. These agencies can include the agricultural commissioner's office, the USDA Soil Conservation Service office, and the county Farm Bureau Federation office.

The CDFA supports the right of local agencies to develop and implement land-use policy in its area of influence. However, the CDFA also wants to assure that agricultural land is not prematurely and irreversibly lost due to development which is not accurately assessed for environmental impact.

Sincerely,

Mary McNally
Graduate Student Assistant
Agricultural Resources Branch
(916) 322-5227

cc: Mr. Charley Stump
Office of Planning and Research
Butte County Agricultural Commissioner
California Association of Resource Conservation Districts

Butte County
AIR POLLUTION CONTROL DISTRICT
9287 MIDWAY, SUITE 1A
DURHAM, CALIFORNIA 95938 (916) 891-2882

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TOWN OF PARADISE
PLANNING

May 30, 1991

Charles Stump
Town of Paradise
Planning Department
5555 Skyway
Paradise, CA 95969

Dear Mr. Stump:

The Butte County Air Pollution Control District has reviewed the Town of Paradise General Plan Update, Environmental Setting, Draft Working Paper #1 section that pertains to air quality and offers the following comments.

The pollutants that are measured in Chico are: nitrogen dioxide, nitrogen oxides, carbon monoxide, ozone, and PM10 (particulate matter smaller than 10 microns in diameter). The monitoring station in Biggs was removed from service in February of 1990.

The superscript on Tables 4-3, 4-4, and 4-6 should be located outside of the parentheses so as not to appear as parts per million squared or parts per million to the 7th degree.

The concentration levels on Table 4-4 are incorrect for the years 1981 to 1988 inclusive. Please amend the columns to reflect the correct concentration levels recorded for those years.

Paradise is designated as non-attainment for ozone only. The Paradise area attains the State health-based standards for nitrogen dioxides, sulfur oxides, lead, and sulfates. The area is as yet unclassified for the pollutants carbon monoxide, hydrogen sulfide, and visibility reducing particles.

If you have any questions regarding the aforementioned comments, please contact this office at 891-2882. Thank you.

Sincerely,

Nancy Norman

Nancy Norman
Deputy Air Pollution Control Officer

NN:nn

The attached copies of Draft Working Paper #1, pages 14-18, dealing with vegetation has been reviewed by some members of the California Native Plant Society. Suggested changes are noted in red; all are deletions and there are no suggested additions. If more detail or something more formal is needed, let me know.

Paul D. Reiling

Paul D. Reiling
872-3670
June 12, 1991

P.S. At its last Board Meeting, the Mt Lassen Chapter of the California Native Plant Society designated me as its representative with respect to the Paradise General Plan.

Its full address is:

Mount Lassen Chapter, CNPS
Herbarium, Dept. of Biol. Sci.
California State University
Chico, CA 95929-0515

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basins, channel improvements, and culvert upgrading are implemented to the extent that funding and regulatory authority with respect to new development permits.

6.0 VEGETATION AND WILDLIFE

Vegetation

Several natural vegetation communities occur within the Paradise Study Area, including chaparral, non-native grassland, riparian woodland, Great Valley cottonwood riparian forest, foothill woodland, digger pine - oak woodland, Ponderosa pine forest, and northern hardpan vernal pool, all of which are described below.

Chaparral

The Chaparral or sclerophyllous woodland is an association of tall, evergreen, woody shrubs which dominates many sites within the Paradise region that are open and dry or in various stages of a post-burn succession. Although characterized as a brushland, chaparral formations are often interspersed with grasses and scattered trees and thus integrate with the other vegetation communities. The chaparral community is often composed of locally dominant species of shrubs along with an admixture of many other species. The dominant shrubs of typical communities are chamise (*Adenostoma* sp.), toyon (*Heteromeles arbutifolia*), several manzanitas (*Arctostaphylos*), California lilac (*Ceanothus* spp.), bitter cherry (*Prunus emarginata*), scrub oak (*Quercus dumosa*), redbud (*Cercis occidentalis*), yerba santa (*Eriodictyon californicum*) and mountain mahogany (*Cercocarpus betuloides*). Chaparral formations occur most prominently on the slopes adjacent to the canyons of Butte Creek and the West Branch of the Feather River, the ridge surfaces and valley sides in south Paradise and in areas which have been cleared, heavily logged or recently burned.

Non-native Grassland

The non-native grassland consists of a dense to sparse cover of annual grasses with flowering culms, often associated with numerous species of showy-flowered, native annual wildflowers, especially in years of favorable rainfall. With few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. This vegetation type occurs in the valleys and

foothills of most of California, on fine-textured, usually clay soils, moist or even waterlogged during the winter rainy season and very dry during the summer and fall.

Riparian Woodland

The riparian woodland occurs as narrow strips of dense brush and trees along the water courses of south Paradise and around the localized drainage basins to the north. The dominant riparian trees are willow (*Salix* sp.), white alder (*Alnus rhombifolia*), western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), California laurel (*Umbellularia californica*), big-leaf maple (*Acer macrophyllum*), quaking aspen (*Populus tremuloides*), and western dogwood (*Cornus nuttallii*). Prominent as understory and vinelike plants are poison oak (*Toxicodendron diversilobum*), California wild grape (*Vitis californica*), wild blackberry (*Rubus* spp.) and elderberry (*Sambucus mexicana*). This association has been greatly disrupted by development along the various watercourses which drain southwesterly across the ridge surfaces of Paradise.

Great Valley Cottonwood Riparian Forest

The Great Valley cottonwood riparian forest is a dense, broadleafed, winter deciduous riparian forest dominated by Fremont cottonwood (*Populus fremontii*) and Goodding's willow (*Salix gooddingii variabilis*). Understories are dense, with abundant vegetative reproduction of canopy dominants. Scattered seedlings and saplings of shade-tolerant species such as California box elder (*Acer negundo californica*) or Oregon ash (*Fraxinus latifolia*) may be found, but frequent flooding prevents their reaching into the canopy. These sites are inundated yearly during spring, resulting in annual inputs of nutrients, soil, and new germination sites. This vegetation community was formerly extensive along the major low-gradient (depositional) streams throughout the Central Valley, but is now reduced to scattered, isolated remnants or young stands because of flood control, water diversion, agricultural development, and urban expansion. Approximately 1200 acres of this sensitive vegetation community occurs within the Dry Creek floodplain.

Foothill Woodland

The foothill woodland extends across the extreme southern portions of the Town and dominates the ridge surfaces to elevations of 1300 feet. The primary floral elements of this woodland are blue oak (*Quercus douglasii*), interior live oak (*Quercus wizlizenii*) and digger pine (*Pinus sabiniana*). Above 1500 feet these species give way to canyon live oak (*Quercus chrysolepis*), tan-bark oak (*Lithocarpus densiflora*) and black oak (*Quercus kelloggii*). Several species of shrubs provide an understory to this open woodland. Prominent in this community are manzanita (*Arctostaphylos* sp.), California lilac (*Ceanothus* sp.), chamise (*Adenostoma fasciculatum*), yerba santa (*Eriodictyon californicum*), poison oak (*Toxicodendron diversilobum*) and several members of the rose family (e.g. the genera *Prunus, Rubus and Rosa*).

Digger Pine-Oak Woodland

This woodland is a mixture of digger pine (*Pinus sabiniana*) and blue oak (*Quercus douglasii*). Pure stands of either tree do occur, but mixed stands are more common. *Pinus sabiniana* usually towers over the oaks in undisturbed stands. Understories usually are dominated by introduced annuals. This vegetation type occurs on well-drained sites with Mediterranean climate, in rocky or exposed sites along ridges or canyons with poor or shallow soils.

Westside Ponderosa Pine Forest

The Ponderosa pine forest occurs as a broad transitional zone between the foothill woodland and higher mixed coniferous associations and is most extensive above 1,500 feet elevation in Paradise. It is generally a closed forest dominated by Ponderosa pine (*Pinus ponderosa*). The closely related Jeffrey pine (*Pinus jeffreyi*) occurs locally on drier sites and serves as a specific indicator of ultrabasic and serpentine rock outcroppings. The Ponderosa pine zone has been the most heavily logged of all the communities in northern California and this practice has allowed the encroachment of other woody species into areas formerly covered by pines. The Ponderosa and Jeffrey pines are found locally intermixed with incense-cedar (*Calocedrus decurrens*),

Douglas-fir (*Pseudotsuga menziesii*), white fir (*Abies concolor*), black oak and several additional hardwood species including big leaf maple, western dogwood and California laurel. The ponderosa pine forest zone represents the primary habitat type utilized for development in the Paradise area.

Northern Hardpan Vernal Pool

Located within close proximity of the Tertiary Study Area is a documented vernal pool community classified by the California Natural Diversity Data Base(CNDDB) as Northern Hardpan Vernal Pool. These pools are ephemeral wetands that occur when winter and spring rains fill the depressions in hogwallow or mima mound areas. Several sensitive plant species occur in association with the northern hardpan vernal pool community: Hoover's spurge (*Chamaesyce hooveri*, Federal Category 1; State-None) and hairy Orcutt grass (*Orcuttia pilosa*, Federal-Candidate Category 1; State-Endangered), Green's tuctoria (*Tuctoria greenei*, Federal-Candidate Category 1; State-Rare), and Shippee meadowfoam (*Limnanthes floccosa* ssp. *californica*, Federal-Category 1; State-Endangered).

Federal Category 2 candidate species for Federal listing comprise taxa for which information now in possession of the U.S. Fish and Wildlife Service indicates proposing to list the species as endangered or threatened is possibly appropriate, but for which conclusive data on biological vulnerability and threat(s) are not currently available to support proposed rules at this time. Federal Category 1 candidate species comprise taxa for which the Service has sufficient biological information to support a proposal to list as endangered or threatened.

Other sensitive species with reported occurrences within or near the Study Area include California hibiscus (*Hibiscus californicus*, Federal-Category 2; State-None), which occurs in moist, freshwater-soaked river banks and low peat islands in sloughs, marshes and swamps; Butte County checkerbloom (*Sidalcea robusta*, Federal-Category 2; State-None), which occurs in small draws and rocky crevices in chaparral and cismontane woodland communities; closed-throated beardtongue (*Penstemon personatus*, Federal-Category 2; State-None), which usually occurs on north-facing slopes in metavolcanic soils in lower and upper montane coniferous forest communities; California beaked-rush (*Rhynchospora californica*, Federal-Category 2;

State-None), occurring in freshwater seeps ~~and open marshy areas of meadows, marshes and swamps.~~

Sensitive plant species with the potential to occur within or near the Study Area include Ahart's paronychia (*Paronychia ahartii*, Federal-Category 2; State-None), which occurs in stony, nearly barren clay of swales and higher ground around vernal pools in valley and foothill grassland communities; and veiny monardella (*Monardella douglasii* var. *venosa*, Federal-Category 2; State-None), which also occurs in valley and foothill grasslands; adobe lily (*fritillaria pluriflora*); Butte County fritillary (*Fritillaria eastwoodias*); Red Bluff dwarf rush (*Juncus leiospermus* var. *leiospermus*); Bidwell's knotweed (*Polygonum bidwelliae*); Butte morning glory (*Calystegia atriplicifolius*); and clustered lady slipper orchid (*Cypripedium fasciculatum*). Appendix B contains a partial listing of common and sensitive plant species found within and in the vicinity of the Study Area.

[A field reconnaissance will be conducted of the study areas at the appropriate time of year to verify the information included in this section.]

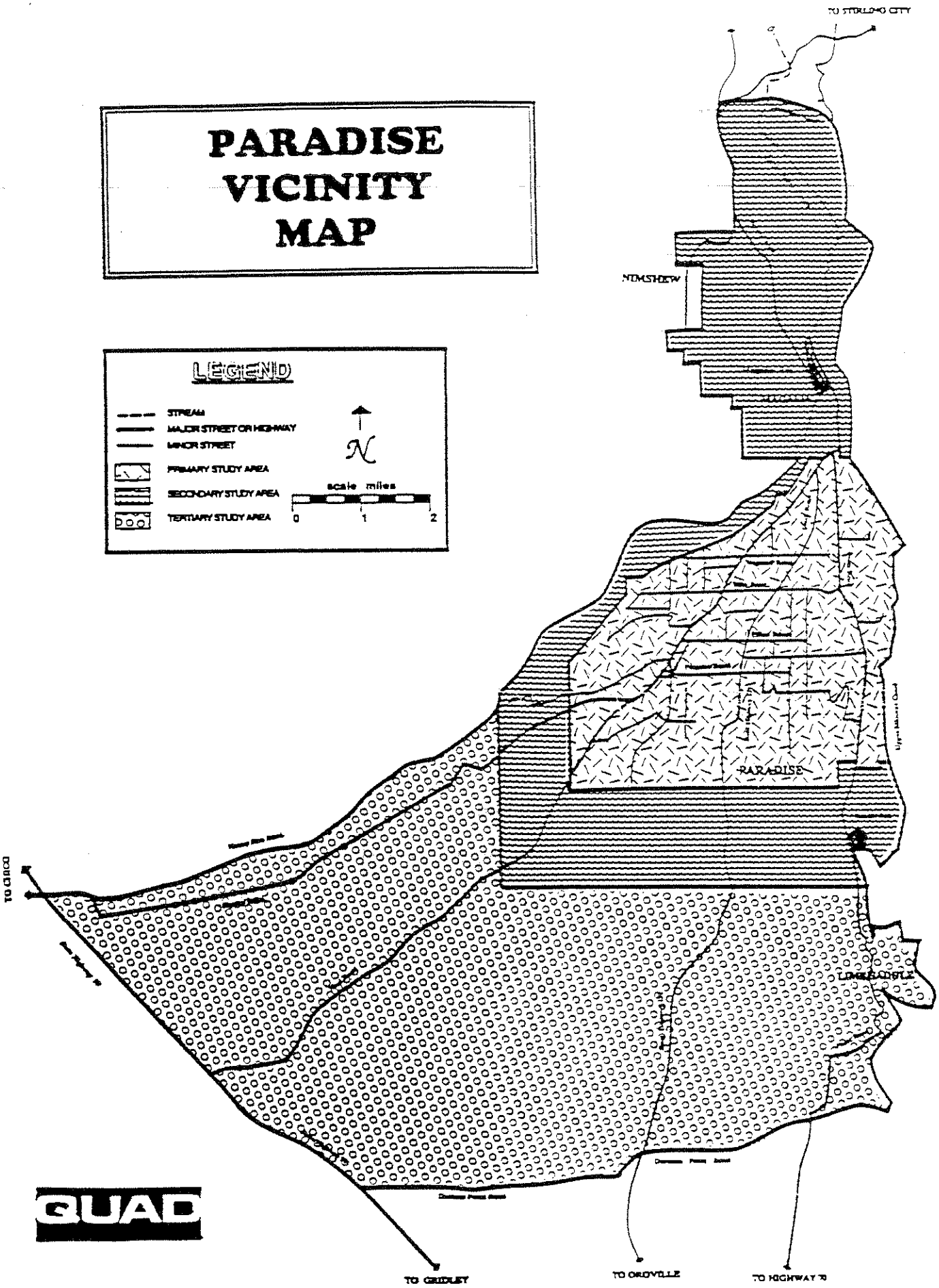
Wildlife

Wildlife reported for the Town of Paradise and the Study Areas is typical of the transitional foothill habitat types found on the western flank of the Sierra plateau. Appendix B contains a partial listing of common and sensitive wildlife species which occupy the habitats within Paradise and adjacent Butte County. This list is not meant to represent a comprehensive survey of the resident and migratory wildlife. The urbanized portions of Paradise are inhabited by a wide diversity of wildlife. No threatened, endangered or candidate wildlife species have been documented within the Paradise Study Area.

Sensitive Wildlife Species

Currently there are eight species of sensitive wildlife found in the general region (Appendix B). None of these species has been recorded by the Natural Diversity Data Base within the Study Area. These species include the western yellow billed cuckoo (*Coccyzus americanus occidentalis*), California red-legged frog (*Rana aurora draytoni*), foothill yellow-legged frog (*Rana boylei*), American badger (*Taxidea taxus*), golden eagle (*Aquila chrysaetos*),

PARADISE VICINITY MAP



PARADISE IRRIGATION DISTRICT

MEMBER OF ASSOCIATION OF CALIFORNIA WATER AGENCIES AND AMERICAN WATER WORKS ASSN

5325 BLACK OLIVE DRIVE — PARADISE, CALIFORNIA 95967-0128 — Telephone: (916) 877-4971 — MAILING ADDRESS: P.O. BOX 128

June 13, 1991

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JUN 17 1991
TOWN OF PARADISE
PLANNING

Charley Stump
Senior Planner
Town of Paradise
5555 Skyway
Paradise, CA 95969

RE: General Plan Revision

Dear Charley:

This is in response to your request for comments to Working Paper #1 and your invitation to participate in the General Plan revision process through a PID representative on one of several subcommittees.

Concerning Working Paper #1, I am enclosing copies of pages 46 and 47 on which I have made suggested changes intended to improve accuracy or clarify intent. Concerning section 17.12.8 "Water Service", it is suggested the last sentence of that section be deleted or expanded to clarify its need and objective.

Regarding subcommittee representation, individual Directors have indicated they are unable to participate directly. As a body they did indicate they would expect staff to assist as much as possible. Unfortunately at this time we are unable to participate as a committee member. We will, however, continue to provide input as needed and could be available to meet with any committee should that become desirable.

Thank you for the opportunity to provide these comments.

Very truly yours,

C. Phillip Kelly, Jr.
Manager

CPK:kw

Enclosure

cc: Directors

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Ans'd.....

- Add, by June of 1993, filtration capacity to enable the District to meet revised Federal and State water quality standards. The District can currently provide filtration treatment for 5 million gallons per day, and is proposing to expand that capacity to 25 million gallons per day.

- Supplement its existing surface water supply, deemed by the District to be sufficient to serve community growth to 1996, by adding reservoir capacity, developing a supplementary groundwater source, or purchasing surface water, or any combination of these options. *

- Replace a significant percentage of the older portion of its 171 (180) mile distribution system, to both improve fire protection to existing developed areas and allow new development in accord with modern fire protection requirements.

Del Oro Water Company

The Del Oro Water Company's Paradise Pines and Magalia service areas have relevance to the Town of Paradise water planning program only if the areas were to be annexed to the Town or if their water supply sources conflicted with proposed additional water supplies essential to maintain Town growth.

The Lime Saddle service area's water system planning is of greater relevance. It is evident that continued urban growth in the area may significantly impact community resources from a planning standpoint, and there is potential for further annexation to the Town of new subdivisions in the area. Del Oro Water Company has recently undertaken the legal and physical steps essential to obtain a supplemental water supply from Lake Oroville to serve further planned urban development in the Lime Saddle area.

14.9 WASTEWATER

The Town of Paradise is the largest unsewered incorporated community in California. Wastewater treatment facilities within the Town consist of individual privately owned septic tanks and soil absorption disposal systems known as leach fields, together with several engineered subsurface disposal systems serving commercial and institutional facilities. In anticipation of an eventual need for centralized wastewater management facilities, portions of a future sanitary sewer system have been constructed along the Skyway. However, there are no existing connections to the system. Businesses and residences in the vicinity of the future

* Current water supply planning is based on the assumption that the existing land use zoning within District boundries[47] will not change significantly. Should significant zoning changes occur which allowed greater population density, maintaining an adequate water supply would become more difficult.

In addition to providing youth activities, the District is also one of the largest employers of youth in the community.

State and Federal parks and facilities are also used by residents of the Study Area. These facilities are listed in Table 14-4. In addition to the parks and facilities listed in Tables 14-3 and 14-4, there are a number of public and private trails which are used by the public for walking, jogging, bicycle and horseback riding. These trails are listed in Table 14-5.

14.3 WATER SERVICE

9,802

The Primary and Secondary Study Areas are served by two water purveyors: Paradise Irrigation District and Del Oro Water Company. Of these, Paradise Irrigation District is the major supplier, with approximately ~~9,780~~ service connections serving about 95% of the incorporated town. Del Oro Water Company serves Paradise Pines District, a large unincorporated, rural residential community immediately north of Paradise, with a population of approximately 9,000, and Magalia District (a County Water District recently acquired by the Del Oro Water Company), serving about 400 acres between Paradise Pines and the Town of Paradise, and providing water to approximately 300 households and fifteen businesses. It also serves the Lime Saddle District, 2,750 acres extending south from the Town of Paradise to Lake Oroville. A small urbanized area of the Lime Saddle District has been annexed to the Town of Paradise; it is an urbanizing district with planned service to more than 1,000 homes (see Figure 14-2 for water purveyor boundaries).

Paradise Irrigation District

The District obtains its water from a series of two reservoirs on Little Butte Creek (Magalia Reservoir and Paradise Reservoir). The reservoir system has a storage capacity of 14,140 acre feet, and the firm annual yield is calculated at ~~2,130~~ 7,860 acre feet. Water is transported to the Town through a single transmission line. Distribution lines, booster pumps and surface-level tank reservoirs serve various pressure zones throughout the Town. Calculated per capita water usage has varied since 1980 from 245 to 289 gallons per day.

The Paradise Irrigation District staff indicates that the District must, subject to voter financing approvals, undertake three major steps to enable its functions - water supply and distribution - to ~~be neither a constraint nor an incentive to growth.~~ keep pace with anticipated growth:

Paradise
Unified
School
District

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PLANNING

5665 Recreation Drive
Paradise, California 95969
Telephone (916) 872-6400
Fax (916) 872-6409

Richard T. Landess, Ed.D.
District Superintendent

July 15, 1991

Mr. Charley Stump
Senior Planner
Town of Paradise
5555 Skyway
Paradise, CA 95969

Dear Charley:

Enclosed please find a copy of the "Schools" section of the working paper #1 for the General Plan Revision. I have highlighted a few areas that I feel are incorrect or that need to be changed. Hopefully these changes can be incorporated into the draft.

Change #1 - Page 44, Paragraph 2

End the last sentence after year with a period and delete "and actually decreases during some years." Add a sentence stating, "Although some years have shown decreases, the average rate of increase from 1986-87 through 1990-91 was 3.29%."

Change #2 - Page 44, Paragraph 3, Sentence 2

This sentence should read, "The District owns another school site in the Upper Ridge and plans to build a new school as soon as possible (probably a middle school)."

Change #3 - Table 14-2

The 1990-91 school year should read, "Enrollment 4,674; Net Change 161; Percent Change 3.56."

If you have any questions regarding these three changes, please do not hesitate to contact me.

Sincerely,

Richard T. Landess

Richard T. Landess
Superintendent

RTL:lee
Enclosure

Board of Trustees
Thomas F. McLaughlin, President
John D. Lanam, V.P.
Dr. Charles Larsen, Clerk
Marilyn C. Connor
Frances D. Main

26.59

Paradise
Unified
School
District

5665 Recreation Drive
Paradise, California 95969
Telephone (916) 872-6400
Fax (916) 872-6409

Richard T. Landess, Ed.D.
District Superintendent

July 16, 1991

Mr. Charley Stump
Senior Planner
Town of Paradise
5555 Skyway
Paradise, CA 95969

Dear Mr. Stump:

The Board of Trustees of the Paradise Unified School District feels strongly that policies, goals and objectives that would require future developments in the Town of Paradise to mitigate all impacts should be incorporated into the General Plan at this time. We would like to suggest that the following statements be placed in the General Plan:

> Unless assurance is obtained that an adequate level of all public facilities, including schools, will be available to future residents, no discretionary land use action shall be taken to increase density of use. The assurance shall include details of how any impacts identified as a result of the proposed land use actions are to be mitigated.

A policy such as this placed in the General Plan would allow the Council to adopt ordinances which would guarantee that the citizens in the Town would be provided with necessary services as the Town grows. If the quality of the educational experience for the students of Paradise is to remain the same or improve, a policy statement of this type is essential.

If you have any questions regarding our request, please do not hesitate to contact me.

Sincerely,

Richard T. Landess

Richard T. Landess
Superintendent

RTL:lee

Board of Trustees
Thomas F. McLaughlin, President
John D. Lenam, V.P.
Dr. Charles Larsen, Clerk
Marilyn C. Connor
Frances D. Main

STATE OF CALIFORNIA—THE RESOURCES AGENCY GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF FISH AND GAME
REGION 2
1701 NIMBUS ROAD, SUITE A
RANCHO CORDOVA, CALIFORNIA 95670

Charley Stump
Senior Planner
Town of Paradise
5555 Skyway
Paradise, CA 95969

TOWN OF PARADISE
COMMUNITY DEVELOPMENT DEPT.
DEC 18 1991
RECEIVED

December 16, 1991

RECEIVED
DEC 23
Ans'd.....

Dear Mr. Stump:

Enclosed are listings of sensitive plant and animal species which do or may occur in the study areas for the Paradise Plan Revision Program. Specifically mapped locations for any of these species are limited to those shown on the Areas of Special Biological Importance maps at the Butte County Planning Department and to those recorded by the Natural Diversity Data Base, neither of which is comprehensive.

In addition to the enclosed listings, the following species are pertinent to the study areas:

Amphibians

Northern red-legged frog (Rana aurora aurora)
Foothill yellow-legged frog (Rana boylii)

Reptiles

Western pond turtle (Clemmys marmorata)
California horned lizard (Phrynosoma coronatum frontale)

Birds

Barrow's goldeneye (Bucephala islandica)
Cooper's hawk (Accipiter cooperi)
Sharp-shinned hawk (Accipiter striatus)
Northern goshawk (Accipiter gentilis)
Golden eagle (Aquila chrysaetos)
Ferruginous hawk (Buteo regalis)
Northern harrier (Circus cyaneus)

Osprey (Pandion haliaetus)

Merlin (Falco columbarius)

Prairie falcon (Falco mexicanus)

Short-eared owl (Asio flammeus)

Long-eared owl (Asio otus)

Burrowing owl (Athene cunicularia)

Spotted owl (Strix occidentalis)

Purple martin (Progne subis)

Yellow warbler (Dendroica petechia brewsteri)

Yellow-breasted chat (Icteria virens)

Mammals

Townsend's western big-eared bat (Plecotus townsendii townsendii)

California mastiff bat (Eumops perotis)

American badger (Taxidea taxus)

If I can be of further assistance please call me at 343-2804.

James H. Snowden
Jamie H Snowden
721 Cessna Ave.
Chico 95928

SENSITIVE VASCULAR PLANTS OF BUTTE COUNTY

This compilation contains those species occurring in Butte County which are listed as special concern, rare, threatened or endangered by the U.S. Fish and Wildlife Service (Fed), the California Department of Fish and Game (DFG) or the California Native Plant Society (CNPS).

I. Species Locations

In this section, Butte County U.S.G.S. topographic quads are listed. Following each quad are two groups of coded plant listings: group one contains those plants documented to be in the quad; group two contains those plants for which their habitat type occurs in the quad. The plant codes are derived from the first two letters of the scientific name (e.g.) Clarkia mildrediae = Clmi) listed in section II.

Bangor: 1) JuLe, Qulo. 2) Aspa, Caop, Cuho, Frpl, Jubu, Migl, Modo, Oplu, Paah, Phra, Pobi, Rhea, Siro, Stdr.

Berry Creek: 1) Clmo, Frea, Sasa, Seeu. 2) Caop, Clmi, Cyca, Cyfa, Leca, Pene, Pepe, Phva, Sefo, Sioc.

Bidwell Bar: 2) Aspa, Asra, Caop, Clmo, Frpl, Jule, Migl, Phva, Pobi, Rhca, Seeu, Siro, Stdr, Stto.

Biggs: 1) Qulo, Tugr. 2) Frpl, Grhu, Jubu, Jule, Lela, Modo, Mymi, Oplu, Paah.

Brush Creek: 1) Bama, Frea, Leca. 2) Clmi, Coca, Cyca, Cyfa, Luda, Mila, Pene, Pepe, Phva, Sasa, Sefo, Sioc.

Butte City: 1) Asra, Grhu, Hica, Lela, Qulo.

Butte Meadows: 1) Clpa, Sioc. 2) Coca, Cyca, Cyfa, Ermi, Frea, Leca, Luda, Mila, Pene, Pepe, Phva, Sasa, Sefo, Stob.

Cascade: 1) Luda. 2) Aspa, Clmi, Coca, Cyca, Cyfa, Frea, Leca, Mila, Pene, Pepe, Phva, Sasa, Seeu, Sefo, Sioc.

Cherokee: 1) Frea, Frpl, Jule, Modo, Qulo, Siro. 2) Caop, Cuho, Jubu, Migl, Mymi, Oplu, Paah, Phva, Pobi, Rhca, Seeu, Stdr, Stto.

Chico: 1) Frea, Frpl, Jubu, Lifl, Modo, Mymi, Qulo, Siro. 2) Cuho, Jule, Lela, Oplu, Paah, Pobi, Rhca, Tugr.

Clipper Mills: 2) Artr, Aspa, Asra, Bama, Caat, Capa, Clmi, Cyca, Cyfa, Frea, Leca, Ludo, Pene, Pepe, Phva, Sasa, Seeu, Sefo, Sioc.

Cohasset: 1) Capa, Jule, Siro, Stto. 2) Aspa, Asra, Caop, Cuho, Frpl, Phva, Pobi, Rhca, Seeu, Sefo, Stdr.

Forbestown: 1) Clmo. 2) Aspa, Asra, Clmi, Frea, Frpl, Leca, Luda, Pene, Pepe, Phva, Sasa, Seeu, Sefo, Sioc, Stto.

Gridley: 1) Qulo. 2) Frpl, Grhu, Jule, Lela, Migl, Modo, Mymi, Oplu, Paah, Tugr.

Hamlin Canyon: 1) Chho, Frea, Hica, Jubu, Lifl, Mymi, Qulo, Siro, Tugr. 2) Caop, Cuho, Frpl, Jule, Migl, Modo, Oplu, Paah, Pobi, Rhca, Stdr.

Honcut: 1) Jule, Paah, Qulo. 2) Asra, Caop, Cuho, Frpl, Grhu, Jubu, Lela, Migl, Modo, Mymi, Ophu, Rhca, Siro, Tugr.

Kimshew Point: 1) Pepe. 2) Aspa, Clmi, Coca, Cyca, Cyfa, Ermi, Frea, Leca, Luda, Mila, Pene, Phva, Sasa, Seeu, Sefo, Sioc.

Jonesville: 1) Clpa, Stob, Pene. 2) Coca, Cyca, Cyfa, Ermi, Luda, Pepe, Phva, Sasa.

Las Plumas: 1) Clmo. 2) Asra, Caop, Frpl, Leca, Phva, Pobi, Rhca, Seeu, Siro, Stdr, Stto.

Llano Seco: 1) Hica, Qulo. 2) Frpl, Grhu, Jubu, Lela, Modo, Paah.

Loma Rica: 2) Asra, Caop, Cuho, Frpl, Jubu, Jule, Migl, Modo, Mymi, Oplu, Paah, Phva, Pobi, Rhca, Siro, Stdr.

Nelson: 1) Hica, Qulo. 2) Frpl, Grhu, Jubu, Lela, Modo, Mymi, Ophu, Paah.

Nord: 1) Cafr, Lifl, Qulo. 2) Jubu, Jule, Lela, Migl, Modo, Mymi, Oplu, Paah, Tugr.

Ord Ferry: 1) Hica, Qulo. 2) Grhu, Lela.

Oroville: 1) Aspa, Caop, Jule, Lifl, Mymi, Qulo. 2) Asra, Cuho, Frpl, Jubu, Migl, Modo, Oplu, Paah, Pobi, Rhca, Siro, Stdr, Tugr.

Palermo: 1) Qulo. 2) Asra, Cuho, Frpl, Jubu, Jule, Migl, Modo, Mymi, Oplu, Paah, Pobi, Rhca, Siro, Stdr.

Paradise East: 1) Artr, Caat, Frea, Seeu. 2) Aspa, Caop, Clmi, Cyca, Cyfa, Frea, Leca, Luda, Mila, Pene, Pepe, Phva, Rhca, Sasa, Sefo, Sioc, Stdr, Stto.

Paradise West: 1) Qulo, Rhca, Siro. 2) Asra, Caop, Cuho, Frea, Frpl, Phva, Pobi, Rhca, Seeu, Stdr, Stto.

Pennington: 1) Grhu, Hica, Lela, Mymi, Qulo.

Pulga: 1) Brpo, Leca, Pepe, Seal, eeu. 2) Aspa, Clmi, Coca, Cyca, Cyfa, Ermi, Frea, Frpl, Luda, Mila, Pene, Phva, Sasa, Sioc, Stob, Stdr, Stto.

Rackerby: 2) Asra, Caop, Cuho, Frpl, Jubu, Migl, Phva, Pobi, Rhca, Seeu, Siro, Stdr.

Richarson Springs NW: 1) Cafr, Chho, Frpl, Tugr. 2) Caop, Cuho, Jule, Migl, Oplu, Paah, Pobi, Rhca, Siro, Stdr.

Richardson Springs: 1) Frpl, Jule, Lifl, Modo, Paah, Qulo, Rhca, Siro. 2) Jubu, Migl, Mymi, Oplu, Pobi, Seeu, Stdr, Tugr.

Sanborn Slough: 1) Grhu, Hica, Lela, Qulo.

Shippee: 1) Frpl, Lifl, Qulo. 2) Jubu, Jule, Lela, Migl, Modo, Oplu, Paah, Pobi.

Strawberry Valley: 1) Leca. 2) Aspa, Clmi, Cyca, Cyfa, Frea, Luda, Mila, Pene, Pepe, Phva, Sasa, Seeu, Sefo, Sioc.

Stirling City: 1) Artr, Capa, Frea, Seeu, Stto. 2) Aspa, Clmi, Leca, Mila, Pene, Pepe, Phva, Sefo, Sioc.

Vina: 2) Cuho, Frpl, Jubu, Jule, Lela, Migl, Modo, Mymi, Oplu, Paah, Tugr.

West of Biggs: 1) Grhu, Hica, Lela, Qulo.

II. Listed Species

Each entry below provides information in this order:

1) Scientific name; 2) common name; 3) general location by U.S.G.S. quad; 4) listing status in the order of Fed., DFG or CNPS; 5) the species habitat type; 6) the species plant family. For administrative convenience, the formal standard of underlining the scientific name is omitted. These listing codes are used below:

R - rare
T - threatened
E - Endangered
C - candidate (1 or 2)
1A, 1B, 2, 3 or 4 - CNPS

1. Arctostaphylos truei (True's manzanita). Paradise East and Stirling City quads. CNPS list 3. Chaparral. Ericaceae family.

2. Astragalus pauperculus (depauperate milk vetch). Oroville quad. CNPS 4. Lower montane conifer forest, valley and foothill grassland. Fabaceae family.

3. Astragalus rattanii var. jepsonianus (Jepson's milk vetch). Butte City quad. CNPS 3. mixed hardwood - conifer woodland. Fabaceae family.

4. Balsamorhisa macrolepis var. macrolepis, (balsamroot). Brush Creek quad. CNPS 3. Lower montane conifer forest, valley and foothill grassland. Asteraceae family.

5. Bromus polyanthus (great basin brome grass). Pulga quad. CNPS 3. Habitat uncertain. Poaceae family.

6. Calycadenia fremontii (Fremont's calycadenia). Nord and Richardson Springs NW quads. Fed C 2, CNPS 3. Cismontane woodland, valley and foothill grasslands. Asteracea family.

7. Calycadenia oppositifolia (Butte County calycadenia). Oroville quad. CNPS 4. Chaparral, cismontane woodland, valley and foothill grasslands. Asteraceae family.

8. Calystegia atriplicifolia (Butte County morning-glory). Paradise East quad. CNPS 3. Lower montane conifer forest. Convolvulaceae family.

9. Cardamine pachystigma var. dissectifolia (dissected-leaf toothwort). Cohasset and Stirling City quads. CNPS 3. Habitat uncertain. Brassicaceae family.

10. Chamaesyce hooveri (Hoover's spurge). Hamlin Canyon, Richardson Springs NW and Nord quads Fed C 1, CNPS 1B. Vernal pools. Euphorbiaceae family.

11. Clarkia mildrediae (Mildred's clarkia). Quads uncertain. CNPS 4. Lower montane conifer forest. Onagraceae family.

12. Clarkia mosquinii ssp. mosquinii (Mosquinin's clarkia). Berry Creek quad, Fed C2, CNPS 1A. Cismontane woodland. Onagraceae family.

13. Clarkia mosquinii ssp. xerophila (Enterprise clarkia). Forbestown quad. CNPS 1A. Cismontane woodland. Onagraceae family.

14. Claytonia palustris (marsh claytonia). Butte Meadows and Jonesville quads. CNPS 3. Montane marsh. Portulacaceae family.

15. Corydalis caseana ssp. caseana (Sierra corydalis). Quads uncertain. CNPS 4. montane wetlands, upper montane conifer forest. Papaveraceae family.

16. Cuscata howelliana (Boggs lake dodder). Quads uncertain. CNPS 4. Chaparral and vernal pools. Cuscutaceae family.

17. Cypripedium californicum (California lady's-slipper). Quads uncertain. CNPS 4. Lower montane conifer forest. Orchidaceae family.

18. Cypripedium fasiculatum (clustered lady's-slipper). Quads uncertain. CNPS 4. Lower montane conifer forest. Orchidaceae family.

19. Erigeron miser (starved daisy). Quads uncertain. CNPS 4. Upper montane conifer forest. Asteraceae family.

20. Fritillaria eastwoodiae (Butte County fritillary). Berry Creek, Brush Creek, Cherokee, Chico, Hamlin Canyon, Paradise East and Stirling City quads Fed C 2, CNPS 3. Chaparral, cismontane woodland, lower montane conifer forest. Liliaceae family.

21. Fritillaria pluriflora (adobe lily). Cherokee, Chico, Nord, Richardson Springs, Richardson Springs NW and Shippee quads. Fed 2, CNPS 1B. Chaparral, cismontane woodland, valley and foothill grasslands. Liliaceae family.

22. Hibiscus californicus (California hibiscus) Butte City, Hamlin Canyon, Llano Seco, Nelson, Ord Ferry, Pennington, Sanborn Slough, Shippee and West of Biggs quads. Fed C 2, CNPS 1B. Marshes and riparian stream channels, rarely in drain ditches or canals. Malvaceae family.

23. Juncus bufonius var. congdonii (toad rush). Chico and Hamlin Canyon quads. CNPS 4. Valley and foothill grasslands, vernal pools. Juncaceae family.

24. Juncus leiospermus var. ahartii (Ahart's dwarf rush). Bangor quad. Fed C 1, CNPS 1B. vernal pools. Juncaceae family.

25. Juncus leiospermus var. leiospermus (Red Bluff dwarf rush). Cherokee, Cohasset, Honcut, Oroville and Richardson Springs quads. Fed C2, CNPS 1B. Chaparral, cismontane woodland, vernal pools and swales. Juncaceae family.

26. Lewisia cantelowii (Cantelow's lewisia). Brush Creek, Pulga and Strawberry Valley quads. CNPS 1B. Broadleaved upland forests, lower montane conifer forest (rock outcrop). Portulacaceae family.

27. Limnanthes floccosa ssp. californica (Shippee or Butte County meadowfoam). Chico, Hamlin Canyon, Nord, Oroville, Riochardson Springs and Shippee quads. Fed C1, DFG E, CNPS 1B. Vernal pools, valley and foothill grasslands. Limnanthaceae family.

28. Lupinus dalesiae (Quincy lupine). Cascade and Rackerby quads. Fed C2, CNPS 1B. lower montane conifer forest. Fabaceae family.

29. Mimulus glaucescens (shield-bracted monkey flower). Chico and Hamlin Canyon quads. CNPS 4. Cismontane woodland, valley and foothill grasslands. Scrophulariaceae family.

30. Mimulus laciniatus (cut-leaved monkey flower). Quads uncertain. CNPS 4. Lower montane conifer forest, upper montane conifer forest. Scrophulariaceae family.

31. Monardella douglasii var. venosa (veiny monardella). Cherokee, Chico, Rackerby and Richardson Springs quads. Fed C2, CNPS 1A. Valley and foothill grasslands, Lamiaceae family.

32. Myosurus minimus ssp. apus (little mousetail). Chico, Hamlin Canyon, Oroville and Pennington quads. Fed C2, CNPS 3. Vernal pools. Ranunculaceae family.

33. Ophioglossum lusitanicum ssp. californicum (California adders-tongue fern). Quads uncertain. CNPS 4. Vernal pools. Ophioglossaceae family.

34. Paronychia ahartii (Aharts paronychia). Honcut and Richardson Springs quads. CNPS 1B. Valley and foothill grasslands. Caryophyllaceae family.

35. Penstemon personatus (close-throated beardtongue). Kimshew Point and Pulga quads. Fed C 2, CNPS 4. Lower and upper montane conifer forests. Scrophulariaceae family.

36. Phacelia vallicola (mariposa phacelia). Quads uncertain. CNPS 4 chaparral, cismontane woodland, lower and upper conifer forests. Hydrophyllaceae family.

37. Polygonum bidwelliae (Bidwell's knotweed). Quads uncertain. CNPS 4. Chaparral, cismontane woodland, valley and foothill grasslands. Polygonaceae family.

38. Quercus lobata (valley oak). Most valley and foothill quads. CNPS 4. Cismontane woodland, valley and foothill grassland, riparian forest. Fagaceae family.

39. Rhynchospora californica (California beaked-rush). Paradise West and Richardson Springs quads. Fed C 2, CNPS 1B. Freshwater seeps and marshes. Cyperaceae family.

40. Sagittaria sanfordii (Sanford's arrowhead). Berry Creek quad. Fed C2, CNPS 3. Marshes. Alismataceae family.

41. Sedum albomarginatum (Feather River stonecrop). Pulga quad. Fed C2, CNPS 1B. Rock outcrops and slopes. Crassulaceae family.

42. Senecio eurycephalus (cut-leaved butterweed). Berry Creek, Paradise East, Pulga and Stirling City quads. CNPS 1B. Cismontane woodland, lower montane conifer forest. Asteraceae family.

43. Senecio foetidus var. foetidus (sweet marsh butterweed). Quads uncertain. CNPS 3. Lower montane conifer forest. Asteraceae family.

44. Sidalcea robusta (Butte County checkerbloom). Cherokee, Chico, Cohasset, Hamlin Canyon, Paradise West and Richardson Springs quads. Fed C2, CNPS 1B. Chaparral and cismontane woodland. Malvaceae family.

45. Silene occidentalis ssp. longistipitata (western campion Butte Meadows quad. Fed C2, CNPS 3. Chaparral, lower montane conifer forest. Caryophyllaceae family.

46. Stellaria obtusa (obtuse stellaria). Jonesville quad. CNPS 3. Upper montane conifer forest. Caryophyllaceae family.

47. Streptanthus drepanoides (sickle-leaved jewelweed). Quads uncertain. CNPS 4. Chaparral. Brassicaceae family.

48. Streptanthus tortuosus (mountain jewelflower). Cohasset and Stirling City quads. CNPS 3. Serpentine soils. Brassicaceae family.

49. Tuctoria greenei (Greene's tuctoria). Biggs, Hamlin Canyon, Richardson Springs NW and Vina quads. Fed C1, DFG R, CNPS 1B. vernal pools. Poaceae family.

Addendum

50. Grindelia humilis (marsh gumplant). Butte City, Pennington, Sanborn Slough and West of Biggs quads. CNPS 4. Freshwater marsh. Asteraceae family.

51. Lepidium latipes (dwarf pepper-grass) Butte City, Pennington, Sanborn Slough and West of Biggs quads. CNPS 4. Valley and foothill grasslands. Brassicaceae family.

61. Penstemon neotericus (Plumas County beardtongue). Jonesville quad. CNPS 4. Lower montane conifer forest. Scrophulariaceae family.

Rare, Threatened or Endangered Species of Butte County

This is a compilation of those species occurring in Butte County which are listed in Sections 670.2 and 670.5, Title 14, California Administrative Code and in 50 CFR 17.11 of the Federal Register.

Status key:

SR - state rare
ST - state threatened
SE - state endangered
FT - federal threatened
FE - federal endangered

A. Animals

1. Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)

   FT status. Status caused by habitat loss and degradation. Impacts include land use coversions, flood control projects, channel maintenance, grazing herbicides, and fire. Occurs in riparian habitat along the Sacramento River and the lower portions of its tributaries. Completely dependent upon elderberry, particularly those with stems 1.5+ inches in diameter.

   A resident species.

2. Winter-run chinook salmon (Oncorhynchus tshawytscha) SE, FT status. Status caused by flood control and channelization projects and water diversions which have destroyed or degraded habitat.

   Adults migrate up the Sacramento River from December through July. Downstream migrating smolts occur from August to October.

3. Giant Garter Snake (Thamnophis couchi gigas)

   ST status. Status caused by wetlands loss. Also impacted by pollution, destroyed food sources, snake collectors, and illegal killing.

   Inhabits marshes, slow moving streams, canals, ponds and flooded fields (especially riceland). Highly aquatic. It is known to occur from the Butte Sink to Nelson. Other locales of possible occurrence include Angel Slough-Little Chico Creek, Honcut Creek, and its tributaries.

   A resident species. Hibernates from November to March.

4. Aleutian Canada Goose (Branta canadensis leucopareia) FE status. Status caused by exotic predators on its Aleutian breeding ground. Hunting was formerly a significant impact on the winter ground.

   Occurs in the Butte Sink from October to December, occasionally later. Feeds in croplands, favors corn. Roosts on flooded areas.

5. Bald Eagle (Haliaeetus leucocephalus)

   SE, FE status. Status caused by pesticides (principally DDT). The population is slowly recovering. Other impacts include pollutants, nest disturbance by humans, and illegal kill.

   There are two known breeding territories in Butte County. Winter populations may exceed 50 birds county wide. Lake Oroville is an important local wintering area. Eagles often congregate about waterfowl concentrations in ricelands. To be looked for around all but the smallest streams and ponds countywide.

   A sparse breeding resident and fairly common winter resident.

6. Swainson's Hawk (Buteo swainsoni)

   ST status. Status caused by loss of grassland (foraging) and woodland (nesting) habitats primarily to agricultural and urban land use conversion. Pesticides and rodenticides are additional problems.

   It may be found throughout the valley portion of Butte County including the foothill edge. Most occurrences are west of Hwy 99. Small rodents are the preferred prey.

   A March to September breeding resident.

7. American Peregrine Falcon (Falco peregrinus anatum)

   SE, FE status. Status caused by DDT contamination. Human theft of nestlings is a problem.

   To be looked for countywide in any season. Most birds occur from September to October. It is infrequently seen but of regular occurrence (one known breeding territory) in Butte County. Most often seen about bird concentrations.

   A resident species, but most sightings may be of winter visitors.

8. California Black Rail (Laterallus jamaicensis coturniculus)

ST status. Status caused by wetlands destruction. There is one record for Gray Lodge Wildlife Area. Unconfirmed sightings have been made in the Nelson area. Its habitat is shallow marshes with short sedges and bulrush.

9. Greater Sandhill Crane (Grus canadensis tabida)

ST status. Status caused by loss of breeding habitat in northeastern California. Winter ground losses in the Central Valley are a growing problem. Human harassment, principally hunting, is a significant local problem.

More than half of the California population is known to occur in Butte County during fall and early winter. They roost in shallowly flooded marshes and sloughs. Most foraging occurs in grain fields. Grasslands, marshes, and pastures are used for feeding. Principal wintering areas are: Hwy 99 near Durham to Rancho Llano Seco, M&T Ranch, Nelson area, and the Butte Sink. May occur elsewhere in the valley. A September to April winter resident. A few have been known to summer locally.

10. Western Yellow-billed Cuckoo (Coccyzus americanus occidentalis)

SE status. Status apparently caused by DDT contamination, and pesticide use (particularly aerial spraying) in nesting territories. Riparian habitat loss and degradation, especially in the Central Valley south of Colusa, is the other major cause of the cuckoo population decline.

It is found along the Sacramento River and lower portions of the rivers tributaries. To be looked for along the Feather River up to Oroville. Cuckoo territories have been found in the Butte Sink and along Butte Creek.

A summer resident from May to September.

11. Great Gray Owl (Strix nebulosa)

SE status. Status caused by habitat loss and degradation. Forested nesting areas have been destroyed by logging. Meadow foraging areas have been lost to, or damaged by, reservoirs, grazing, roads, and buildings.

This owl has been known to occur east of Butte Meadows. It has probably been extirpated as a breeding resident, but could become reestablished. It requires large meadow systems for foraging and old growth timber for nesting.

12. Willow Flycatcher (Empidonax traillii)

SE status. Status caused by the loss and degradation of riparian habitat due to water projects, channel maintenance, grazing, roads, buildings, and pesticides. Cowbird parasitism of the nest may be a problem.

The flycatcher is dependent on willow habitats as a breeder. It may no longer breed in Butte County but it could become reestablished. During migration it may be found countywide in riparian habitat and open woodlands.

A spring (April-May) and fall (August-September) migratory transient.

13. Bank Swallow (Riparia riparia)

ST status. Status caused by bank protection projects which destroy eroding banks and bank swallow nestlings.

Occurs along the Sacramento and Feather rivers. Requires vertical, eroding banks with soft soil. Forages over open water and, somewhat, over open land. A colonial nesting species.

A breeding resident from March to October.

14. Least Bell's Vireo (Vireo bellii pusillus)

SE, FE status. Status caused by the loss and degradation of riparian habitat. Cowbird parasitism of vireo nests have compounded the problem. Pesticides are another problem of unknown magnitude.

Formerly a common summer resident in Sacramento Valley riparian habitat. It is believed to have become extirpated about 1965. Its reestablishment is possible.

15. Sierra Nevada Red Fox (Vulpes vulpes necator)

ST status. Cause of status uncertain. Probable impacts include logging, grazing, reservoirs, roads, trapping, buildings, and disturbance by humans.

Found primarily in fir and lodgepole pine forests. Meadows are probably important for foraging. This fox has been seen east of Butte Meadows. It may be found below 4,000 feet elevation.

The red fox found in the Sacramento Valley is an eastern race not known to be found above the lower foothills.

The native fox should be a permanent resident.

16. Wolverine (Gulo gulo)

ST status. Cause of status uncertain. Probable impacts include logging, grazing, reservoirs, roads, buildings, and disturbance by humans.

There have been unsubstantiated sightings of this species in the Humbug Summit-Philbrook area. It is generally found in alpine habitats.

A possible permanent resident above 5,000 feet elevation.

B. Plants

1. Butte County (Shippee) Meadowfoam (Limnanthes floccosa sp. Californica)

SE status. Status caused by the destruction of vernal swale habitats mostly resulting from urban sprawl and agriculture. Grazing is a significant impact.

Meadowfoam occurs in scattered populations from north of Chico to the Shippee area. Its habitat is vernal swales of the alluvial apron at the valley-foothill junction. The flowering period is primarily March-April. Other subspecies of the species occurs in Butte County.

2. Greene's Orcut Grass (Tuctoria greenei)

SR status. Status caused by vernal pool destruction. Grazing is an additional problem.

Known to occur at Pentz and Richvale vernal pools.

May occur elsewhere. All known locations are in the alluvial apron at the valley-foothill junction, which may extend far into the valley. Flowers in late spring. The species is in reality endangered.

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F. TRANSPORTATION AND CIRCULATION

Town of Paradise - General Plan Update
Dowling Associates - February 1992
Average Daily Traffic Conditions

Trip Generation Report

Forecast for

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1		20.00	SR	3.83	3.83	77	77	154	0.3
1		87.12	TC in KSF	7.20	7.20	627	627	1254	2.7
	Zone 1 Subtotal					704	704	1408	3.0
2		15.00	SR	3.83	3.83	57	57	114	0.2
	Zone 2 Subtotal					57	57	114	0.2
3		20.00	SR	3.83	3.83	77	77	154	0.3
	Zone 3 Subtotal					77	77	154	0.3
4		20.00	SR	3.83	3.83	77	77	154	0.3
	Zone 4 Subtotal					77	77	154	0.3
5		65.34	CS in KSF	2.70	2.70	176	176	352	0.8
5		20.00	SR	3.83	3.83	77	77	154	0.3
	Zone 5 Subtotal					253	253	506	1.1
6		10.00	AR	3.83	3.83	38	38	76	0.2
6		56.00	SR	3.83	3.83	214	214	428	0.9
	Zone 6 Subtotal					252	252	504	1.1
7		0.00		0.00	0.00	0	0	0	0.0
8		0.00		0.00	0.00	0	0	0	0.0
9		0.00		0.00	0.00	0	0	0	0.0
10		9.00	AR	3.83	3.83	34	34	68	0.1
10		57.00	SR	3.83	3.83	218	218	436	0.9
	Zone 10 Subtotal					252	252	504	1.1
11		6.00	AR	3.83	3.83	23	23	46	0.1
11		21.00	SR	3.83	3.83	80	80	160	0.3
11		21.78	TC in KSF	7.20	7.20	157	157	314	0.7
	Zone 11 Subtotal					260	260	520	1.1
12		6.00	SR	3.83	3.83	23	23	46	0.1
12		10.89	TC in KSF	7.20	7.20	78	78	156	0.3
	Zone 12 Subtotal					101	101	202	0.4
13		21.00	SR	3.83	3.83	80	80	160	0.3
	Zone 13 Subtotal					80	80	160	0.3
14		28.00	AR	3.83	3.83	107	107	214	0.5
14		25.00	SR	3.83	3.83	96	96	192	0.4
	Zone 14 Subtotal					203	203	406	0.9

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Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
15		3.00	SR	3.83	3.83	11	11	22	0.0
	Zone 15 Subtotal					11	11	22	0.0
16		35.00	AR	3.83	3.83	134	134	268	0.6
16		80.00	SR	3.83	3.83	306	306	612	1.3
	Zone 16 Subtotal					440	440	880	1.9
17		14.00	TR	3.83	3.83	54	54	108	0.2
17		15.00	MF	3.23	3.23	48	48	96	0.2
	Zone 17 Subtotal					102	102	204	0.4
18		10.00	SR	3.83	3.83	38	38	76	0.2
	Zone 18 Subtotal					38	38	76	0.2
19		10.00	SR	3.83	3.83	38	38	76	0.2
	Zone 19 Subtotal					38	38	76	0.2
20		10.89	TC in KSF	7.20	7.20	78	78	156	0.3
	Zone 20 Subtotal					78	78	156	0.3
21		10.89	TC in KSF	7.20	7.20	78	78	156	0.3
	Zone 21 Subtotal					78	78	156	0.3
22		47.00	SR	3.83	3.83	180	180	360	0.8
22		12.00	MF	3.23	3.23	39	39	78	0.2
	Zone 22 Subtotal					219	219	438	0.9
23		46.00	SR	3.83	3.83	176	176	352	0.8
23		11.00	MF	3.23	3.23	36	36	72	0.2
	Zone 23 Subtotal					212	212	424	0.9
24		6.00	SR	3.83	3.83	23	23	46	0.1
	Zone 24 Subtotal					23	23	46	0.1
25		0.00		0.00	0.00	0	0	0	0.0
26		0.00		0.00	0.00	0	0	0	0.0
27		0.00		0.00	0.00	0	0	0	0.0
28		8.00	MF	3.23	3.23	26	26	52	0.1
	Zone 28 Subtotal					26	26	52	0.1
29		17.00	TR	3.83	3.83	65	65	130	0.3
	Zone 29 Subtotal					65	65	130	0.3
30		0.00		0.00	0.00	0	0	0	0.0
31		36.48	TC in KSF	6.00	6.00	219	219	438	0.9
	Zone 31 Subtotal					219	219	438	0.9
32		17.97	TC in KSF	6.00	6.00	108	108	216	0.5

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Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
32		8.00	TR	3.83	3.83	31	31	62	0.1
	Zone 32 Subtotal					139	139	278	0.6
33		30.00	SR	3.83	3.83	115	115	230	0.5
33		38.12	TC in KSF	6.00	6.00	229	229	458	1.0
	Zone 33 Subtotal					344	344	688	1.5
34		29.00	SR	3.83	3.83	111	111	222	0.5
	Zone 34 Subtotal					111	111	222	0.5
35		87.12	CC in KSF	6.00	6.00	523	523	1046	2.3
35		10.89	TC in KSF	6.00	6.00	65	65	130	0.3
	Zone 35 Subtotal					588	588	1176	2.5
36		75.00	MF	3.23	3.23	242	242	484	1.0
	Zone 36 Subtotal					242	242	484	1.0
37		21.78	TC in KSF	6.00	6.00	131	131	262	0.6
	Zone 37 Subtotal					131	131	262	0.6
38		50.00	SR	3.83	3.83	192	192	384	0.8
	Zone 38 Subtotal					192	192	384	0.8
39		50.00	SR	3.83	3.83	192	192	384	0.8
	Zone 39 Subtotal					192	192	384	0.8
40		10.00	AR	3.83	3.83	38	38	76	0.2
40		10.89	NC in KSF	14.40	14.40	157	157	314	0.7
40		40.00	SR	3.83	3.83	153	153	306	0.7
	Zone 40 Subtotal					348	348	696	1.5
41		3.00	AR	3.83	3.83	11	11	22	0.0
41		54.00	SR	3.83	3.83	207	207	414	0.9
	Zone 41 Subtotal					218	218	436	0.9
42		3.00	AR	3.83	3.83	11	11	22	0.0
42		54.00	SR	3.83	3.83	207	207	414	0.9
42		21.78	TC in KSF	6.00	6.00	131	131	262	0.6
	Zone 42 Subtotal					349	349	698	1.5
43		3.00	AR	3.83	3.83	11	11	22	0.0
43		54.00	SR	3.83	3.83	207	207	414	0.9
	Zone 43 Subtotal					218	218	436	0.9
44		2.00	AR	3.83	3.83	8	8	16	0.0
44		54.00	SR	3.83	3.83	207	207	414	0.9
	Zone 44 Subtotal					215	215	430	0.9

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Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
45		0.00		0.00	0.00	0	0	0	0.0
46		50.00	SR	3.83	3.83	192	192	384	0.8
46		21.78	NC	14.40	14.40	314	314	628	1.4
	Zone 46 Subtotal					506	506	1012	2.2
47		21.78	CS in KSF	2.30	2.30	50	50	100	0.2
	Zone 47 Subtotal					50	50	100	0.2
48		0.00		0.00	0.00	0	0	0	0.0
49		14.00	SR	3.83	3.83	54	54	108	0.2
	Zone 49 Subtotal					54	54	108	0.2
50		10.00	AR	3.83	3.83	38	38	76	0.2
50		248.00	MF	3.23	3.23	801	801	1602	3.5
	Zone 50 Subtotal					839	839	1678	3.6
51		165.00	SR	3.83	3.83	632	632	1264	2.7
51		21.00	MF	3.23	3.23	68	68	136	0.3
51		21.78	TC in KSF	6.00	6.00	131	131	262	0.6
	Zone 51 Subtotal					831	831	1662	3.6
52		729.63	LI in KSF	1.05	1.05	766	766	1532	3.3
	Zone 52 Subtotal					766	766	1532	3.3
53		59.00	AR	3.83	3.83	226	226	452	1.0
53		196.02	LI in KSF	1.05	1.05	206	206	412	0.9
	Zone 53 Subtotal					432	432	864	1.9
54		40.00	AR	3.83	3.83	153	153	306	0.7
54		67.00	SR	3.83	3.83	257	257	514	1.1
	Zone 54 Subtotal					410	410	820	1.8
55		40.00	AR	3.83	3.83	153	153	306	0.7
55		70.00	SR	3.83	3.83	268	268	536	1.2
	Zone 55 Subtotal					421	421	842	1.8
56		20.00	SR	3.83	3.83	77	77	154	0.3
56		30.00	MF	3.23	3.23	97	97	194	0.4
	Zone 56 Subtotal					174	174	348	0.8
57		40.00	AR	3.83	3.83	153	153	306	0.7
57		90.00	SR	3.83	3.83	345	345	690	1.5
	Zone 57 Subtotal					498	498	996	2.1
58		42.00	SR	3.83	3.83	161	161	322	0.7
58		10.89	TC in KSF	6.00	6.00	65	65	130	0.3
	Zone 58 Subtotal					226	226	452	1.0

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Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
59		50.00	AR	3.83	3.83	192	192	384	0.8
59		41.00	SR	3.83	3.83	157	157	314	0.7
59		15.00	MF	3.23	3.23	48	48	96	0.2
59		10.89	TC in KSF	6.00	6.00	65	65	130	0.3
	Zone 59 Subtotal					462	462	924	2.0
61		96.00	SR	3.83	3.83	368	368	736	1.6
	Zone 61 Subtotal					368	368	736	1.6
62		6.00	AR	3.83	3.83	23	23	46	0.1
62		3.00	TR	3.83	3.83	11	11	22	0.0
	Zone 62 Subtotal					34	34	68	0.1
63		21.78	TC in KSF	6.00	6.00	131	131	262	0.6
	Zone 63 Subtotal					131	131	262	0.6
64		10.89	TC in KSF	6.00	6.00	65	65	130	0.3
	Zone 64 Subtotal					65	65	130	0.3
65		280.00	SR	3.83	3.83	1072	1072	2144	4.6
	Zone 65 Subtotal					1072	1072	2144	4.6
66		37.00	AR	3.83	3.83	142	142	284	0.6
66		281.00	SR	3.83	3.83	1076	1076	2152	4.6
	Zone 66 Subtotal					1218	1218	2436	5.3
68		0.00		0.00	0.00	0	0	0	0.0
69		43.56	TC in KSF	6.00	6.00	261	261	522	1.1
	Zone 69 Subtotal					261	261	522	1.1
70		3.00	TR	3.83	3.83	11	11	22	0.0
70		23.00	MF	3.23	3.23	74	74	148	0.3
70		38.12	TC in KSF	6.00	6.00	229	229	458	1.0
	Zone 70 Subtotal					314	314	628	1.4
71		5.00	SR	3.83	3.83	19	19	38	0.1
	Zone 71 Subtotal					19	19	38	0.1
72		10.89	TC in KSF	6.00	6.00	65	65	130	0.3
72		24.00	TR	3.83	3.83	92	92	184	0.4
	Zone 72 Subtotal					157	157	314	0.7
73		80.59	LI in KSF	1.05	1.05	85	85	170	0.4
	Zone 73 Subtotal					85	85	170	0.4
74		377.32	BP in KSF	1.76	1.76	664	664	1328	2.9
74		108.90	CS in KSF	2.30	2.30	250	250	500	1.1
	Zone 74 Subtotal					914	914	1828	3.9

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Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
75		0.00		0.00	0.00	0	0	0	0.0
76		58.00	AR	3.83	3.83	222	222	444	1.0
76		543.99	BP in KSF	1.76	1.76	957	957	1914	4.1
	Zone 76 Subtotal					1179	1179	2358	5.1
77		8.00	AR	3.83	3.83	31	31	62	0.1
77		258.00	SR	3.83	3.83	988	988	1976	4.3
	Zone 77 Subtotal					1019	1019	2038	4.4
78		0.00		0.00	0.00	0	0	0	0.0
79		558.00	AR	1.88	1.88	1049	1049	2098	4.5
79		861.00	SR	1.88	1.88	1619	1619	3238	7.0
79		147.00	MF	1.88	1.88	276	276	552	1.2
	Zone 79 Subtotal					2944	2944	5888	12.7
80		69.00	AR	3.83	3.83	264	264	528	1.1
80		85.00	SR	3.83	3.83	326	326	652	1.4
	Zone 80 Subtotal					590	590	1180	2.5
TOTAL						23191	23191	46382	100.0

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Trip Distribution Report

Percent Of Trips

	To Gates										
Zone	1	2	3	4	5	6	7	8	9	10	11
1	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
2	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
3	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
4	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
5	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
6	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
7	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
8	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
9	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
10	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
11	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
12	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
13	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
14	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
15	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
16	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
17	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
18	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
19	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
20	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
21	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
22	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
23	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
24	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
25	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
26	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
27	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
28	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
29	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
30	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
31	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
32	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
33	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
34	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
35	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
36	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
37	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
38	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
39	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
40	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
41	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
42	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
43	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
44	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
45	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3

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	To Gates										
Zone	1	2	3	4	5	6	7	8	9	10	11
46	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
47	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
48	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
49	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
50	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
51	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
52	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
53	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
54	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
55	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
56	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
57	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
58	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
59	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
61	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
62	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
63	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
64	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
65	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
66	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
68	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
69	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
70	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
71	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
72	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
73	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
74	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
75	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
76	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
77	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
78	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
79	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3
80	8.9	7.4	10.5	9.4	12.4	8.9	0.0	3.8	0.9	12.8	0.3

	To Gates				
Zone	12	13	14	15	16
1	1.6	0.0	5.7	7.0	10.4
2	1.6	0.0	5.7	7.0	10.4
3	1.6	0.0	5.7	7.0	10.4
4	1.6	0.0	5.7	7.0	10.4
5	1.6	0.0	5.7	7.0	10.4
6	1.6	0.0	5.7	7.0	10.4
7	1.6	0.0	5.7	7.0	10.4
8	1.6	0.0	5.7	7.0	10.4
9	1.6	0.0	5.7	7.0	10.4
10	1.6	0.0	5.7	7.0	10.4
11	1.6	0.0	5.7	7.0	10.4

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	To Gates				
	12	13	14	15	16
Zone					
12	1.6	0.0	5.7	7.0	10.4
13	1.6	0.0	5.7	7.0	10.4
14	1.6	0.0	5.7	7.0	10.4
15	1.6	0.0	5.7	7.0	10.4
16	1.6	0.0	5.7	7.0	10.4
17	1.6	0.0	5.7	7.0	10.4
18	1.6	0.0	5.7	7.0	10.4
19	1.6	0.0	5.7	7.0	10.4
20	1.6	0.0	5.7	7.0	10.4
21	1.6	0.0	5.7	7.0	10.4
22	1.6	0.0	5.7	7.0	10.4
23	1.6	0.0	5.7	7.0	10.4
24	1.6	0.0	5.7	7.0	10.4
25	1.6	0.0	5.7	7.0	10.4
26	1.6	0.0	5.7	7.0	10.4
27	1.6	0.0	5.7	7.0	10.4
28	1.6	0.0	5.7	7.0	10.4
29	1.6	0.0	5.7	7.0	10.4
30	1.6	0.0	5.7	7.0	10.4
31	1.6	0.0	5.7	7.0	10.4
32	1.6	0.0	5.7	7.0	10.4
33	1.6	0.0	5.7	7.0	10.4
34	1.6	0.0	5.7	7.0	10.4
35	1.6	0.0	5.7	7.0	10.4
36	1.6	0.0	5.7	7.0	10.4
37	1.6	0.0	5.7	7.0	10.4
38	1.6	0.0	5.7	7.0	10.4
39	1.6	0.0	5.7	7.0	10.4
40	1.6	0.0	5.7	7.0	10.4
41	1.6	0.0	5.7	7.0	10.4
42	1.6	0.0	5.7	7.0	10.4
43	1.6	0.0	5.7	7.0	10.4
44	1.6	0.0	5.7	7.0	10.4
45	1.6	0.0	5.7	7.0	10.4
46	1.6	0.0	5.7	7.0	10.4
47	1.6	0.0	5.7	7.0	10.4
48	1.6	0.0	5.7	7.0	10.4
49	1.6	0.0	5.7	7.0	10.4
50	1.6	0.0	5.7	7.0	10.4
51	1.6	0.0	5.7	7.0	10.4
52	1.6	0.0	5.7	7.0	10.4
53	1.6	0.0	5.7	7.0	10.4
54	1.6	0.0	5.7	7.0	10.4
55	1.6	0.0	5.7	7.0	10.4
56	1.6	0.0	5.7	7.0	10.4
57	1.6	0.0	5.7	7.0	10.4
58	1.6	0.0	5.7	7.0	10.4
59	1.6	0.0	5.7	7.0	10.4
61	1.6	0.0	5.7	7.0	10.4

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Zone	To Gates 12	13	14	15	16
62	1.6	0.0	5.7	7.0	10.4
63	1.6	0.0	5.7	7.0	10.4
64	1.6	0.0	5.7	7.0	10.4
65	1.6	0.0	5.7	7.0	10.4
66	1.6	0.0	5.7	7.0	10.4
68	1.6	0.0	5.7	7.0	10.4
69	1.6	0.0	5.7	7.0	10.4
70	1.6	0.0	5.7	7.0	10.4
71	1.6	0.0	5.7	7.0	10.4
72	1.6	0.0	5.7	7.0	10.4
73	1.6	0.0	5.7	7.0	10.4
74	1.6	0.0	5.7	7.0	10.4
75	1.6	0.0	5.7	7.0	10.4
76	1.6	0.0	5.7	7.0	10.4
77	1.6	0.0	5.7	7.0	10.4
78	1.6	0.0	5.7	7.0	10.4
79	1.6	0.0	5.7	7.0	10.4
80	1.6	0.0	5.7	7.0	10.4

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Link Volume Report

Volume	NB Link			SB Link			EB Link			WB Link			Total
Type	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	Volume
#1 Skyway and Pentz Road													
Base	8386	6104	14490	6398	8610	15008	896	1176	2072	1708	1498	3206	34776
Added	2770	2770	5540	3221	3221	6442	0	0	0	451	451	902	12883
Total	11156	8874	20030	9619	11831	21450	896	1176	2072	2159	1949	4108	4765
#2 Clark Road and Skyway													
Base	5236	3388	8624	5320	9996	15316	0	42	42	5278	2408	7686	31668
Added	2356	2356	4712	2770	2770	5540	0	0	0	414	414	828	11080
Total	7592	5744	13336	8090	12766	20856	0	42	42	5692	2822	8514	4274
#3 Skyway and Rock Lane													
Base	6314	3948	10262	4186	6412	10598	0	0	0	392	532	924	21784
Added	2996	2996	5991	2996	2996	5991	0	0	0	0	0	0	11983
Total	9310	6944	16253	7182	9408	16589	0	0	0	392	532	924	33767
#4 Skyway and Wagstaff Road													
Base	9548	4382	13930	3738	7560	11298	1386	1624	3010	2520	3626	6146	34384
Added	3520	3520	7039	3171	3171	6342	209	209	417	1279	1279	2558	16357
Total	13068	7902	20969	6909	10731	17640	1595	1833	3427	3799	4905	8704	5074
#5 Skyway and Bille Road													
Base	12600	9226	21826	6552	9002	15554	2226	2352	4578	3724	4522	8246	50204
Added	4756	4756	9512	4187	4187	8374	510	510	1021	2071	2071	4142	23049
Total	17356	13982	31338	10739	13189	23928	2736	2862	5599	5795	6593	12388	732
#6 Skyway and Maxwell Road													
Base	13034	7840	20874	8162	13328	21490	0	0	0	1484	1512	2996	4536
Added	4926	4926	9851	4777	4777	9554	0	0	0	149	149	297	19702
Total	17960	12766	30725	12939	18105	31044	0	0	0	1633	1661	3293	650
#7 Skyway and Oliver Road													
Base	14350	9814	24164	9744	12474	22218	2044	3318	5362	490	1022	1512	5325
Added	5683	5683	11366	5598	5598	11196	590	590	1180	0	0	0	23742
Total	20033	15497	35530	15342	18072	33414	2634	3908	6542	490	1022	1512	769
#8 Skyway and Elliot Road													
Base	14882	9618	24500	10038	14420	24458	924	1190	2114	5390	6006	11396	6246
Added	5293	5293	10585	5910	5910	11820	0	0	0	1966	1966	3931	26336
Total	20175	14911	35085	15948	20330	36278	924	1190	2114	7356	7972	15327	888
#9 Skyway and Honey Run Road													
Base	14028	8106	22134	8162	14210	22372	924	672	1596	154	280	434	4653
Added	5140	5140	10279	5140	5140	10279	0	0	0	0	0	0	20558
Total	19168	13246	32413	13302	19350	32651	924	672	1596	154	280	434	670

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Volume Type	NB Link In	Out	Total	SB Link In	Out	Total	EB Link In	Out	Total	WB Link In	Out	Total	Total Volume
#10 Skyway and Pearson Road													
Base	15568	11312	26880	9716	13398	23114	0	0	0	5138	5712	10850	608
Added	6710	6710	13421	5379	5379	10757	0	0	0	4929	4929	9857	34035
Total	22278	18022	40301	15095	18777	33871	0	0	0	10067	10641	20707	94
#11 Skyway and Neal Road													
Base	13202	7168	20370	8414	13902	22316	266	350	616	1736	2198	3934	4723
Added	1678	1678	3356	5033	5033	10067	0	0	0	3685	3685	7370	20792
Total	14880	8846	23726	13447	18935	32383	266	350	616	5421	5883	11304	6802
#12 Clark Road and Wagstaff Road													
Base	5870	5430	11300	4560	4620	9180	2780	2290	5070	2310	3180	5490	31040
Added	2090	2090	4180	1044	1044	2088	1283	1283	2566	952	952	1904	10739
Total	7960	7520	15480	5604	5664	11268	4063	3573	7636	3262	4132	7394	41779
#13 Clark Road and Bille Road													
Base	10090	6840	16930	6680	10300	16980	3170	2550	5720	2570	2820	5390	4502
Added	3895	3895	7791	2609	2609	5217	2065	2065	4130	1654	1654	3308	20446
Total	13985	10735	24721	9289	12909	22197	5235	4615	9850	4224	4474	8698	654
#14 Clark Road and Central Park													
Base	8160	7350	15510	7280	8400	15680	1310	850	2160	0	150	150	33500
Added	3894	3894	7788	4040	4040	8080	242	242	485	0	0	0	16353
Total	12054	11244	23298	11320	12440	23760	1552	1092	2645	0	150	150	498
#15 Clark Road and Elliot Road													
Base	8040	6530	14570	8400	8180	16580	5040	4230	9270	2480	5020	7500	47920
Added	4115	4115	8231	3916	3916	7831	1908	1908	3816	294	294	587	20465
Total	12155	10645	22801	12316	12096	24411	6948	6138	13086	2774	5314	8087	683
#16 Clark Road and Nunneley Road													
Base	8520	5860	14380	5860	8040	13900	520	370	890	1050	1680	2730	31900
Added	4124	4124	8248	4136	4136	8271	30	30	61	196	196	393	16973
Total	12644	9984	22628	9996	12176	22171	550	400	951	1246	1876	3123	4887
#17 Clark Road and Pearson Road													
Base	5330	2680	8010	5200	8000	13200	5910	4750	10660	2650	3660	6310	38180
Added	5552	5552	11105	4124	4124	8248	4856	4856	9713	3496	3496	6992	36058
Total	10882	8232	19115	9324	12124	21448	10766	9606	20373	6146	7156	13302	7423
#18 Clark Road and Buschmann Road													
Base	3530	2650	6180	3180	4260	7440	1380	1180	2560	0	0	0	16180
Added	4810	4810	9620	5413	5413	10826	61	61	123	839	839	1678	22247
Total	8340	7460	15800	8593	9673	18266	1441	1241	2683	839	839	1678	38427
#19 Pentz Road and Wagstaff Road													
Base	2270	2080	4350	2070	2840	4910	2520	1920	4440	60	80	140	13840
Added	1344	1344	2687	733	733	1466	1624	1624	3249	0	0	0	7402
Total	3614	3424	7037	2803	3573	6376	4144	3544	7689	60	80	140	21242

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Volume	NB Link			SB Link			EB Link			WB Link			Total
Type	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	Volume
#20 Pentz Road and Bille Road													
Base	2260	1990	4250	2210	2120	4330	1680	2040	3720	0	0	0	12300
Added	2423	2423	4845	1478	1478	2955	1435	1435	2870	0	0	0	10670
Total	4683	4413	9095	3688	3598	7285	3115	3475	6590	0	0	0	22970
#21 Pentz Road and Pearson Road													
Base	1960	2670	4630	1910	1680	3590	2410	1930	4340	0	0	0	12560
Added	1585	1585	3171	2376	2376	4753	2537	2537	5074	0	0	0	12998
Total	3545	4255	7801	4286	4056	8343	4947	4467	9414	0	0	0	25558
#22 Pentz Road and Stearns Road													
Base	1820	1550	3370	2020	2310	4330	480	450	930	410	420	830	9460
Added	1082	1082	2165	1082	1082	2165	0	0	0	0	0	0	4330
Total	2902	2632	5535	3102	3392	6495	480	450	930	410	420	830	13790
#26 Elliot Road and Maxwell Drive													
Base	70	100	170	2230	1100	3330	4660	5070	9730	4450	5140	9590	22820
Added	0	0	0	28	28	56	1962	1962	3924	1934	1934	3868	7848
Total	70	100	170	2258	1128	3386	6622	7032	13654	6384	7074	13458	30668
#27 Pearson Road and Scottwood Road													
Base	720	460	1180	390	490	880	5710	5210	10920	5290	5950	11240	24220
Added	61	61	123	0	0	0	4929	4929	9857	4867	4867	9735	19715
Total	781	521	1303	390	490	880	10639	10139	20777	10157	10817	20975	439
#29 Sawmill Road and Bille Road													
Base	1420	1250	2670	120	130	250	3480	2930	6410	2620	3330	5950	15280
Added	0	0	0	0	0	0	1647	1647	3294	1647	1647	3294	6589
Total	1420	1250	2670	120	130	250	5127	4577	9704	4267	4977	9244	21869
#30 Sawmill Road and Elliot Road													
Base	1620	2080	3700	1260	1570	2830	1820	1020	2840	180	210	390	9760
Added	179	179	357	105	105	210	283	283	567	0	0	0	1133
Total	1799	2259	4057	1365	1675	3040	2103	1303	3407	180	210	390	10893
#31 Sawmill Road and Nunneley Road													
Base	1170	1450	2620	1470	1600	3070	1090	970	2060	1210	920	2130	9880
Added	179	179	357	179	179	357	167	167	334	167	167	334	1382
Total	1349	1629	2977	1649	1779	3427	1257	1137	2394	1377	1087	2464	11262
#32 Sawmill Road and Pearson Road													
Base	360	470	830	1460	960	2420	3560	2480	6040	2650	4120	6770	16060
Added	174	174	348	179	179	357	2808	2808	5616	2864	2864	5727	12048
Total	534	644	1178	1639	1139	2777	6368	5288	11656	5514	6984	12497	28108

TOWN OF PARADISE

1994 GENERAL PLAN

VOLUME III
ENVIRONMENTAL SETTING DOCUMENT

AS AMENDED THROUGH SEPTEMBER, 1998

TOWN OF PARADISE COMMUNITY DEVELOPMENT DEPARTMENT
QUAD CONSULTANTS

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ENVIRONMENTAL SETTING

1.0 INTRODUCTION

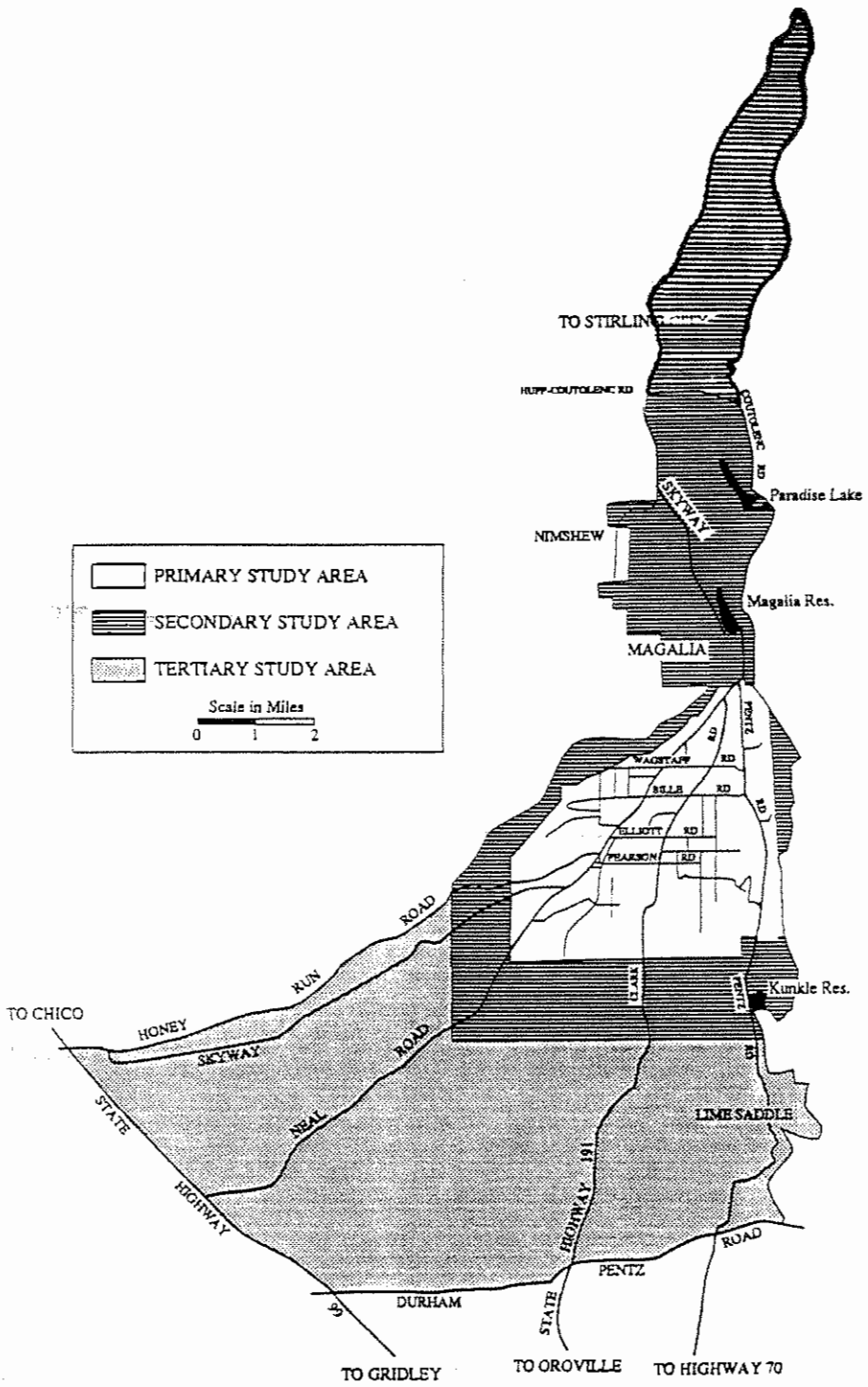
This document contains background information compiled for the Town of Paradise *General Plan*. The document addresses all the subject areas to be addressed in the plan and also serves as the "environmental setting" portion of the environmental impact report prepared for the *General Plan*. It also includes, as Appendix "A," a *Community Concerns Summary Report* which synthesizes comments collected early in the *General Plan* preparation process from the General Plan Revision Steering Committee, and responses to a citizens' opinion telephone survey of the community.

Three study areas have been established for the town and surrounding areas for the purpose of the *General Plan*:

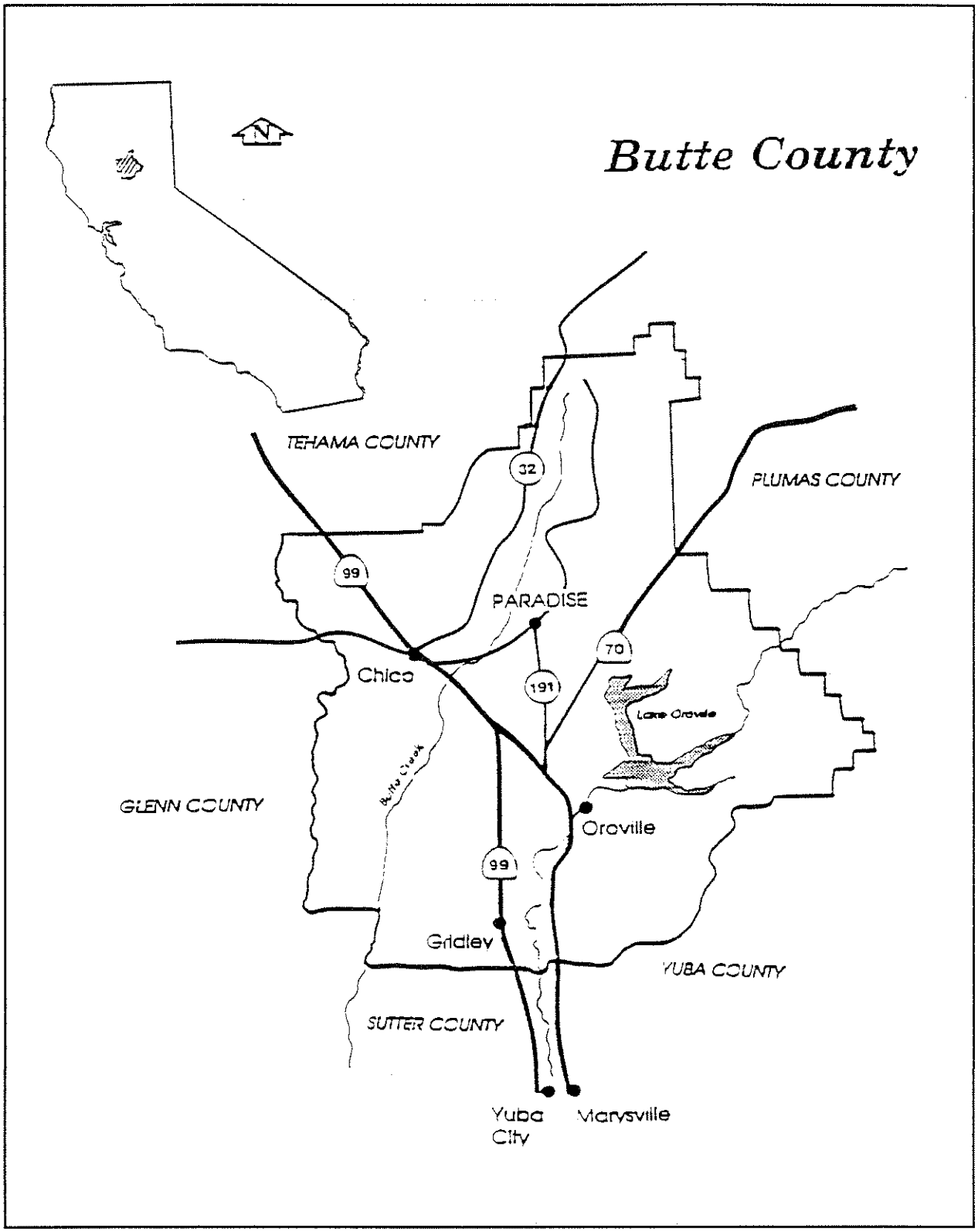
- **Primary Study Area** - reflects the existing town limits
- **Secondary Study Area** - encompasses the existing Sphere of Influence adopted for the town by the Butte County Local Agency Formation Commission (LAFCo), and the Paradise/Magalia Reservoir watershed area to the north.
- **Tertiary Study Area** - extends to the south and west to Highway 99 and Durham-Pentz Road.

These study areas are shown on Figure 1-1. For purposes of this document, the term "study area" refers collectively to the primary, secondary and tertiary study areas.

The Town of Paradise, California is located in eastern Butte County, as shown on Figure 1-2, in the western foothills of the Cascade-Sierra Nevada Mountains. Located north of Paradise are the smaller unincorporated communities of Magalia, Paradise Pines, Nimshew and DeSabla; to the south of the Town is the Lime Saddle area. These areas are known as the Upper and Lower (Eden) Ridge, respectively. To the southeast is the City of Oroville (the county seat), and to the west is the City of Chico.



STUDY AREAS (GENERALIZED) **FIGURE 1-1**



REGIONAL LOCATION **FIGURE 1-2**

2.0 HISTORY

The first Europeans to enter the Sacramento Valley may have been the Spanish expedition led by explorer Gabriel Moraga in 1808, which explored the lower reaches of the Feather River, perhaps as far north as Sutter Buttes. In 1820, Captain Luis Arguello led an expedition into the foothills east of Oroville, and gave the Feather River its name (Fariss and Smith 1882:144-145). By 1828, and throughout the next two decades, Hudson's Bay Company and American Fur Company trappers were active throughout the region (Wells and Chambers 1973:128).

In 1844, Mexican Governor Manuel Micheltorena issued several land grants within northern California. Peter Lassen was awarded a grant on Deer Creek, part of which extended into northern Butte County. That same year, Edward A. Farwell and Thomas Fallon settled on the Farwell grant, the eastern boundary of which cuts through present-day Chico (Wells and Chambers 1973:128-129). In 1847, John Bidwell acquired his famous Rancho Chico estate from Farwell and built a house. Bidwell's estate became a mail, stage, and voting station, and farms sprang up around it. This settlement evolved into the City of Chico (Bancroft 1888:491).

In 1844, Samuel Neal settled along lower Butte Creek with partner David Dutton about seven miles south of Chico. Neal received the Esquon Grant, a 22,193 acre tract encompassing present-day Durham and Nelson. Neal established a successful cattle ranch, which he operated with Indian labor. His breeding stock was obtained from John Sutter. Along with meat, Neal sold hides and tallow. Later, he was successful in breeding horses and sheep. In the summer, he drove his livestock into the foothills along a route that has become today's Neal Road, one of three major early routes between the Paradise Ridge and the Central Valley. In 1848, Neal struck a rich gold deposit on the Feather River, and later he established one of the county's first lumber mills near present-day Magalia (McGie 1982[I]:35-37; Talbitzer 1987:21, 24, 38).

Butte County was incorporated on February 18, 1850, by an act of the newly commissioned state legislature. The original Butte County embraced all of present-day Butte and Plumas Counties along with portions of Lassen, Tehama, Sutter, and Colusa Counties (Wells and Chambers 1973:131). By 1853, when farms and settlements began to appear in some of the county's more remote regions, it became evident that the area was too large for the Butte County government to meet growing demands for roads, schools, law and order. Thus, beginning with Plumas County on March 18, 1854, areas within the original Butte County began to incorporate as separate counties (Fariss and Smith 1882:156-157).

It is thought that the first Euro-Americans to extensively explore Paradise Ridge (also known locally as Apple Ridge or simply "the Ridge") in the spring of 1850 were Abraham Decker, Sam McClellan, Sr., and Sam McClellan, Jr., who arrived in the vicinity of Dogtown (i.e., Magalia) about two miles north of the Town of Paradise. In the fall of that year, a man named Bassett built a cabin, and other settlers soon

followed. Tom Neal was possibly the first to find gold in the area in 1851, and by the next year, about 500 miners were active in this locality. Abe Folk opened the first store in fall, 1851, and one of the area's first settlers, E. B. Kinson, built a sawmill in 1852. Magalia was initially called Mountain View, but it became Dogtown in honor of Mrs. Bassett, who operated a thriving business selling dogs to the miners. The first post office was opened in 1857 under the name Butte Mills. In 1861, the name was changed to Magalia (Wells and Chambers 1973:252).

In 1853, R. P. Powell founded the community of Powellton, a few miles north of Magalia. There were rich diggings around Powellton, which attracted a number of miners (Mansfield 1918:73). A large sawmill was erected there by Charles Clark (Wells and Chambers 1973:259). Powell is credited with blazing the trail to Susanville in 1861, which eventually connected Oroville to Susanville by stagecoach on what became known as the Oroville-Susanville Humbug Road. The 160 mile-long stage road passed through the Ridge communities of Dogtown, Lovelock, Powellton, and Inskip (Wells and Chambers 1973:204-205, 259). Powell had blazed this route as early as 1853, and it served as a pack-mule freight trail for several years before it was improved for wagons and stagecoaches in 1861.

Lovelock, located north of Magalia, was founded in 1855 by George Lovelock. Excellent dry diggings attracted many miners, and some quartz (i.e. "hard rock") mining occurred there, too. A quartz mill was built there that was out of operation by 1882 (Mansfield 1918:73; Wells and Chambers 1973:260). Further yet up the ridge, about 17 miles north of the Study Area, the community of Inskip was settled by a man named Kelly. The mines in this locality were exceptionally rich, and five hotels, stores, and saloons were supported by hundreds of miners (Mansfield 1918:73).

On August 14, 1859, Chauncey Wright found a 54 pound gold nugget in a hydraulic mine about two miles east of Magalia (which was then still referred to as Dogtown by most residents). When melted down in San Francisco, the famous Dogtown nugget yielded $10,690 in gold (Mansfield 1918:74) at 1859 gold prices.

Paradise had its beginnings around 1860, when William Leonard established a sawmill there. In 1865, Leonard established the route now known as Clark Road to connect his sawmill to towns in the Sacramento Valley. This route bypassed the exceedingly steep grade on the Pentz-Magalia Road above Pence's Ranch, which made it the favored route from Oroville to Paradise from that time onward (Estep 1970:26). A hotel on Clark Road served as a stage stop between Oroville and the mining towns on the upper ridge and beyond to Susanville. In the 1870s, churches were built in Paradise, and Paradise Post Office was established in 1877 in John Strong's general store on Clark Road. A second post office, known as Orloff, was established near the Southern Pacific Railroad Company depot at Pearson and Olive in 1905. When the two post offices were consolidated in 1911, the name of Paradise prevailed (McGie 1982[2]:234, 235; Talbitzer 1987:63).

The town experienced little growth until the early decades of the current century when the expansion of the lumber industry, construction of a railroad, and the formation of Paradise Irrigation District brought many new people into the area. Paradise became a center of commerce for many of the newcomers (Talbitzer 1987:78, 80).

The Ridge area received its first economic boost of the new century in 1900, when the Centerville Powerhouse and a power transmission line were completed within Butte Creek Canyon. De Sabla Powerhouse, located about seven miles upstream of the Centerville Powerhouse in Butte Creek Canyon, was completed by 1903. Water was diverted from the Feather River to increase the capacities of both powerhouses (Farber 1988; Mansfield 1918:352-353).

Diamond Match Company began to acquire about 55,000 acres on or near the Ridge in 1902. A huge sawmill, then one of the world's largest, was built in Stirling City in 1904. That same year, Butte County Railroad was built along Magalia Ridge to connect the sawmill at Stirling City to the match plant, planing and finishing mills in Chico. This railroad passed through Paradise, contributing to the growth of that community (McGie 1982[I]:184; Talbitzer 1987:80). In 1907, Southern Pacific took over operation of the railroad (Mansfield 1918:341, 359). The railroad gave renewed vitality to some of the old mining communities of the upper Ridge.

In 1914, about 400 people, mostly farmers, occupied Paradise. There was very little electricity, one telephone, no improved roads, two automobiles, no banks, and all of the water was supplied by wells. Paradise Irrigation District was organized with an initial bond issue of $325,000 for the purpose of irrigating orchards and farms. Domestic drinking water was not initially provided. Nonetheless, the formation of PID led to rapid growth, and new orchards were planted (Mansfield 1918:367). The Magalia Reservoir was acquired from PG&E, and a new dam and distribution system were completed on February 16, 1918. The reservoir lies one-quarter mile from the Southern Pacific Railroad depot in Magalia (Mansfield 1918:348), which today serves as a restaurant.

In January 1921, a new Paradise Elementary School was occupied. One week later, it burned down. The next year, a new town hall was built near the site of the old one. In 1924, Paradise temporarily won a bitter battle with the Chico High School Board of Trustees, who then administered Paradise High School, to keep the school open. In the 1930s, however, Paradise, Magalia, and Stirling City high school students were bused daily to Chico. By 1927, Paradise Irrigation District served 11,250 acres producing pears, apples, walnuts, olives, and grapes. The same year, the Paradise Veterans Building was dedicated (McGie 1982[2]:9, 21, 23, 32, 36, 57).

One of the main events of the 1930s was the announcement of plans for a new road to Chico, later named the Skyway, to replace the narrow, winding Neal Road. In 1939, Paradise Elementary School again burned down (McGie 1982[2]:57).

In 1945, the Butte County Board of Supervisors voted to proceed with construction of the Skyway instead of upgrading and realigning Neal Road. The long awaited road was finally built. In 1948, ground-breaking ceremonies were held for Feather River Hospital, and in 1953, the Supervisors approved the widening of the Skyway to four lanes through Paradise (McGie 1982[2]:102, 103, 120).

Paradise Unified School District was formed in 1950, serving Paradise, DeSabla, Stirling City, and other outlying areas. By the middle of that decade, Paradise population reached around 8,000 people. A new Paradise Junior-Senior High School was built in 1954. To keep up with the town's steady growth, Paradise Irrigation District constructed a new dam to create the Paradise Reservoir above the Magalia Reservoir.

(By 1979, the water district would serve over 30,000 people.) As the 1950s proceeded, Paradise began to establish its identity as a retirement community. Between 1954 and 1959, the number of businesses in the town grew by 47.4 percent (McGie 1982[2]:123, 132, 133, 134, 175).

Paradise continued to grow during the 1960s, with new public works projects such as water mains and the widening of roads. A shopping center was built on the Skyway. Total school enrollment exceeded 2,600, and a second elementary school was constructed on Pentz Road (McGie 1982[2]:190, 196).

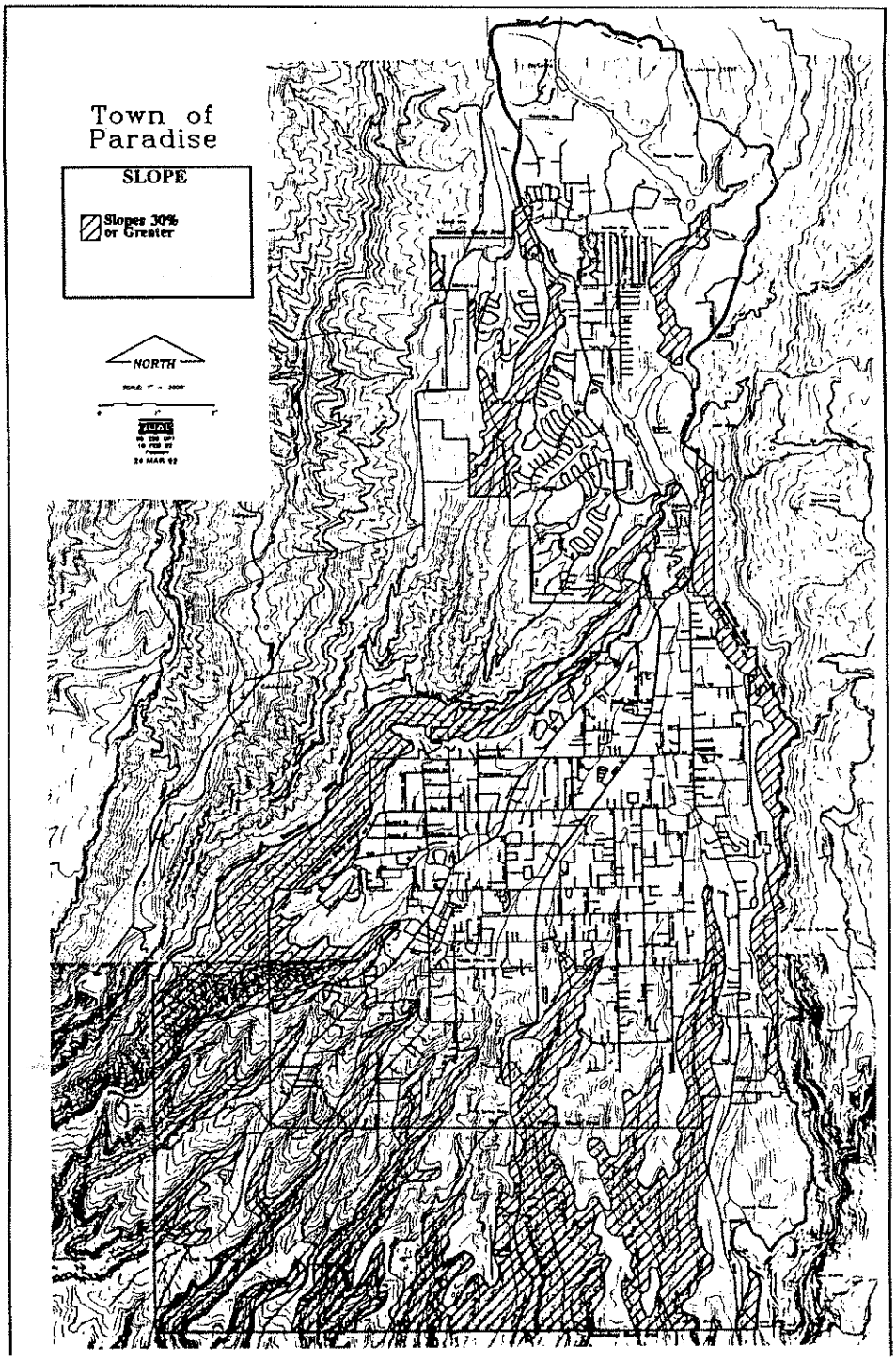
The Skyway was again widened through Paradise in the 1970s, and the town received a new library. A mid-decade drought was hard on the town, as the water supply severely waned. The crowning event of the decade was incorporation of the Town of Paradise in 1979 with over 20,000 residents in the new town limits. For two years, Paradise was the most populous town in the county, until it was overtaken by Chico (Talbitzer 1987:87). The widening of the Skyway to four lanes from Chico to Neal Road at the lower end of Paradise ushered in the 1980s (McGie 1982[2]:216, 224, 236, 266), during which time Paradise became a bustling, somewhat urban community with new shopping centers and other businesses along a widened Clark Road.

3.0 EARTH

3.1 TOPOGRAPHY

The Paradise area is located on the western flanks of the Cascade-Sierra Nevada mountain system. The general elevation above sea level ranges between 1200 feet in the most southerly portion of the tertiary study area to 2,200 feet to the northeast at Magalia; however, the extremes of local relief within the three study areas actually range between about 180 feet near the intersection of Highway 99 and Durham-Pentz Road to nearly 2,900 feet near the northerly portion of Coutolenc Road, above Paradise Pines. The primary study area is gently sloping towards the southwest with average slopes of around four percent, although steeper slopes occur to the west, adjacent to Butte Creek Canyon; to the east, along the margin of the canyon of the West Branch of the Feather River; and in localized stream incisements such as Berry Canyon and Clear Creek to the south. Steep slopes and marked slope breaks are uncharacteristic of the primary study area and nearly eighty-eight percent of the town sits on slopes of less than thirty percent, as shown on Figure 3-1.

Paradise occupies a large southerly trending ridge which generally ranges about 1,000 feet higher than the intervening steep canyons. Development has concentrated principally on south-sloping Paradise Ridge, which is defined by steep canyons: the West Branch of the Feather River drainage to the east; and the Butte Creek-Little Butte Creek drainage to the northwest. While some stream erosion has partially dissected the ridge surface, the overall aspect of this surface is one of generally rounded low hills and terrace-like low ridges. The major access roads to the community tend to follow the topography; however, the network of roads within the town is less influenced by topography.



SLOPE **FIGURE 3-1**

3.2 GEOLOGY/SEISMICITY

The study area is located somewhat intermediate between the Cascade Geo-Province to the north and the Sierra Nevada Geo-Province to the south. The geologic characteristics of both systems are manifested in the terrestrial character of the Paradise region. While the Cascade system is primarily composed of Cenozoic (or geologically newer) volcanic rocks including Pliocene intrusives, the geologically older Sierra Nevada system is characterized by massive intrusions of Mesozoic granite into various layers of overlying rocks of varied origin. The geologic composition of the study area reflects a history of volcanism, tectonic uplift, periods of marine inundation, and erosional and depositional forces which have shaped the current character and distribution of the regional terrestrial strata.

The majority of the Paradise study area is underlain by Pliocene volcanics with those of the Tuscan Formation dominating the northern, southern, and southeastern areas; basaltic deposits encompassing a major portion of the town proper; and other geologic types including pre-Cretaceous deposits of Paleo-Mesozoic undifferentiated rocks and marine sandstone and slate of the Monte De Oro Formation, Cretaceous marine sandstone, conglomerate, and silistone of the Chico Formation, and more recent alluvium of the Modesto Formation, occurring in the western, northeastern, and southeastern portions of the Study Area. The Pliocene volcanics are several hundred feet in thickness but have been deeply trenched by erosion from Butte Creek and the Feather River. In the northwestern portion of Paradise (along the general Butte Creek stream channel), a narrow, bow-shaped extension consisting of pre-Cretaceous metamorphic rocks with small outcroppings of Mesozoic ultrabasic intrusives has been exposed by the erosional forces of Butte Creek. The coincidence of these varied localized formations of the Sierra Nevada and Pliocene volcanics associated with the Cascade system provides for considerable complexity in the local soil types of the western and northeastern portions of the secondary study area.

The Paradise study area is a portion of an area characterized as a westward downtilted fault block which underwent massive uplift during the Cretaceous period. Subsequent erosion of this block along with the adjacent thick volcanics of the Cascade system have created canyons and gold-bearing channels. This erosion has removed metallic gold from the metamorphic rocks and deposited it in gravelly streambeds. The gold mining ventures of the Paradise area correspond to the mining of these gravels. Ancient stream beds and surrounding areas were covered by volcanic outpourings during the Pliocene and exhumed somewhat later during more recent erosion by such streams as the Feather River, Butte Creek and Chico Creek, whose contemporary channels frequently intersect older stream channels lying atop the metamorphic formations. These processes, along with landslide and mudflow activities, have formed the present geological foundation of the study area which include volcanic rocks, metamorphic rocks, old gold-bearing channels and recently excavated deposits of sand and gravel. Other than the localized and heavily worked gold-bearing gravels, the Paradise region is not presently characterized as a heavily mineralized zone. There are no current mining operations in Paradise and the past gold mining period has ended, leaving numerous abandoned gold mines, including the Bader Mine, on the periphery of northeast Paradise.

The study area is located in an area of relatively low seismic activity and consequently has been accorded a category of low potential earthquake hazard (Geomechanics, 1980; Guyton and Scheel, 1974; *Butte County General Plan, Seismic Safety Element*, 1977). Such categorization must be made cautiously given the generally high level of seismicity for most parts of California and the location of Paradise within the

Cascade-Sierra Nevada Provinces. Paradise lies in an upland region whose very existence is due primarily to the active mountain-building processes of volcanism and uplifting along fault zones.

The only major comprehensive study of the earthquake hazard in northeastern California carefully considered the record of low seismic history against the need for accurate planning (Guyton and Scheel, 1974). The approach used in this study was to catalog all known earthquake activity by locating the epicenters of the quakes as well as the relative magnitude of each event. Although it was concluded that the past seismic history of a region is the most objective measure of possible future seismic activity, it is difficult to assess future earthquake activity since existing seismic risk maps of California are inadequate.

A more recent study of the seismicity of the Paradise area (Geomechanics, 1980) maps both the fault zones and the epicenters of earthquakes that have occurred near Paradise since 1934. There were fifty-four earthquakes ranging between 4.0 and 6.9 in magnitude on the Richter scale during the period 1934 - 1980. Of this total only five were of magnitude 6.0 or greater. Two earthquakes of relatively large magnitude have occurred relatively close to Paradise; the Ghost earthquake of February 8, 1940, with a magnitude of 5.7 and the Oroville earthquake of August 1, 1975, with a magnitude of 5.7. The former earthquake had an epicenter roughly twenty-five miles north-northeast of Paradise and the latter earthquake had an epicenter about twenty-four miles southwest of Paradise on the newly discovered Cleveland Hills Fault near Oroville (see Table 3-1).

Fault Zones

The Pacific tectonic plate is forcing itself under California and is moving north. This enormous pressure has caused upthrust faulting that has interrupted the old tertiary channels and stream beds. People in California generally are aware of major faults, such as the San Andreas fault. What is not generally understood is that California contains many thousands of minor faults. In some places in and around Paradise the tertiary channels are faulted as much as five or six times within one mile. Within the Paradise area there are many faults that can be identified and others that are believed to be in existence that have not located.

As the water percolates down these tertiary channels the flow is interrupted when the water encounters a fault. If the upstream portion of the channel is higher than the downstream portion, the water can, and sometimes does, cross the fault and continues in the lower (downstream) portion of the channel. Also, as sometimes happens the water will continue down the fault for many thousands of feet. if on the other hand, the downstream side of the channel is higher than the upstream portion of the channel this creates an underground dam. It is not uncommon for these underground dams to be many miles in length (thirty-sixty miles) and measure from just a few feet to several hundred feet in vertical upthrust. In some cases where there is a minor upthrust fault, the water may backup and cross over the fault, as crossing a small dam and continue percolating downstream. On larger upthrust faults of several hundred feet the water will either go down the fault for several thousands of feet, or if the fault is sealed at that point the water will follow the fault downstream until an opening in the fault is reached. At this point the water will again go down thousands of feet.

The fault zones that may produce seismic activity with an impact on Paradise are listed in Table 3-3 and indicated on Figure 3-2. The five known fault zones that could affect Paradise include the relatively short

Cleveland Hills fault, the Honey Lake fault, the Paradise fault, the Magalia fault and the Melones fault. The Paradise and Magalia faults are approximately six to seven mile fault zones which dissect the northeastern portion of the secondary study area. Although various researchers have disagreed over the relative extent and significance of the Magalia fault , more recent investigation and field surveys have indicated that the Magalia fault is geographically confined to the Magalia-DeSabla region (Dudley, 1988). While no historic evidence of surface displacement on these faults exists, some evidence suggests geologically recent activity along these faults (Dudley, 1988). The Melones fault zone is located roughly thirty-five miles east of Paradise. The fault is in excess of 200 miles in length and may represent a local segment of a more extensive central Sierra fault system. Most researchers accord the maximum credible earthquake along the Melones fault zone to be of magnitude 8.15 - 8.25 on the Richter scale, a range similar to the extensive San Andreas fault zone located over 130 miles to the west. A short fault approximately sixty miles east of Paradise, the Russell Valley fault, has not produced earthquakes affecting Paradise.

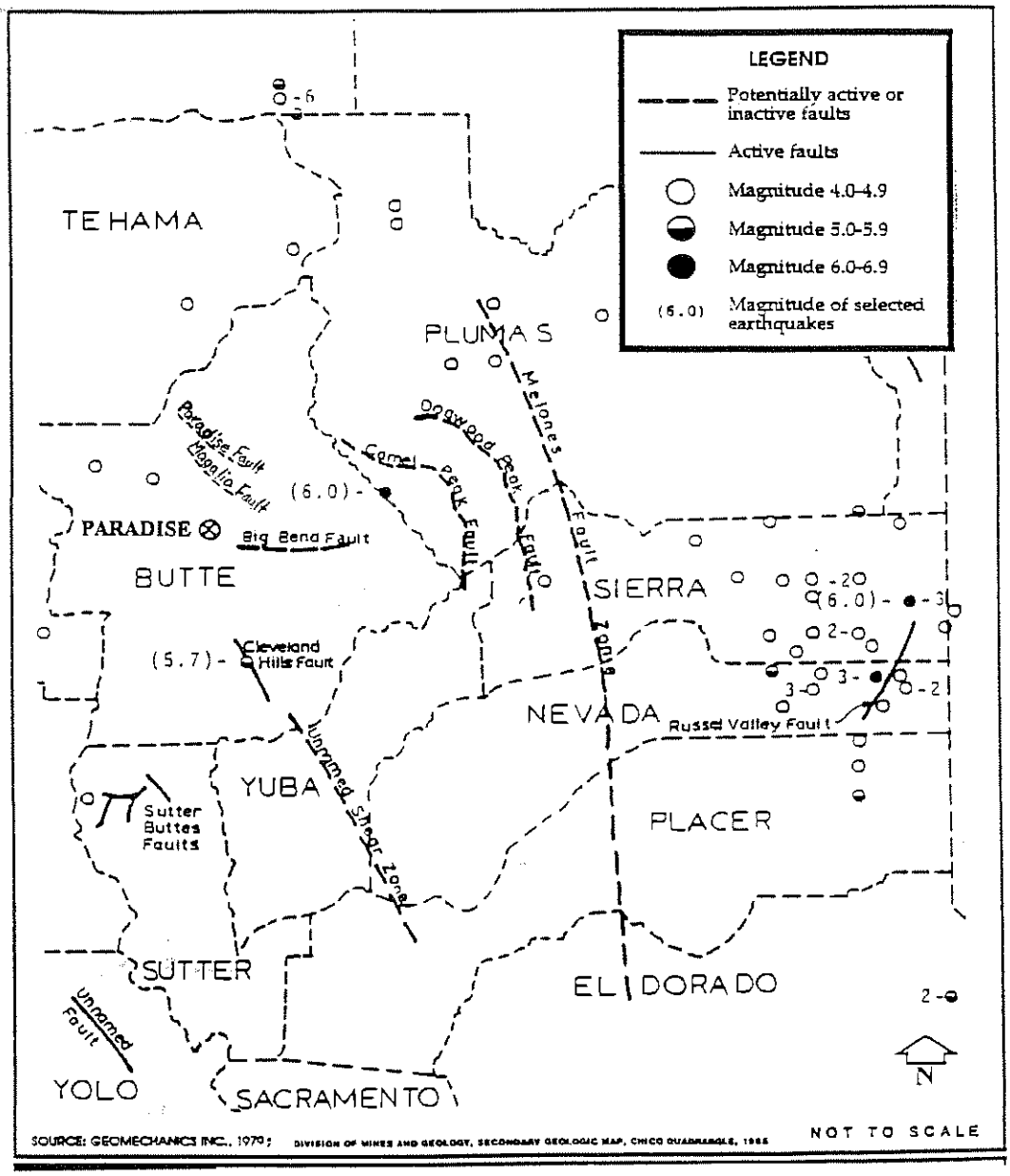
These data indicate that, for the most part, known fault systems in the Paradise region are somewhat short and are unlikely to yield earthquakes of large magnitude. While long and quite active fault systems are located in the northeastern California region, these systems are somewhat distant from Paradise and have not caused large earthquakes within historic times. Previously unknown fault zones may, however, produce locally damaging earthquakes, or a large magnitude earthquake could occur along a major regional fault zone such as the Melones or the Honey Lake fault. Additionally, although the Paradise and Magalia faults within the study area are considered inactive, the potential for earthquakes of unknown magnitude along these fault zones is not quantifiable.

The Paradise *Multihazard Disaster Plan* states that earthquakes of the magnitude of 6.9 on the Richter scale should be anticipated and considered when designing hazard plans. The effects of an earthquake will be further aggravated by aftershocks and by the secondary effects of further damage to structures, fires and possible landslides. The time of day and season of the year will have an effect on the overall damage throughout the Town of Paradise.

TABLE 3-1
SIGNIFICANT EARTHQUAKES
AFFECTING PARADISE STUDY AREAS

Date	Richter Magnitude	Approximate Location From Paradise	Modified Mercalli Intensity [1]
12/27/1869		Oroville	VIII (Oroville)
01/24/1875		20 miles S	VI (Butte)
02/08/1940	5.7	10 miles S	VI (Paradise)
11/18/1942		NE of Chico	VI (Stirling City)
04/20/1945		Paradise	VI (Paradise)
07/07/1946	5.0	48 miles NE	VI (Mill Creek)
08/21/1949	4.5	24 miles NE	IV (Butte)
03/20/1950	5.5	30 miles NE	V (Paradise)
05/24/1966	4.6	22 miles SE	
04/29/1968	4.7	61 miles SW	VI (Chico)
08/01/1975	5.7	24 miles SE	IV-V (Paradise)

[1] For explanation of Modified Mercalli Intensity Scale, see Table 3-2.



EARTHQUAKE EPICENTER AND FAULTS **FIGURE 3-2**

TABLE 3-2
MODIFIED MERCALLI INTENSITY SCALE OF 1931[1]
(1956 version)[2]

I.	Not felt. Marginal and long-period effects of large earthquakes
II.	Felt by persons at rest, on upper floors, or favorably paced.
III.	Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.
IV.	Hanging objects swing. Vibration like passing of heavy trucks or sensation of a jolt like a heavy ball striking the walls. Standing motor cars rock. Windows, dishes, doors rattle. Glasses clink. Crockery clashes. In the upper range of IV, wooden walls and frames creak.
V.	Felt outdoors, direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate.
VI.	Felt by all. Many frightened and run indoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knick knacks, books, etc., off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and masonry D cracked. Small bells ring (church, school). Trees, bushes shakes visibly, or heard to rustle.
VII.	Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to masonry D including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices also unbraced parapets and architectural ornaments. Some cracks in masonry C. Waves on ponds; water turbid with mud. Some slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.
VIII.	Steering of motor cars affected. Damage to masonry C; partial collapse. Some damage to masonry B; none to masonry A. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes.
IX.	General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. General damage to foundations. Frame structures not bolted, shifted off foundations. Frames cracked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluviated areas sand and mud ejected, earthquake foundations, sand craters.
X.	Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.

XI.	Rails bent greatly. Underground pipelines complete out of service.
XII.	Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air.

Masonry A, B, C, D. To avoid ambiguity of language, the quality of masonry, brick or otherwise, is specified by the following lettering.

- Masonry A. Good workmanship, mortar, and design, reinforced especially laterally, and bound together by using steel, concrete, etc., designed to resist lateral forces.
- Masonry B. Good workmanship and mortar, reinforced, hut not designed in detail to resist lateral forces.
- Masonry C. Ordinary workmanship and mortar, no extreme weaknesses, like failing to lie in at corners, but neither reinforced nor designed against horizontal forces.
- Masonry D. Weak materials, such as adobe, poor mortar, low standards of workmanship; weak horizontally.

[1] Original 1931 version in Wood, H. O. & Naumann, F. 1931. Modified Mercalli intensity scale of 1931 *Seismological Society of American Bulletin* v 53 No. 5 p 979-987.

[2] 1956 version prepared by Charles F. Richter in *Elementary Seismology*, 1958 p 137-138. W. H. Freeman & Company

TABLE 3-3
SEISMIC POTENTIAL OF FAULTS AFFECTING PARADISE

Source of Ground Motion	Maximum Credible Earthquake	Distance from Site (miles)	Maximum Anticipated Bedrock Acceleration (g)	Predominant Period of Motion (bedrock)	Duration of Shaking (seconds)	Remarks
Camel Peak Fault (46± miles long)	7.4	20	.26	0.35	30	Inactive
Cleveland Hills Fault (3± miles long)	6.5	24	.16	0.45	18	Active
Unnamed Shear zone along front of Sierra Nevada	7.2	25	.20	0.35	30	Apparently Inactive
Melones Fault Zone (200± long)	8.25	34	.23	0.48	50±	Potentially Active
Unnamed fault near Nelson (15± miles long)	6.1	15	.18	0.25	12	Inactive
Sutter Buttes Faults (6 small faults; 2-9 miles long)	5.4 - 5.8	39	.07	0.27	10	Potentially Active
Unnamed fault near Dunnigan (14± miles long)	6.7	66	.05±	0.43	20	Potentially Active
Midland-Sweitzer[1] (80± miles long)	7.7	69	.07	0.55	25	Partially Active
Coast Range Thrust[1] Zone (200± miles long)	8.25	51	.15	0.55	60	Inactive

Source of Ground Motion	Maximum Credible Earthquake	Distance from Site (miles)	Maximum Anticipated Bedrock Acceleration (g)	Predominant Period of Motion (bedrock)	Duration of Shaking (seconds)	Remarks
Big Bend Fault (14± miles long)	6.7	2	.67	0.30	20	Inactive
Willow Fault[1] (30± miles long)	7.2	30	.16	0.35	30	Inactive
Dogwood Peak Fault (48± miles long)	7.4	26	.18	0.36	30	Inactive
Honey Lake Fault[1] (32± miles long)	7.4	70	.07	0.50	30	Potentially Active
Hayward-Calaveras, Concord, Healdsburg-Robers Creek and Green Valley Faults[1]	7.6±	100 - 120±	0.5±	0.70±	35	Active
San Andreas Fault Zone[1] N Section (200+ miles long)	8.25	130+	0.5	0.90±	70	Active
Russell Valley Fault	6.5	80	.05	0.4	18	Active
Paradise Fault (4.5-8 miles long)	NA2	6.5	NA	NA	NA	Inactive
Magalia Fault (4.5-8 miles long)	NA	3	NA	NA	NA	Inactive

Source: Geomechanics, Inc., 1979; Division of Mines and Geology, Secondary Geologic Map, Chico Quadrangle, 1965.

[1] Not depicted on Figure 3-2; too distant from Paradise

[2] Not available

Landslides

According to the draft *Energy, Natural Resources, and Recreation Element* (1989), in Butte County, landslides frequently occur on slopes greater than fifteen percent, while slopes between five and fifteen percent exhibit very few landslides. Map III-1 of the *Butte County Safety Element* (1977) depicts relative amounts of landslide unit risk. Paradise and the surrounding study area are rated as having a low landslide potential. It is noted that detailed analysis of the complex interrelationships between the governing factors is needed to predict the stability of a specific area, and detailed on-site investigations are recommended to assess site-specific risks. Seismic shaking greatly increases landslide potential. The *Multihazard Disaster Plan* reports that the Feather River Canyon slope, along the northeast boundary of the town, has a lot of shale and appears unstable when disturbed.

Subsidence

The primary cause of subsidence in Butte County is groundwater withdrawal, according to the draft *Energy, Natural Resources, and Recreation Element*. However, areas of potential subsidence in the county are confined to the valley floor and include local areas of heavy groundwater withdrawal and several producing gas fields. These areas are illustrated in Map III-1 of the *Butte County Safety Element,* and the areas with the greatest subsidence potential extend about two miles north and south of Chico and in a one-mile radius around Gridley. Therefore, it is reasonable to assume that the potential for ground subsidence within the study area is low.

Liquefaction

Liquefaction occurs when there is a sudden but temporary increase in the fluid pressure between the soil grains, caused when the weight of the overlying soil or structure is temporarily supported by the water and not the soil grains. Map II-2 of the *Butte County Safety Element* illustrates areas of low, moderate and high liquefaction potential. The Paradise study area has been determined to have a generally low potential for liquefaction because of the soil's diverse particle size. The *Butte County Safety Element* cautions that the map must be considered approximate and invalid for direct determination of liquefaction potential on a specific site.

Dam Inundation Hazards

According to the draft *Butte County Energy, Natural Resources, and Recreation Element* (1989), there are currently twenty-four dams in Butte County which are under the jurisdiction of the California Division of Dam Safety. Two of these dams are above the Town of Paradise, within the secondary study area, on Paradise and Magalia reservoirs on Little Butte Creek. These dams are inspected annually by the state. Because there are no known geologic hazards in the vicinity, and the dams are inspected annually, it is reasonable to conclude that dam inundation hazard is low.

Volcanics

Mount Lassen, located approximately twenty-three miles north of Butte County, is considered to be one of the few active volcanos in the continental United States. According to the draft *Energy, Natural Resources, and Recreation Element*, while geologic hazards do exist in the Lassen Park area, the possibility of mudflows, flowing avalanches, or volcanic ash endangering Butte County is very remote, based upon historical and geological data.

According to the Paradise *Multihazard Disaster Plan*, though most of the eruptions in the Lassen Peak area have been small, it is believed that these volcanoes are capable of much larger eruptions, similar to those at Mount Saint Helens. A repeat eruption could be expected within the next one hundred years, with the severity still unknown at this point. The Town of Paradise may be within the range of ashflow or ashfall of such an eruption.

3.3 SOILS

Recent U.S. Department of Agriculture, Soil Conservation Service soil survey data for Butte County is not available. The USDA Bureau of Chemistry and Soils conducted a soil survey of portions of the county in the 1920s. The *Soil Survey of the Chico Area, California*, published by the USDA-BCS in 1929, classifies the majority of the primary and secondary study areas as Aiken clay loam soils and much of the surrounding areas as "scabland" and "rough broken and stony land."

The California Department of Forestry, in cooperation with the USDA Soil Conservation Service and National Forest Service, has conducted extensive photo interpretation and field surveys to compile comprehensive soil-vegetation maps for areas throughout numerous counties statewide, including those in the Paradise study area. The following discussion is based primarily on information developed through that program.

The complex geologic character of the Paradise area is reflected in a varied and even more intricate soil composition. A total of thirty-three distinct soil series comprise the primary and secondary study areas, with fifteen and thirty different series in each area, respectively. Soils of the Aiken series dominate the primary and northern portion of the secondary study areas. Soil composition is more complex and variable adjacent to stream channels of the Little Butte and Middle Butte Creeks (reflecting erosion and exposure of distinct parent materials). The southern third of the primary study area and the southern portion of the secondary study area are composed of differing soil types and dominated by soils of the Toomes, Guenoc, and Pentz series. Soils of the Supan series are predominant in the western portion of the secondary study area along the northwestern town limits. A complete list of soil series which comprise the primary and secondary study areas, along with their areal extent and physical characteristics, is included in Table 3-4. Soils of the primary and secondary study areas are mapped in Figure 3-3.

Aiken clay loam has been generally characterized as granular, moderately deep, with slow permeability, good drainage characteristics, and medium suitability for timber production. While the information in Table 3-4 indicates that its erosion potential is moderate to very high, the Butte County *Seismic Safety Element* (1977) states that its erosion potential is low. This series ranges from approximately 5 to 11 feet in depth and contains varying amounts of stones and other rock fragments. The parent material of this soil type is basic volcanic rock with some metamorphic layers encountered at depths of twelve to twenty-five feet. Dispersed throughout all soil horizons of Aiken clay loam are hard, massive boulders of weathered andesite (derived from the original volcanic material). Soils of the Toomes, Guenoc, and Pentz series share certain physical characteristics in that they are well-drained, moderately permeable, with slight to moderate erosion potential. Supan series soils are unique in having been derived from secondary volcanic landslide-mudflow parent materials. However, in their basic physical characteristics and drainage/permeability behavior, they closely resemble other soil types of the Paradise area. Despite the varied soil composition of the primary and secondary study areas, certain physical characteristics are generally shared by all soil series within the region. Soils are generally clay, loam, clay loam, or may be gravelly or sandy clay or loam. They have slow to moderate permeability, are well drained, and have moderate to very high erosion potential.

There has been some alluviation (deposition of sediment) in the various drainage depressions and rill networks atop the main ridge. In these drainage systems pockets of silty clay residual soils have formed a somewhat impervious alluvial layer. This condition, while not extensive, has served in a minor way to decrease channel percolation and to increase the potential for flooding along these drainage courses. Other than these small pockets of shallow alluviation, the Paradise-Magalia area is notable for its lack of soil types derived from recent alluvial deposition.

Expansive Soils

According to the draft *Energy, Natural Resources and Recreation Element of the Butte County General Plan (1989),* expansive soils exist over a majority of Butte County, as depicted on Map III-3 of the *Butte County Safety Element* (1977). Expansive soils have a potential for shrinking and swelling with changes in moisture content. According to the draft *Energy, Natural Resources and Recreation Element*, soils with no or low expansion potential are found generally along stream valleys and on steep mountain slopes. Soils of high expansion potential are found in the nearly level areas of the Sacramento Valley around the population centers of Chico, Oroville, Biggs and Gridley.

Soil Erosion

According to the *Butte County Safety Element*, erosion may be expected in Butte County where protective vegetation is removed by construction, fire or cultivation. According to the 1967 *Report and General Soil Map of Butte County* prepared by the U.S. Soil Conservation Service, there are five classes of erosion hazard, as shown in Table 3-5. Soils of high erosion potential are shown on Map III-2 of the *Butte County Safety Element*. The information in Table 3-5 may also be compared with Figure 3-1, Slope, to determine general locations of areas which may have high erosion potential.

TABLE 3-4
SOIL SYMBOLS AND SOME GENERAL CHARACTERISTICS OF SOIL SERIES MAPPED
(Note all 5 pages of table)

Soil Series Symbol	Soil Series Name	Occurrence (Study Area) 1°	Occurrence (Study Area) 2°	Areal Extent (%)	Depth (inches)	Texture Surface/ Subsurface	Parent Material	Relief and Slope (%)	Permeability	General Drainage	Erosion Hazard
147	Conejo		X		40-80	Heavy clay loam/clay loam	Mixed alluvium	Nearly level to sloping (0-30)	Moderate slow	Well to moderately well	Slight
200	Unclassified on lower alluvial planes and terraces		X	<1	NA	NA	NA	NA	Moderate	Well	Slight
700	Colluvial land, rock outcrop, rockland (mixed rock)	X	X	1	NA	NA	NA	NA	Impermeable to rapid	Excessive	Slight to high
711	Aiken	X	X		60-140	Loam/clay	Basic volcanic rock	Gently sloping to steep (0-50)	Slow	Well	Moderate to very high
7118	Boomer		X		40-80	Gravelly loam/clay loam	Greenstone	Nearly level to very steep (0-70)	Moderate	Well	Moderate to very high
7118m	Boomer (Schist)		X		40-80	Gravelly loam clay	Chlorite schist	Nearly level to very steep (30-70)	Moderate	Well	Moderate
7124	McCarthy	X	X		20-40	Cobbly sandy loam/cobbly sandy loam	Basic igneous tuff and breccia	Gently sloping to very steep (0-70+)	Moderately rapid	Well	Slight
7151	Challenge		X		40-120	Clay loam/clay	Greenstone	Moderately steep to very steep (0-50)	Slow	Well	Slight

Soil Series Symbol	Soil Series Name	Occurrence (Study Area) 1*	2*	Areal Extent (%)	Depth (inches)	Texture Surface/ Subsurface	Parent Material	Relief and Slope (%)	Permeability	General Drainage	Erosion Hazard
7153	Englebright		X		20-40	Clay loam/clay	Basic igneous rock	Strongly sloping to extremely steep (0-70)	Moderate	Well	Medium to very high
7153b	Englebright (basalt)	X			20-40	Clay loam/clay	Basalt	Strongly sloping to extremely steep (0-30)	Moderately slow	Well	
7153k	Englebright (greenstone)	X	X		20-40	Clay loam/clay	Meta-volcanic rock	Strongly sloping to extremely steep (0-70)	Moderate	Well	
7153m	Englebright (schist)		X		20-40	Clay loam/clay	Schistone rock	Strongly sloping to extremely steep (0-70)	Moderate	Well	
717	Cohasset	X	X		40-80	Loam/clay loam	Basic igneous rock	Gently sloping to steep (0-50)	Moderate	Well	Moderate to very high
7187	Cobleigh	X	X		40-60	Gravelly loam/clay	Andesitic rock	Gently sloping to moderately steep (0-50)	Moderately slow	Well	Slight to moderate
724	Ishi Pishi		X	0'	29-64	Gravelly loam/clay	Ultramafic rock	Steep (0-50)	Slow	Well	Moderate
726	Dubakella		X		14-28	Stony loam/very gravelly clay	Serpentine rock	Sloping to steep (0-70+)	Slow	Well	Moderate to very high
728m	Neuns (schist)		X		20-40	Gravelly loam/stony loam	Schistose rock	Steep to very steep (0-70+)	Moderate	Somewhat excessive	Moderate

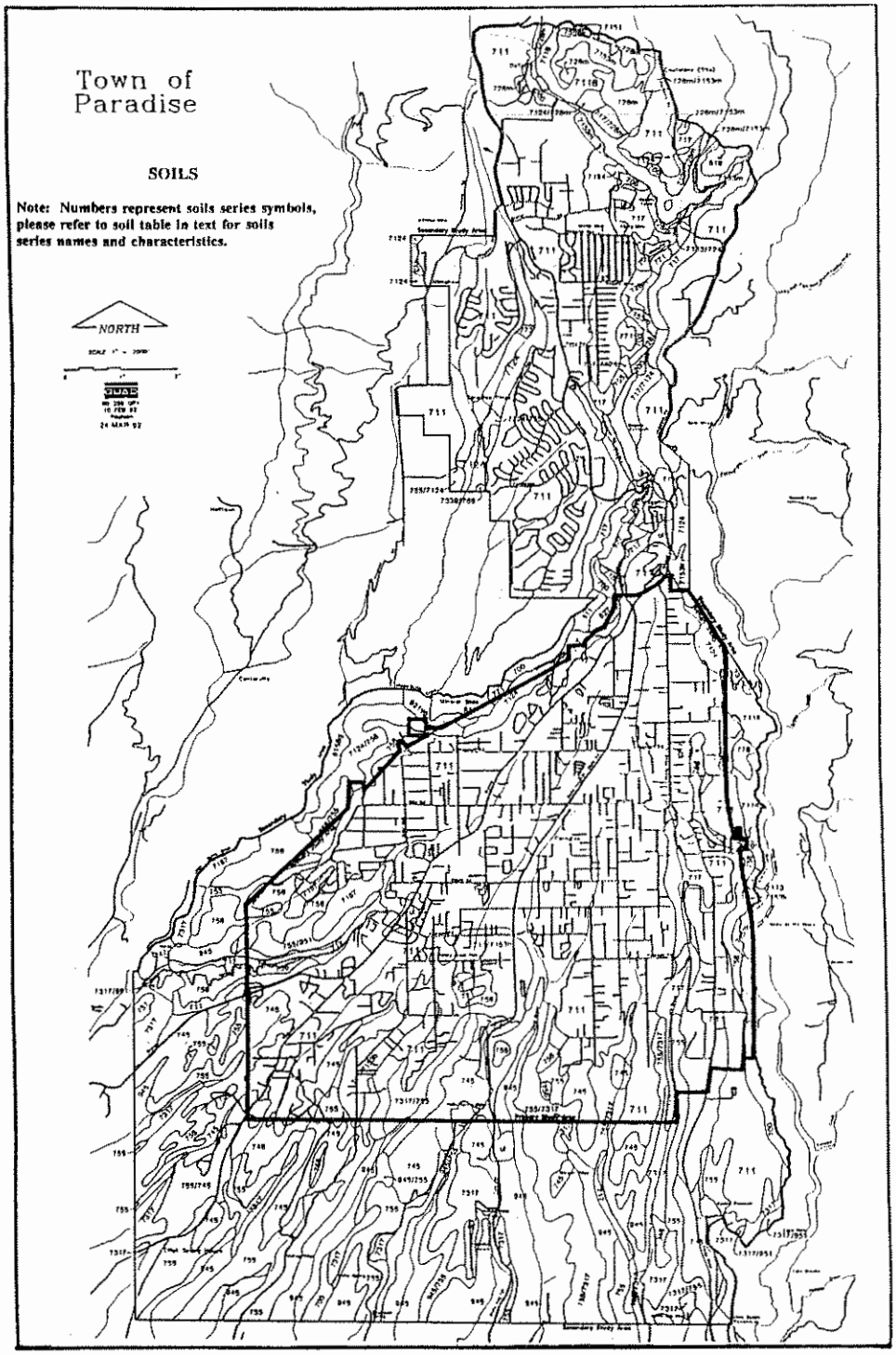
Soil Series Symbol	Soil Series Name	Occurrence (Study Area) 1°	2°	Areal Extent (%)	Depth (inches)	Texture Surface/ Subsurface	Parent Material	Relief and Slope (%)	Permeability	General Drainage	Erosion Hazard
7317	Stover	X	X		20-60	Loam/heavy clay loam	Volcanic tuff-breccia	Gently sloping to steep (50-70)	Moderate	Well	Moderate
7339	Coon		X		19-30	Clay loam/clay loam	Fractured basalt	Nearly level to steep (50-70)	Slow	Well	Slight
745	Guenoc	X	X		20-40	Stony clay/gravelly cobbly clay	Basic igneous rock	Sloping to very steep (0-30, 50-70)	Moderately slow	Well	
755	Toomes	X	X		4-20	Gravelly loam/gravelly loam	Basalt	Sloping to very steep (0-70)	Moderate	Well	Slight
756	Supan	X	X		20-40	Loam/clay	Volcanic braccia	Gently sloping to steep (0-70)	Slow	Well	Moderate
756l	Supan (Landflow)	X			20-40	Loam/clay	Landflow of basic volcanic rock	Gently sloping to steep (0-70+)	Moderately slow	Well	Moderate
7598k	Racerberry (greenstone)		X	<1	20-40	NA	Greenstone	Rolling (30-50)	Slow	Moderately Well	High
771	Henneke		X		10-20	Gravelly loam/very gravelly clay loam	Serpentine	Moderately sloping to extremely steep (0-70)	Moderately slow	Well	Moderate

Soil Series Symbol	Soil Series Name	Occurrence (Study Area) 1°	2°	Areal Extent (%)	Depth (inches)	Texture Surface/ Subsurface	Parent Material	Relief and Slope (%)	Permeability	General Drainage	Erosion Hazard
773	Iron Mountain		X		5-20	Gravelly sandy loam/--	Volcanic breccia	Steep (30-50,70+)	Moderately rapid	Well	Moderate
779	Stonyford	X			12-28	Gravelly clay loam/gravelly clay loam	Greenstone	Hilly to very steep (0-70+)	Moderately slow	Somewhat excess-ive	Moderate
811	Marpa		X		22-40	Very gravelly heavy loam/very gravelly clay loam	Meta-sedimentary rock	Steep to very steep (0-70+)	Moderate	Well	Moderate
8156g	Casabonne (conglomerate)		X		40-60	Gravelly loam/clay loam	Conglomerate	Sloping to very steep (30-70)	Moderately slow	Well	High
816	Sites		X	<1	60-80	Loan/clay	Metabasic & metasediment ary rock	Gently Sloping to steep (30-70)	Slow	Well	Moderate
827	Mariposa		X		12-35	Gravelly silt loam/gravelly heavy silt loam	Meta-sedimentary rock	Hilly to very steep (0-70)	Moderate	Well	Moderate to very high
921vg	Hely (variant conglomerate)		X		20-48	Gravelly sandy loam/gravelly heavy loam	Weakly consolidated conglomerate	Steep to very steep (50-70)	Rapid	Well	Very high

Soil Series Symbol	Soil Series Name	Occurrence (Study Area) 1°	2°	Areal Extent (%)	Depth (inches)	Texture Surface/ Subsurface	Parent Material	Relief and Slope (%)	Permeability	General Drainage	Erosion Hazard
945	Pentz	X	X		<20	Sandy loam/sandy loam	Andesitic tuff	Rolling to hilly (0-70)	Moderate	Well	Moderate
946	Peters		X		6-24	Clay	Andesitic tuff	Nearly level to steep (0-50)	Slow	Well	Slight
951	Inks	X	X		10-20	Gravelly loam/very gravelly clay loam	Strongly commented tuff	Gently sloping to steep (0-50)	Moderate	Well	Moderate

Source: California Dept. of Forestry and Fire Protection, Soil-Vegetation Survey, 1979, 1980.

[1] These soil series are also represented in areas which the CDF classified as mixed composition. Areas classified as mixed composition (i.e. 7124/728m) represent areas where specific mapping was unavailable and contours represent mixed areas whose principal soil series is denoted by the first soil series number and whose secondary soil series is denoted by the second number. These areas (with their associated areal extent) include: 711/7153b, (2%), 7124/728m (<1%), 7124/755 (<1%), 7124/756 (<1%), 7153/724 (<1%), 717/7124 (<1%), 717/728m (<1%), 7317/755 (<1%), 7317/951 (<1%), 7339/755 (<1%), 745/755 (<1%), 755/7124 (<1%), 755/7317 (3%), 755/745 (1%), 755/951 (<1%), 756/755 (<1%), 756/951 (<1%), 945/755 (1%).



SOILS **FIGURE 3-3**

TABLE 3-5

SOIL EROSION HAZARD CLASSIFICATIONS

CLASS	DESCRIPTION
None	Slopes less than two percent, with subsoil permeability ranging from moderately rapid to rapid
Slight	Slopes of two to nine percent with permeability ranging from moderately rapid with weak soil profile development
Moderate	Slopes of nine to thirty percent with soils of no profile development to weak profile development, and slopes of nine to fifteen percent with moderate profile development
High	Slopes of thirty to fifty percent in soils with no profile development to weak profile development, and slopes of fifteen to thirty percent on soils with moderate to strong profile development
Very High	Slopes in excess of fifty percent on soils with no profile development, and slopes over thirty percent with moderate to strong soil profile development

Source: U.S. Soil Conservation Service, Report and General Soil Map of Butte County (1967), from Butte County draft Energy, Natural Resources, and Recreation Element, (1989).

4.0 CLIMATE AND AIR QUALITY

4.1 CLIMATE

The climate of Paradise may be characterized as an inland Mediterranean climatic type. This climate has warm to hot summers and mild to cool winters with a distinctive winter precipitation regime. The long, dry summer period is somewhat unique to the Mediterranean climate yet is a feature shared commonly with most of California. The winter period is characterized by the passage of mid-latitude storms moving westward from the North Pacific Ocean and bringing moist, unstable air masses into interior Northern California. The actual number of storm centers of low pressure is quite different from year to year and is the primary determinant of precipitation variability from one year to another.

Since these storm systems are basically passing along the North American Polar Front under the influence of a strong westerly wind movement, their passage during winter is a time of considerable air mass interaction. Cold, dry air may flow southward across Northeastern California both during and immediately after the passage of the storm centers. Additionally, a strong southerly flow brings moist, unstable maritime air into the Paradise region from the Pacific Ocean by way of the San Francisco Bay and the Sacramento River Valley. This unstable air brings periods of overcast conditions accompanied by drizzly weather and cooler temperatures which can last for several days. North-south fluctuations in the mid-latitude and subtropical jet streams have been noted to have some effect upon the trajectories of these storm systems as they pass across Northern California.

Precipitation from these storms increases from west to east, with lower totals in the Sacramento Valley and Western Sierran foothills, to much higher totals at higher elevations on the western side of the summit. Reflective of this pattern, most stations such as Chico and Oroville receive between twenty-five/thirty inches of precipitation annually; stations such as Paradise, Forest Ranch, and Grass Valley receive between forty-five/fifty inches; and upland stations such as DeSabla, Brush Creek, and Strawberry Valley receive between sixty/seventy inches per year. Table 4-1 shows the annual precipitation totals for Paradise at an elevation of 1,750 feet above sea level, and for DeSabla at an elevation of 2,563 feet. The average monthly precipitation varies greatly in Paradise (Table 4-2).

According to the Paradise *Multihazard Disaster Plan*, Paradise can experience a major storm at any time during the rain and snow season. The Town of Paradise has been hard hit by major storms in the past. When snowfall occurs in combination with warmer temperatures, a heavy, wet snow is produced which creates the potential for damage to buildings and other snow related hazards. A major snowstorm in 1990 produced significant damage to both public and private property, as well as citizen casualties and injuries.

In general the winter months are cool, overcast and periodically dominated by moist maritime air masses whose passage across Northern California as storm systems becomes increasingly more unstable. Freezes can occur within Paradise at any time between late October and late April; however, prolonged periods of freezing temperatures are rare. Absolute minimum temperatures of 10.8 F. and 9.0 F. have been recorded during January for Paradise and DeSabla respectively. Snowfall frequently occurs during mid to late winter in Paradise. It usually does not remain on the ground long, often melting within thirty-six hours. The periods of snowfall, snow depth, and low winter temperatures are all climatological features which change rapidly within short distances of Paradise as one moves up or down in elevation.

During the winter months the Cascade-Sierra area is dominated by higher pressure as a consequence of the chilling effect of altitude coupled with a snowpack covering the surface. Cooler air tends to settle into basins and valley bottoms where radiational cooling during the relatively calm, clear winter nights can lead to low temperatures. On other occasions, radiational cooling can lead to the formation of thick fog which tends to blanket the Sierran foothills. The lower winter temperatures are also primarily responsible for the low evaporation rates during November-April, when about twenty-five percent of the annual evaporation of 53.6 inches is spread over half of the year.

The summer months are usually quite dry with less than four percent of the annual precipitation arriving in the five month period of May-September. By mid-summer, the Sacramento Valley is usually occupied by an elongated thermal high pressure ridge due to intense heating of the land surface. The retreat northward of the Polar Front is accompanied by the domination of Northern California by the North Pacific high pressure system. Warm, dry, subsiding air masses then dominate the Paradise region bringing low relative humidities and absolute maximum temperatures such as 115 F. at Oroville, 104 F. at DeSabla, and 110 F. at Paradise. The period of mid-June to late September is coincidentally the peak season of fire hazard in terms of optimal "fire weather" conditions: strong northwesterly winds; low relative humidities; low soil moisture; dry brush, grass and timber; high air temperatures; and suitable ignition conditions and temperature. The summer drought is not alleviated by the sporadic summer convectional thunderstorms which bring sporadic and unreliable amounts of warm season moisture and the danger of lightning-set wildfires to the Paradise region.

The rainfall pattern in Paradise can be characterized as one of seasonal drought. This seasonal drought can be extended to a longer term cyclical drought during periods of lower than average annual precipitation. The long term record shows that wide departures from the mean are uncharacteristic for Paradise. However, a high of ninety-six inches was recorded in 1983 and a low of 18.5 inches was recorded for 1976.

TABLE 4-1
ANNUAL PRECIPITATION TOTALS
FOR PARADISE AND DE SABLA, 1958-1989

YEAR	PARADISE[1]	DE SABLA[2]
1958	56.10	80.37
1959	30.73	45.45
1960	51.54	71.66
1961	40.37	52.82
1962	61.14	76.36
1963	48.91	61.99
1964	47.82	69.36
1965	44.63	60.02
1966	45.00	52.22
1967	51.76	66.81
1968	52.59	64.42
1969	76.43	86.26
1970	71.43	90.01
1971	27.61	41.02
1972	41.01	52.29
1973	82.84	106.82
1974	59.11	67.01
1975	50.84	63.31
1976	18.47	22.66
1977	35.09	43.95
1978	63.78	82.53
1979	62.81	75.07
1980	52.54	64.30

YEAR	PARADISE[1]	DE SABLA
1981	71.05	88.39
1982	64.72	78.02
1983	96.14	121.24
1984	39.70	44.56
1985	31.77	37.33
1986	58.98	70.59
1987	58.68	59.94
1988	44.94	46.17
1989	40.12	48.09
AVERAGE ANNUAL PRECIPITATION	52.46	65.34

Source: California Climatological Data, Monthly Summaries, 1958-1989, U. S. Department of Commerce, National Oceanic and Atmospheric Administration.

[1] Paradise Station elevation 1,750 feet above mean sea level
[2] DeSabla Station elevation 2,710 feet above mean sea level

TABLE 4-2
CLIMATOLOGICAL DATA SUMMARY
PARADISE, CALIFORNIA

MONTH	AVERAGE TEMPERATURE (FAHRENHEIT)	AVERAGE PRECIPITATION (INCHES)	AVERAGE EVAPORATION (INCHES)
January	43.7	9.3	0.7
February	46.6	15.7	0.8
March	49.7	13.3	3.4
April	52.8	4.8	4.4
May	63.2	0.3	7.0
June	71.9	0.2	8.1
July	75.0	0.3	10.2
August	76.4	0.0	9.1
September	74.9	0.0	5.4
October	65.3	2.7	3.4
November	51.0	2.5	1.1
December	44.0	7.2	0.0
ANNUAL AVERAGE	59.5	56.3	53.6

Source: California Climatological Data, U. S. Department of Commerce, National Oceanic and Atmospheric Administration. As cited in Montgomery, "Water Quality Management Plan for Paradise and Magalia," March 1979.

4.2 AIR QUALITY

Paradise lies within the Sacramento Valley Air Basin, which extends from Sacramento and Solano Counties on the south to Shasta County on the north (Figure 4-1). The air basin is generally situated in the northern portion of the Central Valley and is bounded on the west by the Coastal Range, on the north and east by the Cascade-Sierra Nevada and Siskiyou foothills and mountains, and on the south by the San Joaquin Valley Air Basin.

The primary factors affecting air quality in a given area are the quality, type and location of pollutant emissions, the topographic and geographic features of the region, and the prevailing meteorological conditions. An emission rate represents the amount of pollutant released into the atmosphere by a given source over a specified time period. It is generally expressed in units, such as pounds per hour (lb/hr) or tons per year (ton/yr). Local and regional meteorological conditions govern the transport and diffusion of emissions in the atmosphere. Wind speed, wind direction, atmospheric stability, temperature, and the presence or absence of inversions are some of the key factors which affect pollutant dispersion.

The northern Sacramento Valley Air Basin is a natural closed basin, often with poor air circulation and high atmospheric stability. The area is subject to frequent temperature inversions (a layer of cold air capped with a warm air mass), preventing dispersion of pollutants.

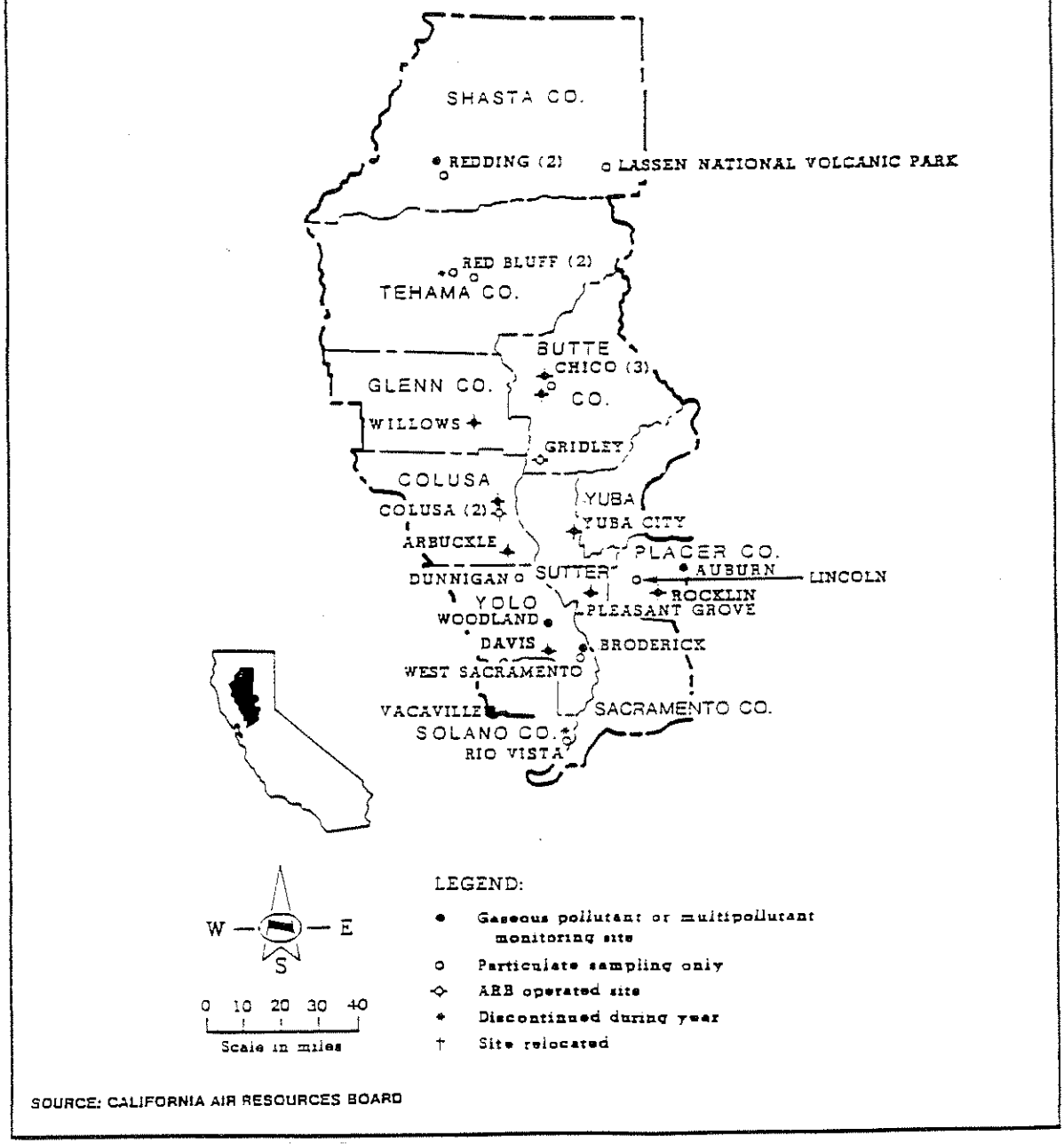
The nearest air quality monitoring stations in Butte County are in Chico [carbon monoxide (CO), nitrogen oxides (NO_x), nitrogen dioxide (NO_2), ozone and particulate matter smaller than ten microns in diameter (PM_{10})]. The Butte County Air Pollution Control District designates the Paradise area as a nonattainment area for ozone and as an attainment area for NO_2, sulfur oxides, lead and sulfates. All other categories are unclassified at this time. The Paradise area has few major stationary sources of air pollutants.

Relative to other nonattainment areas of California, emissions inventories for Butte County show low to moderate emissions of total organic gases and nitrogen dioxide. The burning of agricultural wastes and application of pesticides and herbicides on the valley floor result in hydrocarbon emissions. Agricultural activity is also a significant source of suspended particulates. Vehicular traffic emissions are the major source of CO and the primary constituent of ozone. Motor vehicles comprise the major emission source category generated within the community.

A summary of data from the BCAPCD monitoring stations from 1980 through 1989 pertaining to local pollutant monitoring and the relationship of measured pollutants in the local environment to California and the national ambient air quality standards is contained in Tables 4-3 through 4-6. However, this data should not necessarily be interpreted as having direct applicability to the Paradise area, as Paradise is above the valley floor in the foothills.

The California Clean Air Act (AB 2595, 1988) requires that each air pollution control district that is nonattainment for state ambient air quality standards for ozone or carbon monoxide prepare and submit an

attainment plan. Each plan must include a wide range of control measures which, for most areas, include transportation control measures (programs or measures with the objective of reducing vehicle trip generation and vehicle miles traveled), designed to reduce overall emissions by a net five percent per year from 1987 levels. Butte County is coordinating with other northern Sacramento Valley counties in this planning effort. Refer to Section 16.4 for a more complete discussion of this plan.



SOURCE: CALIFORNIA AIR RESOURCES BOARD

SACRAMENTO VALLEY AIR BASIN **FIGURE 4-1**

TABLE 4-3
MAXIMUM HOURLY CONCENTRATIONS FOR OZONE [1]
(ppm[2])

MONTH	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
January	.03	.04	.06	.05	.05	.04	NA[6]	.05	.06	.07	.04
February	.04	.04	.05	.04	.06	.05	.06	.06	.06	.07	.06
March	.07	.05	.04	.04	.06	.05	.07	.07	.08	.05	.08
April	.06	.08	.09	.07	.05	.07	.08	.09	.07	.10[3]	.08
May	.07	.07	.08	.07	.09	.07	.09	.08	.09	.07	.08
June	.09	.10[3]	.08	.07	.07	.10[3]	.08	.11[3]	.09	.08	.08
July	.10[3]	.09	.08	.08	.08	.10[3]	.11[3]	.09	.10[3]	.10[3]	NA
August	.09	.07	.09	.08	.08	.09	.09	.10[3]	.10[3]	.09	NA
September	.10[3]	.08	.08	.07	.08	.08	.09	.10[3]	.09	.09	NA
October	.11[3]	.08	.08	.08	.07	.09	.10[3]	.09	.10[3]	.10[3]	NA
November	.06	.04	.03	.04	.05	.07	.07	.05	.06	.06	NA
December	.07	.05	.06	.04	.05	.05	.04	.04	.06	.06	NA

STANDARDS

California	.10
1° National[4]	.12
2° National[5]	.12

Footnotes:

1. Manzanita Street, Chico, Monitoring Station
2. Parts per million
3. Denotes a violation of the California Ambient Air Quality Standard
4. National Primary Standards are the ambient Standard levels of pollutants necessary to protect the public health.
5. National Secondary Standards are the ambient levels pollutants necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
6. Data not available

Source: Summary of Air Quality Monitoring, Butte County 1980-1989, Butte County APCD; California Air Resources Board, California Air Quality Data, April 1989 - June 1990.

TABLE 4-4
MAXIMUM HOURLY CONCENTRATIONS FOR CARBON MONOXIDE[1]
(ppm[7])

MONTH	1980[2]	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
January	16	12	12	10	15	15	11	11	12	12	10
February	9	8	9	11	10	15	12	12	6	6	9
March	6	7	4	NA	5	5	7	6	6	6	6
April	5	4	5	5	5	6	5	6	6	5	4
May	3	5	6	4	5	5	4	4	4	5	5
June	3	4	4	3	3	4	NA	3	3	4	3
July	3	4	4	5	4	5	NA	5	5	4	NA
August	4	6	7	5	7	5	NA	8	8	5	NA
September	7	7	8	9	8	5	12	9	9	7	NA
October	NA[3]	10	10	11	10	9	12	15	15	12	NA
November	NA	15	11	8	12	15	11	9	9	15	NA
December	NA	17	10	14	15	20[8]	9	17	17	12	NA

STANDARDS

California	20
1° National[4]	35
2° National[5]	35

Footnotes:

1. Salem Street, Chico, Monitoring station (except 1980)
2. California State University, Chico Monitoring Station
3. Data not available
4. National Primary Standards are the ambient Standard levels of pollutants necessary to protect the public health.
5. National Secondary Standards are the ambient levels of pollutants necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
6. Denotes a violation of the California Ambient Air Quality Standard
7. Parts per million

Source: Ibid

TABLE 4-5
TWENTY-FOUR HOUR MAXIMUM CONCENTRATIONS FOR PM-10[1]
(ug/m³)[2]

MONTH	1985	1986	1987	1988	1989[6]	1990[6]
January	NA[7]	71[3]	88[3]	69[3]	82[3]	68[3]
February	NA	23	43	73[3]	46	49
March	NA	32	54[3]	28	19	33
April	NA	26	56[3]	25	36	46
May	NA	28	47	26	25	40
June	NA	48	49	46	54[3]	28
July	NA	34	48	40	35	NA
August	NA	47	69[3]	46	35	NA
September	NA	68[3]	74[3]	58[3]	53[3]	NA
October	35	79[3]	60[3]	58[3]	53[3]	NA
November	77[3]	80[3]	68[3]	37	81[3]	NA
December	76[3]	68[3]	29	100[3]	90[3]	NA

STANDARDS

California	50
1° National[4]	150
2° National[5]	150

Footnotes:

1. California State University, Chico, monitoring station except November 1989-June 1990.
2. Micrograms per cubic meter
3. Denotes a violation of the California Ambient Air Quality Standard.
4. National Primary Standards are the ambient Standard levels of pollutants necessary to protect the public health.
5. National Secondary Standards are the ambient levels of pollutants necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
6. Chico - Salem Street monitoring station, November 1989 - June 1990.
7. Data not available.

Source: Ibid

TABLE 4-6
MAXIMUM HOURLY CONCENTRATIONS FOR NITROGEN DIOXIDE[1]
(ppm[2])

MONTH	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
January	NA[6]	.06	.06	.04	.06	.06	.05	.23	.05	.06	.05
February	.06	.05	.06	.04	.06	.06	.05	.07	.06	.06	.05
March	.05	.05	.05	.04	.07	.04	.05	.06	.05	.05	.05
April	.05	.05	.05	.05	.04	.05	.05	.04	.05	.04	.05
May	.06	NA	.07	.04	.05	.05	.06	.05	.05	.04	.05
June	.05	NA	.05	.05	.08	.04	.05	.05	.04	.04	.04
July	.05	.05	.05	.06	.05	.04	.05	.05	.06	.05	NA
August	.05	.04	.06	.05	.05	.05	.08	.07	.06	.06	NA
September	.07	.05	.08	.11	.07	.04	.05	.08	.07	.08	NA
October	NA	.06	.06	.07	.05	.08	.07	.09	.10	.07	NA
November	.07	.06	.04	.05	.05	.07	.08	.06	.05	.07	NA
December	.10	.05	NA	.04	.16	.07	.08	.07	.06	.07	NA

STANDARDS

California	.25
1° National[4]	NA
2° National[5]	NA

Footnotes:

1. Manzanita Street, Chico, Monitoring Station
2. Parts per million
3. Denotes a violation of the California Ambient Air Quality Standard.
4. National Primary Standards are the ambient Standard levels of pollutants necessary to protect the public health.
5. National Secondary Standards are the ambient levels of pollutants necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
6. Data not available.

Source: Ibid

5.0 HYDROLOGICAL CONDITIONS

5.1 SURFACE HYDROLOGY

The drainage patterns of the Paradise area reflect the uniqueness of its location on a gently sloping ridge surface. The Paradise area is dominated by a somewhat continuous overland runoff flow which is organized into local rills or depressions as the runoff is collected. There is localized erosion and siltation in these depressions or swales due to slope and the topography. However, the bulk of the runoff is shunted downslope to become runoff in lower stream systems.

The Paradise area is divided into fairly distinct drainage basins. These basins are mapped in the *Master Storm Drainage Study and Facilities Plan, Paradise, California* (McCain Associates, 1980). The drainage basins serve to collect the upslope surface runoff and direct it downslope. However, in these local drainage swales the flow is intermittent and only lasts briefly following rainfall. Due to the lack of a continuous flow, the characteristics of a system of active stream erosion have not developed atop the ridge surface.

The drainage basins' bottom configuration depth of incisement is very shallow, usually less than one meter. Thus, these drainage swales lack adequate capacity to convey runoff waters from lengthy storm activity during the winter months. Since the drainage basins are long and narrow, averaging one-fourth to one-half mile wide and four to five miles long, localized flooding may occur at various points. Downslope, these drainage systems have become incised into the basement volcanic rocks and have developed steeper sides and more clearly defined channels. Many of these channels carry a perennial runoff flow.

The drainage systems often coincide with groundwater seeps and springs which serve to increase the moisture availability beyond the intermittent flows directly related to storm runoff. Consequently, the drainage depressions and their downslope channels are often thickly vegetated.

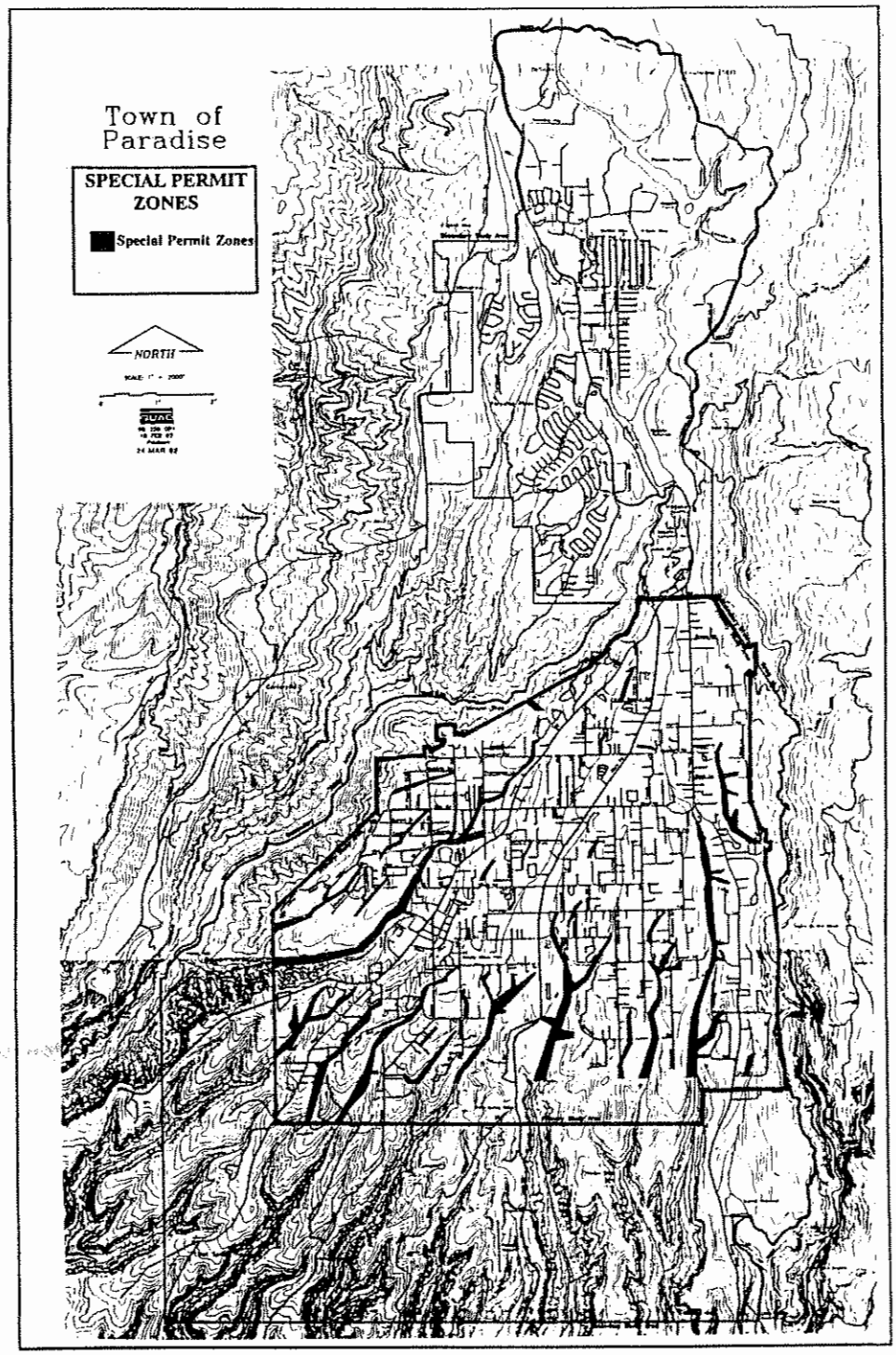
As these areas are developed, the undergrowth and grass cover is often removed and channels are randomly excavated to suit the individual owner's or developer's interest. Often when this takes place, either through lack of knowledge, lack of funds or indifference, the resulting channel is inadequate in capacity and poses a real possibility of promoting damage. While the soils and subsoils of the Paradise area do not markedly aggravate the runoff situation, they also do not prove to be highly permeable. This often results in localized flooding which can be exacerbated by such land use activities as grading operations, vegetation clearance, inattention to storm runoff from construction sites during the peak winter rainfall period, large-scale paving and the lack of a collection system for storm waters. Storm runoff arrives at the principal drainage channels through overland flow for most of the Paradise area. Very few collector systems have been constructed and the primary form of collection has been through roadside ditches.

The major public roads running north and south are situated along ridges between basins and carry runoff south until intercepted by east-west roads. The roadside ditches along these roadways tend to get quite deep and create maintenance problems for town road crews and a somewhat unsightly and dangerous condition for motorists and pedestrians.

According to the *Master Storm Drainage Study*, the area studied is situated in such a manner that it is not subject to flooding from outside sources. Unlike many towns on the valley floor, no large streams or rivers pass sufficiently close to provide any threat. Primary overland flow from storm runoff, the inefficiency of local drainage depressions and roadside ditches to carry the intermediate flow and the aggravation of runoff efficiency by human activities has created a somewhat difficult situation for the management of present storm runoff. This situation also has implications for future development projects which could create further flooding difficulties.

The *Master Storm Drainage Study* considered the possibility of recommending flood zoning of the natural drainage channels. In order to properly describe and locate the boundaries of such a zone, detailed hydrologic and hydraulic studies must be made in order to determine the actual flood stage. The study concluded that this approach is more applicable to towns adjoining major streams and rivers. It requires that extensive topographic information and hydraulic calculations be made in order to determine the actual bounds of the design flood. According to the study, the nature of the topography, and lack of major streams and stream flow data, preclude this level of detail and make flood zoning impractical.

As an alternative, the study recommended the establishment of general areas where special clearance should be required prior to construction of improvements. This approach, called "special permit zones," requires the developer or property owner to verify that adequate provisions are provided for design flows. The special permit zones are depicted in Figure 5-1. The study includes recommended design criteria within the special permit zones. The study cautions that the special permit zones do not indicate limits of flooding.



SPECIAL PERMIT ZONES **FIGURE 5-1**

5.2 WATER QUALITY

It has been reported (*Town of Paradise Wastewater Management Study, Supplementary Phase 1 Report*, 1984) that there has been contamination of small streams in or emanating from the Paradise area associated with surfacing septic tank effluent.

The layered geology beneath Paradise has led to the formation of several aquifer zones. Depending on local conditions of permeability, weathering and fracturing, the aquifers may have some hydraulic continuity. Beneath Paradise, groundwater movement is generally in a north-to-south direction, although some flow does occur toward Butte Creek and West Branch Feather River Canyons. It is estimated that there are approximately 300 privately owned wells in Paradise which supply water for irrigation and domestic uses. Most wells penetrate into the Tuscan Formation and generally are less than 200 feet in depth.

The most shallow groundwater body consists of perched water lying atop the Tuscan Formation. Influenced by seasonal precipitation and local recharge from onsite wastewater disposal systems, this perched, unconfined groundwater does not produce dependable yields of usable quantity. The underlying Tuscan Formation, however, does have weathered and permeable zones which yield significant quantities of groundwater. Based on a review of well logs for the Paradise area, the Tuscan Formation typically yields usable water at depths of less than 200 feet. Much of the water is under pressure indicating at least partial confinement of some of the water-bearing zones. The upper portions of the Tuscan Formation may hold unconfined water which receives recharge from the Paradise area and could be subject to contamination by septic systems.

Beneath the Tuscan Formation lie the auriferous channel aquifers, which contain large quantities of high-quality water. Since the auriferous, or gold-bearing, channels occur at substantial depths and underlie only limited portions of Paradise, they remain relatively untapped. Due to their depth and apparent confinement, the auriferous channels do not appear to receive significant recharge from surface water or septic systems in Paradise.

The Metamorphic Basement Complex is well consolidated with few weathered or fractured zones and thus is not expected to yield large quantities of water. Only the deepest wells in Paradise appear to penetrate this formation. Like the auriferous channels, the basement complex lies well beneath septic systems and should not be subject to contamination from on-site wastewater disposal.

Septic tank/leach line failures in Paradise do not affect water supplies distributed by the Paradise Irrigation District since its sources are outside the urban area. Local shallow wells which were dug long ago and which may still have limited use may be affected.

Factors that may affect the domestic water quality and supply for the Town of Paradise:

a. Surface water protection from siltation, contamination and other pollutants.

b. Logging operations within the Little Butte Creek watershed.

c. Development within the Little Butte Creek watershed.

d. Unauthorized land use activities within the Magalia/Paradise watershed protection zone.

e. Legal issues related to appropriation of water and associated water rights.

f. Regulations concerning treatment requirements of surface water.

g. Long-term precipitation averages (e.g. drought conditions).

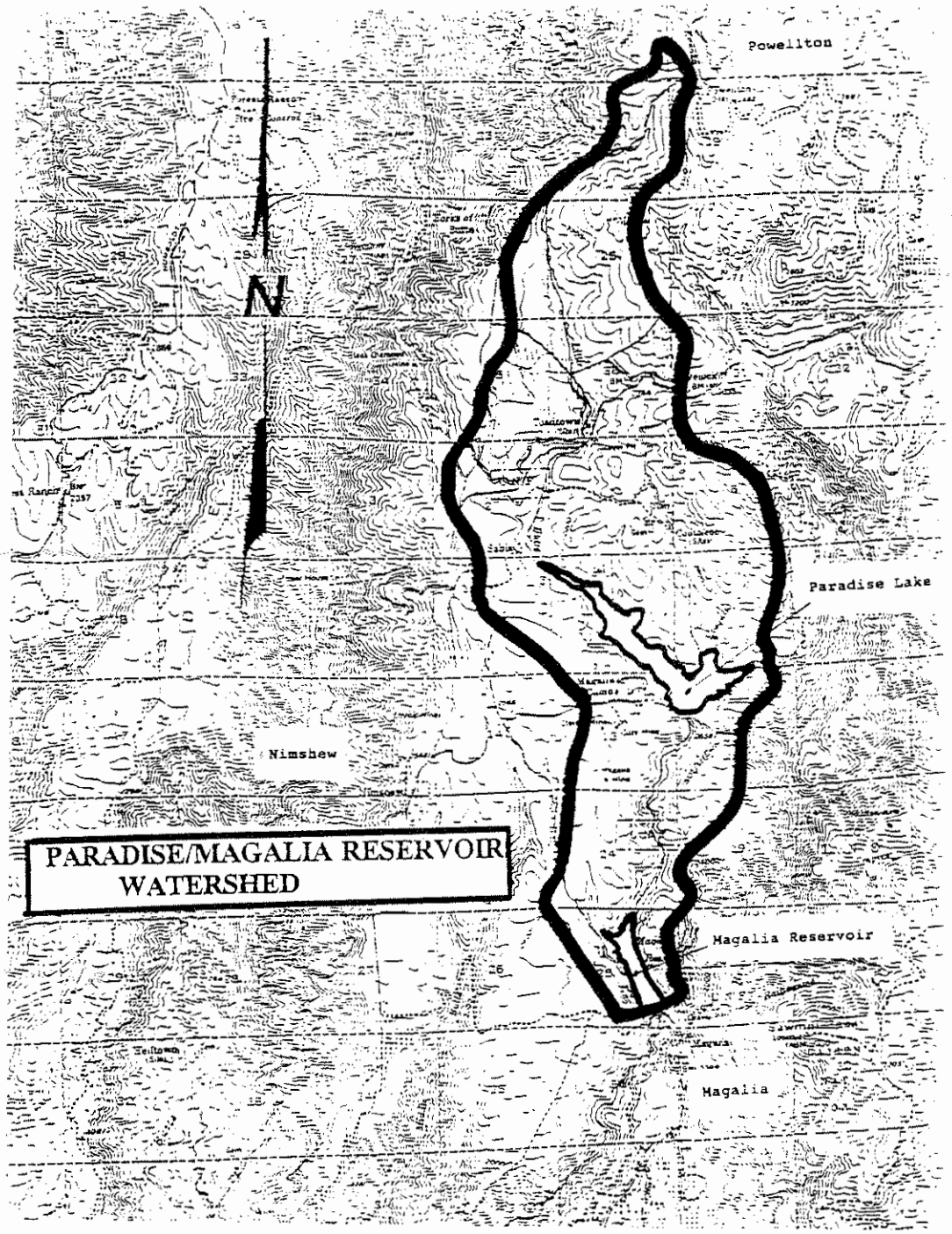
h. Storage capacity of Paradise Lake and Magalia Reservoir.

i. Potable water treatment, storage and distribution system capacities and conditions.

j. Water reclamation and reuse regulations and practices.

k. Seepage and loss of water supply from reservoirs and delivery system network.

l. Funding sources for required system maintenance, upgrades and necessary facilities expansion to meet existing or future demand.



PARADISE/MAGALIA RESERVOIR WATERSHED **FIGURE 5-2**

5.3 TOWN AND DISTRICT RESPONSIBILITIES

The Town of Paradise exercises, through the Town Engineer and the Community Development Department, regulatory responsibility for the provision of adequate drainage facilities for new developments. The town also provides maintenance for drainage facilities within public rights-of-way.

North of and adjacent to the town, County Service Area No. 4 provides periodic maintenance of drainage facilities in county rights-of-way for the community of Paradise Pines. The county requires drainage improvements as a condition of development.

The recommendations of the above-referenced *Master Storm Drainage Study and Facilities Plan* (1980) with respect to detention basins, channel improvements, and culvert upgrading are implemented to the extent that funding and regulatory authority with respect to new development permits.

6.0 VEGETATION AND WILDLIFE

Vegetation

Several natural vegetation communities occur within the Paradise study area, including chaparral, non-native grassland, riparian woodland, Great Valley cottonwood riparian forest, foothill woodland, digger pine - oak woodland, Ponderosa pine forest, and northern hardpan vernal pool, all of which are described below.

- **Chaparral.** The chaparral or sclerophyllous woodland is an association of tall, evergreen, woody shrubs which dominates many sites within the Paradise region that are open and dry or in various stages of a post-burn succession. Although characterized as a brushland, chaparral formations are often interspersed with grasses and scattered trees and thus integrate with the other vegetation communities. The chaparral community is often composed of locally dominant species of shrubs along with an admixture of many other species. The dominant shrubs of typical communities are toyon (*Heteromeles arbutifolia*), several manzanitas (*Arctostaphylos)*, California lilac (*Ceanothus* spp.), bitter cherry (*Prunus emarginata*), scrub oak (*Quercus dumosa)*, redbud (*Cercis occidentalis*), yerba santa (*Eriodictyon californicum*) and mountain mahogany *(Cercocarpus betuloides)*. Chaparral formations occur most prominently on the slopes adjacent to the canyons of Butte Creek and the West Branch of the Feather River, the ridge surfaces and valley sides in south Paradise and in areas which have been cleared, heavily logged or recently burned.

- **Non-native Grassland.** The non-native grassland consists of a dense to sparse cover of annual grasses with flowering culms, often associated with numerous species of showy-flowered, native annual wildflowers, especially in years of favorable rainfall. With few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. This vegetation type occurs in the valleys and foothills of most of California, on fine-textured, usually clay soils, moist or even waterlogged during the winter rainy season and very dry during the summer and fall.

- **Riparian Woodland.** The riparian woodland occurs as narrow strips of dense brush and trees along the water courses of south Paradise and around the localized drainage basins to the north. The dominant riparian trees are willow (*Salix* sp.), white alder (*Alnus rhombifolia*), western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), California laurel (*Umbellularia californica*), big-leaf maple (*Acer macrophyllum*), and western dogwood (*Cornus nuttallii*). Prominent as understory and vinelike plants are poison oak (*Toxicodendron diversilobum*), California wild grape (*Vitis californica*), wild blackberry (*Rubus* spp.) and elderberry (*Sambucus mexicana*). This association has been greatly disrupted by development along the various watercourses which drain southwesterly across the ridge surfaces of Paradise.

- **Great Valley Cottonwood Riparian Forest.** The Great Valley cottonwood riparian forest is a dense, broadleafed, winter deciduous riparian forest dominated by Fremont cottonwood (*Populus*

fremontii) and Goodding's willow (*Salix gooddingii variabilis*). Understories are dense, with abundant vegetative reproduction of canopy dominants. Scattered seedlings and saplings of shade-tolerant species such as California box elder (*Acer negundo californica*) or Oregon ash (*Fraxinus latifolia*) may be found, but frequent flooding prevents their reaching into the canopy. These sites are inundated yearly during spring, resulting in annual inputs of nutrients, soil, and new germination sites. This vegetation community was formerly extensive along the major low-gradient (depositional) streams throughout the Central Valley, but is now reduced to scattered, isolated remnants or young stands because of flood control, water diversion, agricultural development, and urban expansion. Approximately 1200 acres of this sensitive vegetation community occurs within the Dry Creek floodplain.

- **Foothill Woodland.** The foothill woodland extends across the extreme southern portions of the town and dominates the ridge surfaces to elevations of 1,300 feet. The primary floral elements of this woodland are blue oak (*Quercus douglasii*), interior live oak (*Quercus wizlizenii*) and digger pine (*Pinus sabiniana*). Above 1,500 feet these species give way to canyon live oak (*Quercus chrysolepis*), tan-bark oak (*Lithocarpus densiflora*) and black oak (*Quercus kelloggii*). Several species of shrubs provide an understory to this open woodland. Prominent in this community are manzanita (*Arctostaphylos* sp.), California lilac (*Ceanothus* sp.), yerba santa (*Eriodictyon californicum*), poison oak (*Toxicodendron diversilobum*) and several members of the rose family (e.g. the genera *Prunus, Rubus and Rosa*).

- **Digger Pine-Oak Woodland.** This woodland is a mixture of digger pine (*Pinus sabiniana*) and blue oak (*Quercus douglasii*). Pure stands of either tree do occur, but mixed stands are more common. *Pinus sabiniana* usually towers over the oaks in undisturbed stands. Understories usually are dominated by introduced annuals. This vegetation type occurs on well-drained sites with Mediterranean climate, in rocky or exposed sites along ridges or canyons with poor or shallow soils.

- **Westside Ponderosa Pine Forest.** The Ponderosa pine forest occurs as a broad transitional zone between the foothill woodland and higher mixed coniferous associations and is most extensive above 1,500 feet elevation in Paradise. It is generally a closed forest dominated by Ponderosa pine (*Pinus ponderosa*). The closely related Jeffrey pine (*Pinus jeffreyi*) occurs locally on drier sites and serves as a specific indicator of ultrabasic and serpentine rock outcroppings. The Ponderosa pine zone has been the most heavily logged of all the communities in northern California and this practice has allowed the encroachment of other woody species into areas formerly covered by pines. The Ponderosa and Jeffrey pines are found locally intermixed with incense-cedar (*Calocedrus decurrens*), Douglas-fir (*Pseudotsuga menziesii*), white fir (*Abies concolor*), black oak and several additional hardwood species including big leaf maple, western dogwood and California laurel. The ponderosa pine forest zone represents the primary habitat type utilized for development in the Paradise area.

- **Northern Hardpan Vernal Pool.** Located within close proximity of the tertiary study area is a documented vernal pool community classified by the California Natural Diversity Data Base (CNDDB) as northern hardpan vernal pool. These pools are ephemeral wetlands that occur when winter and spring rains fill the depressions in hogwallow or mima mound areas. Several sensitive plant species occur in association with the northern hardpan vernal pool community: Hoover's spurge (*Chamaesyce hooverii*, federal-Category 1; state-none), Green's tuctoria (*Tuctoria greenei*,

federal-candidate Category 1; state-rare), and Shippee meadowfoam (*Limnanthes floccosa* ssp. *californica*, federal-Category 1; state-endangered).

Federal Category 2 candidate species for federal listing comprise taxa for which information now in possession of the U.S. Fish and Wildlife Service indicates proposing to list the species as endangered or threatened is possibly appropriate, but for which conclusive data on biological vulnerability and threat(s) are not currently available to support proposed rules at this time. Federal Category 1 candidate species comprise taxa for which the service has sufficient biological information to support a proposal to list as endangered or threatened.

Other sensitive species with reported occurrences within or near the study area include California hibiscus (*Hibiscus californicus*, federal-Category 2; state-none), which occurs in moist, freshwater-soaked river banks and low peat islands in sloughs, marshes and swamps; Butte County checkerbloom (*Sidalcea robusta*, federal-Category 2; state-none), which occurs in small draws and rocky crevices in chaparral and cismontane woodland communities; California beaked-rush (*Rhynchospora californica*, federal-Category 2; state-none), occurring in freshwater seeps.

Sensitive plant species with the potential to occur within or near the study area include Ahart's paronychia (*Paronychia ahartii*, federal-Category 2; state-none), which occurs in stony, nearly barren clay of swales and higher ground around vernal pools in valley and foothill grassland communities; and veiny monardella (*Monardella douglasii* var. *venosa*, federal-Category 2; state-none), which also occurs in valley and foothill grasslands; adobe lily (*fritillaria pluriflora*); Butte County fritillary (*Fritillaria eastwoodias*); Red Bluff dwarf rush (*Juncus leiospermus* var. *leiospermus*); Bidwell's knotweed (*Polygonum bidwelliae*); Butte morning glory (*Calystegia atriplicifolius*); clustered lady slipper orchid (*Cypripedium fasciculatum)*; Butte County (*Shippee*) meadowfoam (*Limnanthes floccosa sp. Californica*, State-Endangered); and Greene's Orcutt Grass (*Tuctoria greenei*, State-Rare). Appendix B contains a partial listing of common and sensitive plant species found within and in the vicinity of the study area.

Timber

The draft Butte County *Energy, Natural Resources, and Recreation Element* defines timberlands as land available for timber production and capable of growing at least twenty cubic feet of industrial-quality wood per acre per year. Timberlands in Butte County occur at elevations between approximately 2,200 and 6,200 feet. According to the above-referenced document, timberlands in Butte County occupy approximately 341,000 acres, including most of the northern and eastern portions of Butte County. Approximately twenty-seven percent of timberlands in Butte County are on national forest land. Portions of the northerly secondary study area are within the boundaries of the Lassen National Forest.

Butte County recognizes the value of its timber resources by affording protection through the use of Timberland Preserve Zoning (TPZ). The California Forest Taxation Reform Act created timberland preserve zoning as a measure to reduce property taxes and protect timberlands from encroachment. TPZ-zoned lands within the Paradise secondary study area are shown on the *Land Use/Circulation Diagram* in Volume I, *Policy Document*. The timberland preserve zoning ordinance of Butte County also designates other timberland zoning districts in Butte County, including parcels within the secondary study area.

The California Forest Practice Act regulates timber harvesting on nonfederal lands. The act delegates authority for timber harvest plan review and enforcement of forest practice rules to the California Department of Forestry and Fire Protection (CDF). Forest practice rules include guidelines for timber harvest plans. A timber harvest plan is required for harvesting of timber for commercial purposes on parcels larger than three acres.

The Paradise Irrigation District owns timberlands in the secondary study area and has harvested timber on these lands. Local opposition has been expressed to the continuation of this practice due to concerns with soil erosion, sedimentation and deterioration of the watershed, clear-cutting and construction of access roads. As described in the draft *Energy, Natural Resources, and Recreation Element*, timber harvest operations in and adjacent to riparian zones can affect aquatic ecosystems through removal of vegetation and deposition of sediment and debris in stream channels. Another local concern with timber harvesting north of Paradise in general is the impact of the passage of logging trucks through the town.

Wildlife

Wildlife reported for the Town of Paradise and the study areas is typical of the transitional foothill habitat types found on the western flank of the Sierra plateau. Appendix B contains a partial listing of common and sensitive wildlife species which occupy the habitats within Paradise and adjacent Butte County. This list is not meant to represent a comprehensive survey of the resident and migratory wildlife. The urbanized portions of Paradise are inhabited by a wide diversity of wildlife. No threatened, endangered or candidate wildlife species have been documented within the Paradise study area.

- **Sensitive Wildlife Species.** Currently there are twenty-four species of sensitive wildlife found in the general region (Appendix B). None of these species has been recorded by the natural diversity data base within the study area. These species include the western yellow billed cuckoo (*Coccyzus americanus occidentalis*), California red-legged frog (*Rana aurora draytoni*), foothill yellow-legged frog (*Rana boylei*), American badger (*Taxidea taxus*), golden eagle (*Aquila chrysaetos*), northern harrier (*Circus cyaneus*), black-shouldered kite (*Elanus caeruleus)*, prairie falcon (*Falco mexicanus*), burrowing owl (*Athene cunicularia*), Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), winter-run chinook salmon (*Oncorhyncus tshawytscha*), giant garter snake (*thamnophis couchi gigas*), Aleutian Canada goose (*Branta canadensis leucopareia*), bald eagle (*Haliaeetus leucocephalus*), Swainson's hawk (*Buteo swainsoni*), American peregrine falcon (*Falco peregrinus anatum*), California black rail (*Laterallus jamaicensus*), greater sandhill crane (*Grus Canadensis tabida*), great gray owl (*strix nebulosa*), willow flycatcher (*Empidonax traillii*), bank swallow (*Riparia riparia*), least Bell's vireo (*Vireo bellii pusillus*), Sierra Nevada red fox (*Vulpes vulpes necator*), and wolverine (*Gulo gulo*).

- **Deer Population.** Deer herds throughout most of California exhibited a serious long-term decline during the late 1960s and early 1970s. The California Department of Fish and Game (CDFG) then initiated a herd planning program designed to address this problem. In 1976 a statewide *Plan for California Deer* was approved. In 1977, legislative mandate AB 1521 added emphasis to the program. Subsequently, a new deer management policy was adopted by the California Department of Fish and Game. This policy specifies: (1) planning for deer herd management on a herd basis,

(2) that specific program elements be included in each herd plan, and (3) that herd plans generally conform to the goals of the statewide plan.

One of the deer populations associated with the Paradise study area, the Camp Beale herd, is part of the Mother Lode Deer Management Unit. There are no unique biological or geographical features which define the herd boundary. Rather, the herd is composed of resident deer populations which have similar habitat types in common (oak woodland and chaparral in the foothills and remnant marsh and riparian vegetation in the valley). The eastern boundary of the Mother Lode Deer Management Unit is an area of overlap with neighboring migratory herds. In the Paradise study area these herds are the Bucks Mountain herd, the Mooretown herd and the Eastern Tehama herd. This area of overlap is variable in size and depends on topography, severity and onset of winter, and forage conditions. During winter, migratory deer may descend to low elevations and winter with resident deer. Similarly, Mother Lode deer may occupy home ranges within neighboring migratory herd winter range.

A management plan was prepared for the Bucks Mountain/Mooretown deer herds in 1983. This study identified the generalized herd boundaries (Figures 6-1 and 6-2) and identified transportation corridors in areas designated for "agricultural-residential" use in the Butte County General Plan. Corridors within or partially within the Paradise study area include Pentz Road, Clark Road, Neal Road, Skyway (to Inskip), Honey Run Road and Highway 70. The plan sets goals for deer herd management and includes recommendations regarding minimum parcel sizes and densities of development within critical summer and winter ranges, major migration corridors, holding areas, and noncritical summer and winter ranges. A similar management plan was also developed for the Eastern Tehama deer herd in 1983 (Figure 6-3). Figure 6-4 depicts DFG-designated development zones within migratory deer winter ranges, as well as critical and noncritical summer and winter ranges, herd boundaries, and major migration corridors within the Study Area.

- **Fisheries.** The lower reaches of Butte Creek support a varied fish population dominated by suckers (*Catastomus occidentalis*) and squawfish (*Ptychocheilus grandis*). Smallmouth bass (*Micropterus bolomieui*) and catfish (*Ictalurus* spp.) are also found on lower Butte Creek. Appendix B contains a listing of the fish of Butte Creek. The most important fishery is provided by runs of anadromous (sea going) fish including chinook salmon (*Oncorhynchus tshawytscha*) and steelhead trout (*Salmo gairdneri gairdneri*), which make their way up Butte Creek to the reach of stream below Centerville powerhouse.

  As late as the 1960s, Butte Creek supported a spring run of chinook salmon of over 4,000 adults (a maximum of 20,000 in 1960), a lesser number of fall run chinook salmon and a small number of steelhead trout. Currently, the spring-run numbers fewer than 200 adults. These numbers represent more than a ninety-five percent decline in the past thirty years. CDFG population estimates and Pacific Gas and Electric (PG&E) fish surveys indicate that few adult spring-run salmon reach upper Butte Creek, where excellent flow, temperature, and habitat conditions are available. The fall-run population varies between a few to as many as 1,000 (1985) and the number of steelhead trout is unknown (Hinton, 1989).

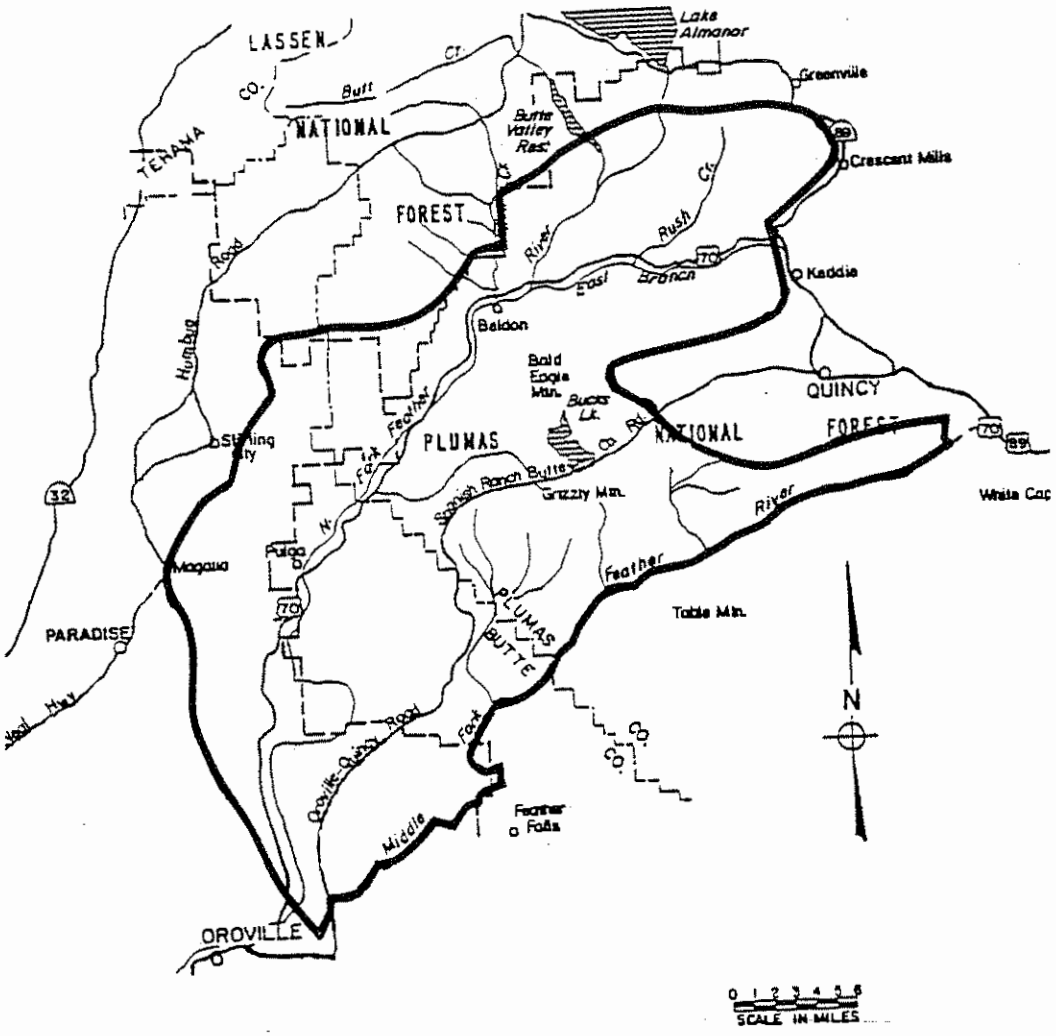
  Project dams and diversions in Butte Creek have had an adverse impact on salmon and steelhead. The decline of Butte Creek's once numerous chinook and steelhead fisheries is attributed to inadequate flows, poor water quality and inadequate fish ladders at several diversion dams.

Reduced flows of water in the creek resulting from the various barriers and diversions increase water temperature and decrease oxygen supply. This combination is lethal to both salmon and steelhead.

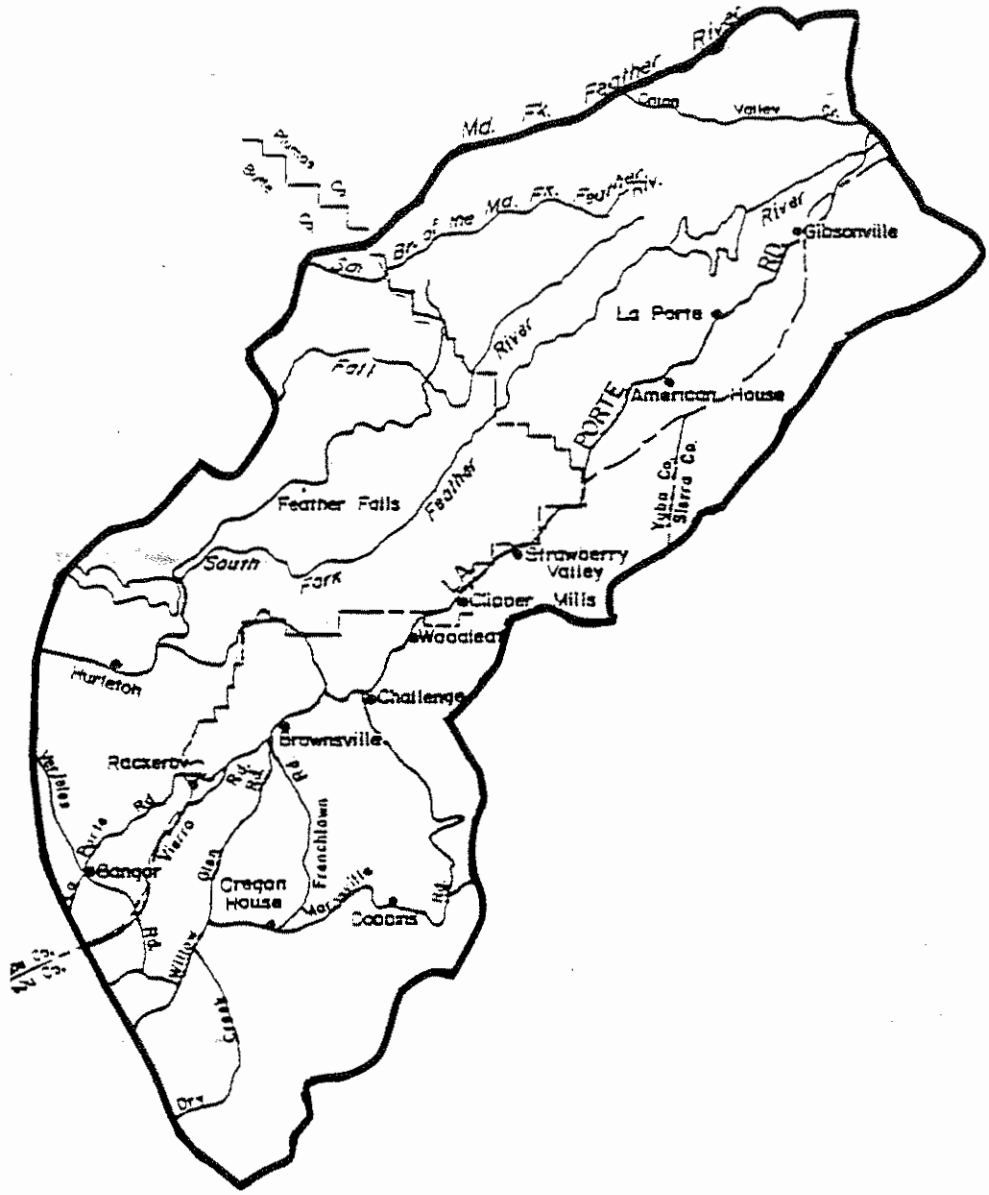
Anadromous fish are precluded from spawning in the West Branch Feather River due to the barrier imposed by Oroville Dam. The Feather River Hatchery below Oroville Dam supports a run of steelhead and salmon. Lake Oroville supports a healthy warm-water fishery including largemouth, smallmouth, spotted, and redeye bass (*Micropterus* spp.); bluegill, green and redear sunfish, (*Lepomis* spp.); catfish (*Ictalurus* spp.); and DFG-stocked chinook salmon (*Oncorhynchus tshawytscha*) and brown trout (*Salmo trutta*). Development in the canyons of the West Branch Feather River watershed may lead to erosion and pollution which could detrimentally affect the Lake Oroville Fishery, according to DFG (Flint, 1991).

The West Branch Feather River represents the western arm of Lake Oroville reservoir. Releases from Hendricks Dam near Stirling City downstream to a diversion structure northeast of Magalia provide for perennial streamflows. A well-established brown and rainbow trout (*salmo gairdneri)* population depends on these flows which Pacific Gas and Electric Company maintains under contractual agreement with DFG.

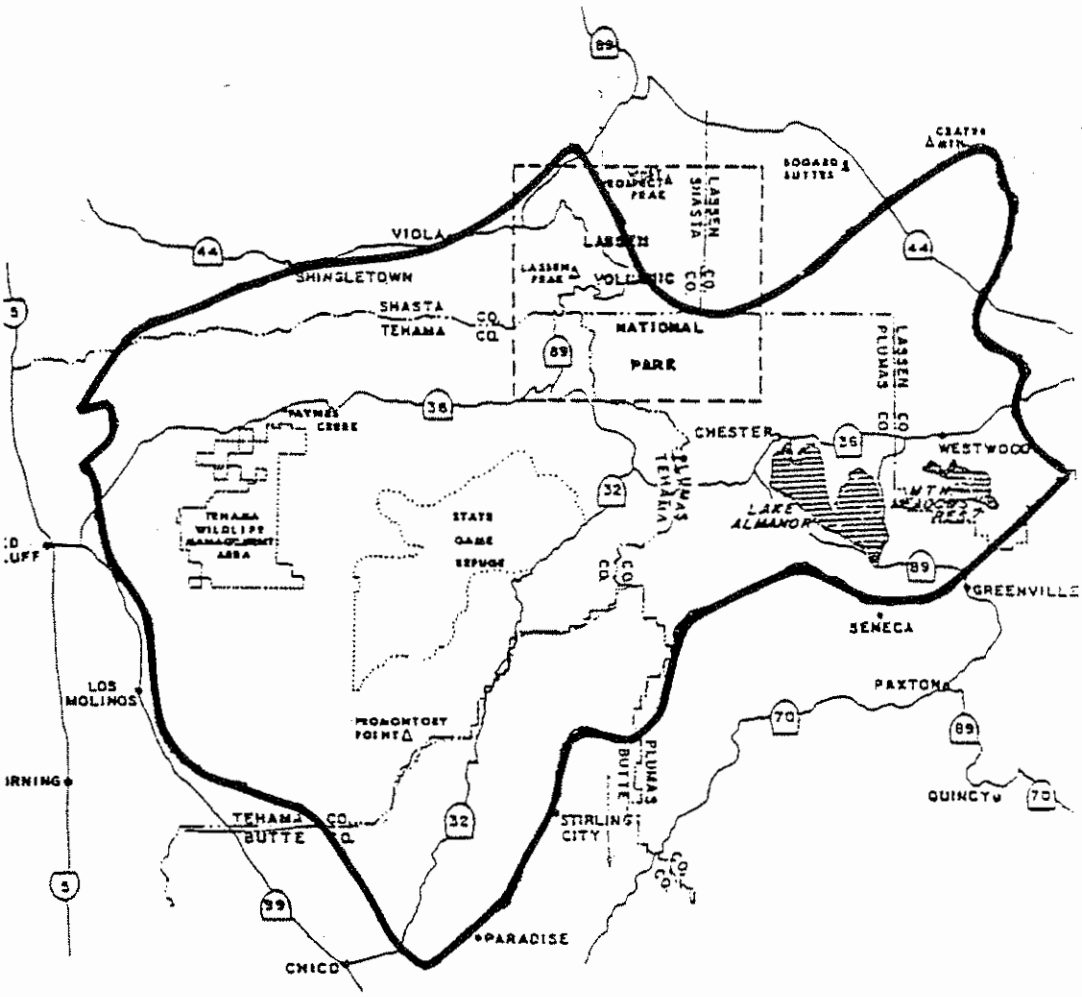
The dam structure northeast of Magalia diverts streamflows to the Upper Miocene Canal (which runs parallel to the West Branch Feather River before feeding Kunkle Reservoir south of the town). Dewatering in the stretch of the West Branch Feather River between Magalia and Lake Oroville renders the section unsuitable to support viable game-fish populations.



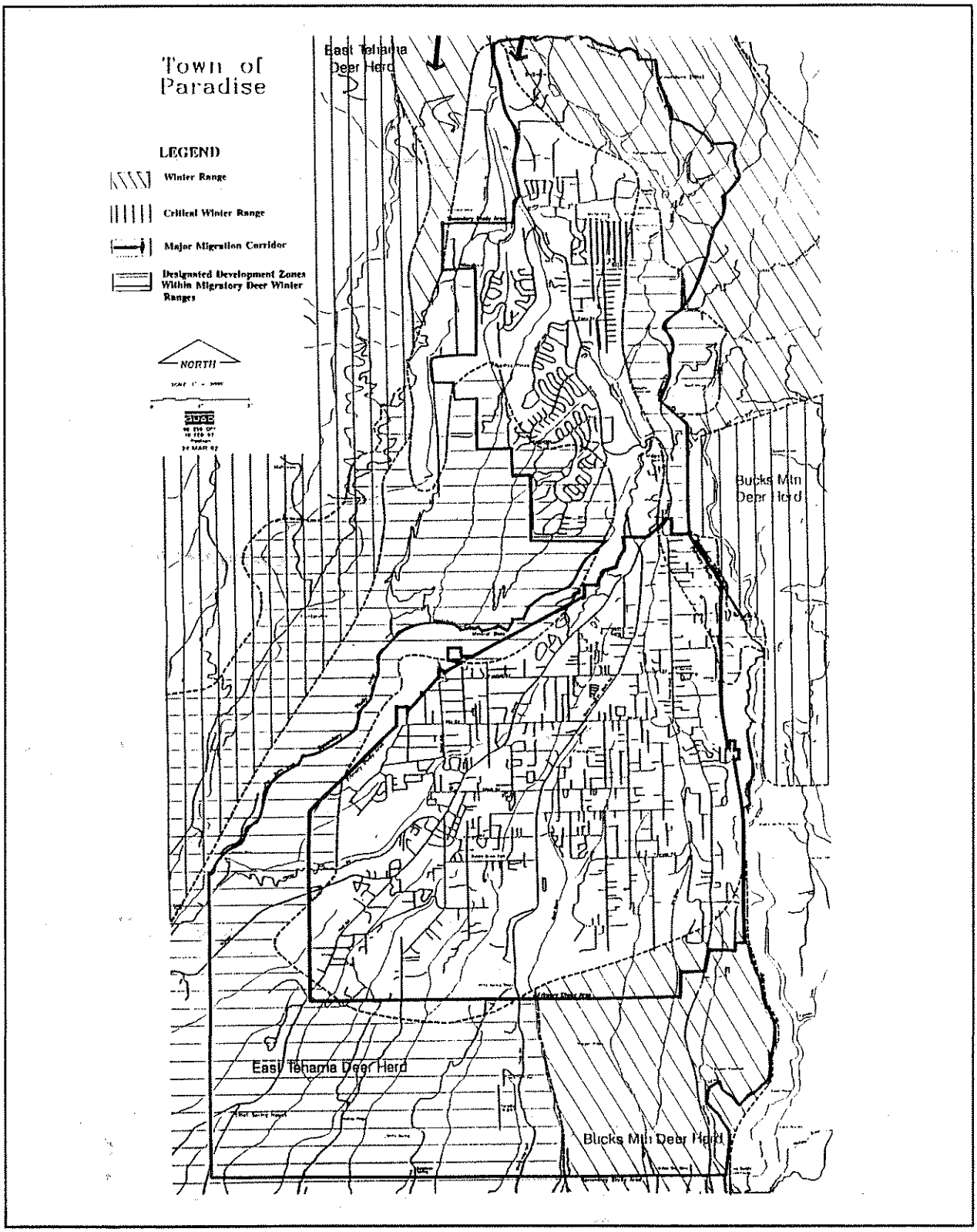
BUCKS MOUNTAIN DEER HERD BOUNDARY (GENERALIZED) **FIGURE 6-1**



MOORETOWN DEER HERD BOUNDARY (GENERALIZED) **FIGURE 6-2**



EASTERN TEHAMA DEER HERD BOUNDARY **FIGURE 6-3**



DEER HERD RANGES AND MIGRATION CORRIDORS **FIGURE 6-4**

7.0 NOISE

The state *Noise Element Guidelines* require that major noise sources be identified and quantified by preparing generalized noise contours for current and projected conditions. Significant noise sources in the Paradise study area include traffic on major roadways and highways, airports, and representative industrial activities and fixed noise sources. Please refer to Appendix C for a glossary of acoustical terminology used in this section.

Noise modeling techniques and noise measurements were used to develop generalized L_{dn} noise contours for the major roadways and fixed noise sources in the Paradise study area for existing (1990 for major roadways and 1991 for fixed noise sources) conditions.

Noise modeling techniques use source-specific data including average levels of activity, hours of operation, seasonal fluctuations, and average levels of noise from source operations. Modeling methods have been developed for a number of environmental noise sources including roadways, railroad line operations, railroad yard operations, industrial plants and airports. Such methods produce reliable results as long as data inputs and assumptions are valid. The modeling methods used closely follow recommendations made by the state Office of Noise Control, and were supplemented where appropriate by field-measured noise level data to account for local conditions. The noise exposure contours are based upon annual average conditions. Because local topography, vegetation or intervening structures may significantly affect noise exposure at a particular location, the noise contours should not be considered site specific.

A community noise survey was conducted to describe existing noise levels in noise-sensitive areas within Paradise and the Paradise study area so that noise level performance standards can be developed to maintain an acceptable noise environment.

Roadways

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to develop L_{dn} contours for all highways and major roadways in Paradise. The FHWA model is the analytical method presently favored for traffic noise prediction by most state and local agencies, including Caltrans. Short-term (fifteen-minute) traffic noise measurements and concurrent traffic counts were conducted for State Route 191/Clark Road, Skyway, Pearson Road and Elliott Road (See Figure 7-1) on March 14, 1991. The noise measurements were made to evaluate the noise exposure due to traffic on those roadways. Using traffic data and the FHWA methodology, traffic noise levels as defined by L_{dn} were calculated for existing (1990) traffic volumes. Distances from the centerlines of selected roadways to the L_{dn} contours are summarized in Table 7-1.

These calculations do not include consideration of shielding caused by local buildings or topographical features, so the distances reported in Table 7-1 are worst-case estimates of noise exposure along roadways in the community.

Existing traffic volumes were not provided for some of the local arterials. However, Figure 7-2, prepared using the FHWA model, may be used to estimate the distance to the 60 dB L_{dn} contour for projected volumes of arterial traffic. For arterial traffic, the predicted distance to the 60 dB L_{dn} contour is determined by the average daily traffic volume (ADT) and the posted speed limit. L_{dn} contours derived from Figure 7-2 are only indicators of potential noise conflicts, requiring more detailed analysis to determine traffic noise levels at any given location.

Industrial Noise

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

The following descriptions of existing fixed noise sources in the Paradise study area are intended to be representative of the relative noise impacts of such uses, and to identify specific noise sources which should be considered in the review of development proposals. The locations of these noise sources are shown by Figure 7-1.

- **Easy Street Industrial Park.** The Easy Street Industrial Park is located on the east side and adjacent to State Route 191 near the south Paradise town limit. Currently the industrial park is approximately thirty percent built out. Existing uses at the industrial park include Fashion Optical Displays, Arlin's RV Repair, Ken's Paradise Hitch and Welding, John H. Franklin Company (paving, excavating, septic systems and general engineering), Frontier Tours, PAL Plastics, CMT Tool Company, Paradise Solid Waste Systems, Inc. and the Paradise Animal Shelter. The industrial park is also used for heavy truck and equipment storage.

  Based upon field observations at the Easy Street Industrial Park, the area noise environment is dominated by State Route 191 vehicle noise. Major noise sources associated with the industrial park included heavy truck traffic, machinery, heating ventilation and air conditioning systems, and dogs barking at the animal shelter. During the field observations, none of the noise sources could be isolated from area roadway traffic noise.

  The Easy Street Industrial Park has adequate room for expansion in the future. Loud or obtrusive noise sources could be located at the industrial park in the future. Uses which inherently have loud or obtrusive noise sources, and could be located at the industrial park in the future include,

but are not limited to, sand and gravel operations, asphalt and concrete batch plants, machine shops, bottling and canning operations, and heavy equipment maintenance shops.

Airport Noise

The Paradise Skypark Airport is located south of the Town of Paradise town limits in the secondary study area. It is a private, public use general aviation airport. The airport has one runway 1,990 feet in length with a heading of 17/35. Based upon the December 1988 California Department of Transportation Division of Aeronautics *California Aviation System Plan*, the Paradise Skypark Airport has twenty-three single engine piston, one multi-engine piston, and one rotor-craft piston based aircraft with a total of 10,000 annual average aircraft operations. The Butte County Airport Land Use Commission adopted a revised policy plan for the Paradise Skypark in August 1985, and a *Comprehensive Land Use Plan* (CLUP) was adopted in March 1986.

Based upon the Paradise Skypark Airport Land Use Plan, the fifty-five dB L_{dn} noise contour for aircraft operations is confined to the airport property and does not extend into the Paradise town limits (see Figure 7-3) However, existing residential uses located within the southern town limits are located under the northern end of the Paradise Skypark approach zone (see Figure 7-4).

Community Noise Survey

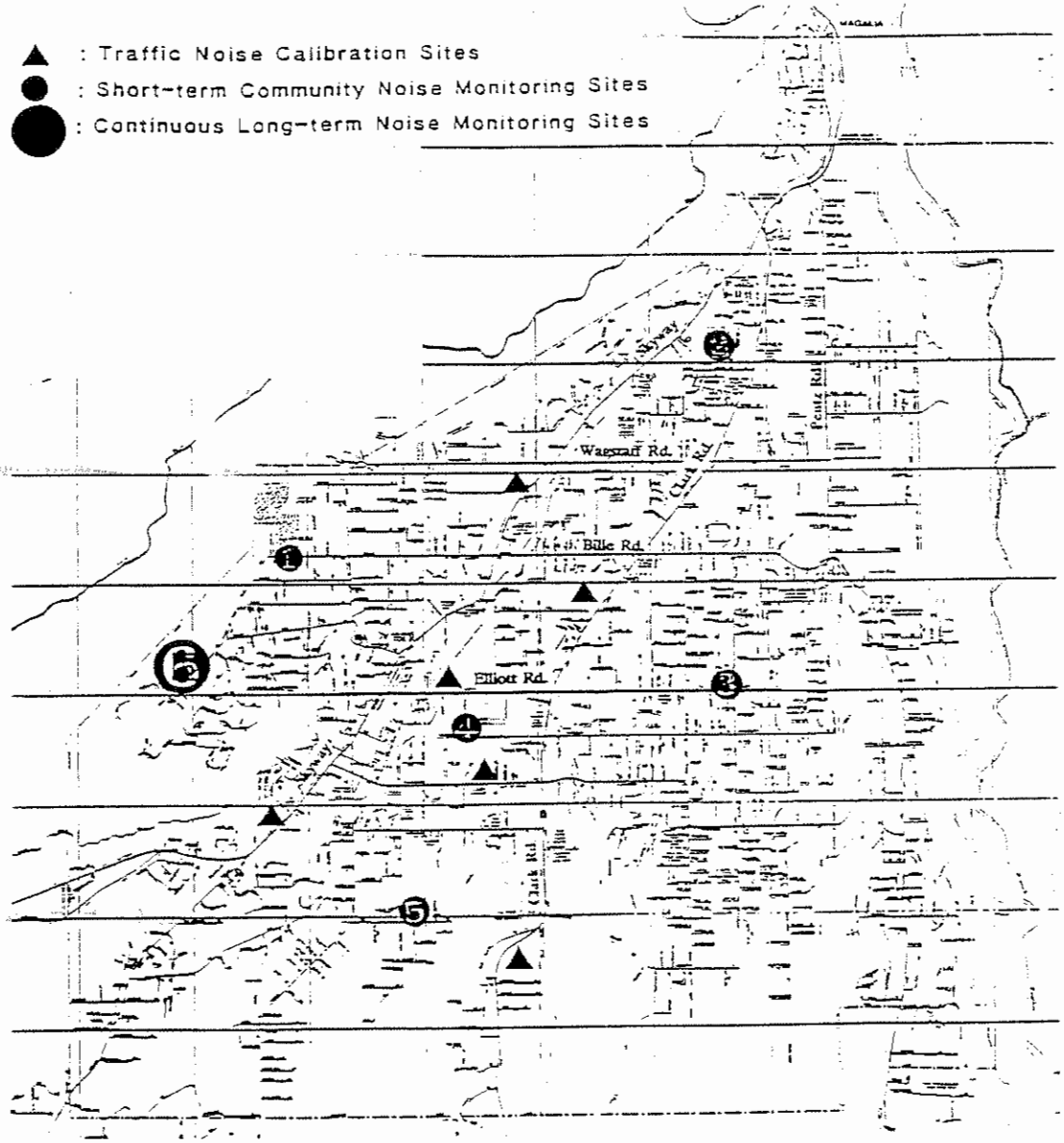
A community noise survey was conducted to document noise exposure in areas of the community containing noise sensitive land uses. For that purpose, noise sensitive land uses in the Paradise study area were considered to include residential areas, parks, schools, day care centers, hospitals and other medical facilities. Noise monitoring sites were selected to be representative of typical conditions in the community.

Short-term noise monitoring was conducted on March 13-14, 1991. Each site was monitored three different times during the day and night so that valid estimates of L_{dn} could be prepared. One long-term noise monitoring site was established in Paradise to record day-night statistical trends. The data collected included the L_{eq} and other statistical descriptors. Noise monitoring sites, measured noise levels and estimated L_{dn} values at each site are summarized in Table 7-2. Monitoring sites are shown by Figure 7-1.

The community noise survey results indicate that typical noise levels in noise sensitive areas of the study area are in the range of forty-five dB to fifty-six dB L_{dn}. Noise from traffic on local roadways and neighborhood activities is the controlling factor for background noise levels in the study area. In general, the areas of Paradise and the Study Area which contain noise sensitive uses are quiet.

The continuous monitoring data in Figure 7-5 show that ambient noise levels reach a minimum during the hours of 1:00-5:00 a.m., increasing during the daytime hours as a function of increased traffic and other

human activities. Figures 7-5, 7-6 and 7-7 show the results of the short-term community noise monitoring survey.

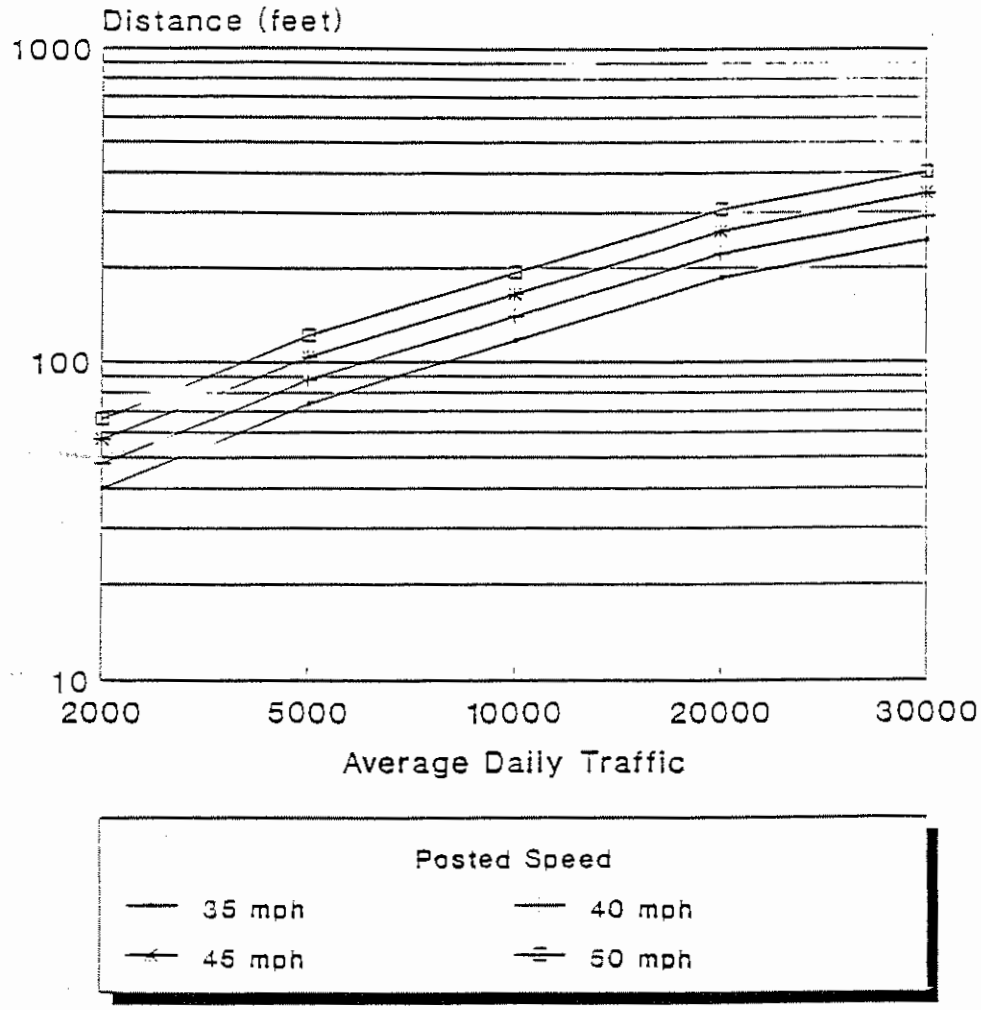


NOISE MONITORING AND CALIBRATION SITES **FIGURE 7-1**

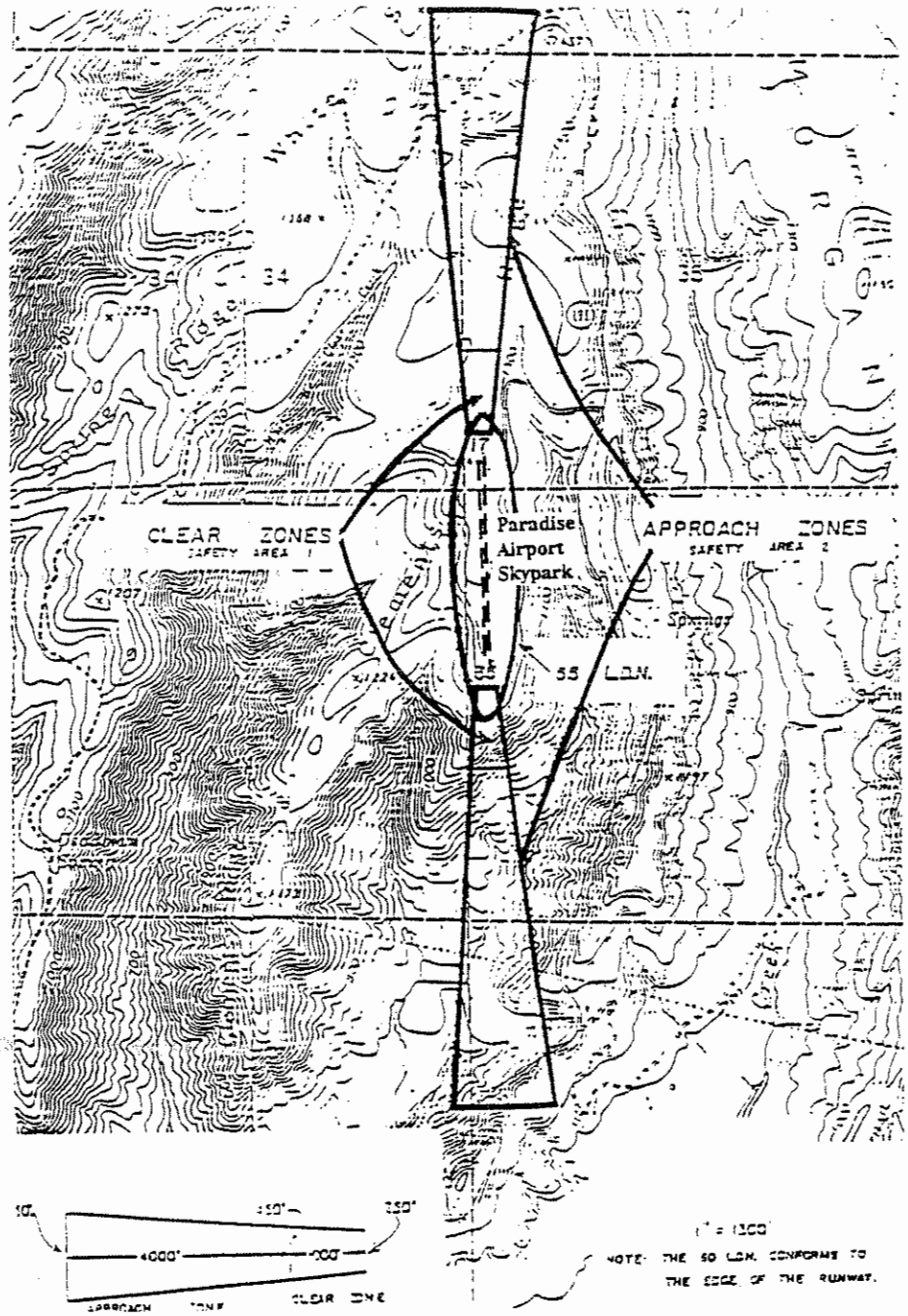
TABLE 7-1
NOISE CONTOUR DATA
DISTANCE (FEET FROM CENTER OF ROADWAY TO L_{dn} CONTOURS

Segment	Description	Existing	
		60 dB	65 dB
SR 191/Clark Road:			
1	South town limits to Buschmann Road	144	67
2	Buschmann Road to Pearson Road	162	75
3	Pearson Road to Bille Road	175	81
4	Bille Road to Skyway	140	65
Skyway:			
5	West town limits to Pearson Road	140	65
6	Pearson Road to Wagstaff Road	156	72
7	Wagstaff Road to north town limits	102	47
Pentz Road:			
8	South town limits to Bille Road	71	33
9	Bille Road to Skyway	78	36
Pearson Road:			
10	Skyway to Clark Road	102	47
11	Clark Road to Pentz Road	68	31
Elliott Road:			
12	Skyway to Clark Road	151	70
13	Clark Road to Sawmill Road	93	43
Bille Road:			
14	Skyway to Clark Road	100	46
15	Clark Road to Pentz Road	102	47
Wagstaff Road:			
16	Skyway to Clark Road	64	30
17	Clark Road to Pentz Road	81	38

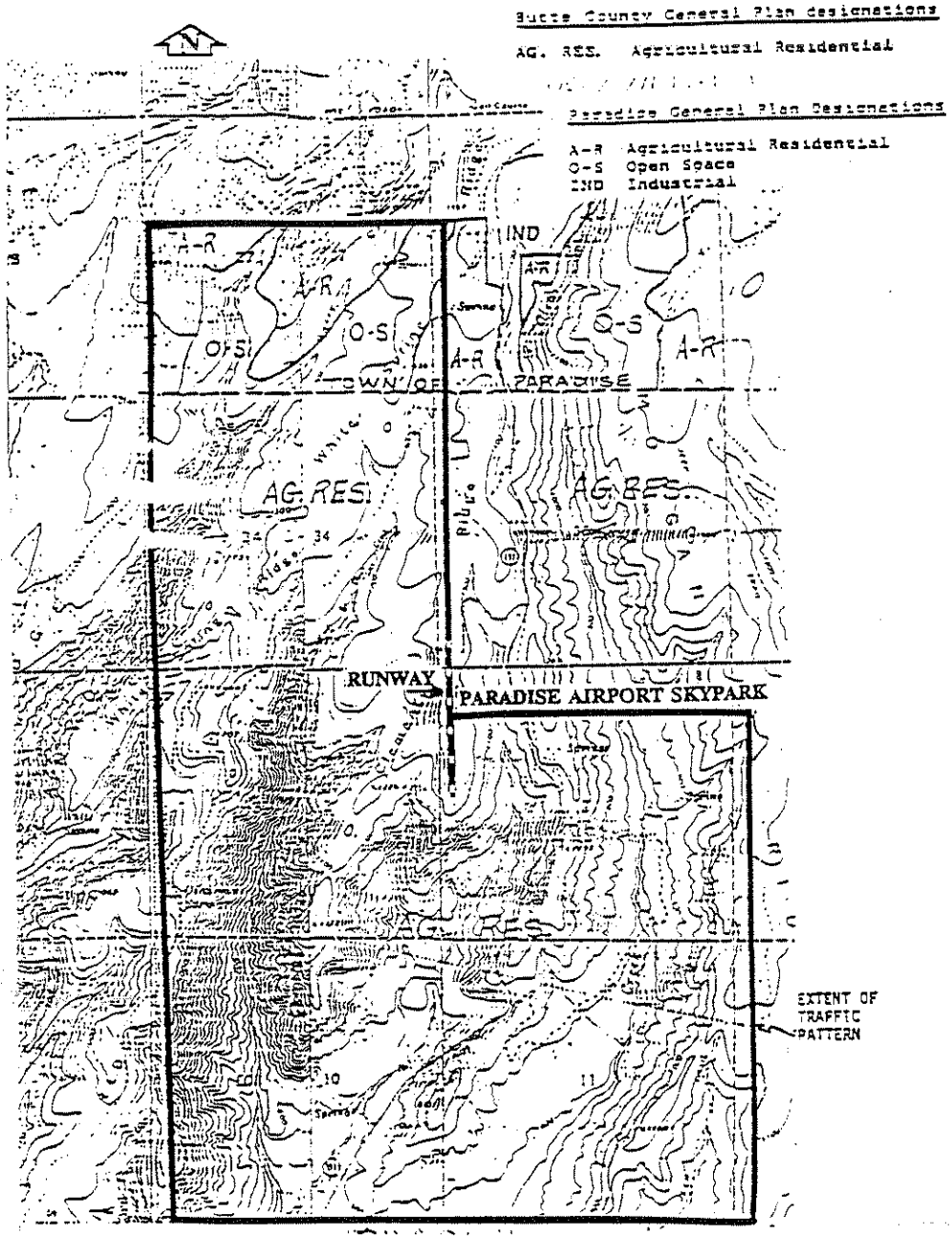
Source: Brown-Buntin Associates, Inc.



DISTANCE TO 60 dB L_{dn} CONTOUR ARTERIAL TRAFFIC **FIGURE 7-2**



PARADISE SKYPARK AIRPORT APPROACH ZONE **FIGURE 7-3**



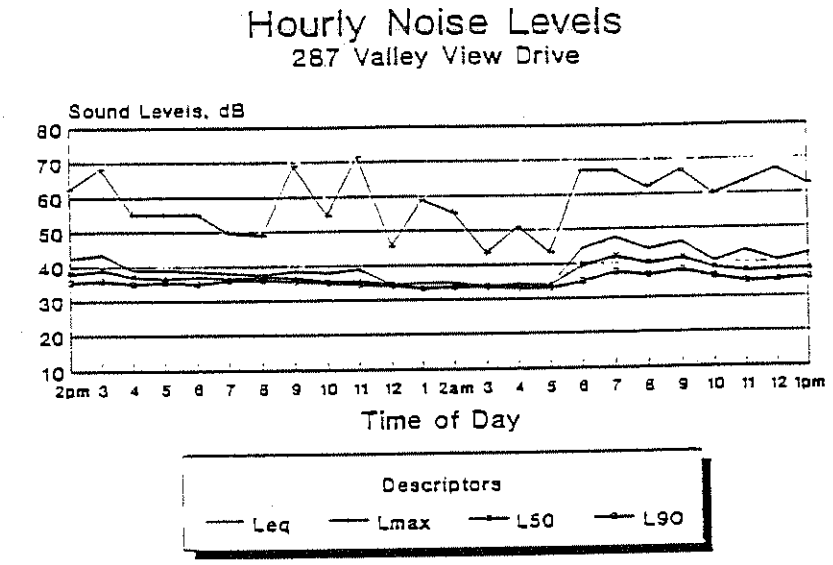
PARADISE SKYPARK AIRPORT **FIGURE 7-4**

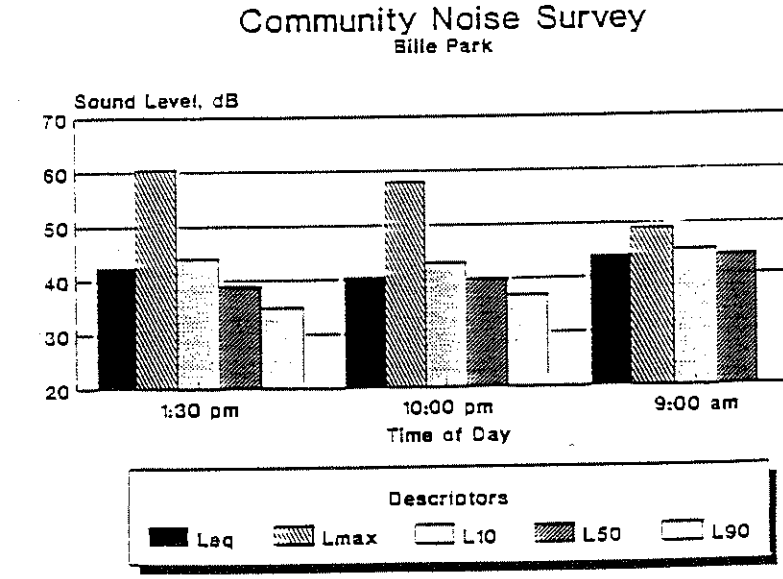
TABLE 7-2
SUMMARY OF MEASURED NOISE LEVELS AND ESTIMATED DAY-NIGHT AVERAGE LEVELS (L_{dn}) IN AREAS CONTAINING NOISE SENSITIVE LAND USES

Site	Location	Date	Time	Sound Level, dB					
				L_{90}	L_{50}	L_{10}	L_{eq}	L_{max}	Est. L_{dn}
1	Bille Park	3/13/91	13:45	35.0	39.0	44.0	42.5	60.5	47.4
			22:00	37.0	40.0	43.0	40.5	58.0	
		3/14/91	09:00	40.0	44.0	45.0	44.0	49.0	
2	Ball Park	3/13/91	14:30	42.5	43.5	46.5	46.5	63.0	49.2
			22:15	38.0	41.0	44.5	42.5	55.0	
		3/14/91	09:30	36.5	38.0	39.5	38.5	46.5	
3	East end of Elliott Road	3/13/91	15:00	40.5	41.5	43.5	42.0	47.0	47.0
			22:35	39.0	40.0	41.5	40.5	46.5	
		3/14/91	10:05	35.5	37.5	42.0	40.5	54.5	
4	5921 Camino Drive	3/13/91	15:25	44.5	49.5	53.5	50.5	57.5	49.6
			23:00	43.5	47.5	51.0	48.5	55.5	
		3/14/91	10:30	41.5	46.0	52.5	48.5	56.0	
5	Corner of Roe and Scottwood in a wooded area	3/13/91	16:00	49.0	49.5	52.0	50.5	55.0	55.9
			23:15	41.0	47.5	51.5	49.5	55.0	
		3/14/91	11:05	47.5	48.0	50.0	48.5	54.0	
6	287 Valley View Drive[1]	3/13/91	16:00	35.0	37.0	41.5	39.0	55.0	45.5
		3/14/91	01:00	34.0	34.5	35.5	35.0	59.0	
		3/14/91	11:00	34.5	37.5	44.0	43.5	67.0	

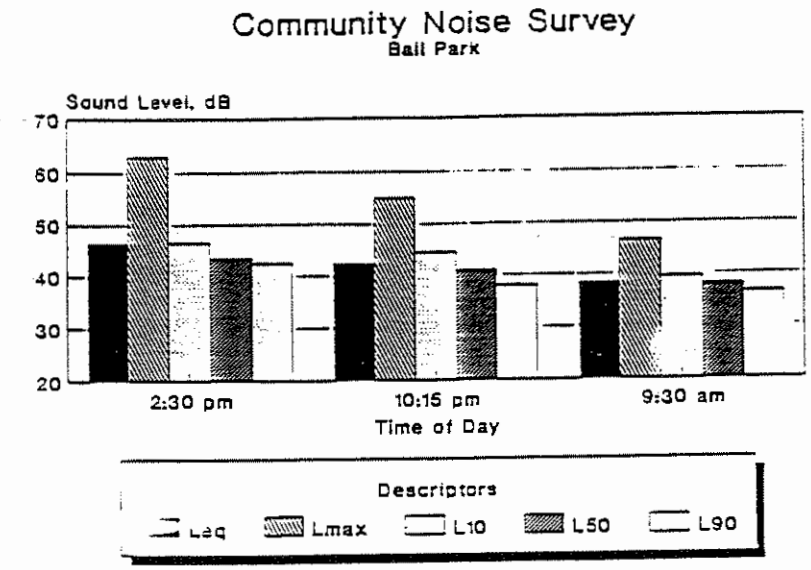
[1] = Continuous monitoring site

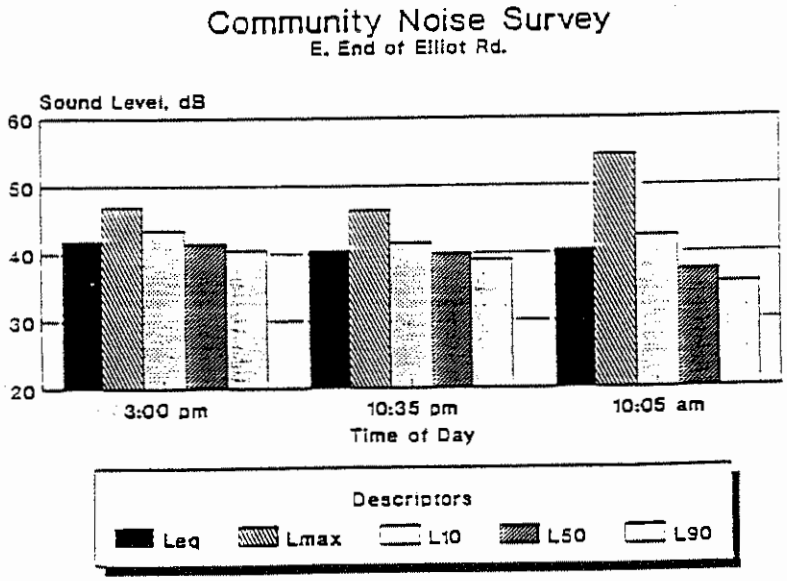
NOTE: The L_{90} values shown represent background noise levels, where there are typically no identifiable local noise sources. The L_{50} values represent median noise levels. The L_{eq} values represent the average noise energy during the sample periods, and show the effects of brief noisy periods. The L_{eq} were the basis of the estimated L_{dn} values. L_{max} values show the maximum noise levels observed during the samples, and are typically due to passing cars.



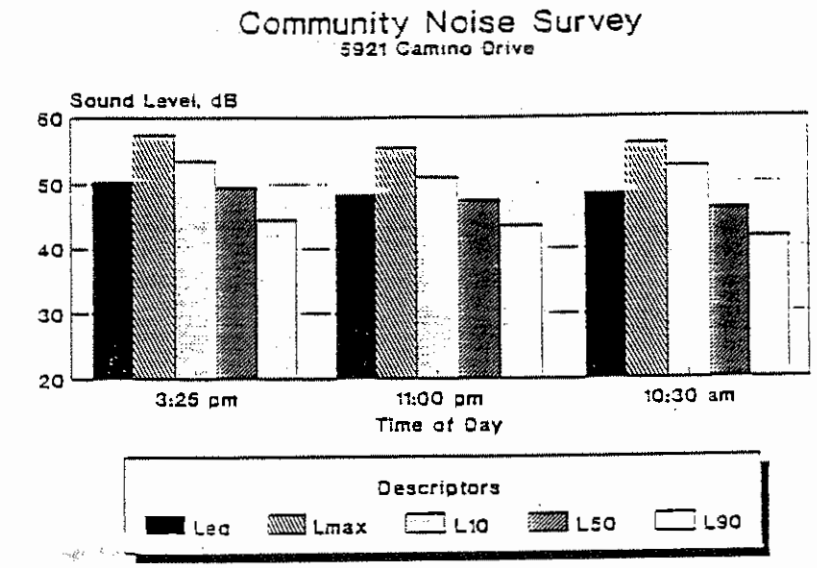


COMMUNITY NOISE SURVEY **FIGURE 7-5**

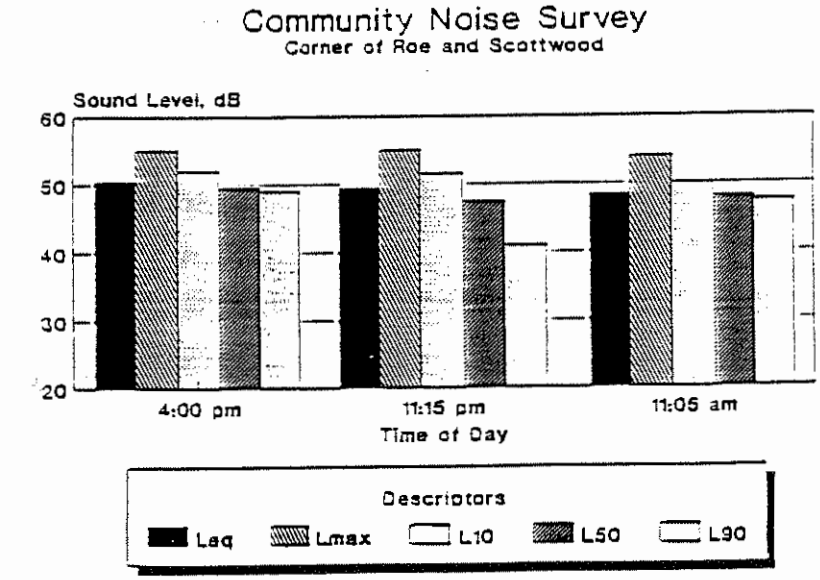




COMMUNITY NOISE SURVEY **FIGURE 7-6**



March 13-14, 19
Ldn = 49.6 dB



COMMUNITY NOISE SURVEY **FIGURE 7-7**

8.0 LIGHT AND GLARE

A nighttime survey of the area revealed light and glare primarily limited to modern commercial centers, consisting of signage, parking lot lighting and street lights. Street lights are not generally installed in residential areas, and are placed in commercial areas to ease the transition for drivers between brightly lit parking lots and dark roadways. Within the secondary and tertiary study areas, potential sources of light and glare include State Highways 99 and 191 and Skyway. The high school stadium as well as other lighted athletic fields are additional sources of light and glare when in use.

TABLE 9-1

EXISTING LAND USE ACREAGE ESTIMATES

Land Use Category	Acreage	Percent of Total
Residential	5,404	46.4
Single Family	4,739	40.7
Multi-Family	146	1.3
Mobile home	519	4.5
Commercial	251	2.2
Industrial	30	.3
Vacant	2,299	19.8
Agriculture	145	1.2
Schools	26	.2
Parks	73	.6
Public/Institutional	388	3.3
Church	90	.8
Professional Office	67	.6
SPRR Right-of-Way	74	.6
Streets and Lanes	2,735	23.5
Hospital	56	.5

Source: 1991 Field Survey, QUAD Consultants
1989 Field Survey, Butte County Association of Governments

TABLE 9-2

COMPARISON OF LAND USE ACREAGE, 1980-1991

Primary Study Area

LAND USE CATEGORY	ACREAGE			PERCENT OF TOTAL		
	1980	1991	Acreage Change	1980	1991	% Change
Residential	4,419	5,404	+ 985	38.1	46.4	+ 22.3
Commercial	266	318	+ 52	2.4	2.7	+ 19.5
Industrial	20	30	+ 10	0.2	.3	+ 50.0
Vacant	3,487	2,299	-1,188	30.1	19.8	- 34.1
Agriculture	282	145	- 137	2.4	1.2	- 48.6
Public & Institutional	243	560	+ 317	2.1	4.8	+ 130.5
SPRR Right-of-Way	74	74	0	0.6	.6	0.0
Parks	68	73	+ 5	0.6	.6	+ 7.4
Streets and Lanes	2,720	2,735	+ 15	23.5	23.5	0.0
TOTAL	**11,579**	**11,638**	**+ 59**	**100.0**	**100.0**	**+ .5**

Source: 1991 Field Survey, QUAD Consultants
1982 Paradise General Plan

10.0 RISK OF UPSET AND SAFETY

Seismic and natural flood hazards relevant to the Paradise study area have been described in the preceding sections on *Geology and Seismicity* (3.2) and *Hydrology* (5.0). Other potential hazards include wildland fire hazards, dam failure, aircraft accidents and a hazardous materials spills and leaks. The terrain and limited access to the community restrict emergency evacuation routes. The town has recently completed preparation of a *Multihazard Disaster Plan* which addresses earthquakes, hazardous material incidents, major storms, major fires and volcanic eruptions.

The wildland fire hazard in the Paradise study area results from topography, elevation, dry summer climate, winds, access, water availability, buildup of combustible materials, vegetation patterns, and structural materials, and is compounded by periods of drought. The peak fire hazard season occurs from late June through early October. Please refer to Section 14.2 for a complete discussion of fire protection. According to the *Multihazard Disaster Plan*, due to the sheer volume of people that can be affected at one time by a wildland fire, a number of potential traffic flow problems exist. These are complicated by the existence of only one north route out of town; only four south routes out of town, two of which could easily be affected by a single fire; and only three through east-west streets. The plan concludes that any fire in the Magalia area would have a major impact on the roads in Paradise because access is via a two-lane road. The plan identifies the following specific areas of concern:

- Lower Neal Road
- The west side, especially Valley View, Valley Ridge, Acorn Ridge and adjoining areas
- Foster Road (single paved access, with Wayland Road to Neal Road as the only other escape)
- Fires threatening large sections of Skyway or Pentz, which could cut off both north and south egress

The potential for hazardous materials incidents exists primarily on the major highways which cross the study area and leaking underground tank storage. Please refer to Section 16.5 for a discussion of the *Butte County Hazardous Waste Management Plan.*

The potential for aircraft accidents exists in relation to Paradise Skypark Airport, a privately-owned, public use airport located south of the town limits, within the secondary study area, on the west side of Clark Road. According to the *Paradise Skypark Airport Land Use Plan* (Butte County Association of Governments, 1985), the airport has experienced no crashes involving the public or scheduled air carriers in recent years. According to this plan, approximately fifty percent of civilian aircraft accidents occur within airport boundaries, and approximately fifteen percent outside airport boundaries and within one mile

of airports. Of these near-airport accidents, approximately sixty percent are concentrated within narrow strips of land at both ends of the runway (approach and departure zones).

The Butte County Mosquito Abatement District has indicated that Lyme disease is present in the Paradise area due to the presence of disease-bearing ticks. The district has also indicated that storm water basins and wastewater treatment ponds may increase the potential for mosquito-borne diseases in the area.

11.0 POPULATION

The 1990 state Department of Finance estimated population for the Town of Paradise was 26,786; however, the 1990 U. S. Census count for the town is 25,403. The growth forecast contained in the 1982 Paradise General Plan for 1990 was 28,580, so it is evident that actual population growth has not equaled previous estimates, most likely due in part to limitations upon sewage disposal systems. Estimated household size for 1990 is 2.4 persons per household.

Department of Finance housing estimates for 1990 reported a vacancy rate of 4.28 percent and a total of 11,652 housing units, while the 1990 U. S. Census reported a total of 11,633 housing units.

Table 11-1 reports population counts for each census year, beginning with 1960, including a 1975 special census conducted by the Department of Finance and sponsored by Butte County. Table 11-2 compares population growth in Butte County with the Town of Paradise for 1980-1990.

According to the 1990 Census, the ethnic composition of the town is 94.6 percent white; eight-tenths of one percent American Indian, Alaskan and Aleut; one percent Asian and Pacific Islanders; one-tenth of one percent Black; and 3.4 percent Hispanic.

Employment information available from the California Employment Development Department (EDD) for the Chico Metropolitan Statistical Area (which encompasses all of Butte County) indicates an annual average unemployment rate of 7.9 percent, as compared to a statewide rate of 5.1 percent for 1989. Data is not available for the Town of Paradise.

Employment projections for the Chico MSA forecast increases in employment in agriculture/forestry/fishing; construction and mining; some manufacturing categories; retail trade; finance, insurance, and real estate; services; and local government and education. No growth or decreases are forecast in food, lumber, and wood products manufacturing; transportation and public utilities; wholesale trade; and State and Federal government employment. The three largest employment sectors for the county are services (24.3 percent), retail trade (22.6 percent) and government (21.2 percent).

The population growth anticipated over the next fifteen years could average approximately 1.3 percent annually. The plan's growth management thrust is intended to keep residential construction and population growth near to that experienced over the past ten years. Carrying this projection forward will result in a population increase from the current 26,000 to approximately 31,692 by the year 2008. Using net rather than gross acreage, the build-out population projection is estimated at 31,377.

Build out projections contained in the *Paradise General Plan* are based primarily on a survey of existing land uses, the land use designations established by this plan, and the vacant land gross acreage town wide.

The numbers have been modified from those contained in the May 1992 draft *General Plan*, consistent with the text revisions directed by the General Plan Revision Steering Committee in December of 1992.

TABLE 11-1
HISTORICAL POPULATION GROWTH

Year	Population	Percentage Annual Increase
1960	9,750	
1970	14,539	4.9
1975	19,239	3.2
1980	22,571	1.7
1990	25,403	1.3

Source: U. S. Census, State Department of Finance.

TABLE 11-2
POPULATION TRENDS 1980-1990

Jurisdiction	1980	Percentage of County Total	1990	Percentage of County Total
Butte County	143,851		182,085	
Incorporated	63,365	44.0	81,940	45.0
Unincorporated	80,486	56.0	100,145	55.0
Town of Paradise	**22,571**	**15.7**	**25,403**	**13.9**

Source: U. S. Census Bureau, 1980,1990; State Department of Finance Estimates, 1990

12.0 HOUSING

12.1 HOUSING PROFILE

As described in Section 11.0 above, the population of Paradise has grown moderately since 1980, at an average annual rate of 1.3 percent. A review of census data and Department of Finance (DOF) estimates indicates that the town's housing stock expanded by 1,510 units during the period 1980-1990, an average annual increase of 151 units (see Table 12-1). The actual growth of the housing inventory, however, has not been constant over time (see Table 12-2).

An examination of census data provides insight into the changing demand for different types of dwelling units within the town. The three basic types of housing units for which data are presented are single family units, multiple family units (which range in size from duplexes to larger apartment complexes containing several units), and mobile homes located in mobile home parks and on individual lots.

The predominant type of dwelling unit in Paradise continues to be the conventional single family residence. In contrast to statewide trends, single family units in Paradise increased from 69.0 percent of the total housing stock in 1980 to 72.4 percent in 1990, as indicated in Table 12-3. Statewide trends indicate a decline in the percentage of single family dwellings, due primarily to an increased market share of lower-priced mobile homes and rental apartment units.

Comparison of the growth rates of the three dwelling types in Paradise illustrates the change in distribution of dwelling type. From 1980 to 1990, single family dwellings increased by only 20.8 percent, while multiple family units experienced a significantly higher increase of 48.0 percent and the number of mobile homes declined by 13.5 percent. The proportion of the town's housing stock comprised of multiple-family units has slowly but steadily increased from 8.0 percent of the total supply in 1980 to 10.3 percent in 1990. Construction of new multiple-family dwellings in Paradise is significantly constrained by the lack of a sewer system.

The percentage of the local housing stock comprised of mobile homes, both in parks and on individual lots, has historically been higher than average in Paradise, due to its rural nature and the larger senior citizen population. The percentage of mobile homes declined from 23.0 percent of the housing stock in 1980 to 17.3 percent in 1990. Fewer new permits for mobile home installations are being issued in proportion to the number of new, custom single family dwellings being constructed.

Before current housing needs can be understood and future needs anticipated, housing occupancy characteristics must be identified. An analysis of household size, household growth, tenure and vacancy trends complements the previous analysis of population and housing characteristics during the same time period.

A review of available data shown in Table 12-4 indicates that the number of households in Paradise increased by 1,613 during the period 1980-1990, a 16.9 percent increase. The small increase in the average household size in Paradise during the 1980s is in contrast to a statewide trend toward smaller households (see Table 12-5). Department of Finance estimates for 1990 indicate that the average household size increased to 2.36 persons per household in 1990. This may be attributable to a decreased percentage of elderly population and an increase in the number of families with children living at home.

Until 1990 Census data becomes available, it is not known whether the rate of homeownership within the Town of Paradise has increased or decreased during this decade. The statewide trend is toward a decreased rate of homeownership, due to the increased cost of housing. Table 12-6 estimates the number of owner-occupied and renter-occupied units based upon 1980 rates.

The vacancy rate is a measure of the general availability of housing. It also indicates how well the type of units available meet the current housing market demand. A low vacancy rate suggests that families may have difficulty finding housing within their price range; a high vacancy rate may indicate either the existence of deficient units undesirable for occupancy, or an oversupply of housing units. The 1980 and 1990 vacancy rates for Paradise are 5.2 and 4.28 percent, respectively.

TABLE 12-1
TOTAL HOUSING STOCK 1980-1990

Year	Number of Units	Percentage Increase 1980-1990
1980	10,123	
1990	11,633	14.9

Source: U. S. Census Bureau, 1980, 1990.

TABLE 12-2
RESIDENTIAL BUILDING PERMIT ACTIVITY
1985-1990

Year	Single-Family Units	Multi-Family Units	Mobile Home Units
1985	96	3	NA[1]
1986	135	8	NA[1]
1987	137	21	9
1988	162	14	11
1989	146	9	3
1990	98	0	10
TOTAL 1985-1990	**774**	**55**	**33**

[1] Mobile home information included with single-family unit count.

Source: Town of Paradise Community Development Department.

TABLE 12-3
TOTAL DWELLING UNITS BY TYPE OF STRUCTURE
1980-1990

Dwelling Type	1980		1990		1980-1990
	Units	% of Total	Units	% of Total	% Change
Single Family	6,985	69.0	8,439	72.4	+20.8
Multi-Family	810	8.0	1,199	10.3	+48.0
Mobile Homes	2,328	23.0	2,014	17.3	-13.5
Total Year-Round Dwelling Units	**10,123**		**11,652**		**+15.1**

Source: U. S. Census Bureau, 1980; Department of Finance estimate 1990.

12.2 HOUSING NEEDS

Existing Housing Needs

Like most municipalities in California, Paradise's goal of providing a decent home and suitable living environment for every family has not yet been achieved. The following analysis of current housing conditions documents Paradise's housing needs relative to various segments of the population.

Housing need is a complex issue, consisting of at least three major components: housing affordability, housing quality, and housing quantity. In addition, certain segments of the population have traditionally experienced unusual difficulty in obtaining adequate housing. Those unusual difficulties experienced by the elderly, the handicapped, female heads of household, large families, and the homeless are discussed as special needs in this section.

Housing Affordability

State housing policy recognizes that cooperative participation of the private and public sectors is necessary to expand housing opportunities to all economic segments of the community. A primary state goal is the provision of a decent home and a satisfying environment that is affordable. The private sector generally responds to the majority of the community's housing needs through the production of market-rate housing. There are many components involved in housing costs. Some of these factors can be controlled at the local level, others cannot. It is a primary goal of Paradise to adopt local policies and procedures which do not unnecessarily add to already escalating housing costs.

Some of the effects or problems which result from increased housing costs include the following:

- **Declining Rate of Homeownership:** As housing prices and financing rates climb, fewer people can afford to purchase homes. Households with median and moderate incomes who traditionally purchased homes compete with less advantaged households for rental housing. This can be expected to result in lower vacancy rates for apartment units and higher rents.

- **Overpayment:** The cost of housing eventually causes fixed-income, elderly and lower income families to use a disproportionate percentage of their income for housing. This causes a series of other financial problems, often resulting in a deteriorating housing stock because the costs of maintenance must be sacrificed for more immediate expenses (e.g. food, clothing, medical care, and utilities).

- **Overcrowding:** As housing prices climb, lower income households must be satisfied with less house for the available money. This can result in overcrowding which places a strain on physical facilities, does not provide a satisfying environment, and eventually causes conditions which contribute to both deterioration of the housing stock and neighborhoods. Buying a new home has become a major obstacle for many families, particularly first-time home buyers.

In this area, the median sale price of a home was $100,000 in 1991. The household earning the median family income for Butte County of $31,400 can theoretically afford a monthly housing payment of $654, which is less than the $692 payment required for a median priced home purchased with a ten percent down payment and financed at an 8.5 percent interest rate. A 1991 analysis of the components of monthly housing costs for a typical single family house costing $100,000 purchased with a ten percent down payment and financed at 8.5 percent for thirty years, indicates that a $10,000 reduction in land development costs results in a ten percent reduction in monthly payment, while a one percent reduction in takeout financing interest rates also results in a 9.2 percent reduction in monthly payment. The 1991 average sales price of a mobile home in a mobile home park was $31,900. Financed at an 8.5 percent interest rate for twenty years with a ten percent down payment, the monthly housing payment would be $249. Although this payment does not include park rental fees, with fees it does fall within the monthly housing payment that is affordable to the median income family.

Also, in this area 23.9 percent of housing units are renter-occupied. In 1990, average rental rates in Paradise were $296 for a one-bedroom apartment, $444 for a two bedroom apartment, and $412 for a three-bedroom apartment, and duplex rents ranged from $348 to $465. Rental rates for houses ranged from $319 to $676, and for mobile homes from $324 to $542 (*A Multifamily Rental Housing Strategy*). These rents are, for the most part, within the affordable range for the median income family.

The magnitude of the affordability problem is discussed in the 1991 Butte County Association of Governments *Regional Housing Allocation Plan.* The definition of housing "needs" is those renters and homeowners paying over twenty-five percent of their gross income for shelter. This plan has grouped Paradise's households into four household income categories, including very low, low, moderate and above moderate income. Table 12-7 indicates the existing and projected 1997 numbers of households that paid or will pay in excess of twenty-five percent of their income for housing by income group.

Housing Quality

A windshield housing condition survey was completed in the Town of Paradise in March 1991. A survey of multiple family units only was completed in February 1990. The results of both surveys are presented in Tables 12-8 and 12-9. Both surveys indicate that the overwhelming majority of dwelling units in Paradise are in sound condition.

The rating system used in both surveys was based on the format prescribed by the California Department of Housing and Community Development. The rating system evaluates residences based on the exterior condition of five components: roof, foundation, siding, windows, and doors.

Residences were rated as one of five possible condition categories: sound, minor, moderate, substantial, and dilapidated. These terms are defined as follows:

- Dwelling units rated as "*sound*" had no visible repair needs or needed one or two deferred maintenance repairs, such as painting, patching, or window repair.

- Dwelling units rated in need of "*minor*" rehabilitation required several deferred maintenance repairs and/or had one replacement repair need (such as the re-sheathing of the roof, replacement of siding, replacement of doors or windows, or partial foundation work).

- The "*moderate*" rehabilitation category was assigned to dwelling units that required two replacement repairs plus deferred maintenance. Complete replacement or installation of a foundation system and structural roof repair or replacement also typify "moderate" rehabilitation.

- A dwelling unit in need of "*substantial*" rehabilitation requires the replacement of three or more components.

- "*Dilapidated*" dwelling units are those which require the replacement of virtually all components and which are not financially feasible to repair.

While age certainly is contributory to housing quality problems, another factor which partially explains substandard housing is overcrowding. Table 12-10 shows that 2.5 percent of the total housing units within Paradise were overcrowded in 1980, a comparatively low number which undoubtedly can be ascribed to the high elderly population. The U.S. Census Bureau defines overcrowded housing units as those with in excess of 1.00 person per room average. The extent of the overcrowding problem in Paradise is shown in Table 12-10. However, the actual causes cannot be determined without conducting special studies.

Overcrowding is often reflective of one of three conditions: a family or household living in too small a dwelling; a family housing extended family members (i.e. grandparents or grown children and their families living with parents); or a family renting inadequate living space to non-family members (i.e. families renting to migrant farm workers). Whatever the cause of overcrowding, there appears to be a direct link to housing affordability. Either homeowners/renters with large families are unable to afford larger dwellings, older children wishing to leave home cannot do so because they cannot qualify for a home loan or are unable to make rental payments, grandparents on fixed incomes are unable to afford suitable housing or have physical handicaps that require them to live with their children, families with low incomes may permit overcrowding to occur in order to derive additional income, or there is an insufficient supply of housing units in the community to accommodate the demand. According to a *Multifamily Rental Housing Strategy*, three-bedroom (and larger) apartments are very scarce in Paradise.

Special Needs

State housing law requires that the special needs of certain disadvantaged groups be addressed. The needs of the elderly, disabled, large families, and female heads of household are described below.

- **The Elderly.** The special housing needs of the elderly are an important concern of the Town of Paradise because this group comprises a larger-than-average share of the population. Their special characteristics include fixed incomes and special needs related to housing construction and location. Location-based needs include access to medical, shopping and public transit facilities. 1990 state census data reveals that 7,770 town residents, or 30.58 percent of the total population, were sixty-five years of age or older in 1990, compared to 6,487 persons (28.7 percent) in 1980.

  The Multi-Family Rental Housing Strategy Plan, prepared for Paradise by Connerly and Associates in 1990, indicated that seventy-three percent of the multi-family rental housing units (apartments, duplexes, multiplexes) in Paradise are occupied by citizens sixty-two years of age or older.

  Elderly households in Paradise may have two special needs: 1) low income elderly households may not have enough income to properly maintain their homes; and 2) some may no longer be able to live in their homes. The former may need financial assistance for housing rehabilitation, while the latter may need to move to an assisted situation for older adults.

  Estimate of Need. The estimate of the two special housing needs of the elderly population in Paradise is relatively high. The *Paradise Multifamily Rental Housing Strategy* report, prepared by Connerly and Associates in 1990 revealed that the majority of renters in the town are over the age of sixty-five. However, it is estimated that a significant amount of elderly persons still own their homes, and could be facing the two identified critical needs.

  Existing and Projected Resources The primary resources available to address the critical housing needs of the elderly population are: 1) federal government entitlement city funds; and 2) an increase in General Plan land use designations that provide an increased opportunity for alternative housing for the elderly.

  The town has prepared a comprehensive housing affordability strategy report that focuses on housing rehabilitation.

- **Physically Disabled.** Table 12-12 indicates the number of persons in 1980 who had disabilities that either restricted working or restricted them from using public transportation. It should be noted that the listing of those persons with transportation disabilities includes a large number of persons sixty-five years of age and older. As indicated, 4.6 percent of Paradise's households contained members who were unable to work because of a disability and 3.8 percent experienced transportation disabilities. Estimates for 1990 are also included in this table.

Physically disabled persons need accessible and functional shelter that accommodates wheelchairs and walking aids. Special housing features may include entry way ramps, larger door and hall widths, grab bars in bathrooms, etc.

Estimate of Need. As indicated in the discussion above and illustrated in Table 12-12, there is a significant population of physically disabled in the Town of Paradise. It is assumed that the need for accessible housing and functional shelter is high because the town does not experience a frequent rate of building permit activity dedicated to retrofitting existing rental or other dwelling units with entry way ramps, expanded door widths, etc.

Existing and Projected Resources. Projects involving compliance with the American Disabilities Act requirements are eligible for funding with the federal government entitlement city funds. The Town of Paradise intends to utilize a portion of the funds for this purpose.

- **Large Families.** Large families are indicative not only of those households that require larger dwellings to meet their housing needs, but also are reflective of a large number that live below the poverty level. Table 12-13 indicates the numbers and percentages of those households that had five or more members of 1980 and 1990.

The primary housing need of low-income large families is affordable multi-bedroom rental and ownership housing.

Estimate of Need. Large families do not make up a significant portion of the Paradise community. As Table 12-13 illustrates, only 6.7 percent of the total number of housing units are occupied by large families. However, 6.2 percent of the total are renters, and the *Paradise Multifamily Rental Housing Strategy* identifies large rental units as a need.

Existing Resources. The federal entitlement city funding will be used, in part, for rental housing and onsite sewage disposal system rehabilitation programs. This will assist in the preservation and enhancement of the large rental unit housing stock town wide.

- **Female Heads of Household.** Families with female heads of household experience a higher than average incidence of poverty as well. Table 12-14 lists the numbers and percentages of female-headed households for 1980 and 1990.

A rental housing survey prepared for the Town of Paradise by Connerly and Associates in 1990, indicates that there are a total of 790 multi-family rental units in the community. Four percent were occupied by female heads of household with children. Extrapolating this percentage over the total number of rental units in Paradise reveals approximately 112 female heads of household with children that rent housing in Paradise. The 1990 census data reveals that there are another 476 female heads of household within the town.

Female heads of households need low-cost family housing because they are usually strapped with the responsibilities of rearing children and earning an income. Recreation and child care facilities associated with housing is another need of single women raising children.

Estimate of Need. While the estimate of need is not considered high in terms of the percentage of female heads of households compared to other groups within the town, there is a need that must be addressed.

Existing Resources. The General Plan land use designations provide ample opportunity for low cost rental housing opportunities. The federal government entitlement city funding can be used to assist the rehabilitation of existing low cost housing units and failing onsite sewage disposal systems.

- **Farm Workers.** Although there are a few remaining agricultural parcels in Paradise, mostly orchards, the farm labor required is not sufficient to create a resident farm worker population. In the 1991 *Regional Housing Allocation Plan*, the Butte County Association of Governments (BCAG) determined that there would be 100 additional farm worker households countywide by 1997, of which Paradise's share would be twelve households. However, BCAG concluded that Paradise is not expected to house farm workers due to its location.

- **The Homeless.** The Butte County Community Action Agency (CAA) is responsible for assisting the homeless population in Butte County, including the Town of Paradise. This agency does not keep records for the numbers of homeless found in individual jurisdictions within the county. There is currently no emergency shelter or transitional housing within the Town of Paradise. The CAA has reported that, during the summer months, there is normally a transient homeless population that camps in the Upper Ridge area north of the town. The CAA, which maintains a Paradise office, refers the small numbers of homeless it serves in Paradise to shelters in Chico and Oroville. According to the agency, it is meeting the needs of the homeless in Butte County (Lorene Eagleson, pers. comm., February 1992).

Extent and Type of Programs Providing Food and Services

Help-4-People and the Butte Community Action Agency are two nonprofit agencies within the Town of Paradise providing assistance to homeless persons within the area. Help-4-People is supported by fraternal and civic service organizations, ministerial associations, churches, business and individual volunteers. Help-4-People offers aid to transients in the form of food distribution every Tuesday and Thursday and agency referrals when needed. The Butte County Community Action Agency also offers aid in the form of distribution of commodities on the third Thursday of each month and agency/shelter referrals.

Social Service Programs for Homeless

Although no social service programs for the homeless exist within the Town of Paradise, the Butte Community Action Agency is able to make the necessary referrals to other programs within Butte County.

Extent and Type of Social Service Programs Targeted to Prevent Low-income Individuals From Becoming Homeless

The Housing Authority of Butte County offers assisted housing to those low-income persons who meet the requirements of Federal Preference. Help-4-People and Butte Community Action Agency offer their commodity assistance to low-income individuals and families as well. Other commodity assistance programs are run through local churches. In addition to commodity assistance, CAA also offers assistance with electric and gas bills for low-income families.

TABLE 12-4
TOTAL HOUSEHOLDS 1980-1990

Year	Number of Households	Percentage Increase 1980-1990
1980	9,540	
1990	11,153	16.9

Source: U. S. Census Bureau, 1980; Department of Finance estimates, 1990.

TABLE 12-5
AVERAGE NUMBER OF PERSONS PER OCCUPIED DWELLING UNIT 1980-1990

Year	Average Household Size	Percentage Change 1980-1990
1980	2.31	
1990	2.36	2.0

Source: U. S. Census Bureau, 1980; Department of Finance Estimates, 1990.

TABLE 12-6
HOUSING TENURE 1980-1990

Year	Owner Occupied	Percentage	Renter Occupied	Percentage
1980	7,263	76.1	2,277	23.9
1990	8,853	76.1	2,780	23.9

Source: U.S. Census Bureau, 1980; 1990 estimates and calculations, QUAD Consultants.

TABLE 12-7
PARADISE HOUSEHOLDS SPENDING
OVER TWENTY-FIVE PERCENT OF GROSS INCOME FOR HOUSING
1991-1997

Year	Total Households	Income Groups							
		Very Low Income[1]	Percentage of Total	Other Lower Income[2]	Percentage of Total	Moderate Income[3]	Percentage of Total	Above Moderate Income[4]	Percentage of Total
1991	11,178	2,347	21	2,012	18	2,907	26	3,902	35
1997	12,503	2,625	21	2,251	18	3,251	26	4,376	35
Year	Total Households	Income Groups Spending Over Twenty-Five Percent for Housing							
1991	11,178	2,347	100	1,509	75	1,454	50	0	0
1997	12,503	2,625	100	1,688	75	1,626	50	0	0

Source: Butte County Association of Governments, *Regional Housing Allocation Plan*, 1991.

1 Income not exceeding fifty percent of the median family income for Butte County.
2 Income between fifty and eighty percent of the median family income for Butte County.
3 Income between eighty and 120 percent of the median family income for Butte County.
4 Income above 120 percent of the median family income for Butte County.

TABLE 12-8
HOUSING CONDITION SURVEY RESULTS
SINGLE FAMILY DWELLINGS AND MOBILE HOMES

Condition	Single Family		Mobile Homes		Total by Condition	
	No.	Percent	No.	Percent	No.	Percent
Sound	7,784	92.5	2,159	87.6	9,943	91.4
Minor	375	4.5	260	10.6	635	5.8
Moderate	151	1.8	30	1.2	181	1.7
Substantial	58	0.7	7	0.3	65	0.6
Dilapidated	51	0.6	8	0.3	59	0.5
Total Units	8,419		2,464		10,883	

Source: QUAD Consultants, 1991.

TABLE 12-9
HOUSING CONDITION SURVEY RESULTS
MULTIPLE FAMILY DWELLINGS

Condition	Duplex		3-4 Units		6-9 Units		10+ Units		Condos		Total by Condition	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Sound	78	88.4	51	76.1	72	100.0	410	97.4	150	100.0	761	95.6
Minor	2	0.02	12	17.9	0	0.0	11	2.6	0	0.0	25	3.1
Moderate	4	0.05	4	6.0	0	0.0	0	0.0	0	0.0	8	1.0
Substantial	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Dilapidated	2	0.02	0	0.0	0	0.0	0	0.0	0	0.0	2	0.0
Total Units	86		67		72		421		150		796	

Source: Connerly and Associates, Inc., 1990.

TABLE 12-10
OVERCROWDING, 1980-1990

	1980 Housing Units			1990 Housing Units		
	Owner	Renter	Total	Owner	Renter	Total
Total Housing Units	7,124	2,182	9,540	8,853	2,780	11,633
Overcrowded (1.01+ persons per room)	139	95	234	168	122	290
Incidence of Overcrowding (%)	1.9	4.4	2.5	1.9	4.4	2.5

Source: U. S. Census Bureau, 1980; 1990 estimates and calculations, QUAD Consultants.

TABLE 12-11
ELDERLY POPULATION 1980-1990

Year	Number Age 65+	Percent of Total
1980	6,487	28.7
1990	7,292	28.7

Source: U. S. Census Bureau 1980, 1990; 1990 estimate and calculation by QUAD Consultants.

TABLE 12-12
DISABLED POPULATION 1980-1990

Year	Worker Disability	Percentage of Population	Transportation Disability	Percentage of Population
1980	1,027	4.6	862	3.8
1990	1,169	4.6	966	3.8

Source: U. S. Census Bureau, 1980; 1990 estimates and calculations, QUAD Consultants.

TABLE 12-13
LARGE FAMILIES 1980-1990

	1980 Housing Units			1990 Housing Units		
Household Type	**Owner**	**Renter**	**Total**	**Owner**	**Renter**	**Total**
Total Housing Units	7,263	2,277	9,540	8,853	2,780	11,633
Large Families (5+ persons)	493	142	635	602	172	774
Rate of Large Families (%)	6.8	6.2	6.7	6.8	6.2	6.7

Source: U. S. Census Bureau, 1980; 1990 estimates and calculations, QUAD Consultants.

TABLE 12-14
FEMALE HEADS OF HOUSEHOLD 1980-1990

	1980	1990
Female-headed Households (2+ persons per household)	562	658
Total Households	9,540	11,153
Percentage of Total Households	5.9	5.9

Source: U. S. Census Bureau, 1980; 1990 estimates and calculations, QUAD Consultants.

12.3 PROJECTED HOUSING NEEDS

Information presented in Sections 11.0 and 12.0 above documented the recent growth which has occurred in the population and housing stock of Paradise. Between 1980 and 1991, the population increased by 14.4 percent. The portion of the statewide housing need assigned to Butte County during the period January 1, 1991 to July I, 1997 totals 12,165 dwelling units. The number of households is projected to increase by 9,866 countywide.

Market Demand for Housing

The Paradise and Butte County regional real estate market, like most of the rest of California, is relatively slow at the time that this *Housing Element* is written. At the same time, it is one of the more affordable housing markets in the state. The cyclical nature of real estate makes it difficult to forecast the character of market demand during the planning period. Local sources have indicated that the supply of rental apartments is relatively scarce in Paradise, although there is a greater available supply of rental houses.

Projected Housing Demand and Basic Construction Need for all Income Levels

The 1991 *Regional Housing Allocation Plan* prepared for the Butte County Association of Governments establishes both the projected need for nonmarket rate housing and the distribution of the projected need to each jurisdiction within the region. The need for nonmarket rate housing is defined as households in the very low, low, and moderate income groups which pay over twenty-five percent of total income for housing. It is assumed that households with an above-moderate income are not in need of economic aid.

A projected total need for 1,176 households is given in the *Regional Housing Allocation Plan* for the Town of Paradise between 1991 and 1997. This total was subsequently adjusted by BCAG to take into consideration additional vacancies, housing replacement need, farm workers, students and other adjustments, for a total of 1,568 households.

The plan establishes the basic new construction need for the Town of Paradise at 1,350 dwelling units. This allocation was based on the assumption that the maximum number of dwelling units that Paradise can accommodate is 1,350 between 1991 and 1997, due to sewer constraints and topographic conditions. The basic construction need for Paradise and the other Butte County jurisdictions by income level is presented in Table 12-15. This total may be translated into an annual new construction need of 193 units.

Conversion of Assisted Housing Units

State housing element law requires that housing elements address subsidized housing units at risk of conversion to market rate units. Two developments have been identified in Paradise which are at risk of conversion: Kathy Court, located at 1561-1565 Kathy Court, a 236 (J) (1) project with family rental units; and Paradise Gardens, a forty-eight unit Section 8 new construction project.

Kathy Court is a mortgage-based subsidy project subject to the provisions of the Low Income Housing Preservation and Resident Homeownership Act (LIHPRHA). It is currently eligible to proceed under the provisions of LIHPRHA because it is within two years of its initial prepayment eligibility date.

Paradise Gardens has a FmHA Section 515 rural rental housing mortgage loan with a Section 8 conventional new construction contract (mortgage and rental subsidies). **April 4, 1994** represents the Section 8 contract opt-out date.

Accordingly, both of these projects are or will be at risk of conversion to market rate units during the next ten years. The Town of Paradise currently does not have the financial ability to purchase and assure preservation of either of these projects, and there is no nonprofit organization within the town that is involved with or capable of purchasing them. Potential future preservation resources may include federal entitlement city funding. If this funding source is available, and if the at risk projects are eligible, the town may choose to attempt to assist the preservation of one or both projects.

Currently, the Community Housing Improvement Program (CHIP) a non-profit housing organization based in Butte County, is seeking "Home" (Home Investment in Affordable Housing) funding to assume the existing mortgage for the twelve family rental units on Kay Court (formally "Kathy Court"). If successful, CHIP intends to maintain the units as affordable for low-income families. The Town of Paradise supports this effort. The units were appraised at a value of $400,000 in 1993. CHIP has offered $377,000 and has estimated another $339,054 in rehabilitation cost is needed to conserve these units. Using the current average cost of new construction for the multifamily residential units ($70 per square foot), replacement of the units is estimated to be approximately $840,000 with an estimated $84,000 for the cost of the land and improvements.

The contract extending the agreement to maintain the Paradise Gardens, a 48 unit Section 8 project as affordable for low income persons, was executed by the property owner in 1996. It is not known at this time if the Section 8 program will be continued; however, all local steps have been taken to ensure these units are conserved. New construction costs for this type of housing is estimated to be $2,956,320 for the construction of the units and $336,000 for the cost of the land and improvements.

TABLE 12-15
BASIC NEW CONSTRUCTION NEED BY INCOME GROUP

Income Groups									
Jurisdiction	**Very Low**		**Other Low**		**Moderate**		**Above Moderate**		**Total**
Biggs	74	30%	31	20%	31	20%	45	30%	154
Chico	1,005	26%	690	18%	769	20%	1,383	36%	3,847
Gridley	101	28%	64	18%	71	20%	120	34%	356
Oroville	296	26%	203	18%	226	20%	405	36%	1,130
Paradise	407	30%	243	18%	270	20%	430	32%	1,350
Unincorporated	1,550	29%	959	18%	1,066	20%	1,753	33%	5,328
Total	**3,406**	**28%**	**2,190**	**18%**	**2,133**	**20%**	**4,136**	**34%**	**12,165**

Source: Butte County Association of Government, *Regional Housing Allocation Plan*, 1991

12.4 RESIDENTIAL LAND RESOURCES/INVENTORY

In order to properly plan for future housing needs, undeveloped lands available for housing within the town and within projected growth areas must be identified. It is assumed that this growth and development will occur upon annexation to the town. The *Regional Housing Allocation Plan* assumes that development will be concentrated in those communities in which public facilities can be constructed or expanded between 1991 and 1997.

Available Land Inventory

Table 2-2 of Volume I, *Policy Document*, itemizes land planned for growth and development within and around the Town of Paradise. It includes vacant lands presently within the Town of Paradise and lands to the south of the town limits within the secondary study area which are planned for residential development, and that are not inordinately constrained by topography and the current lack of a community collection sewer system. Some of the lands in the secondary study area are already prezoned for residential use, and will be zoned to an appropriate residential classification upon annexation to the town. It is important to note that the county has adopted a *Paradise Urban Reserve Policy Statement* and has designated this area as "Urban Reserve" (see Figure 16-1). The policy provides that the county's land use policy, zoning and subdivision shall be coordinated with the Town of Paradise. Please refer to Section 16.1 for a more complete description of this policy.

Table 2-2 of Volume I indicates the projected holding capacity of Paradise based upon vacant lands planned for development. Table 2-1 of Volume I, presents the allowed densities and land use intensity for each residential land use classification in the *Paradise General Plan*.

The tables indicate that the amount of land available (land inventory) for different types of residential development, served or planned to be served by public facilities, is more than adequate to meet anticipated growth, and to provide for the estimated number of new housing units determined necessary by the *Regional Housing Allocation Plan* to provide new housing opportunities for low and lower income households.

The primary land use designations that will provide low and moderate income housing opportunities are "M-R" (Multi-Family Residential: ten dwelling units per net acre), "T-R" (Town-Residential: three dwelling units per net acre), "C-C" (Central-Commercial: ten dwelling units per net acre), and "C-S" (Community-Service: ten dwelling units per net acre).

At the Town's request, the Geographic Information Center (GIC) at California State University, Chico prepared a geographic information systems land use map depicting vacant parcels with the current zoning classifications within the Town of Paradise and the surrounding sphere of influence[1]. This map was analyzed with the General Plan Land Use Map and an environmental constraints map to determine the consistency with the Town Zoning map and the suitability of sites for future residential development.

The Town undertook and completed a town-wide rezoning effort in calendar year 1997. Comparison of the zoning map with the land use map indicated that the two maps are consistent.

The 1998 Sites Analysis indicated there are approximately twenty (20) acres of vacant, buildable MF [Multifamily Residential] zoned property, thirty (30) acres of C-C [Community-Commercial] zoned land, and thirty acres (22 acres buildable) of C-S [Community-Services] zoned property which could be developed with affordable housing within the Town limits (Primary Study Area). These zoning classifications allow up to ten (10) dwelling units per acre for a potential total of 720 new units. A Planning Commission use permit is required for residential use in the C-C and C-S zoning districts; however, these properties are located in areas where residential use is in proximity and the topography is not considered a significant constraint. These districts also allow greater lot coverage, 60% and 80%, respectively. Additionally, there are underdeveloped and vacant sites representing approximately 3 acres within the C-B [Central-Business] zoning district which could be developed with 30 housing units. Because the area is in proximity to commercial services and transportation facilities, this general vicinity would be an appropriate location for a senior citizen housing project.

As indicated in Table 2-2 of the General Plan Policy Document and verified through new mapping, there are approximately 500 vacant acres of property designated for Rural-Residential and Town-Residential development. This acreage could provide approximately 960 new housing units.

Based on above data gathering and analysis, the Town of Paradise has more than adequate vacant, buildable sites to meet the housing allocation projected by the Butte County Association of Government, *Regional Housing Allocation Plan, 1991.* (See Table 12-15, *Basic New Construction Need By Income Group.*)

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[1]Ibid.

TABLE 12-15A
VACANT ACREAGE, POTENTIAL UNITS AND HOUSING ALLOCATION

Income Group	Housing Allocation	Vacant Acreage	Potential Units
Very Low, Other Low	650 units	72 acres	720
Moderate, and Above	700 units	500 acres	960

12.5 DEVELOPMENT CONSTRAINTS

A number of factors affect the ability of the private sector to respond to the demand for housing and constrain the maintenance, improvement or development of housing for all economic groups. Constraints, however, can generally be translated into increased costs to provide housing and fall into two basic categories: governmental and nongovernmental.

Governmental Constraints

Governmental constraints are potential and actual policies, standards, requirements, or actions imposed by the various levels of government or development. Although federal and state programs and agencies play a role in the imposition of governmental constraints and increases in housing costs, they are beyond the influence of town government and cannot be effectively addressed in this document. An analysis of potential local governmental constraints is presented below.

Land Use Controls

Land use controls are basically minimum standards included within the town's zoning and subdivision ordinances. Zoning is a means of ensuring that the land uses in a community are properly situated in relation to one another, providing adequate space for each type of development. Zoning regulations control such features as height and bulk of buildings, lot area, yard setbacks, population density, building use, etc. If zoning standards are too rigid and do not allow sufficient flexibility, development costs could increase, and interest in development may decrease.

Open space requirements can be an impediment to the provision of affordable housing. On-site requirements for off-street parking and open space and/or landscaped areas can greatly increase the cost of land development while limiting the overall housing density. The open space requirements for the Town of Paradise do not exceed the percentages found in the same regional area. The 60% open space requirement for detached single-family residential units would not be considered a constraint to affordable housing in Paradise especially because there is no minimum square footage requirement for the unit size. The open space requirement for multifamily residential development is 40% which is also consistent with open space requirements for cities in the same regional area as Paradise and is not considered a constraint to development of affordable housing. Please see Table 12-16A.

TABLE 12-16A
RESIDENTIAL OPEN SPACE REQUIREMENT - REGIONAL COMPARISON

Open Space Requirements by Jurisdiction			
Jurisdiction	**% open space**	**Allowable lot coverage**	**Off-street parking**
City of Chico	25-60% (R4 - R1)	75-40% (R4 - R1)	Included in lot coverage, but not for open space
City of Oroville	50%	50%	Uncovered areas included in open space
City of Gridley	50%	50%	Includes all impervious surfaces
City of Redding	40-60% (R3 - R1)	60-40% (R3 - R1)	Includes all impervious surfaces
Town of Paradise	40-60% (MF -TR)	60-40% (MF-TR)	Includes all impervious surfaces

Note: All the comparison jurisdictions are served by sanitary sewer. The Town of Paradise, like other communities served by septic and leach line systems, requires replacement areas for additional septic line installation in case of system failure. This factor may require additional open space areas for health and safety reasons and not aesthetic considerations.

Off-street parking regulations may also pose constraints on the provision of affordable housing especially when coupled with open space requirements. The above noted open space requirements represent the total of all impervious surfaces including off-street parking; therefore parking surfaces are not an additional calculation and would not be considered a further constraint. The Town also has a reduced off-street parking space size for compact cars for twenty (20) or more spaces which can constitute up to 25% of the total parking area. Additionally, the town engineer may approve off-street parking spaces within the yard setback areas of the property if sight distance is not impaired.

A potential constraint to providing affordable housing for qualified senior citizens is the current zoning regulation which requires two (2) off-street parking spaces for mobile home sites. Mobile home units represents approximately 16% of the total housing stock in the Town. Additionally, there are no provisions for reduced off-street parking spaces for senior housing. Senior citizens represent the largest group of Paradise occupants in mobile home parks and also comprised the largest number of lower income persons in the community. It is common that senior citizens do not have more than one vehicle per household. Because of this fact, many jurisdictions have reduced the number of required off-street

parking spaces for senior citizens. Therefore, it is recommended the Town review and revise the current off-street parking regulations for mobile home sites and senior citizen housing.

The subdivision ordinance governs the process of converting raw land into building sites. It allows the town to control the internal design of each new subdivision so that its pattern of streets, lots, public utilities, and any amenities will be safe, pleasant and economical to maintain. As with zoning, overly restrictive standards will result in higher land development costs and/or lack of interest in development.

The Town of Paradise offers several incentives in its zoning ordinance and subdivision ordinance, including the following:

- The zoning and subdivision ordinances were comprehensively amended and rewritten in 1988 and 1990, respectively, updating and streamlining many requirements.

- The zoning ordinance was amended to allow small (750 square feet) second dwellings in single family zones with a site plan review permit. These "granny flats" can be rented out and are not considered in density limitations. In addition, the zoning ordinance allows "two-family" residences in single-family residential zones with the securing of a use permit.

- The second dwelling units and two-family residences represent affordable housing opportunities in the Paradise community. Because of the size limitations on the secondary dwelling units, they most often are rented at an affordable price. Additionally, second dwelling units can help senior citizens in retaining their primary household either through the increased income from the rental of a second dwelling unit and/or by providing living quarters for family members or caretakers.

  Currently, second dwelling units require noticing and a public hearing as part of the site plan review approval either by the Planning Commission or the Town Planning Director. The site plan review permit process could be considered a constraint to the provision of second dwelling units. With adopted regulations for second dwelling units including size, yard setback areas and other development standards, second dwelling units could be approved administratively by Town staff.

- The town's present requirements for onsite and offsite improvements are considerably less than most California cities of comparable size and development and are not considered to be a significant impediment to residential development. In order to preserve the rural character of the community, asphalt berms and walkways have been preferred to sidewalks and concrete curbs and gutters in single-family areas.

- The town changed its requirement of two parking spaces per new dwelling unit to a graduated scale based on the square footage of the unit. This allows for a reduced number of required parking spaces for multi-family residential development. For example, units less than 700 square feet in size now only require 1.2 parking spaces, and units exceeding 1,200 square feet in size now require 1.8 parking spaces.

- The Town of Paradise recently reorganized the planning, engineering and building departments into a Community Development Department to streamline permit processing and increase public service efficiency. This has dramatically improved the processing of building and planning permits for local housing projects by improving and expediting interdepartmental communication, and reducing redundancy of work.

- The zoning ordinance does not distinguish between conventional houses and mobile homes on permanent foundations within rural residential and single family residential zoning districts. In addition, the zoning ordinance includes a mobile home combining zone which permits the use of mobile homes not placed on a permanent foundation as dwellings in the Rural Residential-3, Rural Residential, Single-Family Residential, Multiple-Family, Multiple-Family/Professional, Rural Residential-10 and Rural Residential-20 zones.

- Lot merger provisions have been included in the subdivision ordinance to assist in the assembly of small parcels into larger building sites.

- The town's site plan review process establishes standards that can be reviewed by a developer, prior to submittal of an application, to determine the requirements that will apply to the project. A site plan review is conducted before submittal of building plans, and reduces costs by identifying any problem areas prior to development of costly working drawings.

- The zoning ordinance includes a planned development combining zone that provides flexibility for planned developments which do not conform in all respects with the designated land use pattern and/or ordinance requirements.

- In terms of development standards for single and multi-family residential development, the town zoning ordinance is both clearly written and liberal. Lot coverages, height restrictions, setbacks and floor area ratio standards are straight forward and not considered an impediment to residential construction.

- The Town's identity is closely related to the natural beauty of the forested terrain associated with Paradise and other communities located in the foothills of the Sierra Nevada mountains. Shortly after incorporation, the Town adopted its first tree ordinance. In March 1998, the tree preservation ordinance was amended. A permit is required to remove trees; however, the ordinance does not prohibit removal of trees for the construction of buildings and homes, but rather, prohibits indiscriminate and excessive removal of trees and logging. The tree permit is not a constraint to the provision of housing.

Building Codes

Building codes regulate the physical construction of dwellings and include plumbing, electrical and mechanical divisions. The town adopts and follows the Uniform Building Code as established by state law. The town operates a one-stop permit processing procedure.

Site Improvements

Site improvements are regulated by the town subdivision ordinance, and through conditions and standards imposed through the town's site plan review process. Site improvements include required offstreet parking, roads, sidewalks, landscaping, walls, and the storm drainage system. There is currently no sewer system, and water system requirements are handled by the appropriate special district or private water company. The town does not require any improvements other than those deemed necessary to maintain the public health, safety and welfare.

Onsite Wastewater Maintenance District

During the latter part of 1992, the town established an onsite wastewater maintenance district that will monitor the performance of individual septic tank and leachfield systems, and oversee the enforcement of the town sewage disposal ordinance. Existing systems serving rental units that are experiencing failure will ultimately be repaired and/or upgraded. This will result in the potential increase in opportunities for affordable housing units, or at the very least, increase the preservation of existing units.

A review of multiple-family residential projects constructed in the last two years, indicated that maximum densities had been reached.[2] Development of housing within the Town is constrained by the lack of a community sanitary waste collection system; however, the Town has accepted engineered designed systems for septic and leach line disposal facilities on a project by project basis. A formal onsite system variance procedure has been established by the Town in an effort to provide approval for higher density projects including a 96-unit assisted living housing project currently under construction on Buschmann Road. Approximately ten variance applications have been submitted and approved through the variance procedure since 1995. Approximately 40 additional affordable housing units were approved through the variance procedure. Although, still considered a constraint, the procedure to allow variances to the adopted onsite sanitation regulations is minimizing this constraint to the maximum extent possible while maintaining health and safety protection.

Development Permit Processing

In 1997, the Town of Paradise adopted a "Planning Process Reforms and Policy Document."[3] The purpose of the document is to provide early and complete information about the development process. A "Planning Process Handbook" was produced to further implement the goals of the "Planning Process

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[2]Town of Paradise, Community Development Department, April 1998

[3]Adopted by the Town Council, July 1, 1997

Reforms and Policy Document." The Handbook contains useful information regarding development permit processing. According to Town staff, the most common reason for an increase in application processing time, is the submittal of incomplete information by the applicant. The "Handbook" provides specific information to help applicants submit complete applications, and thereby streamlines the development application process.

All Town development applications contain an "Estimated Processing Time" section. Land division applications are generally processed within 8-10 weeks and Site Plan Review applications such as second dwelling unit permits can be processed in 6-8 weeks. If the permit is approved administratively, this time-line can be shortened by two weeks. The Town has a "projects coordinator" who tracks development applications through the various divisions within the Town's Community Development and Public Works Departments to ensure timely processing of development applications. Development application processing and tracking is not a constraint to the provision of housing.

In addition, to the Town's residential zoning districts, high density residential use is allowed in the C-C [Community-Commercial] and C-S [Community-Services] zoning districts subject to site plan review. A field survey conducted in spring, 1998, indicated vacant or underutilized properties within the C-C and C-S zoning districts which may be utilized for affordable housing.[4]

Like other California cities, the Town of Paradise collects development impact fees for residential, commercial and industrial development to finance public facilities and improvements which will be needed to serve the new development. Fees help finance road improvements, police and fire facilities and drainage improvements (only in areas which require stormwater facilities). As required by State law, the impact fee schedule was adopted only after a thorough analysis (nexus) study determined the collection of fees was justified by the projected impact of development on essential public services and facilities. It is estimated that impact fees per housing unit for the Town of Paradise range between $8000 and $10,000 (including school fees). In comparison, the Town of Paradise impact fees are $2000 to $4000 less than neighboring City of Chico. Impact fees for both of these jurisdictions are considered lower than fees collected in the urban areas of the state. Development impact fees are not a constraint to the provision of housing.

Fees

Although development processing fees do contribute to the total cost of development, and therefore housing, the fees charged by the Town of Paradise are very modest in comparison to fees charged by other cities and counties throughout the state. However, the town is not the only public agency which imposes fees on new development. Impact and/or hookup fees are also charged by the Paradise Unified School District, the Paradise Irrigation District, the Lime Saddle Community Services District, the state (for review of environmental documents by the Department of Fish and Game), and the County of Butte.

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[4]1998 Sites Analysis, Appendices, Volume III, Paradise General Plan

By law, fees cannot exceed the cost of providing the particular facility or service for which they are charged. A recent study completed for the town has revealed that for many years, the fees charged by the Town of Paradise have not even recovered the cost to the town of providing facilities and services. The town is in the process of updating its fee schedule to reflect a greater rate of recovery. Building permit fees are as established by the currently adopted edition of the Uniform Building Code, and charges are consistent with most cities and counties.

Building permit fees for residential construction vary depending upon the valuation of the project. Site plan review permit and use permit fees for multi-family residential developments and other alternative housing projects range from $225 to $750 depending upon the scale and intensity of the actual project. However, discretionary review is not required in every zoning district for all residential projects.

The Town of Paradise does not have a comprehensive town wide development impact fee program that would adversely impact housing projects. The Paradise Unified School District impact mitigation fee program does have an exemption for housing development projects serving the elderly population, which assists the town to promote and support this type of housing opportunity within the community.

Public Facilities and Services

As discussed elsewhere in this document, sewer and water service place significant constraints upon existing and planned residential development in Paradise. Water service is provided by special districts and is not currently under the town's control. Water service may not always be available at a particular point in time or location in accordance with the town's timetable for growth and development. The policies of the *General Plan* call for a feasibility study of consolidation and/or acquisition of these districts by the town. The feasibility study on the consolidation or reorganization of the Town of Paradise and Paradise Irrigation District which provides water service to most properties within the jurisdiction of the Town, will be agendized for Town Council consideration as part of the annual budget discussion. As noted above, the Town has no control of provision of water; however, Town officials are taking the lead in opening the discussion for the potential funding for the feasibility study.

Even with construction of the proposed community collection sewer system, large areas of existing and planned residential development will remain unsewered during the time frame of the plan. This limitation was acknowledged by BCAG in the *Regional Housing Allocation Plan*, which adjusted the town's share of regional housing needs under the assumption that the maximum amount of housing it can accommodate is 1,350 dwelling units between 1991 and 1997. At the densities and minimum parcel sizes necessary to properly accommodate new septic systems, the production of affordable housing becomes problematic. However, the formation of an onsite wastewater maintenance district, in 1992, and the implementation by town staff may lead to creative alternatives in terms of sewage disposal for residential construction projects.

Nongovernmental Constraints

Nongovernmental constraints are those generated by the private sector which are beyond the control of local government, as well as physical/environmental constraints. With respect to Paradise, these include availability and cost of financing, price of land, construction costs, consumer preference, and topography/soil suitability.

Availability and Cost of Financing

Interest rates for both construction and take-out financing probably have more impact on housing than any other factor, at least in the short term. When interest rates are high, or financing is not generally available, an increasing number of households cannot afford home ownership even if housing prices are affordable. A 1992 analysis of the components of monthly housing cost for a median-priced single family house costing $100,000, purchased with a ten percent down payment and financed at 8.5 percent for thirty years, indicates that a $10,000 reduction in land and development costs results in a ten percent reduction in monthly payment, while a four percent increase in take-out financing interest rates results in a thirty-eight percent increase in the monthly payment. In the Paradise area, the median sale price of a three-bedroom home was $100,000 in 1991, and is $31,900 for a mobile home in a mobile home park.

To mitigate the impact of high interest rates, when they occur, one of the few options available to local government is to find a means of subsidizing those rates for the home buyer and/or developer. This has been accomplished in the past primarily by the sale of mortgage revenue bonds, often coordinated at the county level. This process has been complicated by changes in federal law and state caps on the amount of bonds that can be issued statewide. State and federal mortgage subsidy programs are available at various times to qualifying projects and developers. While mortgage interest rates are currently at their lowest point in twenty years at the time this is written, the availability of construction and development financing is very tight, primarily in response to savings and loan institution failures and foreclosed development projects on the national level.

Financing for housing construction or rehabilitation loans is generally available. The securing of federal entitlement city funding will greatly increase the availability of local funding programs for housing and onsite sewage disposal rehabilitation projects."

While there are no definitive "blighted" or "slum" areas in the community, the land inventory program has identified a number of both rental and owner occupied housing units and sewage disposal systems in need of repair and rehabilitation. These areas have been targeted for low-interest rehabilitation loan programs.

Price of Land

According to the California Building Industry Association, the cost of land represents an ever-increasing proportion of the total housing development cost. In 1980, land cost represented approximately thirty percent of the cost of a new home in California, but by the end of the decade that component accounted for nearly thirty-five percent of the cost. In Butte County, land costs are still reasonable compared to other, similar areas in California. In Paradise, the average cost of a one acre single family lot ranges from $32,300 to $50,340. The average cost of a multiple family lot is difficult to estimate due to the small number and unique characteristics of such lots. The low density (one acre) of a typical single family lot and the scarcity of multiple family sites are attributable to the lack of a sewer system. The policies of the *General Plan* and imminent construction of a sewer system will address these constraints during the time frame of the *Housing Element*.

Measures available to local government to address land costs include the use of redevelopment funds to write down land costs, and development of housing by a nonprofit corporation or the Housing Authority. Use of surplus government-owned land for housing is an option not often available to a small town or city, due to a general lack of suitable publicly-owned land. However, this option should be kept in mind when such an opportunity occurs. Finally, attempting to stabilize or reduce land prices through increasing the supply of available land can only be effective if a full range of public services and facilities are available at a reasonable cost.

Cost of Construction

Rising costs of labor and materials have contributed to nongovernmental constraints on housing development and improvement. These costs, plus energy costs, formed a substantial part of housing cost increases during the 1970s, increasing by ten percent during that decade. Labor and materials costs continued to increase during the 1980s. The cost of wood is expected to continue to increase due to significant projected cutbacks in timber harvesting in the United States for environmental reasons. Labor costs for publicly-constructed housing are higher than for privately-constructed housing due to the requirement to pay prevailing wage rates, which in an area such as Butte County are significantly higher than local wage rates.

The total cost to the local developer for housing project financing, materials, fees, and labor are not considered significantly prohibitive in Paradise. Financing, materials and labor costs in the community are similar, if not identical to other communities in Northern California. The development impact fees are considerably less in Paradise than in other cities in Butte County.

Local governments can use Community Development Block Grant (CDBG) funds and redevelopment funds to finance infrastructure improvements (e.g. water and sewer lines), which assist in lowering housing costs. The town is considering applying for CDBG funds to assist with the construction of the sewer system.

Consumer Preference

Part of the increase in housing costs in the 1980s has been due to consumer preference and lifestyle expectations regarding dwelling unit size and amenities. All of these lifestyle choices have costs associated with them. As housing costs and/or interest rates make detached single family dwellings less affordable, alternatives such as smaller lots, smaller units, and attached housing become more acceptable, but are still not the housing of choice for the majority of households. Local government can assist in making a variety of housing types available through permitting higher densities, zero-lot-line housing and smaller lots; only, however, if infrastructure permits.

Topography/Soil Suitability

The steeper slopes characteristic of the large canyons east and west of the town, and smaller canyons to the south, limit residential densities and entirely preclude development of some areas. Grading requirements on steeper slopes increase the cost of housing as well. In the *Regional Housing Allocation Plan*, BCAG acknowledged this limitation and adjusted Paradise's share of the regional need accordingly. Soil suitability for septic systems affects the minimum parcel size as well as septic system installation and monitoring requirements, all of which impact the cost of housing.

12.6 EVALUATION OF THE PREVIOUS HOUSING ELEMENT

Pursuant to Section 65588 of the Government Code, the Town of Paradise has reviewed its 1985 *Housing Element* and has evaluated the appropriateness of its housing goals, objectives, and policies in contributing to the attainment of the state housing goal, the effectiveness of the *Housing Element* in attainment of the town's housing goals and objectives, and the progress of the town in implementation of the *Housing Element*. The new *Housing Element* has been updated to reflect the results of this review.

Results of Previous Goals, Quantified Objectives, Policies and Programs

By definition, a goal is an "...ideal future end, condition or state related to the public health, safety or general welfare toward which planning and planning implementation measures are directed... a goal is generally not quantifiable, time-dependent or suggestive of specific actions for its achievement" (State of California *General Plan Guidelines,* 1990). Thus, it is unlikely that the Town of Paradise can expect to completely achieve the goals set forth in the 1985 *Housing Element.* Nevertheless, the town has made progress toward its goals, as described in this section and below in the review of the 1985 *Housing Element* programs. The goals, which are consistent with state and national housing goals to provide a decent home and suitable living environment for every individual and family, have for the most part been incorporated unchanged into this *Housing Element* update due to their continuing worthiness as an expression of community values.

The *General Plan Guidelines* define a policy as a specific statement that guides decision making and which indicates a clear commitment of the local legislative body, the Town Council. A review of the policies contained in the 1985 *Housing Element* indicates that the town intends to snpport and uphold some of the adopted policies, which have been carried forward into the *Housing Element* Update (Volume I, *Policy Document*, Section 6, *Housing Element*), along with newly drafted policies.

An objective is defined as a "...specific end condition or state that is an intermediate step toward attaining a goal." With regard to the *Housing Element*, objectives must be *quantified*; that is, measurable and/or time-specific. The quantified objectives contained in the 1985 *Housing Element*, along with an estimate of the actual results achieved during the planning period, are presented in Table 12-16.

Previous Housing Element Programs

The results of the programs contained in the town's 1985 *Housing Element* are summarized and reviewed below on a program-by-program basis.

- **6.42 Building Sites and Densities**

  - *Allow residential and mixed development in commercial zones, particularly dwellings in upper stories.*

    Residential uses are permitted in the C-B (Central-Business) zone and the C-C (Community-Commercial) zone with a use permit, to implement this program.

  - *Encourage creation of new building sites through demolition of dilapidated units and assemblage of small parcels.*

    The town has established a demolition permit process and has also included lot merger provisions in the recently-adopted subdivision ordinance to implement this program. In addition, the town is actively considering establishment of a redevelopment agency and preparation of a redevelopment plan, which would provide tools for assembling properties for this purpose.

  - *Assist development of specific plans for residential densities, roads, drainage, utilities and sewage disposal in the largely undeveloped ridgetops along the southern and western edges of the town.*

    The town has completed studies and established impact/road improvement development fees for the westside and southside areas, which will allow development to proceed in those areas, and help to implement this program. The 1992 *General Plan* revision, of which this *Housing Element* is a part, designates areas for development and addresses the issues outlined in this program.

- **6.43 Development and Construction**

  - *Continue to review innovations and cost saving materials and techniques that will provide the same quality construction at lower cost to the consumer.*

    The building permit review process which implements this program is ongoing. The building division has reported moderate success in educating themselves and builders about innovations and cost saving materials and techniques. Due to lack of staff and budgetary constraints, full implementation has been delayed and success has been only moderate.

  - *Require the first floors of the multi-family developments to accommodate access and use by the elderly and handicapped.*

    This is currently required by the Town of Paradise, to implement this program.

- *Continue to analyze setback requirements, lot design criteria, review procedures, parking requirements, and street improvement standards and modify each of these where possible to cut development costs.*

  This is an ongoing process in the Town of Paradise Community Development Department. Major revisions to the zoning ordinance were adopted in 1988 and 1992, and amendments to the subdivision ordinance were adopted in 1990 and 1993, which incorporated numerous changes in setback requirements, lot design criteria, review procedures, parking requirements, and street improvement standards.

- *Allow mobile homes in all residentially zoned areas of the town unless clearly incompatible with existing development.*

  The zoning ordinance does not distinguish between conventional houses and mobile homes on permanent foundations within rural residential and single family residential zoning districts. In addition, the Paradise zoning ordinance includes a Mobile-Home combining zone which permits the use of mobile homes not placed on a permanent foundation as dwellings in the Rural Residential-3, Rural-Residential, Single-Family Residential, Multiple-Family Residential, Multiple-Family/Professional, Rural Residential-10 and Rural Residential-20 zones. Relative to other California cities and towns, there is a high percentage of mobile homes in Paradise (22.6 percent of the single-family housing stock).

- *Limit condominium conversions to assure sufficient housing opportunities for renters.*

  The actions of the private market have limited the conversion of apartments to condominiums without the need for intervention by town government to implement this program. Very few conversion requests have ever been submitted to the Community Development Department.

- **6.45 Maintenance and Utilities**

  - *Inspect housing upon complaints about health and safety problems and require compliance with applicable codes.*

    Such inspections and compliance procedures are an ongoing function of the Town of Paradise building division to implement this program.

  - *Initiate a program of periodic inspections of apartments and rest homes.*

    Due to a lack of staffing and budgetary resources, the town does not yet have a program for performing periodic inspections of apartments and rest homes to determine compliance with applicable codes. Residential care facilities must be licensed by the state, and are periodically inspected by state officials as part of the licensing procedures.

- *Require demolition of vacant dilapidated dwellings which are not economically feasible to improve to code standards.*

  The town adopted an ordinance (Chapter 15.06.010 of the Paradise Municipal Code) in 1989 to implement this program.

- *Require design of new residential development to minimize use of energy and water and to maximize use of natural lighting, heating, and cooling process.*

  The Town of Paradise building division enforces building code requirements to implement this program.

- *Allow home occupations.*

  The Town of Paradise permits home occupations with the securing of a home occupation permit in residential zones to implement this program.

- *Require developers to pay the costs of new facilities and services needed for new development.*

  This is currently the practice of the Town of Paradise with regard to new facilities, although a recent management study has shown that not all costs are fully recovered by town fees. While there are additional mechanisms available to recoup the costs of increased services (such as AB 1600 fees and assessment districts), implementation of such fees would not advance the cause of increasing the supply of affordable housing in the town.

- **6.46 Residential Environments**

  - *Encourage retention of adult trees or replacement with adequate sized trees on all new development sites.*

    The town has adopted a tree ordinance to implement this program. This ordinance is further supported by the policies contained in the revised *Conservation Element* of the *General Plan*. Implementation of this program results in lower energy (cooling) costs for home occupants.

- **6.47 Housing Assistance Programs**

  - *Assist development of a housing complex for the elderly, handicapped and disabled through the Butte County Housing Authority by helping the authority select and acquire a site and by placing a referendum on the ballot.*

Due to a lack of staff and budgetary resources, the town has been unable to implement this program. The hours of town staff were cut by ten percent in 1990 for budgetary reasons.

- *Support continuance and expansion of the Housing Authority's rental assistance program.*

  The town provides informal support for this Housing Authority program.

- *Apply for CDBG funds (from HUD) to help finance a senior citizen's center, acquisition of new housing sites, rehabilitation loans, construction of public facilities, and other eligible activities.*

  The Town of Paradise submitted a CDBG application under the small cities program in 1989 for a housing rehabilitation program within a target area. It is the town's understanding that this application was not competitive due to the town's relatively high median income (in comparison to Butte County), the relatively good condition of the housing stock, and perhaps also the lack of a comprehensive housing condition survey.

  In 1989, the town initiated the process of evaluating its most serious community development needs which would be eligible for funding. The town determined that one of those needs was a rental housing survey. The town received a planning/technical assistance allocation under the CDBG program to fund the survey work, with the direction to prepare subsequent applications for state and federal funding to address needs that are identified in the survey report.

  Private projects that the town has supported include the Heritage Convalescent Hospital, a 100-bed facility located on upper Skyway.

- *Support continuance of the Community Action Agency's weatherization program and other housing-related programs.*

  The town provides informal support for Community Action Agency programs.

- *Encourage local developers and nonprofit sponsors to use HUD-FHA programs to assist construction of affordable housing, particularly for the elderly and those needing various levels of daily care.*

  Due to lack of staff and budgetary resources, the town has been unable to devote the resources that would be required to implement this program.

- *Support continuance and local use of housing assistance programs provided by the California Department of Housing and Community Development.*

  See response to third item in Section 6.47.

How the Updated Element Incorporates What Has Been Learned from the Previous Element

Several observations and conclusions can be drawn based on experience gained by the town in implementing the previous *Housing Element*. First, it is reasonable to conclude that the town has accomplished more in the quest for decent, affordable housing than if there had not been an adopted *Housing Element* during the planning period, simply by focusing attention on this issue. Secondly, it is fair to say that outside forces, both governmental and nongovernmental, play a large role in the town's relative success or failure at *Housing Element* implementation. This conclusion is particularly valid with regard to interest rates, availability of financing, the private real estate market, and the commitment of state and federal funds to housing programs. Third, it can also be concluded that, at the end of this planning period, the Town of Paradise, and the Butte County region of which it is a part, remains one of the more affordable areas in the state for housing.

With regard to program implementation, the town experienced its greatest difficulties in attempting to use, or encourage private developers to use, state and federal housing subsidy programs. Part of this can be attributed to a lack of interest on the part of private developers during a relatively healthy housing market, and to a reduced commitment on the part of state and federal government funding of such programs. The difficulties on the part of the town, however, can mostly be traced to a lack of staffing and budgetary resources to enable existing town staff to have the necessary time and expertise to devote to implementation of these programs and funding applications, many of which are quite complex. The entire planning division staff consists of three persons who are responsible for all current and long range planning activities.

There are unique physical characteristics of the Town of Paradise which also impact the provision of affordable housing. In addition to the higher costs associated with development in a foothill community, Paradise is the largest unsewered community in California, which limits high density residential development. These issues are discussed in more detail in Section 12.5 above.

This evaluation has been taken into consideration in the development of goals, quantified objectives, policies and programs of the updated *Housing Element*, as set forth in Volume I, *Policy Document*. Two programs are proposed that, when implemented, will have a considerable impact on housing affordability over the long term: construction of a community collection sewer system and establishment of a redevelopment agency. These programs are explained in the *Policy Document* referenced above.

Public Participation in the General Plan Revision Program

The revision of the housing element has proceeded in conjunction with the overall revision to the town's *General Plan*. The public participation process has included the formation of four citizen subcommittee groups utilizing approximately eighty citizens from all segments of the community, ranging from high school students to lawyers, painting contractors to retired corporate executives. The citizen subcommittee groups have met routinely for two years, beginning in early 1991, brainstorming community issues, goals for the future and policies for reaching those goals.

Citizens have also had the opportunity to interact in the process during the regular meetings of the General Plan Revision Steering Committee. While these meetings are not public hearings, citizens have been encouraged to attend and discuss any aspect of the *General Plan* elements or revision program.

Town staff have also conducted an aggressive speaking tour throughout the community, discussing all elements and aspects of the General Plan revision program with various civic organizations, special districts and other interested groups. These speeches and workshops have provided a forum for many different groups in the Paradise community to voice their concerns and visions for the future.

Public comment on the draft *Housing Element* was solicited through Planning Commission and Town Council hearings and through the environmental review process for the element. Notices of these public hearings were published, distributed to interested community organizations representing special needs, and posted in governmental buildings. Town residents will have an opportunity to participate in the implementation of the *Housing Element*, as many of the implementation measures require the adoption of ordinances or other specific actions at Planning Commission and Town Council meetings.

Through the means above, the town believes it has actively sought and pursued public participation and public comments on all phases of the *Housing Element* revision, and has attempted to include all segments of the community in its public participation process.

Consistency with Other General Plan Elements

The *Housing Element* was prepared in conjunction with the revision of the other General Plan elements. Its strongest relationship is with both the land use and circulation elements, where land use categories and circulation patterns have been established to accommodate housing needs. In addition, it bonds with the discussions of public facilities and infrastructure, in that only those areas deemed suitable for residential development have been so designated.

The primary thrust of the revised Paradise *General Plan* is to ensure orderly growth and development according to the town's ability to provide adequate services and infrastructure, as well as to ensure long-term preservation of the environmental and rural charm of the town. While the *Housing Element* acknowledges the regional housing fair share numbers, and will attempt to meet them, it stays consistent with the primary thrust of the plan by listing factors that must come together in order for the needed housing to be constructed in the town.

TABLE 12-16
COMPARISON OF QUANTIFIED OBJECTIVES
1985 HOUSING ELEMENT
1985-1992

Objective	Total Dwelling Units/Year Projected	Total Dwelling Units/Year Achieved
Construction of new dwelling units	238	129
Rehabilitation of dwelling units	44	0
Demolition/Replacement of dwelling units	13	14

Source: Town of Paradise Building Department, 1985 Paradise Housing Element

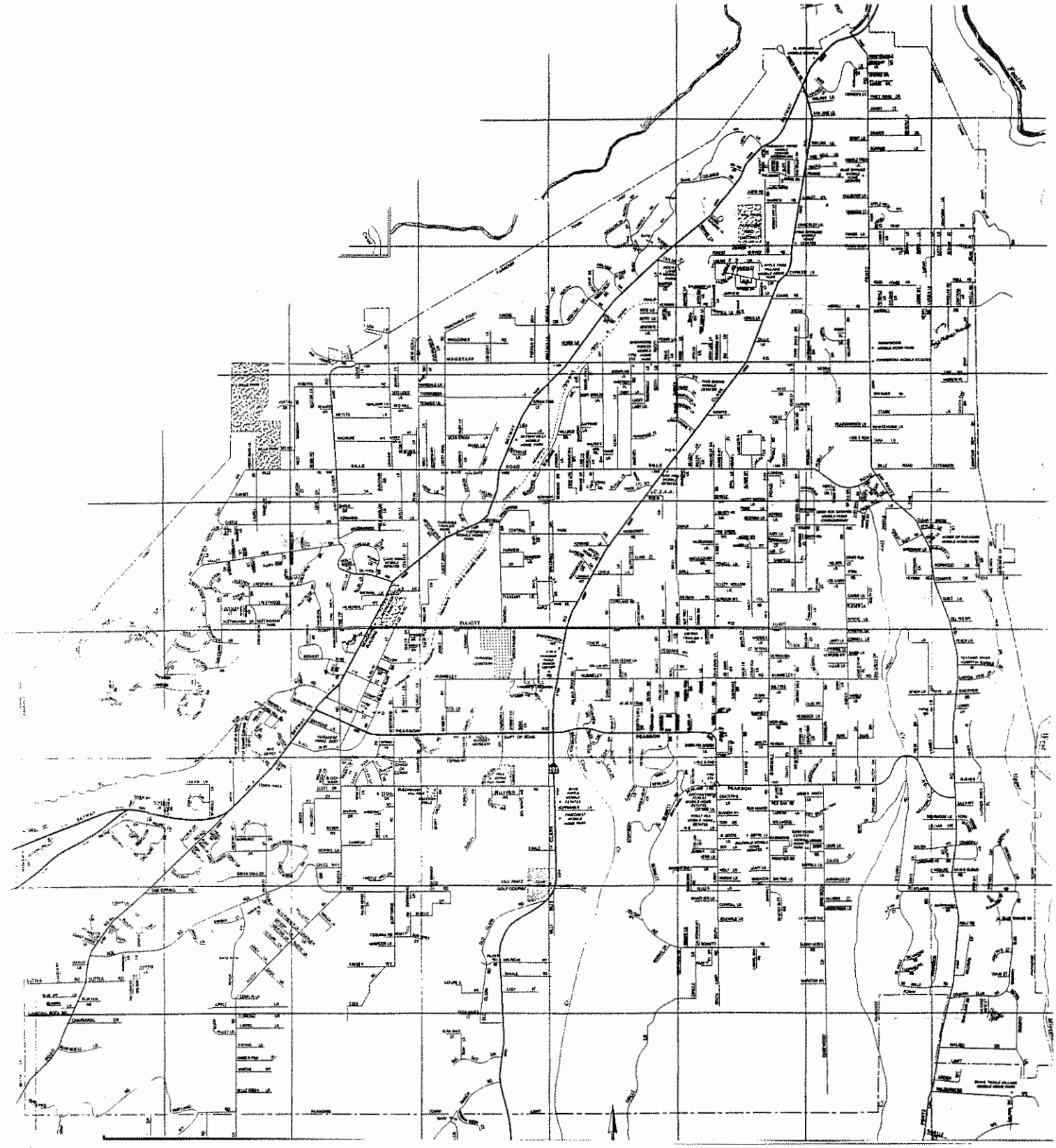
13.0 TRANSPORTATION/CIRCULATION

Regional access to the Town of Paradise is provided via the Skyway from the southwest and State Route 191, a two lane rural highway, northerly from State Route 70. Near State Route 70, Route 191 carries about 4,300 vehicles per day. In Paradise, just south of Pearson Road, State Route 191 carries about 8,600 vehicles. State Route 70 is a two-lane north/south highway connecting Sacramento, Marysville and Oroville to the south of State Route 191 and Chico and Red Bluff to the north of State Route 191. South of State Route 191, Route 70 carries about 7,100 vehicles while north toward Coal Cauyon Road it carries about 3,400 vehicles (1989 *Traffic Volumes of California State Highways*, Caltrans).

In Paradise, the major mode of travel is by private automobile. The pedestrian system and bicycle systems are not extensive. However, the Town of Paradise has provided the Paradise Memorial Trailway, a pedestrian and bicycle path along segments of the abandoned Southern Pacific Railroad right-of-way between Skyway and Clark Road. The pedestrian sidewalk system is very limited. This is due in part to the desire of the community to maintain the rural character of the town. There are a number of roadways, however, which carry high volumes of traffic, including Elliott Road, Skyway, Pentz Road, Clark Road and Pearson Road. Paradise presently has about eighty-five miles of paved public roads and an estimated 280 miles of private, largely nonpaved roads.

Very limited use is made of public transit, rail or other non-automobile modes of travel. A transit needs assessment was prepared by Butte County and Caltrans in 1979 and updated in May of 1993 which outlines the needs of Paradise. More than twenty regional agencies provide some form of transportation services in Paradise, including Butte County Transit, Greyhound bus, Butte College bus, Paradise Unified School District, local taxi services and the Paradise Express. Paradise Express, the local transit service, is operated by American Transportation Company under contract with the Towu of Paradise. It provides weekday service with four sedans and two lift-equipped vans. Butte County operates scheduled transit service between Paradise and Oroville (on a limited basis), hourly daytime service between Paradise and Chico, and a dial-a-ride system. The contract for this dial-a-ride service is administered by Butte County Transit for the Town of Paradise.

The street system in Paradise is shown on Figure 13-1. The system is comprised of three major north/south and four east/west arterial streets. The north/south arterials include: Skyway, Clark Road (State Route 191 - south of Pearson Road) and Pentz Road. The east/west facilities include: Wagstaff Road, Bille Road, Elliott Road and Pearson Road. Other arterial streets include: Sawmill Road, a north/south roadway connecting Bille Road with Pearson Road; Nunneley Road, an east/west collector, between Elliott Road and Pearson Road; and South, Middle and North Libby Roads; which are north/south facilities that intersect a number of the east/west streets in Paradise.



PARADISE STREET SYSTEM **FIGURE 13-1**

13.1 STREET CLASSIFICATION SYSTEM

Paradise is a rural community; therefore, the street system does not include freeways or expressways. State Route 191 is designated by Caltrans as a "conventional (no access) control" facility, a highway with no control of access, which may or may not be divided or have grade separations at intersections. Within Paradise the street system is comprised of arterial, collector and local residential streets. Street classification is used to designate the various streets within a community including the design standards for the street, street width, number of travel lanes, access control and other features. Arterial streets are generally the wider streets and carry the major traffic volumes. Collector streets carry less traffic and provide connections between adjacent land uses and the arterial street system. Collector streets do not generally function as residential streets; however, collector streets can access residential land uses. In Paradise, many of the collector streets serve residential uses. Local streets normally serve isolated or smaller residential areas.

The 1982 *General Plan* does not specifically classify street types. A field reconnaissance was conducted in 1991 and the street system was observed in terms of traffic volume levels, roadway widths, access and relationship to adjacent land uses. These factors were used to provide a preliminary designation for the major and secondary streets in Paradise.

Arterial Streets

A class of street serving a major movement of traffic not served by a freeway or expressway. In addition, arterials tend to accommodate through traffic such as trips between Paradise Pines and Chico or Paradise Pines and Butte College. In Paradise the following streets operate as arterial roadways:

North/South Arterials	East/West Arterials
Skyway	Wagstaff Road
Clark Road	Bille Road
Pentz Road	Elliott Road
	Pearson Road

Collector Streets

Surface streets providing land access and traffic circulation service for residential, commercial and industrial areas. In Paradise the following streets operate as collector roadways:

North/South Collectors	East/West Collectors
Moore Road	Dean Road
Rocky Lane	Merrill Road
Oliver Road	Stark Lane
Graham Road	Valley View Drive
Lucky John Road	Central Park Drive
Berkshire Avenue	Young Avenue (Partial)
Oak Way	Honey Run Road
Forest Lane	Nunneley Road
Maxwell Drive	Fir Street
North Libby Road	Birch Street
Sawmill Road	Buschmann Road
Kibler Road	Wayland Road
Foster Road	Stearns Road
Scottwood Road	
Academy Drive	
Edgewood Lane	
Almond Street	
Copeland Road (Elliott to Nunneley Road)	
Neal Road	
South Libby Road	

Local Streets

Surface streets providing land access and traffic circulation service within residential areas. The remaining streets within Paradise, non-arterial and collector streets, could be designated as local streets. In Paradise, there are many streets which are private or do not provide linkages with adjacent collector or arterial streets. Numerous streets have been allowed to be constructed which do not provide connectivity within the street system.

The Arterial System

The Town of Paradise has seven major arterials. Each of these facilities is discussed below. Consideration is given to describing the number of travel lanes, signalization, adjacent land uses and levels of service. Average daily traffic volumes have been measured along numerous segments of the street system. Butte County compiled counts from 1955 until 1977. The Town of Paradise counted an extensive number of local intersections during 1989 as part of the development by Butte County of the Paradise traffic model. Table 13-1 indicates the average daily traffic volumes on the major streets in Paradise. Table 13-1 also includes historical data along many of the local streets.

- **Clark Road (State Road 191)**. Clark Road is a four-lane roadway with a central two-way left turn lane from Pearson Road to Wagstaff Road. Clark Road carries between 9,000 and 25,000 daily trips. North of Wagstaff Road, Clark Road is two lanes carrying about 17,000 trips with stop sign controls at most local intersections. Clark Road intersects Skyway at its northern terminus. Clark Road at Skyway is stop sign controlled with the movements along Clark Road controlled.

  Many of the intersections along Clark Road are signalized with left turn lanes. No onstreet parking is allowed along most of the length of Clark Road. The major intersections along Clark Road include: Pearson Road, Elliott Road, Bille Road, Wagstaff and Skyway. Local collector intersections are provided at Buschmann Road, Nunneley Road, and Central Park Drive.

  Between 1982 and 1989 traffic volumes along Clark Road have doubled. Generally, the growth has occurred north of Pearson Road. However, traffic levels have also increased markedly to the south of Pearson Road. The intersections along Clark Road operate at generally acceptable levels of service during peak hours.

- **Skyway**. Skyway is a four-lane roadway with a central two-way left turn lane from Pearson Road to Wagstaff Road and carries between 11,000 and 21,000 daily trips. North of Wagstaff Road, Skyway is two lanes with stop sign controls at most local intersections. Many of the major intersections along Skyway are signalized with left turn lanes. The significant intersections along Skyway include: Neal Road, Pearson Road, Elliott Road, Oliver Road, Maxwell Drive, Bille Road, Wagstaff Road, Rocky Lane, Clark Road and Pentz Road.

  Between 1982 and 1989 traffic volumes along Skyway have increased substantially. Generally, the growth has occurred the entire length of Skyway. The intersections along Skyway between Elliott Road and Bille Road operate at generally acceptable levels of service during peak hours. South of Elliott Road and north of Bille Road peak hour levels of service are worse. Peak hour conditions at Clark Road and Wagstaff in the north and at Honey Run Road and Neal Road in the south are at or approaching unacceptable levels.

- **Pentz Road**. Pentz Road is a two-lane arterial which extends from the southern town limits to Skyway. Pentz Road carries about 7,000 trips per day. Most of the intersections along Pentz Road are stop sign controlled, with the stop control on the streets intersecting with Pentz Road. The intersections of Wagstaff Road and Pentz Road and Bille Road and Pentz Road are all-stop. Traffic volumes along Pentz Road have increased about fifty percent since 1982. The levels of service along Pentz Road are acceptable.

- **Pearson Road**. Pearson Road is the most southerly arterial in Paradise and carries about 1,000 daily trips. It extends from Skyway to Pentz Road. Between Skyway and Clark Road it is a four-lane facility. Stop sign controls are provided at many intersections with four-way stops at Black Olive Drive and Recreation Drive. East of Clark Road, Pearson Road is a two-lane facility. Pearson Road is the last roadway in the southern portion of the town that provides continuous

east/west access between Pentz Road and Skyway. South of Pearson Road, many of the residential areas must use north/south arterial and collector streets to access Pearson Road.

- **Remaining Arterial Streets**. The remaining arterial streets are all two-lane facilities with traffic controls at most of the north/south arterial intersections. Bille Road and Wagstaff Road provide continuous east/west connections between Skyway and Pentz Road. Elliott Road provides connections between the area west of Skyway and just east of Sawmill Road. Nunneley Road extends east/west from Academy Drive (on the west) to Oak Creek Drive (on the east).

The Collector System

There are many collector streets in Paradise. The designation of collector and local street can be misleading when used in Paradise. Collector streets tend to provide the linkages between segments of the arterial street system while local streets serve immediate residential or other isolated land uses. Using this concept, the connection of Forest Service Road and Moore Road provides a collector linkage between Skyway and Clark Road north of Wagstaff Road. Within the Town of Paradise roadway system, there are some missing linkages in the collector street system. These include:

- The connection of Young Avenue to Bille Road over public streets.
- The easterly extension of Elliott Road to Kibler Road.
- The westerly extension of Buschmann Road to Skyway.
- The westerly extension of Anchor Way to Clark Road at Noffsinger Lane or alternative intersection.
- The connection of South Libby Road and Edgewood Lane.
- The connection of Pinewood Drive and Honey Run Road.

Other similar situations may occur elsewhere in Paradise. New collector road connections, and the standard of design they should provide, need to be identified. The levels of service within the collector street system are acceptable. There are some locations where stop sign controls and pedestrian facilities may be warranted (e.g., along Maxwell Road near the high school).

The Local Street System

The local street system is composed of numerous public and private roadways throughout Paradise. The system appears to be based upon individual infill developments and subdivision activities rather than a comprehensive townwide circulation plan. Most streets serve a limited number of land uses, primarily residential. Further, the street standards vary substantially from area to area. The minimum allowable street width appears to be sixteen feet established in the 1982 *General Plan* for fire access. The minimum street width standard is twenty feet.

As traffic grows in Paradise, the potential for increased concentrations of traffic along existing collector and arterial streets will grow as well. Without an improved collector and local street system of interlinked roadways, the potential for required widening of the existing collector and local street system to be required will increase.

TABLE 13-1
AVERAGE DAILY TRAFFIC VOLUMES[1]

Roadway Segment	1982 Traffic Volumes	1989 Traffic Volumes
Skyway		
North of Wagstaff	7,000	11,000
Bille to Wagstaff	13,000	15,900
Elliott to Bille	17,200	20,700
Pearson to Elliott	17,600	17,700
South of Neal	10,800	17,600
Clark Road (SR191)		
North of Wagstaff	5,700	9,300
Bille to Wagstaff	8,900	17,700
Elliott to Bille	11,800	24,700
Pearson to Elliott	11,200	22,100
South of Pearson	6,700	8,600
Pentz Road		
North of Bille	4,900	7,375
South of Stearns	4,800	6,375
Wagstaff Road		
Skyway to Clark	8,200	7,700
Clark to Pentz	4,500	5,550
Bille Road		
Skyway to Clark	NA	10,600
Clark to Pentz	NA	11,000

Roadway Segment	1982 Traffic Volumes	1989 Traffic Volumes
Elliott Road		
Skyway to Maxwell	6,800	19,800
Clark to Pentz	3,200	9,600
Pearson Road		
Skyway to Clark	10,800	10,900

[1] 1982 traffic data from the Town of Paradise, traffic safety study, September 1982. The 1989 counts provided to the Town of Paradise by Butte County except State Route 191 south of Pearson Road which was provided by Caltrans District 3. Some counts were factored at eight percent from peak hour to daily estimates.

13.2 EXISTING LEVELS OF SERVICE

Level of service is determined differently for signalized and unsignalized intersections. For signalized intersections, a percentage of capacity is calculated which results in a specific overall intersection level of service. For unsignalized intersections, an amount of reserved capacity for each movement is calculated. The lowest amount of reserved capacity is used to determine the intersection level of service. It should be noted that for unsignalized intersections, some movements may experience acceptable levels of service while others may not. For this assessment, the level of service for the worst case traffic movement on each approach is shown. For example, a level of service shown as "A/A/D/E" would mean that the level of service for the north and southbound approaches is "A" while the level of service for the eastbound approach is "D" and the westbound approach "E."

The level of service (LOS) rating system of LOS A through LOS F is used to indicate the average level of traffic utilization of an intersection. LOS A indicates little or no congestion and LOS F indicates severe congestion. The 1982 *General Plan* does not appear to establish a specific standard for acceptable level of service. In general, most rural communities use level of service "C" for a standard. Table 13-2 describes the various level of service categories and intersection performance characteristics for signalized intersections. For the unsignalized intersections, the 1985 Highway Capacity Manual was used to determine level of service (Table 13-3). The Butte County Congestion Management Program has adopted a level of service (LOS) standard "D" for the principal arterial road system in Paradise.

Using the existing peak hour data provided by the Town of Paradise, the existing peak hour levels of service were determined at a number of intersections. Table 13-4 details the peak hour levels of service. For the unsignalized intersections, the level of service by approach together with the reserved capacity for the worst case traffic movement are noted. For consistency, the order of the results is northbound, southbound, eastbound and westbound. In other words, a LOS result shown in the various tables within this report noted as "A/A/B/B" would mean LOS "A" for the northbound and southbound approaches and LOS "B" for the eastbound and westbound approaches. Further, a "-" is used when a particular approach and/or left turn movement does not exist. For example, a "T" intersection such as Skyway and Clark Road would show the existing worst case level of service of "D" and the various approach levels of service as "A/A/-/D."

Level of Service Evaluation

Most of the intersections in Paradise operate at acceptable levels of service. Of the twenty-eight intersections evaluated, twelve were signalized and sixteen unsignalized. The results of the LOS analysis are discussed below.

Along Skyway, the signalized intersections at Wagstaff Road and Pearson Road operate at LOS "D" and "C" respectively. All of the signalized intersections along Clark Road operate at LOS "B" or better.

For the unsignalized locations, many of the intersections operate at unacceptable levels of service. Specifically, Skyway at Clark Road operates at LOS "D." Skyway at Honey Run Road and Neal Road both operate LOS "E." Pearson Road at Scottwood Road operates at LOS "D" while Elliott Road at Maxwell Drive operates at LOS "E." The remaining intersections operate at LOS "C" or better. The locations that operate at LOS "C" include: Skyway at Pentz Road, Clark Road at Buschmann Road, Pentz Road at Wagstaff Road, and Sawmill Road at Pearson Road.

TABLE 13-2
LOS CRITERIA SIGNALIZED INTERSECTIONS

Level of Service	Vehicle Delay (seconds)	Volume to Capacity Ratio	Description
A	≤ 5.00	0.00 - 0.59	**Free Flow/Insignificant Delays:** No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.
B	5.1 - 15.0	0.60 - 0.69	**Stable Operation/Minimal Delays:** An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles.
C	15.1 - 25.1	0.70 - 0.79	**Stable Operation/Acceptable Delays:** Major approach phases fully utilized. Most drivers feel somewhat restricted.
D	25.1 - 40.0	0.80 - 0.89	**Approaching Unstable/Tolerable Delays:** Drivers may have to wait through more than one red signal indication. Queues may develop but dissipate rapidly, without excessive delays.
E	40.1 - 60.0	0.90 - 0.99	**Unstable Operation/Significant Delays:** Volumes at or near capacity. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
F	≥ 60	N/A	**Forced Flow/Excessive Delays:** Represents jammed conditions. Intersection operated below capacity with low volumes. Queues may block upstream intersections.

Source: *Highway Capacity Manual*, Transportation Research Board, Special Report No. 209, Washington, D.C., 1985.

TABLE 13-3
LOS CRITERIA UNSIGNALIZED INTERSECTIONS

Level of Service	Expected Delay	Reserve Capacity (Vehicles/Hour)
A	Little or no delay	≥ 400
B	Short traffic delays	300 - 399
C	Average traffic delays	200 - 299
D	Long traffic delays	100 - 199
E	Very long traffic delays	0 - 99
F	Extreme delays potentially affecting other traffic movements in the intersection	≤ 0

Source: *Highway Capacity Manual*, Transportation Research Board, Special Report No. 209, Washington D.C., 1985.

TABLE 13-4
PEAK HOUR LEVEL OF SERVICE[1]

Intersection	Reserved Capacity (Critical Movement) or Volume Capacity Ratio (Percentage of Capacity)	PM Peak Hour Level of Service
Skyway at		
Pentz Road	245 Vehicles	A/A/B/C
Clark Road	158 Vehicles	A/A/-/D
Rocky Lane	423 Vehicles	A/A/-/A
Wagstaff Road	Not Applicable	D
Bille Road	0.52	A
Maxwell Drive	0.45	A
Oliver Road	0.48	A
Elliott Road	0.62	B
Honey Run Road	57 Vehicles	A/A/E/D
Pearson Road	0.71	C
Neal Road	2 Vehicles	A/A/E/E
Clark Road at		
Wagstaff Road	0.39	A
Bille Road	0.51	A
Central Park	0.39	A
Elliott Road	0.67	B
Nunneley Road	0.43	A
Pearson Road	0.59	A
Buschmann Road	250 Vehicles	A/A/C/-

Intersection	Reserved Capacity (Critical Movement) or Volume Capacity Ratio (Percentage of Capacity)	PM Peak Hour Level of Service
Pentz Road at		
Wagstaff Road	255 Vehicles	A/A/C/A
Bille Road	353 Vehicles	A/A/B/-
Pearson Road	372 Vehicles	A/A/B/-
Stearns Road	499 Vehicles	A/A/A/A
Pearson Road at		
Scottwood Road	169 Vehicles	D/D/A/A
Elliott Road at		
Maxwell Drive	98 Vehicles	B/E/A/A
Sawmill Road at		
Bille Road	306 Vehicles	B/B/A/A
Elliott Road	451 Vehicles	A/A/A/A
Nunneley Road	528 Vehicles	A/A/A/A
Pearson Road	238 Vehicles	B/C/A/A

[1] Applies Transportation Research Board Circular 212 Planning Method for Signalized Intersections and 1985 Highway Capacity Manual Unsignalized Methodology for all Stop Sign Controlled Intersections.

Source: Dowling Associates, 1991.

13.3 PARKING

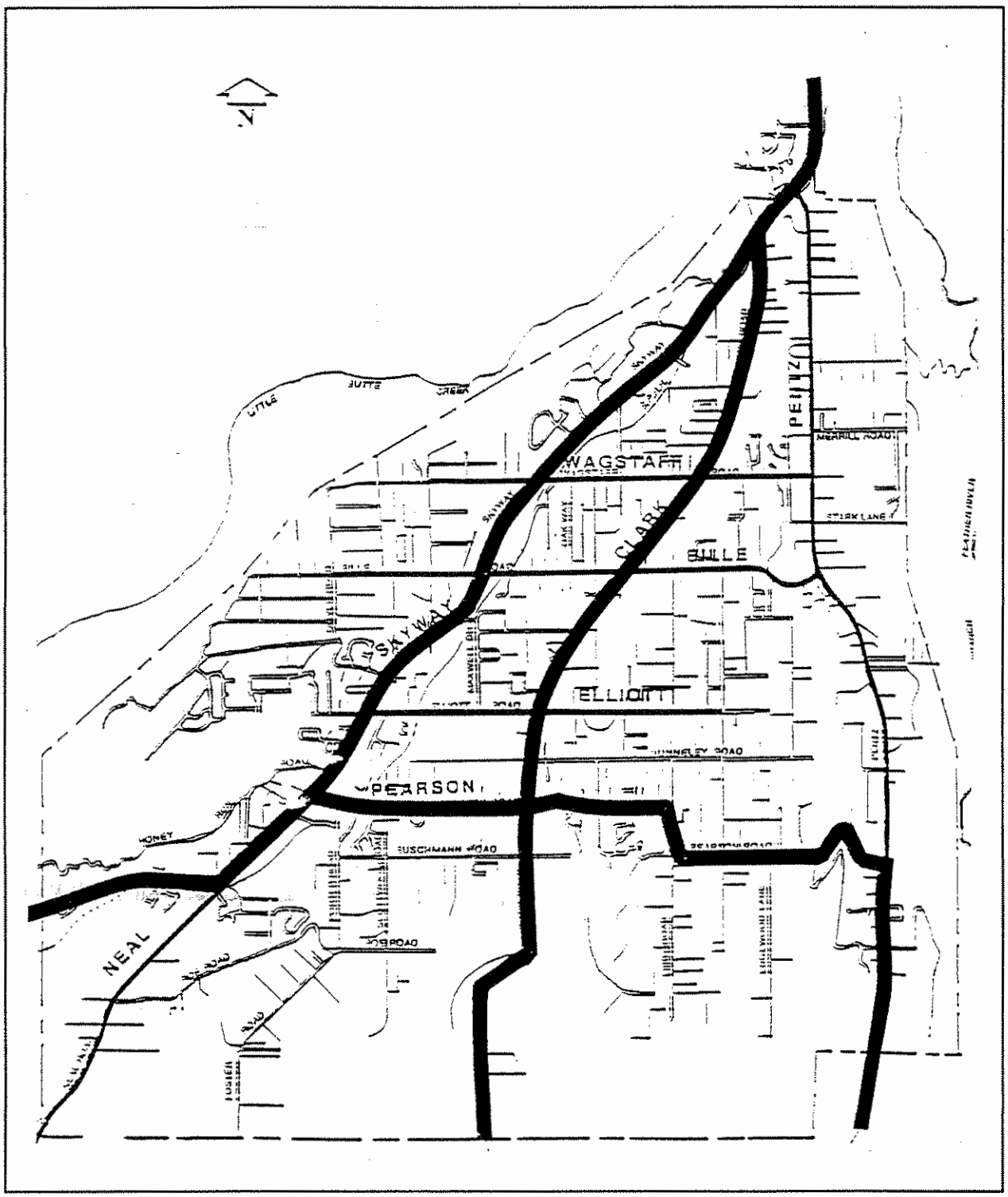
As part of the 1982 *General Plan*, a parking inventory was conducted. The general policy since 1982 has been to restrict parking to offstreet areas and not develop additional onstreet parking spaces. As part of the current General Plan, the town's current offstreet parking standards will be reviewed and warranted changes to these standards will be recommended.

13.4 TRUCK ROUTES

Traffic safety studies conducted in 1982 recommended the designation of specific routes for truck traffic. Consideration of appropriate truck routes within Paradise should be based on several factors, including: the location of businesses served by large trucks, the origin and destination of logging trucks, and the location of exclusively residential areas.

Given the location of existing commercial development along Skyway, Pearson Road and Clark Road, the following routes were recommended as truck facilities (see Figure 13-2).

- Skyway from the south town limit to the north town limit.
- Clark Road from the south town limit to Skyway.
- Pearson Road from Skyway to Pentz Road.
- Pentz Road south of Pearson Road to the town limit.



PARADISE TRUCK ROUTES **FIGURE 13-2**

13.5 THE PARADISE AREA TRANSPORTATION PLANNING MODEL

Butte County, with the assistance of a professional traffic consulting firm, has recently completed a traffic model for the Paradise area. The model was calibrated to 1989 conditions and includes the Town of Paradise, the communities of Magalia and Paradise Pines and the area south of Paradise to Route 70. External traffic zones include Chico, Route 99 south, Route 70 south and Route 70 east from Pentz Road. The model was reviewed for use during the *General Plan* to evaluate future land use conditions. In general, the model appears to be adequately calibrated for application in the *General Plan* process. To date, three land use conditions have been modelled and analyzed. These include: the existing conditions, a five-year build out of the study area and a twenty-year build out of the study area. The build out land use intensities assumed that no major expansion of the existing sewage disposal system would occur. Therefore, the growth in single and multiple family dwelling units for the five-year period was restricted to 2,371 units. The twenty-year growth scenario provided 1,259 additional units. The existing conditions include about 14,750 single family and 777 multiple family units. Further, 3,681,600 square feet of nonresidential land use was included in the model.

14.0 PUBLIC SERVICES AND UTILITIES

14.1 LAW ENFORCEMENT

The Paradise Police Department has provided law enforcement for the Town of Paradise since 1980, when it took over law enforcement responsibility for the area from the Butte County Sheriff's Department. The police station is located at 5595 Black Olive Drive, adjacent to the main fire station. Dispatching of police, fire and ambulance units is done by the town. The department maintains a mutual aid agreement with the Sheriff's Department. As of March 1991, there were twenty-two sworn personnel and one reserve officer who patrol two beats. The current ratio of sworn personnel to population is one of the lowest in the state (approximately one officer per 1,200 citizens). According to the state Department of Justice, the statewide average in 1989 was approximately one officer for 500 citizens, while the City of Chico maintaius one officer for approximately 650 citizens. The department's typical response time for routine calls is four to five minutes.

Although the town's higher percentage of senior citizens contributes to a lower than average crime rate, the absolute number of calls and residents' expectations of service are relatively high. The manufacture and sale of narcotics poses a problem due to the town's remoteness and the difficulty of observing individual properties because of the hilly and forested terrain.

Law enforcement in the unincorporated area surrounding the town is the responsibility of the Butte County Sheriff's Department, and is provided out of a substation in Paradise Pines. Coroner's service is provided throughout the county by the Sheriff's Department. The California Highway Patrol polices State Highway 191 out of their Chico and Oroville substations.

14.2 FIRE PROTECTION

The Paradise Fire Department provides fire protection and emergency services within the town limits and has a mutual aid agreement with the Butte County Fire Department. The department's service area includes all lands within the town limits. Upon incorporation of the Town of Paradise, the Paradise Fire Protection District was dissolved.

The department presently operates out of three fire stations, each with a designated response zone. Station 1 is located at 767 Birch Street, adjacent to the police station. The other two stations are located at the intersection of Wagstaff Road and Harvey Road, and at the intersection of Pearson Road/Newland Road and South Libby Road. As of March 1991, the department has twenty-seven authorized positions and twenty-one volunteers. The Police Chief is currently the acting Fire Chief, and has assumed the position of town Public Services Director. The department's average response time is two to two-and-one-half minutes.

The town Police Department dispatches ambulances and fire units in response to medical emergencies. Ambulance service is provided by Paradise Ambulance Service, a private service supervised by the Feather River Hospital Emergency Room. Both the ambulance and the fire units are staffed by paramedics.

The Town Council has considered contracting with the California Department of Forestry and Fire Protection (CDF) for fire protection services, rather than operating its own department, as a cost-saving measure. Fire Department employees would have become CDF employees if the Council had approved the contract arrangement. However, the Council has decided to maintain the Fire Department at this time.

Fire hydrants are owned by the town and maintained by the Paradise Irrigation District. Butte County, which contracts with CDF, provides fire protection services in the unincorporated portions of the study area. The county operates two fire stations in the study area, one in the Town of Paradise and one in Magalia.

Wildland Fire Potential and High Fire Risk Areas

Large areas within the Town of Paradise, as well as the secondary and tertiary study area, are subject to wildland fire potential. Typically, such areas pose a substantial fire risk to dwellings and other structures, as evidenced by the recent 49er fire in Placer and Nevada Counties, and the even more recent Oakland Hills disaster. Clearly, such areas pose great risk when people choose to live in them in large numbers. Despite this risk, such areas are typically viewed as attractive places to reside. It is important that fire risk and planning for fire safety play an important role when considering residential development in such areas. The *Multihazard Disaster Plan* has identified areas of particular concern for wildland fire:

- Country Club Drive
- West side of lower Skyway
- Butte Creek Canyon
- West Branch Canyon
- Nance Canyon
- Hamlin Canyon
- Berry Creek Canyon
- Little Clear Creek Canyon
- Clear Creek Canyon
- Horse Thief Canyon
- Dry Creek Canyon

Fire hazard severity zones have been mapped for the state responsibility area (SRA) around the Town of Paradise (see Figure 14-1). All of the secondary study area, and most of the tertiary study area, are within areas rated "high" or "very high." Fire hazard severity zones are intended to show relatively homogeneous areas and are based on fuel loading, slope, fire weather and other factors. The state Board of Forestry has adopted fire safety regulations which apply to the SRA and which require certain minimum fire safety measures within these areas. Outside the SRA, risks are more typical in nature and do not pose any unusual constraints to development, assuming that adequate fire service is in place and that standards for development take fire safety into consideration.

According to the Paradise *Multihazard Disaster Plan*, the possibility of major urban fires exists primarily within the built up areas of the downtown commercial areas of Paradise. This would pose major problems in the event that evacuation is necessary. All of these structures present a variety in type of construction, occupant load and fire potential.

Peakload Water Supply Requirements

In order to have effective fire suppression capability, it is necessary to have an adequate and reliable supply of water. As shown on Figure 14-3, the Town of Paradise and all but the most northerly portion of the secondary study area are served by one of the water districts or companies described in Section 14.8 below. Generally speaking, these systems have adequate line size and hydrants for fire suppression purposes; however, fire flow quantity may vary considerably from area to area, depending on the immediate water main size. The town's Fire Department has identified various fire flow deficiencies in the community. Water must be pumped to portions of the service area at higher elevations. The capital improvement program for the Paradise Irrigation District includes an accelerated pipeline replacement program to correct existing inadequacies, as described in Section 14.8 below.

According to the Paradise *Multihazard Disaster Plan*, municipal water systems are able to support large fire flows in the commercial areas, but not in the wildlands. The town is served by a forty-two inch PID water main. If ruptured, the town has approximately a one-day reserve; however, drought conditions would seriously disrupt these capabilities.

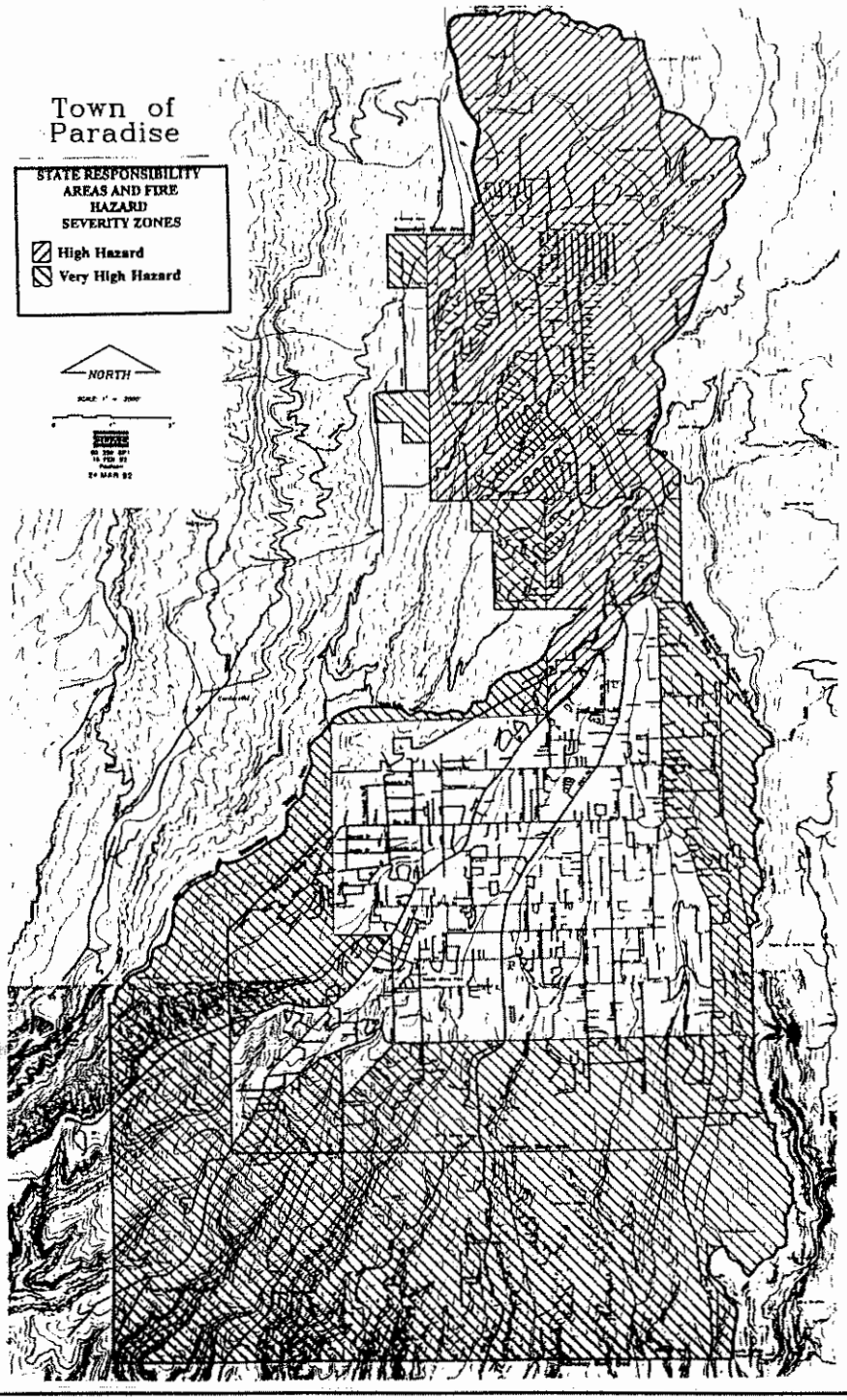
The town currently requires that each lot or unit within a subdivision have adequate water for domestic use. However, the subdivision ordinance does not require hookup to an existing system, and does not establish fire flow standards.

In the unincorporated area of Butte County, the type and size of the project dictates the county Fire Department requirements for water, as established in the Butte County improvement standards. Requirements range from a pressurized water system to a static water supply system. The county's fire flow requirements are included in the improvement standards and vary by lot density.

In addition to town or county standards for new systems, the state Public Utilities Commission (PUC) establishes minimum standards for systems not operated by a public entity. These standards are found in PUC General Order 103 and also apply to existing systems that may not meet current requirements; however, compliance is only required when new hookups, modifications or extensions of systems are proposed.

Road Widths and Access

The Town of Paradise subdivision ordinance requires all access easements or rights-of-way to be fifty feet in width, except for those which serve four or fewer lots. However, subdivision applicants may request widths of less than fifty feet for privately maintained roads. They must connect, via private roads if necessary, with a publicly-maintained street. Maximum cul-de-sac length is 1,800 feet.



STATE RESPONSIBILITY AREAS AND HAZARD SEVERITY ZONES **FIGURE 14-1**

14.3 SOLID WASTE DISPOSAL

Solid waste collection and disposal in the Town of Paradise is provided by four independent haulers and is not mandatory. Recycling services are provided through various sources, both by private commercial haulers, nonprofit organizations and independent for profit recyclers. Yard waste is commonly disposed of by burning, and some residents dispose of their own refuse by hauling it to the landfill on an individual basis. Paradise generates approximately 30,398 tons per year of residential and industrial waste (Preliminary Draft *Source Reduction and Recycling Elements*, 1991).

The Neal Road Landfill, the only landfill for disposal of municipal waste in Butte County, is located on the north side of Neal Road, within the tertiary study area, and is operated by the Neal Road Landfill Company. It is a Class 3 landfill (no hazardous materials) and is anticipated to reach capacity by mid 1999. A new county disposal facility will need to be developed to meet the disposal needs of the county. The City of Chico has the only permitted composting facility in the Butte County area, and the cities of Chico and Oroville have significant recycling operations including redemption and drop off centers, commercial collection and wood waste processors.

AB 939, the Solid Waste Management Act of 1989, established the requirement for every city and county in the state to develop comprehensive plans for the implementation of programs and policies to reduce, recycle or otherwise divert from landfill disposal twenty-five percent of the solid waste stream by 1995 and fifty percent by 2000. These plans include the city and county *Source Reduction and Recycling Elements* and *Household Hazardous Waste Elements* as well as a countywide *Siting Element*. All of these elements are to be incorporated into a countywide *Integrated Waste Management Plan* by January 1, 1994.

The town is currently considering revisions to its solid waste management ordinances that would establish a town-wide roadside (curbside) recycling program, a chipping/composting program and mandatory solid waste collection for the residential, commercial and industrial sectors. The *Source Reduction and Recycling Elements* call for the establishment of a centralized permitted composting facility to be developed in Butte County by 1995. The actual siting for this proposed facility is not yet determined. The *Household Hazardous Waste Element* calls for the development of a household hazardous waste drop off center within three years. A permanent household hazardous waste collection facility is proposed to be developed by Paradise Solid Waste Systems, Inc., a private local company, at their facility to serve the needs of the town.

14.4 UTILITIES

Pacific Gas and Electric Company provides electricity in the study area and natural gas within the town and some outlying areas. Two high voltage electrical transmission lines cross the tertiary study area, near Highway 99. Electrical energy comes from a variety of sources and Pacific Gas and Electric Company foresees no problems in meeting future demand. Telephone service is provided to the study area by Pacific Bell. Propane is utilized for heating in some areas outside the town limits.

14.5 HEALTH SERVICES

The Town of Paradise is well-served with doctors, other medical practitioners and facilities. Feather River Hospital, a private hospital, is the largest employer in the Town of Paradise. It provides general acute-care service in a 109-bed facility located at 5974 Pentz Road. The hospital offers cardiopulmonary services, intensive coronary care, maternity care, surgical services and twenty-four hour emergency treatment. In addition, the hospital's discharge planning and social services department provides senior and support services for patients. Hospital expansion plaus include the obstetrical unit, enlarging the operating room and additional beds for outpatient services.

Other facilities offering treatment in the Paradise area include:

- Alcohol and Chemical Recovery Program
- Feather River Home Health Agency
- Feather River Physical Rehabilitation Center
- Paradise Mammography Center
- New West Dialysis Clinic
- Paradise Adult Day Care
- Alzheimers Disease Center

There are three skilled nursing facilities located in Paradise and over fifty residential care facilities.

Residents typically travel to Chico and elsewhere for certain specialized services including severe burns, heart surgery, neurological treatment, severe trauma and psychiatric care.

14.6 SCHOOLS

The Paradise Unified School District (PUSD) provides public elementary and secondary education within the Town of Paradise, north to the Tehama and Plumas County boundaries, and within the secondary study area boundaries (please refer to Figure 14-2). The tertiary study area is served by the Chico Unified School District and the Durham Unified School District.

PUSD operates four elementary schools, one intermediate school, and two high schools. Two of the elementary schools (Paradise Elementary and Ponderosa Elementary), Paradise Intermediate and Paradise High School are located within the Town of Paradise. According to a *Site Selection Study* for a new elementary school prepared for PUSD in October 1989, enrollment at each of the elementary schools, with the exception of Brakebill Elementary (located in Stirling City), exceeded capacity. A more recent study, *Facility Needs and Funding Analysis* (March 1991), indicates that Pines Elementary is at capacity (see Table 14-1). With Paradise Elementary on year-round education (YRE), its capacity exceeds its current enrollment. Enrollment exceeds capacity at Paradise Intermediate School, but additional capacity exists at Paradise High School.

As stated in the *Site Selection Study*, "The rate of enrollment and the net increase in number of students has increased district-wide through the late 1980s. For grades K-6, enrollment has increased at an average annual rate of 5.87 percent from 1985-89. This growth rate is likely to continue through the 1990s." The study further states that "...enrollment is roughly proportional by grade, however, there is a slightly higher percentage of students in elementary school and most notably in kindergarten," which implies that the growth trend will continue. Please refer to Table 14-2 for district enrollment, 1978-79 through 1990. The 1991 study reports that the district has been experiencing enrollment growth of approximately 3.5 percent annually; however, as is indicated in the table, the actual change varies from year to year. Although some years have shown decreases, the average rate of increase from 1986-87 through 1990-91 was 3.29 percent.

One of the two elementary schools located in the town, Paradise Elementary, currently operates on a year-round schedule, and Ponderosa Elementary is proposed for a year-round schedule in 1991-92. The district owns another school site in the Upper Ridge, and plans to build a new school as soon as possible (probably a middle school). The district collects developer impact fees from building permit applications to apply to land acquisition and new construction costs.

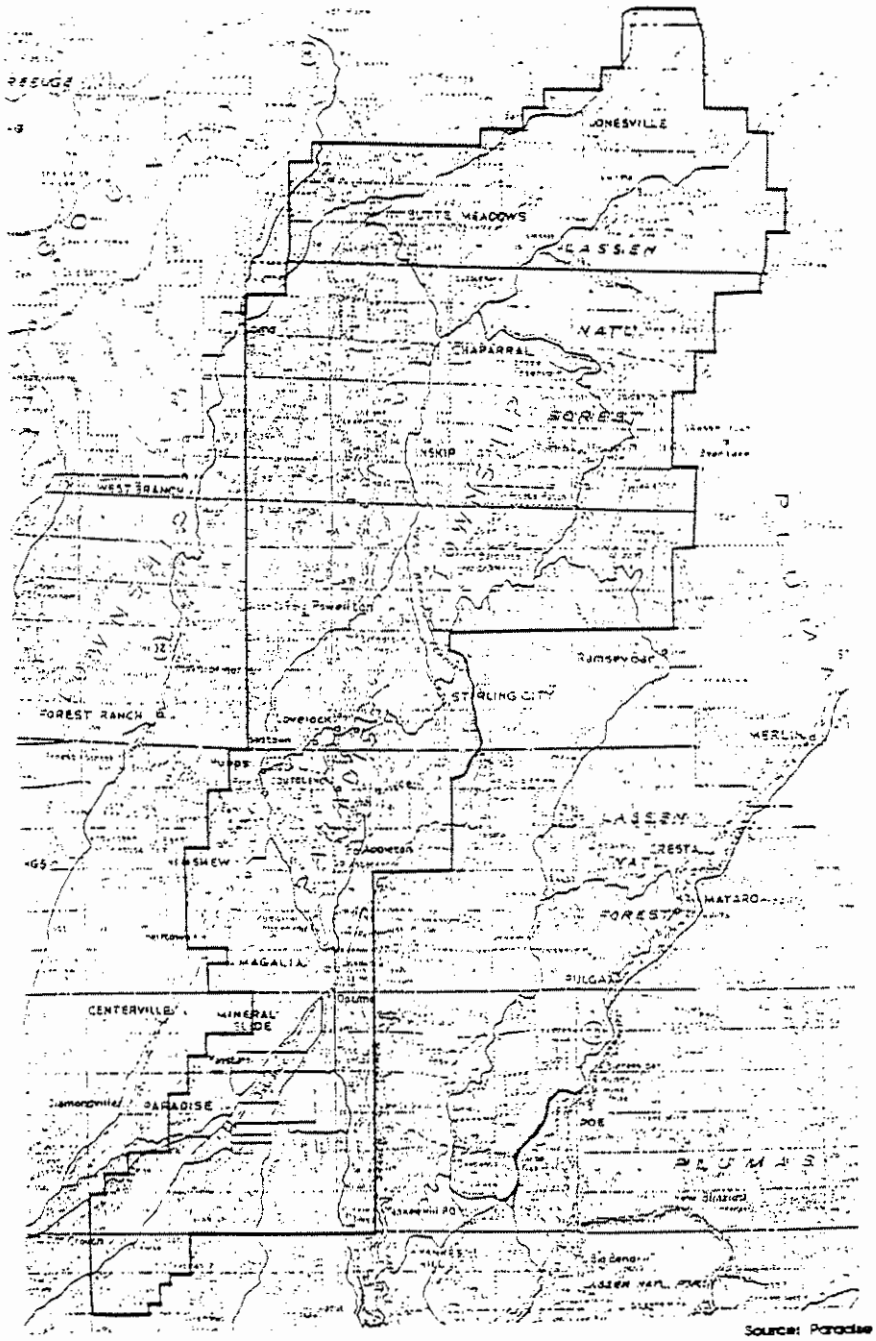
In 1981, the district adopted the following criteria to guide planning for new sites and buildings:

- educational needs of students
- proximity of students to school plants
- safety of students
- ages of students served
- nature of the educational program
- racial and ethnic balance

In addition to these criteria, the following criteria were used in the 1989 *Site Selection Study*:

- proximity to centers of growth
- site accessibility
- site topography
- adjacent residential development
- land size, minimum of eight-ten acres, single parcel
- opportunity for joint use
- possible hazards - power lines, gas transmission lines, water hazards
- available services

The study area is located within the Butte Community College District, and Butte College is located along Highway 191 within the tertiary study area. The college has recently prepared a preliminary ten-year plan which includes new construction on the campus and a permanent Chico center. Proposed new on-campus facilities include new classroom and office buildings, an expanded tutoring center, a child care center and a "little theater."



NOT TO SCALE

PARADISE UNIFIED SCHOOL DISTRICT BOUNDARIES **FIGURE 14-2**

TABLE 14-1
PARADISE UNIFIED SCHOOL DISTRICT
DISTRICT ENROLLMENT 1978-79 THROUGH 1989

SCHOOL	ENROLLMENT	CAPACITY	UNUSED CAPACITY
Elementary Schools			
Pines Elementary	632	632	0
H Brakebill	80	117	37
Ponderosa	1,047	1,029	(18)
Paradise (on YRE)	983	1,300	317
TOTAL ELEMENTARY	**2,742**	**3,078**	**336**
Intermediate School			
Paradise Intermediate	**682**	**603**	**(79)**
High School			
Paradise High School	**1,081**	**1,192**	**111**
TOTAL	**4,505**	**4,873**	**368**

Source: Paradise Unified School District, *Facility Needs and Funding Analysis*, March 1991.

TABLE 14-2
PARADISE UNIFIED SCHOOL DISTRICT
DISTRICT ENROLLMENT 1978-79 THROUGH 1990

School Year	Enrollment	Net Change	Percent Change
1990-91	4,674	161	+3.56
1989-90	4,513	201	+4.66
1988-89	4,312	131	+3.13
1987-88	4,181	135	+3.33
1986-87	4,046	57	+1.43
1985-86	3,989	140	+3.64
1984-85	3,849	43	+1.13
1983-84	3,806	-24	-0.63
1982-83	3,830	80	+2.13
1981-82	3,750	76	+2.07
1980-81	3,674	-16	-0.04
1979-80	3,690	127	+3.56
1978-79	3,563		

Source: Paradise Unified School District, September 1989; Wade Associates; March 1991, Shilts Consultants, Inc.

14.7 PARKS AND RECREATION

Parks and recreation services are provided by the Paradise Recreation and Park District, a special district established in 1948. The district encompasses 169 square miles, including the Upper and Lower Ridge and the Town of Paradise. The district boundaries extend beyond the *General Plan* study area. The district, as well as other entities own, operate and maintain the facilities described in Table 14-3 containing approximately 415 acres. The district also operates numerous recreational services including programs for senior citizens, adult sports, teens, youth and children's programs and aquatics.

The district receives revenues from property taxes, impact fees ("Quimby" fees, which are imposed upon all subdivision and parcel maps) required by the Town of Paradise, fees for recreational programs, and grants (primarily from state park bond funds). The town subdivision ordinance requires that, as a condition of approval of a final subdivision or parcel map, the subdivider must dedicate land, pay an in-lieu fee, or both, at the option of the town and the recreation and park district, based on the formula contained in the ordinance. The ordinance is based upon a standard of three acres of park land per 1,000 population. The draft Butte County *Energy, Natural Resources and Recreation Element* proposes to establish Quimby fees in the unincorporated area.

The district operates several facilities in cooperation with the Paradise Unified School District, and makes facilities such as the swimming pool available for use by the schools. Current recreation and park district projects include improvements to Paul Byrne Park and Bille Park. Some of the identified recreational needs include a second pool, two additional lighted softball diamonds and additional soccer practice and play fields. In addition to providing youth activities, the district is also one of the largest employers of youth in the community.

State and federal parks and facilities are also used by residents of the study area. These facilities are listed in Table 14-4. In addition to the parks and facilities listed in Tables 14-3 and 14-4, there are a number of public and private trails which are used by the public for walking, jogging, bicycle and horseback riding. These trails are listed in Table 14-5.

TABLE 14-3
PARK AND RECREATION FACILITIES

PARK	TYPE OF LAND	FUTURE PLANS	DESCRIPTION
Bille Park	Bille Park contains definite evidence of Indian inhabitation		Located on the west end of Bille Road in Paradise, this fifty-four acre day-use facility contains both group and individual picnic areas, barbecues, children's play equipment, a hiking trail, restrooms, water and electricity (will accommodate 100 people)
Coutolenc Park	320 acres of unimproved land with public access for hiking.		This park is located on Coutolenc Road 2.5 miles north of the Skyway. The archery club uses portions of the park to operate an archery range.
Crain Memorial Park	Six-acre facility		Located near the Concow Reservoir, this facility contains picnic tables, chemical toilets, and open areas for softball
Aquatic Park and Rotary Grove Park	Three-acre facility		Located on Buschmann Road in Paradise, this facility contains a swimming pool, fishing pond for ages twelve and under, picnic areas, barbecue facilities, ball sports area in joint use with Paradise Intermediate School, children's play equipment, volleyball court, restrooms and parking
Ball Parks			Located on Moore Road in Paradise, this facility contains two lighted ball parks, children's play equipment, a fenced riding area, horse arena, picnic tables and restrooms

PARK	TYPE OF LAND	FUTURE PLANS	DESCRIPTION
Recreation Center	This is a 2.5 acre facility		Located at 6626 Skyway in Paradise, this facility serves as a community center that includes a kitchen, meeting rooms, offices and indoor restrooms. Outside facilities include a volleyball court, basketball court, a horseshoe pit, children's play equipment, picnic tables, a gazebo and outdoor restrooms.
Paradise Reservoir	This is a reservoir area maintained by the Paradise Irrigation District. The water shed area is 8.3 square miles, with 11,500 acre feet of water, and a shoreline of 7.5 miles.		Located on North Lake Road, this area provides shoreline fishing in designated area. Boating is restricted to row boats, canoes and boats propelled by electric trolling motors. Swimming and overnight camping are prohibited. There are twelve picnic tables, two sets of toilets and children's play equipment on the grounds.
~~Rifle range~~			~~Located three miles north of Skyway on Coutolenc Road, it is co-sponsored by the Paradise Rod and Gun Club.~~
Little League baseball diamonds		Future additions to this facility include a second baseball diamond, a snack bar, restrooms and fourteen poles of light (seven on each field) for night games.	Located at Buschmann Road and Recreation Drive in Paradise, this facility currently has one baseball diamond and a snack bar.
Paradise Memorial Park	This is a 0.5 acre facility		Located at Pearson Road and Mallan Lane, this facility is a picnic area for group and organization use. it accommodated up to 125 people.

Source: Paradise Recreation and Park District, 1993.

TABLE 14-4
STATE AND FEDERAL PARKS AND RECREATIONAL FACILITIES WITHIN ONE HOUR DRIVING DISTANCE OF PARADISE

STATE RECREATION AREAS	FEDERAL FACILITIES
Lake Oroville SRA	Plumas National Forest Campgrounds and Recreational Sites
Loafer Creek	Rogers Cow Camp
Bidwell Canyon	Milsap Bar
Kelly Ridge Visitor Center Complex	Bald Rock
Spillway Ramp	Plumas National Forest Ranger Station
Thermalito Forebay North Area	Lewis Flat
Thermalito Forebay South Area	Shady Rest (P.G. & E.)
Lake Oroville SRA Headquarters	Feather Falls Overlook
Lake Oroville SRA Boat-in Camps	Lassen National Forest Campgrounds and Recreation Sites
Goat Ranch	Cherry Hill Campground
Craig Saddle	Philbrook Campground
Foreman Point	West Branch Campground
Bloomer Point	Butte Meadows Campground
Bloomer Knoll	Soda Springs Campground
Bloomer Cove	
Bloomer Group Camp	
Bidwell Mansion State Historic Park	
Sacramento River Park	
Gianelli Bridge, Sacramento River, Highway 32	
Gray Lodge Wildlife Refuge, southwest of Gridley	
Oroville State Wildlife Area	

Source: 1982 Paradise General Plan; Draft Butte County Energy, Natural Resources, and Recreation Element, 1989.

TABLE 14-5
TRAILS

TRAIL	DESCRIPTION
Paradise Memorial Trailway	This trail runs on former SPRR right-of-way from Neal Road on the south to beyond the town limits on the north. Presently, it is paved from Fir Street to Wagstaff. Its purpose is to be the main route for nonmotorized access through the town, and will accommodate pedestrian, bicycle and equestrian use.
Rivendell Lane/Rodgers Trail and Wildlife Sanctuary	This trail is privately owned and is not open for public use.
Bille Park Trail	Located in Bille Park, this trail provides a walk by a water grotto, past a large Indian grindstone, towards a vista bluff that overlooks Butte Creek Canyon.
Town Trail	This trail starts at the end of Circle Lane in south Paradise and runs west toward Clear Creek and east toward Dry Creek.
Chrome Mine Trail	Located outside the town limits, this trail runs from Middle Butte Creek to the former chrome mine just south of Aurora Court in Paradise Pines.
Paradise Reservoir Trail	Also outside the town limits, this trail starts east of Paradise Reservoir Dam and runs around the lake to a point 2.6 miles north of North Lake Road.
Ponderosa Way Trail	This trail runs along the Ponderosa Road cut to Nimshew Ridge Road.
Merchants Bar Road Trail	This trail runs along Merchants Bar Road to Merchants Bar at Little West Branch of the Feather River.
Magalia Dam Trail	This trail runs on the east side of the Little Butte Creek.
Valley Ridge Trail and Valley View Trail	Both these trails have been acquired as roadway and no longer exit.

Source: Town of Paradise, 1991.

14.8 WATER SERVICE

The primary and secondary study areas are served by two water purveyors: Paradise Irrigation District and Del Oro Water Company. Of these, Paradise Irrigation District is the major supplier, with approximately 9,802 service connections serving about ninety-five percent of the incorporated town. Del Oro Water Company serves Paradise Pines district, a large unincorporated, rural residential community immediately north of Paradise, with a population of approximately 9,000, and Magalia District (a county water district recently acquired by the Del Oro Water Company), serving about 400 acres between Paradise Pines and the Town of Paradise, and providing water to approximately 300 households and fifteen businesses. It also serves the Lime Saddle District, 2,750 acres extending south from the Town of Paradise to Lake Oroville. A small urbanized area of the Lime Saddle District has been annexed to the Town of Paradise; it is an urbanizing district with planned service to more than 1,000 homes (see Figure 14-3 for water purveyor boundaries).

Paradise Irrigation District

The district obtains its water from a series of two reservoirs on Little Butte Creek (Magalia Reservoir and Paradise Reservoir). The reservoir system has a storage capacity of 14,140 acre feet, and the firm annual yield is calculated at 7,860 acre feet. Water is transported to the town through a single transmission line. Distribution lines, booster pumps and surface-level tank reservoirs serve various pressure zones throughout the town. Calculated per capita water usage has varied since 1980 from 245 to 289 gallons per day.

The Paradise Irrigation District staff indicates that the district must, subject to voter financing approvals, undertake three major steps to enable its functions - water supply and distribution to keep pace with anticipated growth:

- Add, by June of 1993, filtration capacity to enable the district to meet revised federal and state water quality standards. The district can currently provide filtration treatment for six million gallons per day, and is proposing to expand that capacity to twenty-five million gallons per day.

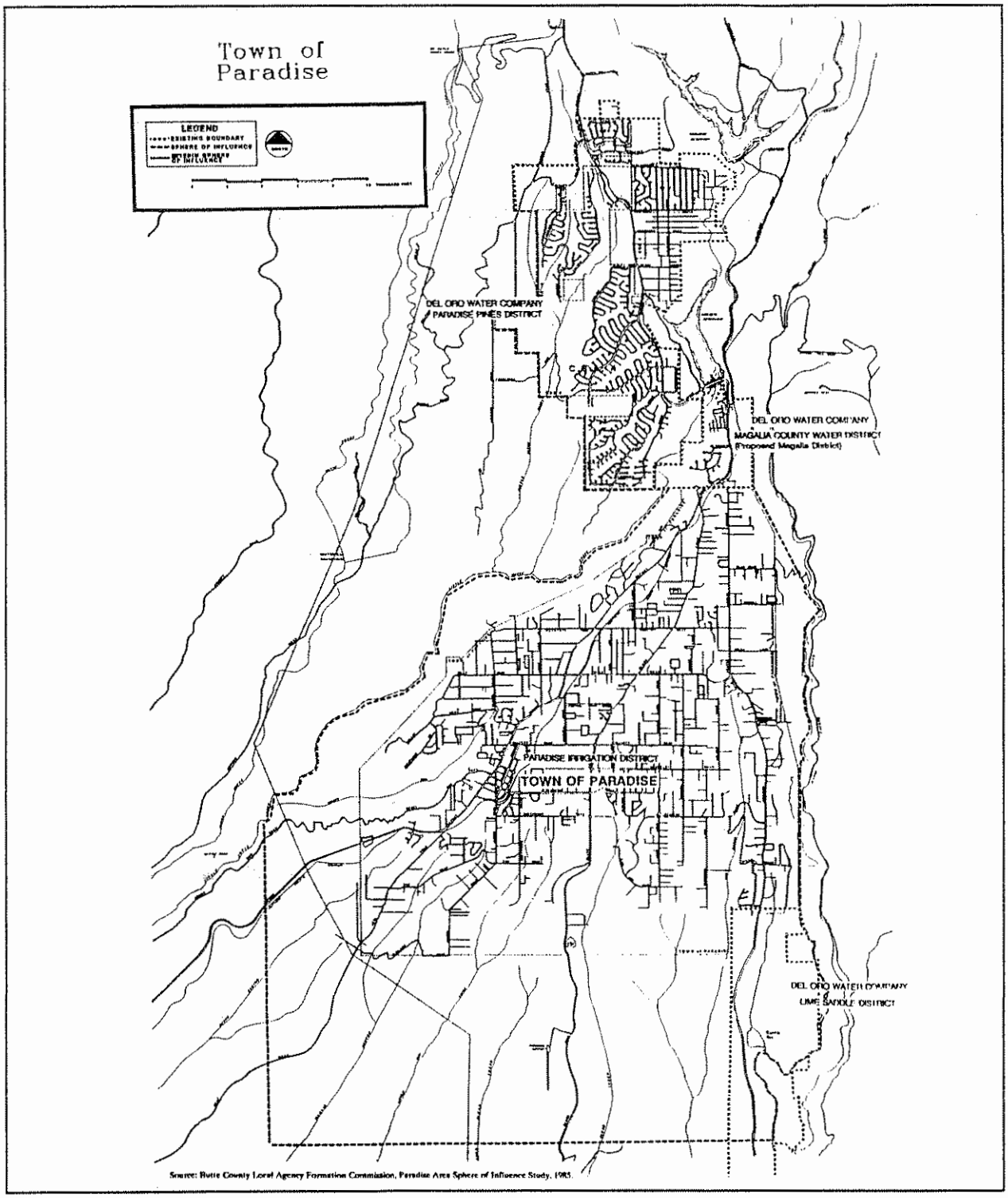
- Supplement its existing surface water supply, deemed by the district to be sufficient to serve community growth to 1996, by adding reservoir capacity, developing a supplementary groundwater source, purchasing surface water, or any combination of these options.

- Replace a significant percentage of the older portion of its 180 mile distribution system, to both improve fire protection to existing developed areas and allow new development in accord with modern fire protection requirements.

Del Oro Water Company

The Del Oro Water Company's Paradise Pines and Magalia service areas have relevance to the Town of Paradise water planning program only if the areas were to be annexed to the town or if their water supply sources conflicted with proposed additional water supplies essential to maintain town growth.

The Lime Saddle service area's water system planning is of greater relevance. It is evident that continued urban growth in the area may significantly impact community resources from a planning standpoint, and there is potential for further annexation to the town of new subdivisions in the area. Del Oro Water Company has recently undertaken the legal and physical steps essential to obtain a supplemental water supply from Lake Oroville to serve further planned urban development in the Lime Saddle area.



WATER SERVICES BOUNDARIES **FIGURE 14-3**

14.9 WASTEWATER

The Town of Paradise is the largest unsewered incorporated community in California. Wastewater treatment facilities within the town consist of individual privately owned septic tanks and soil absorption disposal systems known as leach fields, together with several engineered subsurface disposal systems serving commercial and institutional facilities. In anticipation of an eventual need for centralized wastewater management facilities, portions of a future sanitary sewer system have been constructed along the Skyway. However, there are no existing connections to the system. Businesses and residences in the vicinity of the future sewer system continue to rely on septic tank/leach field systems for wastewater treatment and disposal.

The typical residential septic system installation in Paradise consists of a two-chambered septic tank, measuring approximately 1,000 gallons in volume, connected to about 150 feet of leach field piping. Within the septic tank, heavy solids settle and decompose, leading to the formation of a sludge blanket which must be periodically removed. Grease and other floatables are trapped in a scum layer which forms behind the baffles. In a properly designed, well maintained, septic tank forty to seventy-five percent of the total soluble solids (TSS) and twenty-five to sixty percent of the biological oxygen demand (BOD) are removed. However, septic tank effluent still contains large quantities of pathogenic microorganisms and nutrients. Effluent from the septic tank enters the leach field where physical, chemical and biological processes within the soil provide further treatment and disposal of the wastewater.

Studies

The Town of Paradise authorized several studies, commencing in 1981, to examine the integrity of existing individual wastewater collection and disposal systems (septic tank and leach field design), the extent and degree of water quality degradation and the various alternatives for development of an integrated community wastewater collection, treatment and disposal system. These studies are listed below:

- *Town of Paradise Wastewater Management Study, Phase I Report*, J. M. Montgomery Consulting Engineers, May 1983.
- *Town of Paradise Wastewater Management Study Supplementary Phase I Report*, George Tchobanoglous, March 1984.
- *Town of Paradise Wastewater Management Plan, Phase II Report*, R. A. Ryder and Associates, September 1985.
- *Town of Paradise Wastewater Collection, Treatment, and Disposal Preliminary Design Report*, Volumes 1, and 2, Nolte and Associates, July 1992.

The Town of Paradise contracted with Kennedy/Jenks/Chilton Consulting Engineers to prepare a feasibility study to examine the formation of a central area wastewater assessment district for wastewater collection, treatment and disposal. This study recommended the formation of an assessment district to fund the design and construction of wastewater collection, treatment and disposal facilities.

Current Status

A wastewater design assessment district was formed to finance steps preliminary to construction of a wastewater collection, treatment and disposal facility, including but not limited to environmental impact reports, feasibility studies, engineering plans, cost estimates, legal expenses, the acquisition of easements and rights-of-way. The district withstood a legal challenge and hired a project manager and a consulting engineering firm.

Previous engineering studies have recommended a bifurcated system, with the commercial core of the community being served by a formal centralized collection, treatment and disposal facility, while the balance (the predominantly residential portion of the community) is to remain on septic systems with an onsite wastewater management district to monitor and manage the individual systems.

The plan envisioned a formal sewerage system serving the high wastewater flow areas of the town, including the commercial and multifamily areas, together with the industrial area and other areas with poor soil characteristics. The success of the program is believed to be founded upon the ability to operate an onsite wastewater management district that will care for existing systems, with minimal alterations, for the foreseeable future. The onsite district was formed townwide in May 1992 and has become a town function. The stated purpose of the onsite wastewater maintenance district (zone) is to protect the public health and safety, protect surface and subsurface water quality, conserve water and to minimize the rate and tax expense of the community. The district is intended to accomplish the following tasks:

- Oversee the periodic inspection of all onsite wastewater disposal systems within the zone.
- Provide continuing educational programs for the users of all onsite wastewater disposal systems relating to the proper use, maintenance and repair of said systems.
- Provide reviews and approvals of all repairs and alterations to the existing systems in accordance with the town adopted design guideline manual.
- Provide reviews and approvals for all new onsite wastewater disposal systems that may be installed within the zone in accordance with the town adopted design guideline manual.
- Maintain a water quality monitoring program that will detect any changes in the water quality of the community.

- Initiate remedial actions as may be necessary to assure the protection of the public health and safety and to assure a nondegregation of the community water quality.

The onsite district contains three or more zones, ranging from a zone requiring only simple onsite suitability determinations, to areas with high flow and/or marginal onsite suitability determinations. The latter areas may require community leach fields or other unique solutions.

In May of 1992 the town formally adopted the manual for the onsite treatment of wastewater intended to facilitate the orderly development of wastewater management within the district (zone). It provides technical guidance for siting, design, construction and inspection of onsite wastewater treatment and disposal systems. Approved procedures, design and siting criteria, materials, methods, administrative policies and enabling legislation are described in detail in the manual.

After an advisory measure for a limited community collection sewer system was defeated by Paradise voters in November of 1992, the Town Council took action to postpone all work efforts associated with the sewer project for a minimum of three years.

15.0 SCENIC AND CULTURAL RESOURCES

Scenic and aesthetic resources and views are one of the study area's greatest assets. The forested nature of the town and the surrounding areas, the number of vegetation communities and the range of topography combine to offer a fairly unique variety of visual experiences within a relatively compact geographic area. Views range from valley and canyon panoramas to forest and ridge lines. From some vantage points, the Sutter Buttes and the Coastal Range are visible on clear days.

Residential development is located primarily in forested areas. Trees have been cleared for various commercial and industrial development, some of which is less visually pleasing. The overall ambience is rustic and natural, a genuine community asset which can be enhanced through local policies, guidelines and/or ordinances.

Table 15-1 lists identified historical landmarks and historic structures within and near the study area.

Ethnographic Background

Paradise lies within territory formerly held by the Northwestern *Maidu* or *Konkow* Indians, who inhabited much of what is now Butte County. These people spoke dialects similar to the Northeastern or Mountain *Maidu*, who occupied the upper Feather River basin in much of what is now Plumas County, and the Southern *Maidu* or *Nisenan*, who occupied portions of the mountains and the Central Valley to the south within the Bear, Yuba, and American River basins. Like most native Californians, the *Konkow* were divided into territorial groups known to anthropologists as "tribelets" or "village communities." These consisted of two or more politically confederated villages led by the head man of the most prominent village. Each tribelet was sovereign in matters of land ownership, reaction to trespass, war, and ceremonies. The head man was often assisted by lesser officials and a council of elders. Most tribelet leaders "ruled" by virtue of their wisdom, experience, and acquired respect, rather than through any real authority. Tribelets were the largest social and political unit among most California Indians.

The *Konkow* tribelet was centered around Concow Valley, while the *Michoopda* tribelet claimed the area around Chico and are believed to have foraged within the foothills east of Chico. Some anthropologists believe there was a tribelet in the vicinity of present-day Cherokee called *Ti'-mah*, who may also have foraged on portions of Paradise Ridge. It may be impossible to determine which of these groups actually claimed or inhabited Paradise. All of these tribelets could have maintained settlements or exploited resources in the area at various times. Major villages were located atop the crests of ridges high above the rivers or part of the way down the walls of the canyons on mid-slope benches, particularly where there were springs.

Acorns, deer, and fish provided dietary staples, which were supplemented by a vast variety of small game, seeds, nuts, fruits, and berries. The *Konkow* exploited their environment very systematically. Far from being randomly nomadic, they planned seasonal hunting and foraging rounds to arrive at specific places during peak productivity of certain resources. Their semi-sedentary lifestyle would be impossible without technologies for preserving and storing food resources. For example, these technologies enabled them to convert vast, but seasonal surpluses of acorns and salmon into reliable year-round staples.

Even before the arrival of large numbers of Euro-American settlers and miners, the Indians were affected by white civilization. In 1833, an epidemic of what is believed to have been malaria was brought into the California Central Valley from Oregon by fur trapping parties. As many as seventy-five percent of the native people in the Valley and lower foothills died. The Indians never recovered from this catastrophe and were thus unable to resist the invasion of their homeland during and after the Gold Rush.

Along with epidemics and armed attacks, the Indians had to contend with the destruction of the fisheries and other resources by gold miners and the exclusion of Indians from prime hunting and food gathering lands claimed by white settlers. They were soon reduced to poverty, becoming homeless refugees in their own country. During the late 1850s and 1860s, many surviving Northwestern *Maidu* were removed to the Round Valley Indian Reservation.

A few *Maidu* Indians reside in Butte and Plumas Counties today. Many are involved in efforts to revive their native language and culture.

Prehistory

Archaeological excavations in Messilla Valley in the southeastern corner of the study area suggested to archaeologists that five distinctive cultural expressions had occupied the region over the last three or four thousand years. From youngest to oldest, they are called the Historic Complex (A.D. 1830 to 1850), which clearly represents the archaeological remains of the Northwestern *Maidu*, the Oroville Complex (about A.D. 1500 to 1830), the Sweetwater Complex (about A.D. 800 to 1500), the Bidwell Complex (about A.D. 1 to 800), and the somewhat enigmatic Mesilla Complex (possibly 1000 to 2000 B.C. to A.D. 1). Many archaeologists feel that the Bidwell Complex marks the appearance of *Maidu*-speaking people in the area, although this has not yet been confirmed. At least one prominent archaeologist has hypothesized that the *Konkow* arrived no earlier than about A.D. 1400, while several archaeologists have recently unearthed evidence they believe suggests even the Mesilla Complex people were Maiduan.

The Mesilla Complex bears certain similarities to Central Valley and high Sierran cultures of the same period, including the Martis Complex of the Lake Tahoe and Truckee basin areas. However, most archaeologists now recognize the Martis and Mesilla as distinct cultures.

There is tantalizing evidence for much earlier human presence in many northern Sierra Nevada locations, although none of the evidence is as yet unequivocal. This evidence, in the form of large, relatively crude projectile points that were used for spears – the bow and arrow was not introduced until about A.D. 500 –

indicates Great Basin origins. In 1990, fairly substantial radiocarbon evidence was found for settlement of the central Sierra Nevada in Calaveras County nearly 10,000 years ago.

The California Archaeological Inventory, Northeast Information Center, California State University, Chico, has prepared a map of archaeologically sensitive areas for the Town of Paradise. The map indicates a preponderance of known sites roughly south of Honey Run Road and Pearson Road, with a particular concentration in the Lime Saddle area. The map indicates that "land disturbing projects" south of the line must be surveyed by a qualified archaeologist prior to land disturbance, and that projects north of the line must be reviewed by the center to determine if an archaeological survey will be necessary.

TABLE 15-1
HISTORICAL STRUCTURES AND LANDMARKS

SITE/STRUCTURE/ LANDMARK	TYPE	LOCATION	DESCRIPTION
"Thankful" Lewis Landmark	Sign	Pentz and Williams Road (before Butte College)	Landmark to "Thankful" Lewis, only survivor of an Indian attack on herself and two brothers while they were walking to school in 1863
Clear Creek Cemetery Lewis Children Memorial	Marker	Clear Creek Cemetery Road (off East Clark Road)	Memorial to James and John Lewis who were captured and killed by the Mill Creek Indians in July 1863
Elliott Springhouse	Structure with plaque	Lower Neal Road	In memory of Alexander McClure Elliott 1829-1917, who settled on this site in 1867. Elliott Road was named for this early resident
Sierra Polytechnic Institute	Sign	Pearson Road and College Hill Road	This institute offered education for ninth-fourteenth grades so ridge residents did not have to travel to Chico. Established in 1904, it was the equivalent to two years of college
Skyway and Foster Triangle Park	Park	Skyway and Elliott Roads	Dedicated to the beautification of Paradise by the Paradise Chamber of Commerce
Southern Railroad Depot Building and the Washington Plaza Memorial Park	Depot with park	Black Olive Drive and Pearson Road	This depot was built by Southern Pacific in approximately 1903. The Washington Plaza Memorial Park was the area that surrounds the depot. It was created by the community of Paradise and beautified in 1929
Old Paradise Historical Marker	Marker	East side of Clark Road and Elliott Road	Commemorates the original business section of Paradise, known in the 1860s as Leonard's Mill. The first community hall, school, church and post office were located at this site. Then it was bypassed when the railroad was build in 1903
Dogtown Nugget Monument California Historical Landmark No. 771	Plaque	Skyway at Inspiration Point, Magalia	This marker symbolizes the discovery of the first large gold nugget in California weighing fifty-four pounds on April 12, 1859

SITE/STRUCTURE/ LANDMARK	TYPE	LOCATION	DESCRIPTION
Magalia Depot Building	Site	Skyway and Coutolenc Road	This was built in 1903 on the Southern Pacific Line for lnmber and passenger service from Stirling City. Last passenger service was in the 1950s and all log hauling was discontinued in May 1974, when the Stirling City Mill was closed
Magalia Cemetery	Plaque	Magalia Cemetery Road	On July 15, 1973 a plaque was dedicated at the Magalia Cemetery honoring the pioneers who settled Dogtown in 1850 and Mr. and Mrs. John Hupp donors of the land.
Eugene J. DeSabla, Jr.	Plaque	West side of Skyway near DeSabla Reservoir Dam	Eugene DeSabla was a promoter and developer of the hydroelectric system on the ridge, which later became PG&E
Stirling City Historical Marker	Sign	Stirling City	A sign describing the early history of Stirling City and explaining the history of the famous Diamoud Match Company
Stirling City Historical Marker	Sign	Inskip	The first hotel was built in 1857 by Mr. Kelly. John Stakes purchased the hotel in 1866. It was destroyed by fire in March 1868. The present building was erected later in the same year. The gold strike of the 1850s brought the population to over a thousand making it a booming township
Inskip Pioneer Cemetery	Plaque	Inskip	The names on the wooden markers have completely disintegrated with the passage of time. Iuscribed on the surrounding fence are the words: "Those who rest here are only known to God."
Sank Spring	Plaque	Chaparral	Dedicated by Jesse Sank, pioneer, to his wife Cornelia Lott.
Nimshew Cemetery	Plaque	Nimshew	Honoring pioneers of the area, Saul and Rebecca Rugh
Honey Run Covered Bridge	Monument	Honey Run Road and Butte Creek	Monument of early pioneering which connects the Honey Run grade with the Humbug Road. It was built for the purpose of providing a shorter route to the mountains as well as a closer access to points of shipping on the Sacramento River. The bridge was erected in 1894 by George Miller

SITE/STRUCTURE/ LANDMARK	TYPE	LOCATION	DESCRIPTION
Gold Nugget Museum	Museum	502 Pearson Road	While this building is not a historical landmark, most of the history of Paradise and historical artifacts are located here.

Source: State Office of Historic Preservation; 1982 Paradise General Plan; Draft Butte County Energy, Natural Resources and Recreation Element, 1989.

16.0 RELATIONSHIP TO OTHER PLANS

16.1 BUTTE COUNTY GENERAL PLAN

Butte County has recently started work on a comprehensive update of the *Butte County General Plan*. The existing land use plan for the Paradise area, the *Paradise Area Land Use Plan*, was adopted by the Butte County Board of Supervisors in 1981, and generally encompasses the area corresponding to the primary and secondary study areas. The area within the 1981 Paradise town limits is primarily designated for medium density residential development (seven-thirteen dwelling units per gross acre) and low density residential development (one-six dwelling units per acre). Some areas paralleling the Skyway and along Clark Road are designated for high density residential development (fourteen-twenty dwelling units per acre), and most of the length of the Skyway and an area along Clark Road are designated for commercial development. Selected sites are designated for industrial and public use. No explanation is provided regarding the relatively high residential densities shown on the plan in the absence of a community sewer system.

With regard to the secondary study area, the communities of Paradise Pines and Magalia are designated for low density residential development. Surrounding areas, north to Coutolenc Road, are primarily designated agricultural residential (one-forty acres per dwelling units). The easterly portion of the area is designated timber mountain (forty acre minimum parcel size), grazing and open lands (forty acre minimum parcel size) and public, and the westerly portion is designated grazing and open lands.

To the east of the *Paradise Area Land Use Plan* boundaries, the county has adopted the *Concow Area Land Use Map*. This map designates a majority of the area as timber-mountain, with three sizable areas designated for foothill area residential (one-forty acres per dwelling units). The majority of the area abutting the *Paradise Area Land Use Plan* boundaries to the north and east is designated timber-mountain; and to the west, grazing and open land. Within the tertiary study area, lands are designated agricultural residential, grazing and open land, and public (Butte College).

The county has adopted a general plan amendment entitled the *Paradise Urban Reserve Policy Statement* and has designated an area as "Urban Reserve" south of the town limits (south Paradise area). The area is shown in Figure 16-1. The area was formerly designated agricultural residential. This general plan amendment established the following policies for the south Paradise area:

- The county's land use policy, zoning and subdivision shall be coordinated with the Town of Paradise and any other service district within the Urban Reserve.

- The Urban Reserve designation permits rural residential development and uses on parcels of not less than forty (40) acres in those areas designated by the California Department of Fish and Game (DFG) as NO DEVELOPMENT ZONES for the protection of critical deer herd winter ranges (see Figure 6-4), and twenty (20) acres on all other properties until such time as they are needed for development and adequate services are available to serve this area.

- Any proposal for a general plan amendment, rezoning or subdivision which would permit parcels of less than twenty (20) acres to be created shall be coordinated with all public agencies which provide utility and public services as well as the plans of the Town of Paradise for extension of water, sewer, circulation, drainage, and shall be accompanied by the following plans prior to or concurrently with the adoption (summarized).

    - capital improvement plan
    - park and open space plan
    - environmental plan
    - street and transportation plan
    - health department standards
    - fiscal plan

- Any parcel which is now less than forty (40) acres which was legally created, pre-existing, and nonconforming may be developed according to its zoning.

- Development standards compatible with the Town of Paradise shall be utilized for urban development projects within the Urban Reserve.

The definitions of the "land use plan designations" contained in the *Butte County General Plan* which apply to the portions of the study areas outside the area subject to the *Paradise Urban Reserve Policy* are summarized as follows:

- **Grazing and open land** - livestock grazing, animal husbandry, intense animal uses and animal matter processing.

- **Timber-mountain** - forest management and the harvesting and processing of forest products.

- **Agricultural residential** - agricultural uses and single-family dwellings at rural densities.

- **Foothill area residential** - single family dwellings at rural densities.

- **Low density residential** - detached single-family dwellings at urban densities.

- **Medium density residential** - a mixture of urban residential uses, including detached single-family homes, condominiums, multiple-dwelling structures, mobile home parks, group quarters and care homes.

- **High density residential** - higher-density urban residential uses, including condominiums, multiple-dwelling structures, mobile home parks, group quarters and care homes.

- **Commercial** - structures and activities providing a full range of merchandise and services to the general public.

- **Industrial** - processing, manufacturing, packaging, storage and distribution of goods and commodities.

- **Public** - large facilities owned and operated by government agencies, including schools, colleges, airports, dams and reservoirs, disposal sites, recreation facilities, conservation areas, fire stations and other government buildings and property.

Land Use Element policies which are particularly relevant to the Paradise area include the following:

- Regulate development in identified winter deer ranges to facilitate the survival of deer herds.

- Prevent development and site clearance other than river bank protection of marshes and significant riparian habitats.

- Protect valuable scenic areas and parks for enjoyment by residents and visitors.

- Encourage compatible land use patterns in scenic corridors and adjacent to scenic waterways, rivers, and creeks.

- Provide open space areas near and between designated urban areas on the land use map.

- Promote the development of new industry in the county.

- Allow agricultural uses and farm animals in designated residential areas where appropriate.

- Correlate residential densities to soil, slope and other natural site characteristics.

- Relate residential densities to intensity and compatibility of adjacent uses.

- Balance residential densities with traffic-carrying capacities of existing and proposed circulation plans.

- Support water development projects needed to supply local demands.

- Control development in watershed areas to minimize erosion and water pollution.

- Consult with incorporated cities and neighboring counties in the development of planning proposals for areas of mutual concern.

- Designate adequate land for free-market competition among land suppliers to avoid artificially constricting land availability.

- Encourage annexation to existing cities and existing districts.

- Encourage development in and around existing communities with public facilities.

- Encourage urban expansion toward the least productive soils.

- Allow rural residential development as a buffer between urban development and intensive crop land.

- Retain in an agricultural designation on the land use map areas where location, natural conditions and water availability make lands well suited to orchard and field crop use, while considering for non-agricultural use areas where urban encroachment has made inroads into agricultural areas and where past official actions have planned areas for development.

- Maintain extensive areas for primary use as livestock grazing land.

- Prevent scattered development in grazing areas.

- Retain in a grazing-open land category areas on the land use map where location and natural conditions make lands well suited for grazing land, while considering for nongrazing use areas where urban encroachment has made inroads into grazing areas and where past official actions have planned areas for development.

- Retain in a "timberland" category areas on the land use map where location and natural couditions make lands well suited for timberland, while considering for nontimber use areas where urban encroachment has made inroads into timber areas and where past official actions have planned areas for development.

The *Circulation Element* of the *Butte County General Plan* was adopted in 1984. It includes assessments of projected traffic growth for the following planning areas with relevance to the *Paradise General Plan*:

- **Upper Ridge** - Significant population growth in this mountain planning area will cause need for a capacity expansion of the Skyway from Paradise Pines to the Town of Paradise sometime during the 1990s. Also, it will be important to ensure adequate access for rapid evacuation in case of a wildland fire emergency in this planning area. The Upper Ridge will continue to have a very high percentage of senior citizens, and public transportation development for this area should be encouraged as part of a Paradise area transit system.

- **Paradise** - The Paradise planning area is almost entirely under the jurisdictiou of the Town of Paradise. The town has developed a circulation forecast to 1990 which shows the need for several street collector extensions to better serve east-west travel demand in the community.

- Concow- The population of the Concow area is forecasted to triple by the year 2000. However, because of extremely low trip generation rates expected by the area's rural population, traffic growth rates will increase slowly, resulting in no needed capacity expansion of primary roads to the area.

- Central Butte - This foothill planning area's population growth rate forecast is the highest in Butte County to the year 2000; more than a 600 percent increase over 1980. This is due to a very large inventory of land with a designation of agricultural residential (A-R) in the *Land Use Element.* This area is located mostly south of the Town of Paradise and totals approximately 12,500 acres. The development of potential from the A-R designation is extremely variable due to its wide density range (one-forty acres per dwelling unit) allowed. This kind of deusity range does not allow the development of a confident traffic forecast for the planning area.

  The planning area presents special problems for circulation planning and forecasting, in that the area is largely undeveloped, contains difficult terrain, and could potentially impact circulation plans and programs in the Town of Paradise and Chico. Before significant developments occur in this area, a comprehensive plan should be developed for this planning area.

Circulation Element policies which are particularly relevant to the Paradise area include the following:

- The transportation system shall be developed in a manner consistent with specified land use densities and estimated trip generation capabilities and which is consistent with the policy to encourage development in and around existing cities and community centers.

- Circulation plans for the county's foothill areas should be designed around patterns which encourage development near existing highway corridors and emphasize development near existing rural community centers.

- The most important roads and highways should be designed and maintained to the highest possible level of service and convenience. The least important roads and highways should receive only the improvements necessary to maintain their structural integrity and operational safety.

- Encourage development in areas that can be served by public roads in a manner that does not become an economic burden to the county, over time.

- It is suggested that the utilization of county road funds should focus on completing projects with a higher priority before completing a lower priority project.

- Rural arterial road and highway traffic capacity levels should be planned to provide a level of service "B," and be considered to be providing acceptable service at level of service "C" when fiscal, environmental, or site constraints are prohibitive.

- Land uses that would preclude the timely development of right-of-way needed for new roads or expansion of existing roads shall be prohibited.

- All road systems, both public and private, shall provide for the safe evacuation of residents and adequate access for fire and other emergency services by providing at least two means of emergency access to an interconnected collector system.

- The county will work with the Butte County Fire Department and the California Division of Forestry towards developing emergency evacuation routing plans for developing foothill and mountain areas with extreme fire hazard potential.

- The county will consider city-initiated circulation element amendments to the county transportation element.

- The county and its cities should develop mutual and complementary policies regarding the timing and phasing of new urban area developments, as necessary for the logical and timely development of each urban area circulation network.

- The county will jointly coordinate circulation capital improvement programs with the respective cities.

- Urban street and highway traffic capacity levels should be planned to provide a level of service "C," and be considered to be providing acceptable service at level of service "D" when fiscal, environmental or site constraints are prohibitive.

- Urban area street improvement standards should conform to city street standards and circulation plans for each respective city.

- The county shall support local public transportation services in the three largest urban areas and adequate intercity service to the Chico, Oroville, Paradise, Gridley-Biggs, and Palermo areas.

- The county will encourage the cities to prepare and propose comprehensive urban area bicycle plans to the county for review and adoption.

- Construction or expansion of all major arterials shall consider bicycle paths of Class II or better.

- The county shall implement measures in unincorporated areas that provide for the continued safe operation of airports.

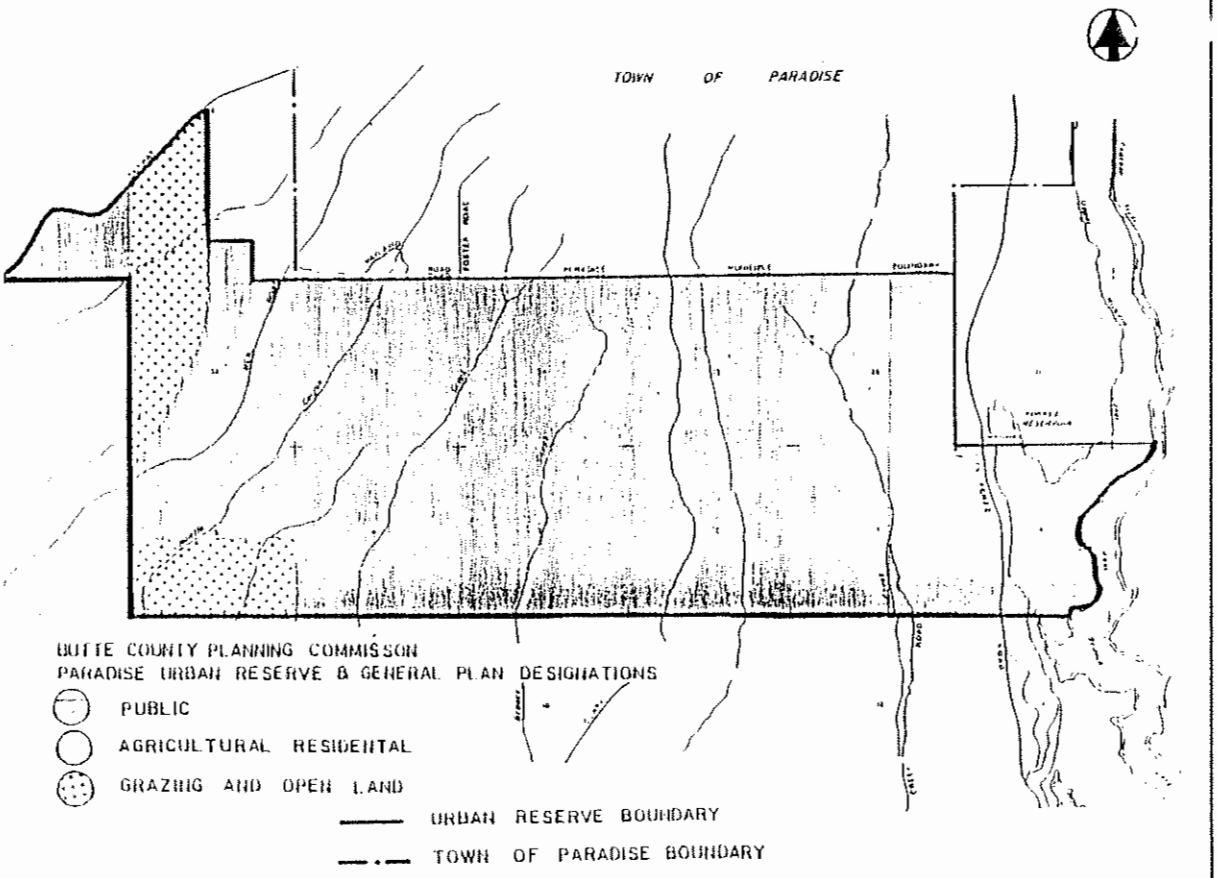
- The county will support the cities in the encouragement of ridesharing and carpooling programs by large employers and public agencies.

The *Circulation Element* also identifies the following state highway and other road projects in the Paradise area which have current or projected capacity-safety problems that will need correction during the 1981-2000 planning period:

- **State Route 99** - 0.8 mile north of Pentz Road to 0.4 mile south of the Skyway overcrossing. This segment of highway is presently near capacity and should be widened to a four-lane expressway in the near future.

- Skyway(Paradise area) - Realignment of the Skyway between Coutolenc Road and 0.2 mile inside of the northern Town of Paradise limits. This portion of the Skyway between the Town of Paradise and Paradise Pines is at or near capacity. The realignment would follow the improved grade of the abandoned Southern Pacific rail line to Stirling City, making construction of a two-lane expressway along this segment possible.

The county has circulated a draft *Natural Resources, Recreation and Energy Element*. The existing *Noise* and *Safety Elements* were discussed in previous sections of this document.



SOURCE: BUTTE COUNTY GENERAL PLAN

PARADISE URBAN RESERVE **FIGURE 16-1**

16.2 SPHERES OF INFLUENCE

Spheres of influence are adopted by the Butte County Local Agency Formation Commission (LAFCo) for all cities, towns and special districts (excluding school districts) within Butte County. A "sphere of influence" is defined in state law as a plan for the probable ultimate physical boundaries and service area of a local agency. Annexations to cities, towns and districts must be consistent with adopted spheres of influence.

The secondary study area follows the sphere of influence boundary adopted by LAFCo for the Town of Paradise.

Special districts which provide services to the Paradise area, and whose spheres of influence lie at least partially within the study area, include:

Special District	Services Provided
Paradise Irrigation District	Water, hydroelectric power generation, recreation
Magalia County Water District	Water for residential and commercial use
Lime Saddle Community Services District (Del Oro)	Water for residential use
Paradise Recreation and Park District	Parks and recreation programs
Butte County Mosquito Abatement District	Mosquito abatement
Paradise Cemetery District	Operation and maintenance of Paradise Cemetery
Nimshew Cemetery District	Operation and maintenance of eight cemeteries
County Service Area No. 4	Storm drainage

16.3 TOWN OF PARADISE

Paradise Downtown Revitalization Plan

The *Paradise Downtown Revitalization Plan* was adopted in 1986 to provide the town with a tool leading to an improved economic climate in the Central-Business district (CBD) by providing sets of time-phased programmatic goals to be attained by a partnership between town government and downtown businesses. The plan focuses on the area bounded by the Skyway, Pearson Road, Almond Street, and Elliott Street. The plan includes a design concept plan and phasing plan, as well as recommendations regarding parking, circulation, land use, business organizations, marketing and promotion, target businesses and industries, beautification, improvements and financing.

Redevelopment Plan

The town does not currently have a redevelopment agency or a redevelopment plan

16.4 BUTTE COUNTY AIR QUALITY ATTAINMENT PLAN

The California Clean Air Act transportation planning requirements mandate that nonattainment areas for ozone and carbon monoxide develop air quality plans by July 1991. Therefore, the Butte County Air Pollution Control District, in coordination with transportation agencies (BCAG), is required to coordinate, adopt and implement various transportation controls to meet specific performance standards outlined in the Act. Butte County is coordinating with other Northern Sacramento Valley counties (Shasta, Tehama, Glenn, Colusa, Sutter and Yuba) in the preparation of this plan.

The *Air Quality Attainment Plan* for the Northern Sacramento Valley Air Basin has been prepared in compliance with the Clean Air Act and submitted to the Air Resources Board. The plan is designed to achieve a reduction in district-wide emissions of five percent or more per year for each nonattainment pollutant or its precursors, averaged every consecutive three-year period. By law, the five percent requirement is calculated against the 1987 actual emission level of each nonattainment pollutant or its precursor.

According to the plan, it does not demonstrate a five percent reduction of the pollutant levels, as the control efficiencies and cost-effectiveness are not available for many of the proposed control strategies. The plan states that it does, however, include every feasible control measure and a schedule of adoption for the control measures.

The plan provides that Butte County must reduce reactive organic gases (ROG) emissions by 12.39 tons per day, and reduce nitrogen oxides (NO_x) emissions by 7.58 tons per day by 1994, in order to comply with the requirements of the Clean Air Act. The county must reduce ROG emissions by 17.70 tons per day and reduce NO_x emissions by 10.83 tons per day by 1997, and must reduce ROG emissions by 23.00 tons per day and reduce NO_x emissions by 14.08 tons per day by 2000.

The draft plan contains proposed community contact, educational and public information elements designed to reduce emissions from transportation and area wide sources. The plan also contains a list of feasible control measures, which are proposed to be implemented according to the following schedule:

- All measures ranked No. 1 shall be proposed and implemented by applicable districts no later than July 1, 1992.
- All measures ranked No. 2 shall be proposed and implemented by applicable districts no later than July 1, 1993.

- All measures ranked No. 3 shall be proposed and implemented by applicable districts no later than July 1, 1994 only if attainment of the state ambient air standard for ozone is not achieved by January 1, 1994.

A complete listing of these control measures is included in the plan. The ranking of feasible control measures is based upon technical feasibility, cost-effectiveness, emission reduction potential, rate of emission reductions, public acceptability, and enforceability. The control measures include a new source review rule (requirements for permitting new and modified stationary sources of air pollution), indirect source review (sources which generate or attract motor vehicle activity, including shopping centers, residential and commercial developments, government buildings, medical facilities, office buildings, hospitals, hotels, restaurants, etc.), and transportation control measures, for which each district will develop measures that are appropriate for only its own jurisdiction.

16.5 BUTTE COUNTY HAZARDOUS WASTE MANAGEMENT PLAN

The County of Butte has prepared a Hazardous Waste Management Plan in accordance with state law. The plan contains information on sites that may be potentially suitable for various hazardous waste facilities, including transfer and storage facilities, treatment and recovery facilities, and solidification for storage or residuals repositories. The plan describes the various facilities as follows:

Transfer and Storage Facilities

Hazardous waste transfer and storage facilities generally serve as collection stations for industrial waste, but could also be used for household waste. Materials are frequently stored on site until quantities are sufficiently large to be shipped economically to treatment or recycling facilities.

At transfer stations, hazardous wastes are examined and analyzed to confirm their identity, degree of hazard, and compatibility with other wastes. They are then separated as liquids, solids, and sludges according to their overall chemical characteristics, and are kept separate from incompatible wastes. Drums may be transferred directly out of the transporting vehicle to the storage area, or they may be transferred by forklift from a receiving area to the storage buildings. Uncontainerized dry solid hazardous waste is transferred to bins or tanks by dump truck or a conveyor system. Uncontainerized liquids, sludges and slurries are transferred by pipeline from tank trucks to appropriate storage tanks. Wastes are subsequently transported from a transfer/storage facility to a treatment, recovery, incinerator or residuals repository.

- **Treatment and Recovery Facilities:** Hazardous waste treatment facilities can occupy anywhere from three to thirty acres. A large facility can treat up to 200,000 tons of liquid wastes annually. This volume would likely require 185 tanker trucks or 120 rail cars annually. Visually, the aqueous treatment center resembles a municipal sewage treatment plant.

  Water contaminated with hazardous wastes, for example, arrives at a treatment facility from a transfer station, from a liquid organics recovery facility or sometimes from a large waste generator. Various processes are used to remove heavy metals, reactive ions and organic matter. The segregated wastes are then neutralized and/or oxidized to precipitate metals or to detoxify selected chemicals. Treated wastewater effluent is discharged either to a sewer or to an evaporation pond. The sludges that are formed are sent to an incinerator, to a biological waste converter or are stabilized for land disposal.

  Liquid hazardous wastes containing solvents, oils and other organics arriving at the recovery facility are analyzed at an onsite laboratory to identify those constituents valuable enough to recycle. Decisions are made regarding those components which will be reclaimed, incinerated

recycle. Decisions are made regarding those components which will be reclaimed, incinerated or converted to usable or stable residues. Solvents and oils are separated and clarified, respectively, by physical processes such as distillation, condensation and filtration. Toxic vapors are destroyed by incineration or are collected on adsorbents. The purified solvents and oils are sorted, recycled, blended into fuels, or shipped out as industrial raw materials. Residues or sludges from this facility are incinerated, extracted for metals, or "stabilized" prior to land disposal. Wastes remaining after recovery procedures have been completed are then sent to an aqueous waste treatment facility for further processing.

- **Solidification for Storage or Residuals Repositories:** Some hazardous wastes that cannot be recycled, treated or destroyed can be solidified or stabilized. Liquid wastes and sludges can be solidified by use of special additives. Inorganic sludges can be fixed by adding lime and fly ash. Other wastes can be encapsulated in asphalt or plastic coatings for lengthy storage or ultimate retrieval.

  A solidification facility would constitute a large industrial building with several tall silos attached for storage of dry chemicals. These facilities generally require one-ten acres. Transportation requirements would vary depending on the volume of waste handled.

- **Residuals Repositories:** Residuals repositories are designed for long-term storage of wastes that have been treated and/or reduced to the maximum extent feasible. They would be sited only in areas that meet conditions set forth in Subchapter 15, Title 23 of the California Administrative Code governing the disposal of wastes to land. The residuals to be stored at these facilities are solids, with low organic content, and with inorganic components that are relatively insoluble. These solids are among the most inert and least mobile wastes presented for land disposal. An example of residuals potentially suitable for long-term storage would be the solids from pretreatment from sewage treatment facilities. The facility would be designed and operated to keep materials dry in order to prevent the formation of leachate. Thus, a properly designed and well operated residuals repository should present very low environmental risk.

Using a "constraints and opportunities mapping" process, the county has selected candidate areas that may be "appropriate for siting the various facilities." Maps contained in the plan show portious of the Town of Paradise, the secondary and tertiary study areas, as "potentially suitable" or "potentially usable with adequate mitigation measures. The plan also recognizes, however, that:

> Butte County does not generate enough hazardous waste to warrant siting more than community transfer and collection stations...potential areas for siting treatment and residuals repository facilities are reflected in the plan only to comply with DHS (Department of Health Services) guidelines. The advisory committee will, however, meet with the surrounding rural counties to establish multi-county agreements for any treatment or residuals repository facilities determined to be needed in the larger geographical area.

16.6 BUTTE COUNTY AIRPORT LAND USE COMMISSION

The Butte County Airport Land Use Commission has adopted the *Paradise Skypark Airport Land Use Plan* (1985) for the airport and the surrounding area. The plan establishes planning boundaries around the Paradise Skypark Airport area of influence, and sets forth appropriate land uses, including building height restrictions, to the extent that such land is not already devoted to incompatible uses. The plan's stated objective is "to promote the orderly development of lands contiguous to the Paradise Skypark Airport in a manner which safeguards the general welfare of the inhabitants, assures the safety of air navigation, and maintains the utility" of the airport.

According to this plan, "In general, the Paradise Skypark Airport may be described as a safe airport because the past accident record is entirely free of incidents involving the public or the public welfare. In addition, structures do not now intrude into the air space requirement of the airport and no future problem with height restrictions is foreseen." The plan also includes noise policies to assure that new land uses in the airport environs are compatible with aircraft-generated noise. The plan recommends that Butte County, in conjunction with the Town of Paradise, begin negotiations with owners of the land in each of the clear zones to purchase, exchange, or acquire avigation easements for the land. Appendix E includes the plan's "Land Use Guidelines for Safety Compatibility," and the clear zones and approach zones are shown in Figure 7-4.

16.7 BUTTE COUNTY REGIONAL TRANSPORTATION PLAN/CONGESTION MANAGEMENT PROGRAM

The Butte County Regional Transportation Plan and Congestion Management Program constitutes a strategy for regional transportation in Butte County. The program and plan were prepared by Butte County with the assistance and participation of local municipalities.

TOWN OF PARADISE

1994 GENERAL PLAN

VOLUME III
ENVIRONMENTAL SETTING DOCUMENT

APPENDICES

TOWN OF PARADISE

1994 GENERAL PLAN

VOLUME III
ENVIRONMENTAL SETTING DOCUMENT

APPENDIX A

APPENDIX A

COMMUNITY CONCERNS SUMMARY REPORT

I. LIST OF COMMUNITY ISSUES/CONCERNS

Based on meetings with Town staff and the General Plan Revision Steering Committee, the following Town issues and concerns relevant to the General Plan update process have been identified:

- Growth management--need for comprehensive statement
- Butte County and other city General Plan updates
  - Chico
  - Oroville
- General Plan planning area and level of planning detail
  - Interest in Highway 99 and communities to north of Paradise
- Time frame for General Plan
- Housing
  - Density
  - Lot size
  - Location
  - Size and cost
  - Mix of housing types
- Sewer system and method of wastewater disposal
  - Pressure for higher densities if sewers are installed
- Need for open space policy
- Jobs/housing balance
- Circulation
  - Access
  - Lack of cross-streets
  - Road width (number of lanes)
  - Emergency response
  - Alternative transportation systems
- Community character (rustic nature)
- Parks
- Economic development
  - Tourism
  - Downtown revitalization
  - Redevelopment
  - Cluster vs. strip
- Historic/cultural resources
- Public services and infrastructure
- Level of municipal services and expectations of Town residents
- Water
  - Quantity
  - System capacities (domestic and fire flow)
  - Quality
- Air quality
- Solid waste pickup (mandatory or voluntary?)
- Street lights

- Relationship between public service capacity and growth
- Location of important mineral resources
- Need for realistic, implementable, internally consistent General Plan
- Tree preservation and replacement
- Viewshed protection
- Need for unique development standards

II. SUMMARY OF COMMUNITY SURVEY RESULTS

[WHEN AVAILABLE]

QUAD

2530 J Street, Suite 302
Sacramento, CA 95816
FAX 916 447-2874
916 447-1700

MEMO

TO: General Plan Steering Committee and Town staff

FROM Roberta MacGlashan

RE: Citizens' Opinion Survey Results

DATE: May 9, 1991

Attached are the results of the Citizens' Opinion Survey of 300 Paradise residents conducted by volunteers during the months of March and April, 1991. The survey instrument was designed by the General Plan Steering Committee, Town staff and QUAD Consultants, and was based in part on the Citizens' Attitude Survey conducted in March, 1981.

Where questions were comparable, results from the 1981 survey are included for purposes of comparison. Some of the highlights, or most notable differences between 1981 and 1991 include the following:

- Decrease in the number of survey respondents age 60 and older, and corresponding increase in the number of respondents between the ages of 18 and 40. This suggests a shift in the age composition of the population to a younger median age.

- Decrease in the percentage of the labor force working in the Town of Paradise from 1981 to 1991.

- Increase in the percentage of shopping dollars spent outside the Town of Paradise from 1981 to 1991.

- By a margin of 2 to 1, respondents believe that parking is adequate in Paradise.

- Over 55 percent of respondents prefer Paradise to grow at a lower rate or not at all; 43 percent prefer the present rate, and only 3.9 percent prefer a higher rate of growth.

- One-quarter to one-half-acre lots are the preferred lot size for single family homes.

- Almost 80 percent believe there should be an active attempt to increase job opportunities in Paradise.

- The highest interest in recreational facilities is in foot and bicycle paths, followed by nature areas and an auditorium.

- While 36.8 percent would improve traffic conditions by encouraging the use of alternative forms of transportation, 70 percent would use bus service only occasionally or not at all.

Results of the survey are accurate within 3 to 4 percentage points.

While this survey provides much information of interest, it cannot be all things to all people and questions of equal interest could not be asked due to length. Survey results will be supplemented by input from the General Plan Steering Committee, the four Subcommittees and citizens at public meetings and hearings.

TOWN OF PARADISE
CITIZENS' OPINION SURVEY
March-April 1991
(with comparisons to March 1981 survey)

1. How many persons are living at this address?

Persons	Percent
1	22.8
2	42.8
3	14.9
4	12.3
5	3.6
6 or more	3.6
Average household size = 2.5	

2. Of the persons living in this household, how many are in each of the following age groups?

Age Group	1991 Survey %	1981 Survey %
<18	21.6	20.7
18-40	27.9	22.1
40-60	21.0	17.7
60+	29.5	39.5

7. How many persons in this household are physically disabled?

Year	Percent of Population Disabled
1991	8
1981	7

8. Thinking of your shopping dollar, what percentage do you estimate is spent outside of the Town of Paradise?

% of Shopping $	1991 %	1981 %
< 10	25.8	68.3
11-20	18.1	11.8
21-50	29.8	13.0
51 or more	26.2	6.9

9. On the subject of shopping, what changes would encourage you to do more shopping in Paradise?

Changes	%
Better variety of shopping opportunities	55.2
Discount grocery store	56.3
Off-price retail center	35.7
Enclosed mall	31.4
More parking	20.2
Improvement in customer relations	23.5
Additional automobile dealerships	18.8
Establishment of a bus system	27.4
Development of mini-rest areas with shade, benches & drinking fountains	21.7

11. Complaints have been received about the manner in which businesses have been located in the Town of Paradise. Would you prefer business be...

Location	1991 %	1981 %
Concentrated in a few centers located at major street intersections	41.0	54.3
Located throughout the downtown area	21.4	NA*
Restricted to a few primary streets	15.9	27.6
Spread throughout neighborhoods townwide	21.7	18.0

* Not asked in 1981

12. Is parking adequate in Paradise?

	%
Yes	67.8
No	32.2

13. If no, exactly where in Paradise do you feel parking is inadequate?

Location	1991 %	1981 %
Shopping Centers	23.9	NA
Old Downtown	100.0[1]	9.5
Parks	8.0	NA
Town Hall	12.5	NA
Skyway	NA	20.3
Other	19.3[2]	6.9

16. What do you **dislike** most about the growth of Paradise since you have lived here.

Dislikes	%
Increase in traffic	59.2
General increase in noise, crowds and hustle-bustle of the community	23.1
Increased strain on our public services such as law enforcement, fire protection and road maintenance	45.5
A loss in the serenity that once existed in Paradise	32.9
Increased potential of ground water pollution resulting from additional septic systems	42.2
Just plain too many people	26.0
The decrease in the size of residential lots	20.9
Don't dislike anything about growth	9.4
Other	20.9

Note: Same as No. 15

17. In your opinion, what type of housing is most needed in the Town of Paradise?

Housing Type	1991 %	1981 %
Single family homes	50.9	68.9
Mobile homes in parks	9.7	9.8
Mobile homes on lots	11.2	11.2
Apartments	17.7	10.0
Condominiums	15.9	NA
Low-Income Housing	27.8	NA
Moderate-Income Housing	46.9	NA

	%
Yes	53.6
No	46.4

21. If yes, what monthly rate would you be willing to pay?

Monthly rate	%
$1-4	38.1
$5-10	47.5
$11-20	7.6
More than $20	1.7
Other/don't know	5.1

22. Should there be an active attempt to increase the number of job opportunities in Paradise?

	%
Yes	78.8
No	21.2

	Low		Range		High	
Facility	1	2	3	4	5	No Opinion
Exercise, jogging & fitness	17.0	15.6	25.7	15.6	15.9	10.1
Lighted ball fields	13.8	10.5	21.0	17.0	26.4	11.2
Year-round swimming pool complex	17.0	11.2	18.8	14.5	26.4	11.9
Botanical & community gardens	19.9	14.9	21.7	17.4	13.8	12.3
Other	(Most frequent answers) Youth Center/Facilities, Tennis Courts, Bowling Alley, Library					

25. If a local bus system were to be established to serve the Paradise community, how often would you use it?

Frequency	1991 %	1981 %*
Daily	6.1	11.3
2-4 times per week	10.5	36.2
Once a week	9.0	11.0
Occasionally	27.1	41.5
Not at all	43.3	(44.7)

* Asked only of those responding that they would use a bus system if it was established.

28. What two things do you most **dislike** about living in Paradise?

Most frequent responses:

Growth
Politics/Town government
Lack of shopping and restaurants/high prices
Leaf burning
Lack of services
Water situation
Traffic
Elderly drivers
Lack of opportunities (social, employment, recreational)

29. What is it that you consider to be the most unique characteristic of Paradise?

Most frequent responses:

Trees, wildlife
Mountain environment/location/beauty
Friendliness/lifestyle
Gold Nugget Days
Retirement community

30. What other concerns do you have about the services provided by the Town of Paradise, about present or future land uses, or particular problems not covered in this survey?

Most frequent responses:

Police and fire service needs more support
Growth/better planning
Other services and facilities (refuse, sewers, water, roads, library, schools)
Politics
Over-regulation
Sewer system

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APPENDIX B

APPENDIX B

A PARTIAL CHECKLIST OF BUTTE COUNTY WILDLIFE

Common Name	Scientific Name
AMPHIBIANS AND REPTILES	
California newt	*Taricha torosa*
Rough-skinned newt	*Taricha granulosa*
California slender salamander	*Batrachoseps attenuatus*
Ensatina	*Ensatina eschscholtzii*
Western toad	*Bufo boreas*
Southern spadefoot	*Scaphiopus multiplicatus*
Pacific treefrog	*Hyla regilla*
Red-legged frog	*Rana aurora*
Mountain red-legged frog	*Rana muscosa*
Foothill yellow-legged frog	*Rana boylei*
Bullfrog	*Rana catesbeiana*
Western pond turtle	*Clemmys marmorata*
Western fence lizard	*Sceloporus occidentalis*
Sagebrush lizard	*Sceloporus graciousus*
Gilbert's skink	*Eumeces gilberti*
Western skink	*Eumeces skiltonianus*
Western whiptail	*Cnemidophorus tigris*
Northern alligator lizard	*Gerrhonotus coeruleus*
Southern alligator lizard	*Gerrhonotus multicarinatus*
Ringneck snake	*Diadophis punctatus*
Sharp-tailed snake	*Contia tenuis*
Racer	*Coluber constrictor*

Common Name	Scientific Name
Striped racer	*Masticophis lateralis*
Gopher snake	*Pituophis melanoleucus*
Common kingsnake	*Lampropeltis getulus*
California mountain kingsnake	*Lampropeltis zonata*
Common garter snake	*Thamnophis sirtalis*
Western terrestrial garter snake	*Thamnophis elegans*
Western aquatic garter snake	*Thamnophis couchi*
Western rattlesnake	*Crotalus viridis*
Northern red-legged frog	*Rana aurora aurora*
California horned lizard	*Phrynosoma coronatum frontale*
BIRDS	
Eared grebe	*Podiceps nigricollis*
Western grebe	*Aechmophorus occidentalis*
Pied-billed grebe	*Podilymbus podiceps*
Double-crested cormorant	*Phalacrocorax auritus*
Great blue heron	*Ardea herodias*
Great egret	*Casmerodius albus*
Snowy egret	*Egretta thula*
Green-backed heron	*Butorides striatus*
Tundra swan	*Olor columbianus*
Greater white-fronted goose	*Anser albifrons*
Snow goose	*Chen caerulescens*
Ross' goose	*Chen rossii*
Canada goose	*Branta canadensis*
Gadwall	*Anas strepera*
Ring-necked duck	*Anas collaris*

Common Name	Scientific Name
Mallard	*Anas platyrhynchos*
Northern pintail	*Anas acuta*
Green-winged teal	*Anas crecca*
Cinnamon teal	*Anas cyanoptera*
Purple martin	*Progne subis*
American wigeon	*Anas americana*
Northern shoveler	*Anas clypeata*
Wood duck	*Aix sponsa*
Redhead	*Aythya americana*
Canvasback	*Aythya valisineria*
Ruddy duck	*Oxyura jamaicensis*
Common goldeneye	*Bucephala clangula*
Barrow's goldeneye	*Bucephala islandica*
Bufflehead	*Bucephala albeola*
Common merganser	*Mergus merganser*
Turkey vulture	*Cathartes aura*
Cooper's hawk	*Accipiter cooperi*
Sharp-shinned hawk	*Accipiter striatus*
Northern goshawk	*Accipiter gentilis*
Black-shouldered kite	*Elanus caeruleus*
Red-tailed hawk	*Buteo jamaicensis*
Swainson's hawk	*Buteo swainsoni*
Golden eagle	*Aquila chrysaetos*
Northern harrier	*Circus cyaneus*
Prairie falcon	*Falco mexicanus*
Merlin	*Falco columbarius*
American kestrel	*Falco sparverius*

Common Name	Scientific Name
California quail	*Callipepla californica*
Wild turkey	*Meleagris gallopavo*
Virginia rail	*Rallus limicola*
American coot	*Fulica americana*
Killdeer	*Charadrius vociferus*
Common snipe	*Gallinago gallinago*
Spotted sandpiper	*Actitus macularia*
Western sandpiper	*Calidris mauri*
Least sandpiper	*Calidris minutilla*
Ring-billed gull	*Larus delawarensis*
California gull	*Larus californicus*
Band-tailed pigeon	*Columba fasciata*
Rock dove	*Columba livia*
Mourning dove	*Zenaida macroura*
Common barn-owl	*Tyto alba*
Western screech-owl	*Otus kennicottii*
Great horned owl	*Bubo virginianus*
Northern pygmy-owl	*Glaucidium gnoma*
Spotted owl	*Strix occidentalis*
Long-eared owl	*Asio otus*
Short-eared owl	*Asio flammeus*
Northern saw-whet owl	*Aegolius acadicus*
Burrowing owl	*Athene cunicularia*
Common poor-will	*Phalaenoptilus nuttallii*
Common nighthawk	*Chordeiles minor*
White-throated swift	*Aeronautes saxatalis*
Black-chinned hummingbird	*Archilochus alexandri*

Common Name	Scientific Name
Anna's hummingbird	*Calypte anna*
Allen's hummingbird	*Selasphorus sasin*
Rufous hummingbird	*Selasphorus rufus*
Belted kingfisher	*Ceryle alcyon*
Northern flicker	*Colaptes auratus*
Acorn woodpecker	*Melanerpes formicivorous*
Lewis woodpecker	*Melanerpes lewis*
Yellow-bellied sapsucker	*Sphyrapicus varius*
Downy woodpecker	*Picoides pubescens*
Nuttail's woodpecker	*Picoides nuttallii*
Pileated woodpecker	*Drycopus pileatus*
Western kingbird	*Tyrannus verticalis*
Ash-throated flycatcher	*Myiarchus cinerascens*
Black phoebe	*Sayornis nigricans*
Say's phoebe	*Sayornis saya*
Willow flycatcher	*Empidonax traillii*
Dusky flycatcher	*Empidonax oberholseri*
Western flycatcher	*Empidonax difficilis*
Western wood-pewee	*Contopus sordidulus*
Horned lark	*Eremophila alpestris*
Violet-green swallow	*Tachycineta thalassina*
Tree swallow	Tachycineta bicolor
Northern rough-winged swallow	*Stelgidopteryx serripennis*
Barn swallow	*Hirundo rustica*
Cliff swallow	*Hirundo pyrrhonota*
Scrub jay	*Aphelocoma coerulescens*
Yellow-billed mapie	*Pica nuttalli*

Common Name	Scientific Name
Common raven	*Corvus corax*
American crow	*Corvus brachyrhynchos*
Plain titmouse	*Parus inornatus*
Bushtit	*Psaltriparus minimus*
White-breasted nuthatch	*Sitta carolinensis*
Red-breasted nuthatch	*Sitta canadensis*
Wrentit	*Chamaea fasciata*
American dipper	*Cinclus mexicanus*
House wren	*Trogladytes aedon*
Bewick's wren	*Thryomanes bewickii*
Marsh wren	*Cistothorus palustris*
Canyon wren	*Catherpes mexicanus*
Rock wren	*Salpinctes obsoletus*
Northern mockingbird	*Mimus polyglottos*
California thrasher	*Toxostoma redivivum*
American robin	*Turdus migratorius*
Varied thrush	*Ixoreus naevius*
Hermit thrush	*Catharus guttatus*
Western bluebird	*Sialia mexicana*
Blue-gray gnatcatcher	*Polioptila caerulea*
Phainopepla	*Phainopepla nitens*
Loggerhead shrike	*Lanius ludovicianus*
European starling	*Sturnus vulgaris*
Yellow-headed blackbird	*Xanthocephalus xanthocephalus*
Red-winged blackbird	*Agelaius phoeniceus*
Tricolored blackbird	*Agelaius tricolor*

Common Name	Scientific Name
Northern oriole	*Icterus galbula*
Brewers's blackbird	*Euphagus cyanocephalus*
Brown-headed cowbird	*Molothrus ater*
Western tanager	*Piranga ludoviciana*
Black-headed grosbeak	*Pheucticus melanocephalus*
Blue grosbeak	*Guiraca caerulea*
Osprey	*Pundion haliaetus*
Lazuli bunting	*Passerina amoena*
Purple finch	*Carpodacus purpureus*
House finch	*Carpodacus mexicanus*
American goldfinch	*Carduelis tristis*
Lesser goldfinch	*Carduelis psaltria*
Lawrence's goldfinch	*Carduelis lawrencei*
Rufous-sided towhee	*Pipilo erythrophthalmus*
Brown towhee	*Pipilo fuscus*
Savannah sparrow	*Passerculus sandwichensis*
Grasshopper sparrow	*Ammodramus savannarum*
Vesper sparrow	*Pooecetes gramineus*
Lark sparrow	*Chondestes grammacus*
Rufous-crowned sparrow	*Aimophila ruficeps*
Chipping sparrow	*Spizella passerina*
Dark-eyed junco	*Junco hyemalis*
White-crowned sparrow	*Zonotrichia leucophyrs*
Golden-crowned sparrow	*Zonotrichia atricapilla*
Fox sparrow	*Passerella iliaca*
Song sparrow	*Melopsiza melodia*
Ferruginous hawk	*Buteo regalis*

Common Name	Scientific Name
MAMMALS	
American badger (rare)	*Taxidea taxus*
Beaver	*Castor canadensis*
Belding ground squirrel	*Citellus beldingi*
Big brown bat	*Eptesicus fuscus*
Black bear (rare)	*Euarctos americanus*
Black-tailed jackrabbit	*Lepus californicus*
Bobcat	*Lynx rufus*
Botta pocket gopher	*Thomomys bottae*
Brazilian free-tailed bat	*Tadarida brasiliensis*
Brush mouse	*Peromyscus boylei*
Brush rabbit	*Sylvilagus bachmani*
California mastiff bat	*Eumops perotis*
California meadow mouse	*Microtus californicus*
California mouse	*Peromyscus californicus*
California myotis	*Myotis californicus*
California ground squirrel	*Spermophilus beecheyi*
Coyote	*Canis latrans*
Deer mouse	*Peromyscus maniculatus*
Douglas squirrel	*Tamiasciurus douglasii*
Dusky-footed woodrat	*Neotoma fuscipes*
Fringed myotis	*Myotis thysanodes*
Gray fox	*Urocyon cinereoargenteus*
Great Basin pocket mouse	*Perognathus parvus*
Hairy-winged myotis	*Myotis volans*
Heerman kangaroo rat	*Dipodomys heermanni*
Hoary bat	*Lasiurus cinereus*

Common Name	Scientific Name
Little brown myotis	*Myotis lucifugus*
Lodgepole chipmunk	*Eutamias speciosus*
Long-eared chipmunk	*Eutamias quadrimaculatus*
Long-eared myotis	*Myotis evotis*
Long-tailed meadow mouse	*Microtus longicaudus*
Lump-nosed bat	*Plecotus townsendii*
Montane meadow mouse	*Microtus montanus*
Mountain beaver	*Aplodontia rufa*
Mountain lion (rare)	*Felis concolor*
Mountain pocket gopher	*Thomomys monticola*
Mule (black-tailed) deer	*Odocoileus hemionu*
Muskrat	*Ondatra zibethica*
Northern flying squirrel	*Glaucomys sabrinus*
Nuttail cottontail	*Sylvilagus nuttallii*
Pallid bat	*Antrozous pallidus*
Pika	*Ochotona princeps*
Pinyon mouse	*Peromyscus truei*
Porcupine	*Erethizon dorsatum*
Raccoon	*Procyon lotor*
Red bat	*Lasiurus borealis*
Ring-tail (rare)	*Bassariscus astutus*
Sierra Nevada golden-mantled ground squirrel	*Spermophilus lateralis*
Silvery-haired bat	*Lasionycteris notivagans*
Small-footed myotis	*Myotis subalatus*
Spotted skunk	*Spilogale putorius*
Striped skunk	*Mephitis mephitis*
Townsend's chipmunk	*Eutamias townsendii*

Common Name	Scientific Name
Townsend mole	*Scapanus townsendii*
Townsend's western big-eared bat	*Plecotus townsendii townsendii*
Trowbridge shrew	*Sorex troxbridgii*
Vagrant shrew	*Sorex vagrans*
Western gray squirrel	*Sciurus griseus*
Western harvest mouse	*Reithrodontomys megalotis*
Western jumping mouse	*Zapus princeps*
Western pipistrelle	*Pipistrellus hesperus*
Yellow-bellied marmot	*Marmota flaviventris*
Yellow pine chipmunk	*Eutamias amoenus*
Yuma myotis	*Myotis yumanensis*

COMMON PLANT SPECIES OF THE PARADISE AREA

Common Name	Scientific Name
ANNUAL GRASSES	
Foxtail fescue	*Festuca megalura*
Hairy orcutt grass	*Orcuttia pilosa*
Red brome	*Bromus rubens*
Slender wild oats	*Avena barbata*
Spanish brome	*Bromus madritensis*
PERRENNIAL GRASSES AND GRASS-LIKE PLANTS	
Lemmon stipa	*Stipa lemmoni*
Parish wheatgrass	*Agropyron parishii laeve*
Perennial bluegrass	*Poa sp.*
Many-stem sedge	*Carex multicaulis*
ANNUAL FORBS	
Bidwell's knotweed	*Polygonum bidwelliae*
California hibiscus	*Hibiscus californicus*
Butte County checkerbloom	*Sidalcea robusta*
Common dwarf flax	*Hesperolinon micranthum*
Greene's tuctoria	*Tuctoria greenei*
Little tarweed	*Madia exigua*
Red Bluff dwarf rush	*Juncus leoispermus var. lenispermus*
Shippee meadowfoam	*Limnanthes floccosa californica*
Slender annual fireweed	*epilobium minutum*
Small-flower lotus	*Lotus micranthus*
Veiny monardella	*Monardella douglasii var. venosa*
PERENNIAL FORBS	
Aster	*Aster spp.*
Blue dicks	*Dichelostemma pulchella*
Bolander galium	*Galium bolanderi*
Bracken fern	*Pteridium aquilinum pubescens*
Climbing galium	*Galium nuttallii tenue*
Common woolly-sunflower	*Eriophyllum lanatum grandiflorum*
Fritillary	*Fritillaria spp.*
Hoover's spurge	*Chamaesyce hooveri*
Iris	*Iris macrosiphon*
Klamath weed	*Hypericum perforatum*
Morning-glory	*Calystegia occidentalis*
Purple milkweed	*Asclepias cordifolia*
Purple sanicle	*Tauschia kelloggii*
Shasta puccoon	*Lithospermum californicum*
Snake-lily	*Dichelostemma volubilis*
Sulfur pea	*Lathyrus sulphureus*
Spear-leaf mountain dandelion	*Agoseris retrorsa*
Soap plant	*Chlorogalum pomeridianum*
Whiteflower hawkweed	*Hieracium albiflorum*
Yellow star-tulip	*Calochortus monophyllus*

TREES AND SHRUBS

Big leaf maple	*Acer macrophyllum*
Hard Tack	*Cercocarpus betuloides*
Blue oak	*Quercus douglasii*
Brewer oak	*Quercus garryana breweri*
California black oak	*Quercus kelloggii kelloggii*
California buckeye	*Aesculus californica*
California laurel	*Umbellularia californica*
California nutmeg	*Torreya californica*
California redbud	*Cercis occidentalis*
California scrub oak	*Quercus dumosa*
California yerba santa	*Eriodictyon californicum*
California wild grape	*Vitis californica*
Canyon live oak	*Quercus chrysolepis chrysolepis*
Chamise	*Adenostoma fasciculatum fasciculatum*
Deerbrush	*Ceanothus integerrimus*
Digger pine	*Pinus sabiniana*
Douglas-fir	*Pseudotsuga menziesii*
Freemont silktassel	*Garrya fremontii*
Fremont cottonwood	*Populus fremontii*
Foothill ash	*Fraxinus dipetala*
goosberry	*Ribes spp.*
Incense-cedar	*Calocedrus decurrens*
Interior live oak	*Quercus wislizenii wislizenii*
Lemmon ceanothus	*Ceanothus lemmonii*
Paicifc dogwood	*Cornus nuttallii*
Pipe-stem clematis	*Clematis lasiantha*
Poison-oak	*Toxicodendron diversilobum*
Ponderosa pine	*Pinus ponderosa*
Shrub interior live oak	*Quercus wislizenii frutescens*
Sierra coffeeberry	*Rhamnus rubra rubra*
Sugar pine	*Pinus lambertiana*
Toyon	*Heteromeles arbutifolia*
Wedgeleaf ceanothus	*Ceanothus cuneatus*
Western azalea	*Rhododendron occidentale*
Western sycamore	*Platanus racemosa*
White alder	*Alnus rhombifolia*
Whiteleaf manzanita	*Arctostaphylos viscida*
Willow	*Salix sp.*
Woodbalm	*Lepechinia claycina*

TABLE 4-4A
SENSITIVE SPECIES OF PARADISE AND ADJACENT AREAS

Common Name	Scientific Name	Status		
		Federal	State	CNPS
Hoover's spurge	*Chamaesyce hooveri*	1		
Adobe lily	*Fritillaria pluriflora*			
Butte County fritillary	*Fritillaria eastwoodiae*			2
California hibiscus	*Hibiscus californicus*	2		
Red Bluff dwarf rush	*Juncus leiospermus var. leiospermus*	2		
Shippee meadowfoam	*Limnanthes floccosa californica*	1	CE	
Veiny monardella	*Monardella douglasii var. venosa*	2		
Hairy orcutt grass	*Orcuttia pilosa*	1	CE	
Bidwell's knotweed	*Polygonum bidwelliae*	2		
Butte County checkerbloom	*Sidalcea robusta*			3
Greene's tuctoria	*Tuctoria greenei*	1	CR	
California red-legged frog	*Rana aurora draytoni*	2	CSC	
Foothill yellow-legged frog	*Rana boylei*		CSC	
American badger	*Taxidea taxus*		CSC	
Golden eagle	*Aquila chrysaetos*		CFP	
Northern harrier	*Circus cyaneus*		CSC	
Black-shouldered kite	*Elanus caeruleus*		CFP	
Prairie falcon	*Falco mexicanus*		CSC	
Burrowing owl	*Athene cunicularia*		CSC	

CODES

CE	Listed as Endangered in the State of California
CT	Listed as Threatened in the State of California
CR	Listed as Rare in the State of California
CCE	California Candidate for listing as Endangered
CCT	California Candidate for listing as Threatened
CSC	California Department of Fish and Game Species of Special Concern
CFP	A California Department of Fish and Game "fully protected" species as described in Section 4700 of Chapter 8, Section 5050 of Chapter 2, Division 6, Chapter 1, Section 5515.
FE	Listed as endangerd by the Federal Government
FT	Listed as Threatened by the Federal Government
FPE	Proposed as Endangered by the Federal Government
FPT	Proposed as Threatened by the Federal Government
FSS	Federal (BLM and USFS) Sensitive Species
1	Category 1 Candidate for Federal listing (Taxa for which the U.S. Fish and Wildlife Service has sufficient biological information to support a proposal to list as Endangered or Threatened.)
2	Category 2 Candidate for Federal listing (Taxa which existing information indicates may warrant listing, but for which substantial biological information to support a proposed rule is lacking.
W	Watch List. Location information for these taxa is not computerized. The NDDB is currently collecting distribution information but maintains manual files only.

CALIFORNIA NATIVE PLANT SOCIETY (CNPS)

List 1A:	Plants Presumed Extinct in California
List 1B:	Plants Rare, Threatened or Endangered in California and Elsewhere
List 2:	Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
List 3:	Plants About Which We Need More Information - A Review List
List 4:	Plants of Limited Distribution - A Watch List

FISH OF BUTTE CREEK

Common Name	Scientific Name
Chinook salmon	*Oncorhynchus tshawytscha*
Brown trout	*Salmo trutta*
Rainbow trout	*Salmo gairdneri*
Steelhead trout	*Salmo gairdneri gairdneri*
Lamprey	*Lampetrus* spp.
Bluegill	*Lepomis macrochirus*
Green sunfish	*Lepomis cyanellus*
Redear sunfish	*Lepomis microlophus*
Brown bullhead	*Lepomis nebulosus*
Sacramento sucker	*Catostomus occidentalis*
Sacramento squawfish	*Ptychocheilus grandis*
Hitch	*Lavinia exilicauda*
Goldfish	*Carassius auratus*
Mosquito fish	*Gambusia affinis*
Catfish	*Ictalurus* spp.
Smallmouth bass	*Micropterus bolomieui*

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APPENDIX C

APPENDIX C

ACOUSTICAL TERMINOLOGY

AMBIENT NOISE LEVEL: The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

CNEL: Community Noise Equivalent Level. The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.

DECIBEL, dB: A unit for describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

L_{dn}: Day-Night Average Sound Level. The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.

L_{eq}: Equivalent Sound Level. The sound level containing the same total energy as a time varying signal over a given sample period. L_{eq} is typically computed over 1, 8 and 24-hour sample periods.

NOTE: CNEL and L_{dn} represent daily levels of noise exposure averaged on an annual basis, while L_{eq} represents the average noise exposure for a shorter time period, typically one hour.

L_{max}: The maximum sound level recorded during a noise event.

L_n: The sound level exceeded "n" percent of the time during a sample interval. L_{10} equals the level exceeded 10 percent of the time (L_{90}, L_{50}, etc.)

BBA

ACOUSTICAL TERMINOLOGY

NOISE EXPOSURE CONTOURS: Lines drawn about a noise source indicating constar levels of noise exposure. CNEL and L_{dn} contours a frequently utilized to describe community exposure noise.

SEL or SENEL: Sound Exposure Level or Single Event Noise Exposu Level. The level of noise accumulated during a sing noise event, such as an aircraft overflight, wi reference to a duration of one second. Mo specifically, it is the time-integrated A-weight squared sound level for a stated time interval event, based on a reference pressure of micropascals and a reference duration of one second.

SOUND LEVEL: The sound pressure level in decibels as measured on sound level meter using the A-weighting filt network. The A-weighting filter de-emphasizes t very low and very high frequency components of t sound in a manner similar to the response of the hum ear and gives good correlation with subjecti reactions to noise.

BBA

NOISE MEASUREMENT AND MODELING METHODOLOGY

ROADWAYS

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to develop L_{dn} contours for all highways and major roadways in Paradise. The FHWA Model is the analytical method presently favored for traffic noise prediction by most state and local agencies, including Caltrans. The current version of the model is based upon the CALVENO noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver and the acoustical characteristics of the site. The FHWA Model predicts hourly L_{eq} values for free-flowing traffic conditions, and is generally considered to be accurate within 1.5 dB. To predict L_{dn} values, it is necessary to determine the hourly distribution of traffic for a typical 24-hour day and to adjust the traffic volume input data to yield an equivalent hourly traffic volume.

Short-term (15-minute) traffic noise measurements and concurrent traffic counts were conducted by Brown-Buntin Associates (BBA) for State Route 191/Clark Road, Skyway, Pearson Road and Elliot Road (see Figure 7-1) on March 14, 1991. The noise measurements were made to evaluate the noise exposure due to traffic on those roadways. Instrumentation was a Larson Davis Laboratories (LDL) model 700B integrating sound level meter which was calibrated in the field before measurements using a CA-250 acoustical calibrator.

The purpose of the traffic noise level measurements was to determine the accuracy of the FHWA model in describing the existing noise environment at the project site. Noise measurement results were compared to the FHWA Model results by entering the observed traffic volumes, speed and distance as inputs to the FHWA Model.

Traffic data representing annual average traffic volumes for existing conditions were obtained from Caltrans and Dowling Associates traffic consultants as summarized in Appendix D. Day/night traffic distribution and truck mix were based upon Caltrans and BBA file data. Using these data and the FHWA methodology, traffic noise levels as defined by L_{dn} were calculated for existing (1990) traffic volumes. Distances from the centerlines of selected roadways to the L_{dn} contours are summarized in Table 7-1.

COMMUNITY NOISE SURVEY

A community noise survey was conducted to document noise exposure in areas of the community containing noise sensitive land uses. For that purpose, noise sensitive land uses in the Paradise General Plan Study Area were considered to include residential areas, parks and schools. Noise monitoring sites were selected to be representative of typical conditions in the community.

Short-term noise monitoring was conducted on March 13-14, 1991. Each site was monitored three different times during the day and night so that valid estimates of L_{dn} could be prepared. One long-term noise monitoring site was established in Paradise to record day-night statistical trends. The data collected included the L_{eq} and other statistical descriptors. Noise monitoring sites, measured noise levels and estimated L_{dn} values at each site are summarized in Table 7-2. Monitoring sites are shown by Figure 7-1.

Community noise monitoring systems were calibrated with acoustical calibrators in the field prior to use. The systems comply with all pertinent requirements of the American National Standards Institute (ANSI) for Type I sound level meters.

TOWN OF PARADISE

1994 GENERAL PLAN

VOLUME III
ENVIRONMENTAL SETTING DOCUMENT

APPENDIX D

DOWLING ASSOCIATES
TOWN OF PARADISE GENERAL PLAN UPDATE
PM Peak Hour Existing Conditions

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 1 Skyway and Pentz Road	C	0.0	0.00	C	0.0	0.00	+ 0.00
# 2 Clark Road and Skyway	D	0.0	0.00	D	0.0	0.00	+ 0.00
# 3 Skyway and Rock Lane	A	0.0	0.00	A	0.0	0.00	+ 0.00
# 4 Skyway and Wagstaff Road	D	23.9	0.95	D	23.9	0.95	+ 0.00
# 5 Skyway and Bille Road	A	17.4	0.52	A	17.4	0.52	+ 0.00
# 6 Skyway and Maxwell Road	A	6.0	0.45	A	6.0	0.45	+ 0.00
# 7 Skyway and Oliver Road	A	12.0	0.48	A	12.0	0.48	+ 0.00
# 8 Skyway and Elliot Road	B	14.1	0.62	B	14.1	0.62	+ 0.00
# 9 Skyway and Honey Run Road	E	0.0	0.00	E	0.0	0.00	+ 0.00
# 10 Skyway and Pearson Road	C	15.6	0.71	C	15.6	0.71	+ 0.00
# 11 Skyway and Neal Road	E	0.0	0.00	E	0.0	0.00	+ 0.00
# 12 Clark Road and Wagstaff Road	A	18.6	0.39	A	18.6	0.39	+ 0.00
# 13 Clark Road and Bille Road	A	14.9	0.51	A	14.9	0.51	+ 0.00
# 14 Clark Road and Central Park	A	7.4	0.39	A	7.4	0.39	+ 0.00
# 15 Clark Road and Elliot Road	B	26.2	0.67	B	26.2	0.67	+ 0.00
# 16 Clark Road and Nunneley Road	A	8.3	0.43	A	8.3	0.43	+ 0.00
# 17 Clark Road and Pearson Road	A	24.9	0.59	A	24.9	0.59	+ 0.00
# 18 Clark Road and Buschmann Road	C	0.0	0.00	C	0.0	0.00	+ 0.00
# 19 Pentz Road and Wagstaff Road	C	0.0	0.00	C	0.0	0.00	+ 0.00
# 20 Pentz Road and Bille Road	B	0.0	0.00	B	0.0	0.00	+ 0.00
# 21 Pentz Road and Pearson Road	B	0.0	0.00	B	0.0	0.00	+ 0.00
# 22 Pentz Road and Stearns Road	A	0.0	0.00	A	0.0	0.00	+ 0.00

DOWLING ASSOCIATES
TOWN OF PARADISE GENERAL PLAN UPDATE
PM Peak Hour Existing Conditions

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C		Change in V/C
# 26 Elliot Road and Maxwell Drive	E	0.0	0.00	E	0.0	0.00	+	0.00
# 27 Pearson Road and Scottwood Roa	D	0.0	0.00	D	0.0	0.00	+	0.00
# 29 Sawmill Road and Bille Road	B	0.0	0.00	B	0.0	0.00	+	0.00
# 30 Sawmill Road and Elliot Road	A	0.0	0.00	A	0.0	0.00	+	0.00
# 31 Sawmill Road and Nunneley Road	A	0.0	0.00	A	0.0	0.00	+	0.00
# 32 Sawmill Road and Pearson Road	C	0.0	0.00	C	0.0	0.00	+	0.00

DOWLING ASSOCIATES
TOWN OF PARADISE GENERAL PLAN UPDATE
PM Peak Hour Existing Conditions

Level Of Service Computation Report
1985 HCM Unsignalized Method
****
* Base Volume Alternative *

Intersection #1 Skyway and Pentz Road

Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Initial Vol:	69	508	22	79	374	4	2	6	56	6	11	105
Grade:		0%			0%			0%			0%	
Cycle/Cars:	xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx	
Truck/Combi:	xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	76	559	24	87	411	4	2	7	62	7	12	116
Critical Gap Module:												
RT Rad/Ang:	20.0	ft/90.0	deg	20.0	ft/90.0	deg	20.0	ft/90.0	deg	20.0	ft/90.0	deg
Critical Gp:	5.0	xxxx	xxxxx	5.0	xxxx	xxxxx	6.5	6.0	5.5	6.5	6.0	5.5
Capacity Module:												
Cnflict Vol:	416	xxxx	xxxxx	583	xxxx	xxxxx	1287	1159	418	1218	1150	595
Potent Cap.:	653	xxxx	xxxxx	539	xxxx	xxxxx	168	224	607	184	227	491
% Used Cap.:	11.6	xxxx	xxxxx	16.1	xxxx	xxxxx	1.3	2.9	10.1	3.6	5.3	23.5
Impedance:	0.91	xxxx	xxxxx	0.87	xxxx	xxxxx	xxxx	0.98	0.92	xxxx	0.96	0.81
Actual Cap.:	653	xxxx	xxxxx	539	xxxx	xxxxx	103	177	607	131	179	491
Level Of Service Module:												
Unused Cap.:	577	xxxx	xxxxx	452	xxxx	xxxxx	101	170	545	124	167	375
LOS by Move:	A	A	A	A	A	A	D	D	A	D	D	B
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	440	xxxxx	xxxx	380	xxxxx
Unused Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	369	xxxxx	xxxx	245	xxxxx
Shared LOS:	A	A	A	A	A	A	A	B	A	A	C	A

DOWLING ASSOCIATES
TOWN OF PARADISE GENERAL PLAN UPDATE
PM Peak Hour Existing Conditions

Level Of Service Computation Report
1985 HCM Unsignalized Method

* Base Volume Alternative *

Intersection #2 Clark Road and Skyway

Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Initial Vol:	1	351	22	150	228	2	0	0	0	14	0	363
Grade:	0%			0%			0%			0%		
Cycle/Cars:	xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx	
Truck/Combi:	xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	1	386	24	165	251	2	0	0	0	15	0	399
Critical Gap Module:												
RT Rad/Ang:	20.0	ft/90.0	deg	20.0	ft/90.0	deg	20.0	ft/90.0	deg	20.0	ft/90.0	deg
Critical Gp:	5.0	xxxx	xxxxx	5.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	6.5	6.0	5.5
Capacity Module:												
Cnflict Vol:	253	xxxx	xxxxx	410	xxxx	xxxxx	xxxx	xxxx	xxxxx	817	817	422
Potent Cap.:	788	xxxx	xxxxx	657	xxxx	xxxxx	xxxx	xxxx	xxxxx	310	343	604
% Used Cap.:	0.1	xxxx	xxxxx	25.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	5.0	0.0	66.1
Impedance:	1.00	xxxx	xxxxx	0.80	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1.00	0.41
Actual Cap.:	788	xxxx	xxxxx	657	xxxx	xxxxx	xxxx	xxxx	100000	248	274	604
Level Of Service Module:												
Unused Cap.:	787	xxxx	xxxxx	492	xxxx	xxxxx	xxxx	xxxx	xxxxx	232	274	204
LOS by Move:	A	A	A	A	A	A	*	*	*	C	C	C
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	573	xxxxx
Unused Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	158	xxxxx
Shared LOS:	A	A	A	A	A	A	*	*	*	A	D	A

DOWLING ASSOCIATES
TOWN OF PARADISE GENERAL PLAN UPDATE
PM Peak Hour Existing Conditions

Level Of Service Computation Report
1985 HCM Unsignalized Method
****
* Base Volume Alternative *

Intersection #3 Skyway and Rock Lane

Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Initial Vol:	0	437	14	24	275	0	0	0	0	7	0	21
Grade:		0%			0%			0%			0%	
Cycle/Cars:	xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx	
Truck/Combi:	xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	481	15	26	303	0	0	0	0	8	0	23
Critical Gap Module:												
RT Rad/Ang:	20.0	ft/90.0	deg	20.0	ft/90.0	deg	20.0	ft/90.0	deg	20.0	ft/90.0	deg
Critical Gp:	5.0	xxxx	xxxxx	5.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	6.5	6.0	5.5
Capacity Module:												
Cnflict Vol:	303	xxxx	xxxxx	496	xxxx	xxxxx	xxxx	xxxx	xxxxx	817	817	504
Potent Cap.:	744	xxxx	xxxxx	596	xxxx	xxxxx	xxxx	xxxx	xxxxx	310	343	548
% Used Cap.:	0.0	xxxx	xxxxx	4.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	2.5	0.0	4.2
Impedance:	1.00	xxxx	xxxxx	0.96	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1.00	0.97
Actual Cap.:	744	xxxx	xxxxx	596	xxxx	xxxxx	xxxx	xxxx	100000	299	331	548
Level Of Service Module:												
Unused Cap.:	744	xxxx	xxxxx	569	xxxx	xxxxx	xxxx	xxxx	xxxxx	292	331	524
LOS by Move:	A	A	A	A	A	A	*	*	*	C	B	A
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	453	xxxxx
Unused Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	423	xxxxx
Shared LOS:	A	A	A	A	A	A	*	*	*	A	A	A

DOWLING ASSOCIATES
TOWN OF PARADISE GENERAL PLAN UPDATE
PM Peak Hour Existing Conditions

Level Of Service Computation Report
4-Way Stop Method
****
* Base Volume Alternative *

****
Intersection #4 Skyway and Wagstaff Road
****

Cycle (sec):	1	Critical Vol./Cap. (X):	0.95
Loss Time (sec):	0	Average Delay (sec/vehicle):	23.9
Optimal Cycle:	0	Level Of Service:	D

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Initial Vol:	40	468	174	39	208	20	33	46	20	85	56	39
Grade:		0%			0%			0%			0%	
Cycle/Cars:	xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx	
Truck/Combi:	xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	40	468	174	39	208	20	33	46	20	85	56	39
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.06	0.69	0.26	0.15	0.78	0.07	0.33	0.46	0.20	0.47	0.31	0.22
Final Sat.:	42	491	182	99	527	51	74	103	45	132	87	61
Capacity Analysis Module:												
Vol/Sat:	0.95	0.95	0.95	0.39	0.39	0.39	0.45	0.45	0.45	0.64	0.64	0.64
Crit Moves:			****			****		****				****
Green/Cycle:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Volume/Cap:	0.95	0.95	0.95	0.39	0.39	0.39	0.45	0.45	0.45	0.64	0.64	0.64
Level Of Service Module:												
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.5	37.5	37.5	4.5	4.5	4.5	5.5	5.5	5.5	11.5	11.5	11.5
Queue:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx

****

DOWLING ASSOCIATES
TOWN OF PARADISE GENERAL PLAN UPDATE
PM Peak Hour Existing Conditions

Level Of Service Computation Report
Circular 212 Planning Method
****
* Base Volume Alternative *

Intersection #5 Skyway and Bille Road

Cycle (sec):	100	Critical Vol./Cap. (X):	0.52
Loss Time (sec):	0	Average Delay (sec/vehicle):	17.4
Optimal Cycle:	30	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	No Left Phase			No Left Phase			No Left Phase			No Left Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	0	1 0	0 1	0	1 0	0 1	0	1 0
Volume Module:												
Initial Vol:	91	593	216	58	385	25	27	49	83	191	52	23
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	91	593	216	58	385	25	27	49	83	191	52	23
Saturation Flow Module:												
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.47	0.53	1.00	0.94	0.06	0.39	0.61	1.00	1.00	0.69	0.31
Final Sat.:	1500	2199	801	1500	1409	91	589	911	1500	1500	1040	460
Capacity Analysis Module:												
Vol/Sat:	0.06	0.27	0.27	0.04	0.27	0.27	0.05	0.05	0.06	0.13	0.05	0.05
Crit Moves:	****				****				****	****		
Green/Cycle:	0.12	0.57	0.57	0.08	0.53	0.53	0.17	0.11	0.11	0.25	0.18	0.18
Volume/Cap:	0.52	0.48	0.48	0.48	0.52	0.52	0.27	0.50	0.52	0.52	0.27	0.27
Level Of Service Module:												
Delay/Veh:	34.1	10.2	10.6	36.1	12.3	18.8	28.2	35.8	34.8	26.1	27.2	27.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.1	10.2	10.6	36.1	12.3	18.8	28.2	35.8	34.8	26.1	27.2	27.4
Queue:	3	10	4	2	7	1	1	1	2	5	1	1

DOWLING ASSOCIATES
TOWN OF PARADISE GENERAL PLAN UPDATE
PM Peak Hour Existing Conditions

Level Of Service Computation Report
Circular 212 Planning Method
****
* Base Volume Alternative *

Intersection #6 Skyway and Maxwell Road

Cycle (sec):	100	Critical Vol./Cap. (X):	0.45
Loss Time (sec):	0	Average Delay (sec/vehicle):	6.0
Optimal Cycle:	42	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Left Phase			Left Phase			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 0	0	0 0	0 0	1!	0 0
Volume Module:												
Initial Vol:	0	877	54	54	529	0	0	0	0	31	0	75
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	877	54	54	529	0	0	0	0	31	0	75
Saturation Flow Module:												
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.88	0.12	1.00	2.00	0.00	0.00	0.00	0.00	0.29	0.00	0.71
Final Sat.:	1375	2590	160	1375	2750	0	0	0	0	402	0	973
Capacity Analysis Module:												
Vol/Sat:	0.00	0.34	0.34	0.04	0.19	0.00	0.00	0.00	0.00	0.08	0.00	0.08
Crit Moves:			****	****					****			****
Green/Cycle:	0.00	0.74	0.74	0.09	0.83	0.83	0.00	0.00	0.00	0.17	0.17	0.17
Volume/Cap:	0.00	0.45	0.45	0.45	0.23	0.00	0.00	0.00	0.00	0.45	0.00	0.45
Level Of Service Module:												
Delay/Veh:	0.0	3.9	5.7	35.4	1.4	0.0	0.0	0.0	0.0	32.0	0.0	30.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	3.9	5.7	35.4	1.4	0.0	0.0	0.0	0.0	32.0	0.0	30.2
Queue:	0	10	1	2	3	0	0	0	0	1	0	2

DOWLING ASSOCIATES
TOWN OF PARADISE GENERAL PLAN UPDATE
PM Peak Hour Existing Conditions

Level Of Service Computation Report
Circular 212 Planning Method
****
* Base Volume Alternative *

Intersection #7 Skyway and Oliver Road

Cycle (sec):	100	Critical Vol./Cap. (X):	0.48
Loss Time (sec):	0	Average Delay (sec/vehicle):	12.0
Optimal Cycle:	44	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Left Phase			Left Phase			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	0	0 1!	0 0	0	1 0	1 0
Volume Module:												
Initial Vol:	151	831	43	16	599	81	51	14	81	21	5	9
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	151	831	43	16	599	81	51	14	81	21	5	9
Saturation Flow Module:												
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.90	0.10	1.00	1.76	0.24	0.35	0.10	0.55	1.00	0.36	0.64
Final Sat.:	1375	2615	135	1375	2422	328	480	132	763	1375	491	884
Capacity Analysis Module:												
Vol/Sat:	0.11	0.32	0.32	0.01	0.25	0.25	0.11	0.11	0.11	0.02	0.01	0.01
Crit Moves:	****				****				****	****		
Green/Cycle:	0.23	0.72	0.72	0.03	0.52	0.52	0.22	0.22	0.22	0.03	0.03	0.03
Volume/Cap:	0.48	0.44	0.44	0.44	0.48	0.48	0.48	0.48	0.48	0.48	0.32	0.32
Level Of Service Module:												
Delay/Veh:	26.6	4.5	6.5	42.1	12.2	13.6	28.7	34.4	27.7	42.5	40.1	38.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.6	4.5	6.5	42.1	12.2	13.6	28.7	34.4	27.7	42.5	40.1	38.6
Queue:	4	10	1	1	11	2	1	0	2	1	0	0

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****
* Base Volume Alternative *

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Intersection #8 Skyway and Elliot Road
****

Cycle (sec):	100	Critical Vol./Cap. (X):	0.62
Loss Time (sec):	0	Average Delay (sec/vehicle):	14.1
Optimal Cycle:	38	Level Of Service:	B

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	No Left Phase			No Left Phase			No Left Phase			No Left Phase		
Rights:	Include			Include			Include			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 0	1!	0 0	0 1	0	0 1
Volume Module:												
Initial Vol:	40	795	228	167	541	9	15	34	17	129	36	220
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	40	795	228	167	541	9	15	34	17	129	36	0
Saturation Flow Module:												
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.55	0.45	1.00	1.97	0.03	0.23	0.52	0.26	0.80	0.20	1.00
Final Sat.:	1500	2331	669	1500	2951	49	341	773	386	1199	301	1500
Capacity Analysis Module:												
Vol/Sat:	0.03	0.34	0.34	0.11	0.18	0.18	0.04	0.04	0.04	0.11	0.12	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.09	0.55	0.55	0.18	0.64	0.64	0.07	0.08	0.08	0.19	0.19	1.00
Volume/Cap:	0.29	0.62	0.62	0.62	0.29	0.29	0.62	0.57	0.57	0.57	0.62	0.00
Level Of Service Module:												
Delay/Veh:	32.8	12.3	13.8	32.0	6.1	7.4	58.3	42.8	49.5	30.9	40.1	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.8	12.3	13.8	32.0	6.1	7.4	58.3	42.8	49.5	30.9	40.1	0.0
Queue:	1	15	5	5	7	0	1	1	1	3	1	0

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1985 HCM Unsignalized Method
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* Base Volume Alternative *

Intersection #9 Skyway and Honey Run Road

Level Of Service: E

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	1	0	0	1	0	1	0	0	0	1!	0	0	0	0	1!	0	0
Volume Module:																				
Initial Vol:	21	975			6	12	545			26	33		2		31	3		1		7
Grade:		0%					0%					0%					0%			
Cycle/Cars:		xxxx		xxxx			xxxx		xxxx			xxxx		xxxx			xxxx		xxxx	
Truck/Combi:		xxxx		xxxx			xxxx		xxxx			xxxx		xxxx			xxxx		xxxx	
Adjustment:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00	
Final Vol.:	23	1073			7	13	600			29	36		2		34	3		1		8
Critical Gap Module:																				
RT Rad/Ang:	20.0	ft/90.0	deg			20.0	ft/90.0	deg			20.0	ft/90.0	deg			20.0	ft/90.0	deg		
Critical Gp:	5.5	xxxx	xxxxx			5.5	xxxx	xxxxx			7.0	6.5		5.5		7.0	6.5		5.5	
Capacity Module:																				
Cnflict Vol:	628	xxxx	xxxxx			1079	xxxx	xxxxx			1731	1729		328		1748	1740		543	
Potent Cap.:	472	xxxx	xxxxx			275	xxxx	xxxxx			82	95		676		81	93		522	
% Used Cap.:	4.9	xxxx	xxxxx			4.8	xxxx	xxxxx			44.0	2.3		5.0		4.1	1.2		1.5	
Impedance:	0.96	xxxx	xxxxx			0.96	xxxx	xxxxx			xxxx	0.98		0.96		xxxx	0.99		0.99	
Actual Cap.:	472	xxxx	xxxxx			275	xxxx	xxxxx			75	88		676		70	86		522	
Level Of Service Module:																				
Unused Cap.:	449	xxxx	xxxxx			261	xxxx	xxxxx			38	85		642		67	85		515	
LOS by Move:	A	A		A		C	A		A		E	E		A		E	E		A	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	129		xxxxx		xxxx	162		xxxxx	
Unused Cap.:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	57		xxxxx		xxxx	150		xxxxx	
Shared LOS:	A	A		A		A	A		A		A	E		A		A	D		A	

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* Base Volume Alternative *

Intersection #10 Skyway and Pearson Road

Cycle (sec):	100	Critical Vol./Cap. (X):	0.71
Loss Time (sec):	0	Average Delay (sec/vehicle):	15.6
Optimal Cycle:	80	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Left Phase			Left Phase			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 1	0 1	0	1 0	1 1	0	0 0	0 0	0	1 0	0 0	1
Volume Module:												
Initial Vol:	0	860	252	156	538	0	0	0	0	270	0	97
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	860	252	156	538	0	0	0	0	270	0	97
Saturation Flow Module:												
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.55	0.45	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	2127	623	1375	2750	0	0	0	0	1375	0	1375
Capacity Analysis Module:												
Vol/Sat:	0.00	0.40	0.40	0.11	0.20	0.00	0.00	0.00	0.00	0.20	0.00	0.07
Crit Moves:		****		****					****	****		
Green/Cycle:	0.00	0.57	0.57	0.16	0.73	0.73	0.00	0.00	0.00	0.27	0.27	0.27
Volume/Cap:	0.00	0.71	0.71	0.71	0.27	0.00	0.00	0.00	0.00	0.71	0.00	0.26
Level Of Service Module:												
Delay/Veh:	0.0	13.6	16.8	37.8	3.6	0.0	0.0	0.0	0.0	29.5	0.0	21.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	13.6	16.8	37.8	3.6	0.0	0.0	0.0	0.0	29.5	0.0	21.9
Queue:	0	18	6	5	5	0	0	0	0	7	0	2

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* Base Volume Alternative *

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Intersection #11 Skyway and Neal Road

****

Level Of Service: E

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Initial Vol:	7	896	40	115	468	18	13	2	4	40	0	84
Grade:		0%			0%			0%			0%	
Cycle/Cars:	xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx	
Truck/Combi:	xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	8	986	44	127	515	20	14	2	4	44	0	92
Critical Gap Module:												
RT Rad/Ang:	20.0 ft/90.0 deg			20.0 ft/90.0 deg			20.0 ft/90.0 deg			20.0 ft/90.0 deg		
Critical Gp:	5.0	xxxx	xxxxx	5.0	xxxx	xxxxx	6.5	6.0	5.5	6.5	6.0	5.5
Capacity Module:												
Cnflict Vol:	535	xxxx	xxxxx	1030	xxxx	xxxxx	1781	1689	545	1683	1676	1052
Potent Cap.:	570	xxxx	xxxxx	322	xxxx	xxxxx	89	116	521	101	117	284
% Used Cap.:	1.4	xxxx	xxxxx	39.2	xxxx	xxxxx	16.1	1.9	0.8	43.7	0.0	32.6
Impedance:	0.99	xxxx	xxxxx	0.69	xxxx	xxxxx	xxxx	0.98	0.99	xxxx	1.00	0.74
Actual Cap.:	570	xxxx	xxxxx	322	xxxx	xxxxx	45	78	521	67	80	284
Level Of Service Module:												
Unused Cap.:	562	xxxx	xxxxx	196	xxxx	xxxxx	30	76	517	23	80	191
LOS by Move:	A	A	A	D	A	A	E	E	A	E	E	D
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	58	xxxxx	xxxx	139	xxxxx
Unused Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	38	xxxxx	xxxx	2	xxxxx
Shared LOS:	A	A	A	A	A	A	A	E	A	A	E	A

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****
* Base Volume Alternative *

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Intersection #12 Clark Road and Wagstaff Road

****

Cycle (sec):	100	Critical Vol./Cap. (X):	0.39
Loss Time (sec):	0	Average Delay (sec/vehicle):	18.6
Optimal Cycle:	37	Level Of Service:	A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Left Phase			Left Phase			Left Phase			Left Phase		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	1 1	0	1 0	1 0	1	1 0	1 0	1
Volume Module:												
Initial Vol:	118	347	122	76	336	44	59	120	99	108	67	56
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	118	347	122	76	336	44	59	120	0	108	67	0
Saturation Flow Module:												
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.48	0.52	1.00	1.77	0.23	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1375	2035	715	1375	2432	318	1375	1375	1375	1375	1375	1375
Capacity Analysis Module:												
Vol/Sat:	0.09	0.17	0.17	0.06	0.14	0.14	0.04	0.09	0.00	0.08	0.05	0.00
Crit Moves:		****		****				****		****		
Green/Cycle:	0.22	0.44	0.44	0.14	0.36	0.36	0.20	0.22	1.00	0.20	0.23	1.00
Volume/Cap:	0.39	0.39	0.39	0.39	0.39	0.39	0.22	0.39	0.00	0.39	0.22	0.00
Level Of Service Module:												
Delay/Veh:	26.0	14.9	15.2	30.8	18.7	19.7	25.9	25.9	0.0	27.2	24.4	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.0	14.9	15.2	30.8	18.7	19.7	25.9	25.9	0.0	27.2	24.4	0.0
Queue:	3	7	2	2	7	1	1	3	0	3	2	0

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* Base Volume Alternative *

Intersection #13 Clark Road and Bille Road

Cycle (sec):	100	Critical Vol./Cap. (X):	0.51
Loss Time (sec):	0	Average Delay (sec/vehicle):	14.9
Optimal Cycle:	29	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	No Left Phase			No Left Phase			No Left Phase			No Left Phase		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	0 1	1 0	1	0 1
Volume Module:												
Initial Vol:	94	826	89	89	502	77	133	104	80	102	84	71
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	94	826	89	89	502	77	133	104	0	102	84	0
Saturation Flow Module:												
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.81	0.19	1.00	1.73	0.27	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1500	2708	292	1500	2601	399	1500	1500	1500	1500	1500	1500
Capacity Analysis Module:												
Vol/Sat:	0.06	0.30	0.31	0.06	0.19	0.19	0.09	0.07	0.00	0.07	0.06	0.00
Crit Moves:			****	****			****				****	
Green/Cycle:	0.18	0.60	0.60	0.12	0.54	0.54	0.17	0.14	1.00	0.14	0.11	1.00
Volume/Cap:	0.36	0.51	0.51	0.51	0.36	0.36	0.51	0.48	0.00	0.48	0.51	0.00
Level Of Service Module:												
Delay/Veh:	28.3	9.1	10.9	34.0	10.1	10.5	30.2	31.7	0.0	31.9	34.5	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.3	9.1	10.9	34.0	10.1	10.5	30.2	31.7	0.0	31.9	34.5	0.0
Queue:	2	13	2	2	8	1	3	3	0	3	2	0

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* Base Volume Alternative *

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Intersection #14 Clark Road and Central Park

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Cycle (sec):	100	Critical Vol./Cap. (X):	0.39
Loss Time (sec):	0	Average Delay (sec/vehicle):	7.4
Optimal Cycle:	37	Level Of Service:	A

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Left Phase			Left Phase			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1 1	0	1 0	1 1	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Initial Vol:	43	771	2	12	674	42	69	1	61	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	43	771	2	12	674	42	69	1	61	0	0	0
Saturation Flow Module:												
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.99	0.01	1.00	1.88	0.12	0.53	0.01	0.47	0.00	1.00	0.00
Final Sat.:	1375	2743	7	1375	2589	161	724	10	640	0	1375	0
Capacity Analysis Module:												
Vol/Sat:	0.03	0.28	0.28	0.01	0.26	0.26	0.10	0.10	0.10	0.00	0.00	0.00
Crit Moves:	****					****		****				****
Green/Cycle:	0.08	0.73	0.73	0.02	0.67	0.67	0.25	0.25	0.25	0.00	0.00	0.00
Volume/Cap:	0.39	0.38	0.38	0.38	0.39	0.39	0.39	0.39	0.39	0.00	0.00	0.00
Level Of Service Module:												
Delay/Veh:	34.7	3.9	20.1	40.8	5.6	6.7	24.9	51.4	25.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.7	3.9	20.1	40.8	5.6	6.7	24.9	51.4	25.0	0.0	0.0	0.0
Queue:	1	8	0	0	8	1	2	0	1	0	0	0

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* Base Volume Alternative *

Intersection #15 Clark Road and Elliot Road

Cycle (sec):	100	Critical Vol./Cap. (X):	0.67
Loss Time (sec):	0	Average Delay (sec/vehicle):	26.2
Optimal Cycle:	43	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	No Left Phase			No Left Phase			No Left Phase			No Left Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Initial Vol:	181	576	47	299	420	121	203	156	145	88	121	39
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	181	576	47	299	420	121	203	156	145	88	121	39
Saturation Flow Module:												
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.85	0.15	1.00	1.55	0.45	1.00	0.52	0.48	1.00	0.76	0.24
Final Sat.:	1500	2774	226	1500	2329	671	1500	777	723	1500	1134	366
Capacity Analysis Module:												
Vol/Sat:	0.12	0.21	0.21	0.20	0.18	0.18	0.14	0.20	0.20	0.06	0.11	0.11
Crit Moves:		****		****				****		****		
Green/Cycle:	0.24	0.31	0.31	0.30	0.37	0.37	0.22	0.30	0.30	0.09	0.17	0.17
Volume/Cap:	0.49	0.67	0.67	0.67	0.49	0.49	0.62	0.67	0.67	0.67	0.62	0.62
Level Of Service Module:												
Delay/Veh:	25.8	24.4	36.8	26.2	19.3	20.2	29.8	28.3	28.7	42.1	33.8	41.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.8	24.4	36.8	26.2	19.3	20.2	29.8	28.3	28.7	42.1	33.8	41.0
Queue:	4	14	1	8	9	3	5	4	4	3	3	1

DOWLING ASSOCIATES
TOWN OF PARADISE GENERAL PLAN UPDATE
PM Peak Hour Existing Conditions

Level Of Service Computation Report
Circular 212 Planning Method
****
* Base Volume Alternative *

****
Intersection #16 Clark Road and Nunneley Road
****

Cycle (sec):	100	Critical Vol./Cap. (X):	0.43
Loss Time (sec):	0	Average Delay (sec/vehicle):	8.3
Optimal Cycle:	33	Level Of Service:	A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Left Phase			Left Phase			No Left Phase			No Left Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Initial Vol:	3	729	120	36	523	27	32	12	8	55	7	43
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	3	729	120	36	523	27	32	12	8	55	7	43
Saturation Flow Module:												
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.72	0.28	1.00	1.90	0.10	0.62	0.23	0.15	0.52	0.07	0.41
Final Sat.:	1425	2447	403	1425	2710	140	877	329	219	746	95	584
Capacity Analysis Module:												
Vol/Sat:	0.00	0.30	0.30	0.03	0.19	0.19	0.04	0.04	0.04	0.07	0.07	0.07
Crit Moves:			****	****			****					****
Green/Cycle:	0.01	0.69	0.69	0.06	0.74	0.74	0.08	0.08	0.08	0.17	0.17	0.17
Volume/Cap:	0.26	0.43	0.43	0.43	0.26	0.26	0.43	0.43	0.43	0.43	0.43	0.43
Level Of Service Module:												
Delay/Veh:	40.5	5.5	6.1	37.3	3.3	3.6	36.0	39.7	42.2	30.1	38.4	30.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.5	5.5	6.1	37.3	3.3	3.6	36.0	39.7	42.2	30.1	38.4	30.5
Queue:	0	9	2	1	5	0	1	0	0	1	0	1

****

DOWLING ASSOCIATES
TOWN OF PARADISE GENERAL PLAN UPDATE
PM Peak Hour Existing Conditions

Level Of Service Computation Report
Circular 212 Planning Method
****
* Base Volume Alternative *

Intersection #17 Clark Road and Pearson Road

Cycle (sec):	100	Critical Vol./Cap. (X):	0.59
Loss Time (sec):	0	Average Delay (sec/vehicle):	24.9
Optimal Cycle:	56	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Left Phase			Left Phase			Left Phase			Left Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Initial Vol:	142	351	40	117	196	207	356	209	26	46	126	93
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	142	351	40	117	196	207	356	209	26	46	126	93
Saturation Flow Module:												
Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.80	0.20	1.00	1.00	1.00	1.00	1.78	0.22	1.00	1.15	0.85
Final Sat.:	1375	2469	281	1375	1375	1375	1375	2446	304	1375	1582	1168
Capacity Analysis Module:												
Vol/Sat:	0.10	0.14	0.14	0.09	0.14	0.15	0.26	0.09	0.09	0.03	0.08	0.08
Crit Moves:	****					****	****				****	
Green/Cycle:	0.17	0.27	0.27	0.16	0.25	0.25	0.44	0.41	0.41	0.16	0.13	0.13
Volume/Cap:	0.59	0.53	0.53	0.53	0.56	0.59	0.59	0.21	0.21	0.21	0.59	0.59
Level Of Service Module:												
Delay/Veh:	32.1	24.7	29.3	31.6	26.5	27.2	17.6	14.6	14.7	28.1	34.5	35.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.1	24.7	29.3	31.6	26.5	27.2	17.6	14.6	14.7	28.1	34.5	35.5
Queue:	4	8	1	3	5	5	8	4	0	1	4	3

DOWLING ASSOCIATES
TOWN OF PARADISE GENERAL PLAN UPDATE
PM Peak Hour Existing Conditions

Level Of Service Computation Report
1985 HCM Unsignalized Method
****
* Base Volume Alternative *

Intersection #18 Clark Road and Buschmann Road

Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 0 0 0		
Volume Module:												
Initial Vol:	27	326	0	0	227	91	100	0	38	0	0	0
Grade:		0%			0%			0%			0%	
Cycle/Cars:	xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx	
Truck/Combi:	xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx	
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	30	359	0	0	250	100	110	0	42	0	0	0
Critical Gap Module:												
RT Rad/Ang:	20.0	ft/90.0	deg	20.0	ft/90.0	deg	20.0	ft/90.0	deg	20.0	ft/90.0	deg
Critical Gp:	5.0	xxxx	xxxxx	5.0	xxxx	xxxxx	6.5	6.0	5.5	xxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	350	xxxx	xxxxx	359	xxxx	xxxxx	688	688	400	xxxx	xxxx	xxxxx
Potent Cap.:	705	xxxx	xxxxx	698	xxxx	xxxxx	367	403	620	xxxx	xxxx	xxxxx
% Used Cap.:	4.2	xxxx	xxxxx	0.0	xxxx	xxxxx	30.0	0.0	6.7	xxxx	xxxx	xxxxx
Impedance:	0.97	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	1.00	0.95	xxxx	xxxx	xxxxx
Actual Cap.:	705	xxxx	xxxxx	698	xxxx	xxxxx	355	390	620	xxxx	xxxx	100000
Level Of Service Module:												
Unused Cap.:	675	xxxx	xxxxx	698	xxxx	xxxxx	245	390	578	xxxx	xxxx	xxxxx
LOS by Move:	A	A	A	A	A	A	C	B	A	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	402	xxxxx	xxxx	xxxx	xxxxx
Unused Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	250	xxxxx	xxxx	xxxx	xxxxx
Shared LOS:	A	A	A	A	A	A	A	C	A	*	*	*

Exhibit 2 Notes:

(1) Single family residential is a compatible land use within the approach zone only if the population density is not more than one single family resident per 5 acres within mile of the runway end, subject to ALUC review.

(2) Use not compatible in approach zone within 1 mile of the runway end. Use subject to ALUC review if more than 1 mile from the runway end.

(3) Uses subject to ALUC review if they result in large concentration of people underneath downwind and base legs or departure paths of frequently used airport patterns. Threshold for review of "large concentrations" is on the order of 25 people per acre for non-residential uses or more than 4 units per acre for residential uses.

(4) No above-grade transmission lines, no on or above-grade gas or oil pipe lines.

(5) Equestrian activity including riding trails is not compatible with areas overflown by low flying aircraft as horses may be frightened by aircraft.

(6) Intensive development in a clear zone is prohibited. All specific development plans must be reviewed by the ALUC to assure that temporary or permanent concentration of people greater than 25 people per acre are avoided, that storage of concentrations of hazardous material will not occur, and that the local public agency will be able to effectively provide emergency services to the parcel.

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1994 GENERAL PLAN

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APPENDIX F

APPENDIX F

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APPENDIX G

APPENDIX G

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TOWN OF PARADISE

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VOLUME II
ENVIRONMENTAL IMPACT REPORT

SCH NO. 91043055

ADDENDUMS I & II

AS AMENDED THROUGH SEPTEMBER, 1998

TOWN OF PARADISE
COMMUNITY DEVELOPMENT DEPARTMENT

TABLE OF CONTENTS

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1.0 INTRODUCTION

The intent of this environmental document is to provide an addendum to the previously prepared draft *Environmental Impact Report* (EIR) for the Paradise *General Plan*. The draft EIR was originally released in May of 1992, circulated through the state clearinghouse, and made available for public comment through an extended review period.

Subsequent to the closure of the public review and comment period, and prior to the conduct of public hearings, the Paradise General Plan Revision Steering Committee directed staff to make changes to the draft policy document. These comprehensive changes, were geared towards restructuring the approach of the plan into a *growth management plan*, and reducing potential build out and population projections by modifying the draft *General Plan* land use designation map.

The purpose of this draft EIR addendum is to provide an analysis of the potential environmental impacts resulting from the changes and revisions to the draft *General Plan*. Because the plan has been revised to reduce potential residential build out and population growth over the fifteen-year planning period, it is not anticipated that new and significant adverse environmental impacts will result from plan implementation.

Pursuant to Section 15164 of the California Environmental Quality Act guidelines, this addendum is being prepared, rather than a subsequent or supplemental EIR for the following reasons:

1. The changes in the project (draft *General Plan*) will not require revisions of the previous draft EIR due to the involvement of new significant environmental impacts not considered in the previous draft EIR.

2. No substantial changes in the circumstances under which the project is being undertaken, such as substantial deterioration in air quality, have occurred since the production of the draft EIR.

3. No new important information that will cause new significant environmental impacts has become available since the production of the draft EIR.

4. The revisions and changes to the project (draft *General Plan*) will not cause previously insignificant environmental impacts to become significant.

5. No mitigation measures or project alternatives not previously considered in the draft EIR have been identified that would lessen one or more significant effects upon the environment.

This EIR addendum accompanies Volume II, *draft Environmental Impact Report*, Volume I revised *Policy Document*, Volume III, *Environmental Setting Document* and the associated land use designation map, circulation diagram and environmental constraints diagrams.

Together, these documents (*Volumes I, II and III)*, maps and diagrams constitute the draft Paradise *General Plan.*

2.0 *DESCRIPTION OF CHANGES AND REVISIONS TO THE DRAFT POLICY DOCUMENT (VOLUME I)*

The primary changes and revisions to the draft *General Plan* involve restructuring it into a *growth management plan*. This was accomplished in a number of ways. First, by incorporating a land use planning tool termed "constraints analysis" to influence land use designations, dictate the assignment of future zoning classifications, and guide the future design and review of development proposals. The plan now calls for lower density and less land use intensity on lands containing both infrastructural and environmental constraints. Land use designations and build out projections have been influenced by these types of constraints, and the plan requires residential densities and land use intensities to be based upon the degree of constraints affecting properties.

Second, the smallest minimum parcel size for new lots created for single-family residential development (divisions of land) is now predominantly one-half net acre, rather than up to three to five parcels per gross acre as suggested in the earlier draft plan. The "T-R" (Town-Residential) land use designation would potentially allow up to three dwelling units/parcels per net acre. However, it is estimated that this change would only result in approximately thirty-nine additional units/parcels within the primary study area. This will serve to reduce potential build out, and potentially limit ultimate population growth over the fifteen-year planning period.

Third, specific police and fire response times thresholds have been established and highlighted in the plan. If the town Police Department or Fire Department cannot respond to an emergency at a proposed development site within the time thresholds established by the plan, the development cannot be approved.

Fourth, specific traffic service levels have been established in the circulation element of the plan. If the level of service at intersections or along roadways will erode below the threshold level established by the plan as a result of a proposed project, then it cannot be approved.

Finally, the plan suggests an overriding policy of requiring development to be designed to accommodate constraints, rather than altering the environment to accommodate the development project.

Other major changes to the draft *General Plan* include the following:

- A change in the land use designation of properties in the southern portion of town from "S-R" (Suburban-Residential) to "A-R" (Agricultural-Residential).

- Changes in the housing element to more strongly promote rehabilitation of existing dwelling units rather than the construction of new units, and to provide a more personalized approach to the future planning for housing in Paradise. Also, to assure its consistency with the growth management thrust of the plan.

- Putting more "teeth" into the open space/conservation element. Placing more of an emphasis on open space acquisition, promoting a strong relationship with the Paradise Recreation and Park District, and promoting agricultural land preservation.

- Modifying the circulation element to reflect the growth management thrust of the plan. Revising circulation system classifications to reflect a more rural character.

- Modify (soften) language regarding the community collection sewer system, and add language regarding the Paradise onsite wastewater management zone (district).

TABLE 2-1
GENERAL PLAN BUILD OUT - ACREAGE, DWELLING UNITS AND POPULATION (PRIMARY AREA)

Land Use Designation	Existing Acreage by Land Use[1]	Existing Units/ Sq. Ft.[2]	Potential New Acreage[3]	Potential New Units/ Sq. Ft.[4]	Build out Units/ Sq. Ft.[5]	Total Persons[6]	Total Planned Acreage[7]
Agricultural-Residential	-	-	2,587	517 u	517 u	1,205	2,587
Rural-Residential	-	-	454	908 u	908 u	1,911	5,015
Town-Residential	5,348	10,883 u	78	156 u	11,039 u	25,721	2,283
Multi-Family Residential	146	796 u	92	390 u	1,186 u	2,277	465
Neighborhood-Commercial	-	-	6	38,670 sf	38,670 sf	-	26
Central-Commercial	-	-	4	87,120 sf	87,120 sf	-	128
Town-Commercial	318	1,558,124 sf	39	451,380 sf	2,009,504 sf	-	433
Business-Park	-	-	-	-	-	-	-
Light-Industrial	30	310,500 sf	141	1,006,236 sf	1,316,736 sf	-	212
Community-Service	56	195,000 sf	71	87,120 sf	282,120 sf	-	166
Public-Institutional	414	666,405 sf	-	-	666,405 sf	-	175
Recreational	147	-	0.5	-	-	-	210
Open-Space/Agricultural	145	-	-	-	-	-	145
Timber-Production	-	-	-	-	-	-	-
Totals						**31,114 29,752[8]**	**11,845**

1 Based on existing land use survey.

2 Based on Housing Condition Surveys, March 1991 and February 1990, and documentation for the development of the Paradise Area Transportation Model Planning prepared for the Butte County Council of Governments, October 1990; Mobile homes are included with single-family units.

3 Based on land use designation and vacant land gross acreage **(it is estimated that these figures could be reduced up to ten percent when figuring net rather than gross acreage)**.

4 Based on population density and building intensity ratios contained in Table 2-1. Residential densities are figured on the averaged allowable density; A-R density is figured on one unit per five acres. Commercial, Business Park and Industrial calculations allow for property constraints.

5 Based on existing plus potential new, allowing for property constraints, and where data on existing square footage is available.

6 Based on average household size of 2.33 for single-family dwellings and 1.92 for multiple-family dwellings.

7 Based on total net acres allocated to each land use designation under *General Plan*.

8 Based on total gross acres allocated to each land use category under General Plan **(it is estimated that these figures could be reduced up to ten percent when figuring net rather than gross acreage)**.

TABLE 2-1
GENERAL PLAN BUILD OUT - ACREAGE, DWELLING UNITS AND POPULATION (SECONDARY AREA)

Land Use Designation	Acreage[1]	Potential New Units/Sq. Ft.[2]	Existing Units/Sq. Ft.[3]	Build out Units/ Sq. Ft.[4]	Total Persons[5]
Agricultural-Residential	3,678	736 u	-	736 u	1,715
Rural-Residential	2,300	1,000 u	4,906 u	5,096 u	11,874
Town-Residential	-	-	-	-	-
Multi-Family-Residential	-	147 u	12 u	159 u	305
Neighborhood-Commercial	1	-	10,890 sf	10,890 sf	-
Central-Commercial	-	-	-	-	-
Town-Commercial	330	-	99,350 sf	99,350 sf	-
Business-Park	280	896,819 sf	-	896,819 sf	-
Light-Industrial	-	-	10,000 sf	10,000 sf	-
Community-Service	63	108,900 sf	-	108,900 sf	-
Public-Institutional	1,398	-	121,737 sf	121,737 sf	-
Recreational	262	-	-	-	-
Open-Space/Agriculture	8,811	-	-	-	-
Timber-Production	588	-	-	-	-
Totals	**17,711**				**13,894**

1 Based on total net acres allocated to each land use designation under *General Plan*.

2 Based on population density and building intensity ratios contained in Table 2-1. Residential densities are figured on the averaged allowable density; A-R density is figured on one unit per five acres. Commercial, Business Park and Industrial calculations allow for property constraints.

3 Based on Housing Condition Surveys, March 1991 and February 1990, and documentation for the development of the Paradise Area Transportation Model Planning prepared for the Butte County Council of Governments, October 1990; Mobile homes are included with single-family units.

4 Based on existing plus potential new, allowing for property constraints, and where data on existing square footage is available.

5 Based on average household size of 2.33 for single-family dwellings and 1.92 for multiple-family dwellings.

IMPORTANT NOTE: It is estimated that the numbers in the above table could be reduced up to ten percent when figuring net rather than gross acreage. Accordingly, the projected population (total persons) at build out of net acreage would be approximately 12,505.

TABLE 2-1
GENERAL PLAN BUILD OUT
ACREAGE, DWELLING UNITS AND POPULATION
FULL BUILD OUT
(PRIMARY AND SECONDARY AREAS)

Land Use Designation	Total Acres	Total Units	Total Persons	Total Sq. Ft.
Agricultural-Residential	6,265	1,253	2,919	-
Rural-Residential	7,315	6,004	13,989	-
Town-Residential	2,283	11,039	25,721	-
Multi-Family-Residential	465	1,345	2,582	-
Neighborhood-Commercial	27	-	-	49,560
Central-Commercial	128	-	-	87,120
Town-Commercial	763	-	-	2,108,854
Business-Park	197	-	-	556,653
Light-Industrial	212	-	-	1,326,736
Community-Service	229	-	-	391,020
Public-Institutional	1,573	-	-	788,142
Recreational	472	-	-	-
Open-Space/Agricultural	8,956	-	-	-
Timber-Production	588	-	-	-
Totals using gross acreage	**29,473**	**19,641**	**45,211**	
Totals using net acreage	**29,526**	**18,659**	**45,257**	

3.0 *ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES*

3.1 INTRODUCTION

The draft *Environmental Impact Report* (DEIR) for the Paradise *General Plan* primarily uses the goals, objectives, policies and implementation measures as mitigations to avoid potential impacts or to reduce them to a level of insignificance. The DEIR also recommends additional mitigation measures for impacts other than goal, objective and policy statements related to a number of topics. This addendum uses the same format and approach as the draft *Environmental Impact Report*. The topical setting is described, the potential impacts discussed, and the suggested policies/mitigations measures are listed. The text describes the revision, deletion, addition, and renumbering of goals, objectives, policies, and implementation measures used to assure that the potential impacts resulting from plan implementation will be insignificant.

3.2 TOPOGRAPHY

Setting

The discussion of the topographic setting contained in Section 3.1 of Volume III, *Environmental Setting Document*, is still accurate, and is unchanged as a result of the revised draft *General Plan*.

Impacts

Identified Impact Nos. 3.2.1-1 and 3.2.1-2 on pages 4-2 and 4-5 of the EIR are still valid, yet their potential is reduced because the build out projections townwide have been reduced, and therefore the potential for excessive cuts and fills on steep slopes, and for the modification of ridgelines is lessened.

Policy/Mitigation

The policy statements contained in the original draft *General Plan* that act to mitigate potential topographic impacts such as excessive cuts and fills and modification of ridge lines, all remain in the revised draft *General Plan*, except for LUP-2 and OCEP-27.

- LUP-2 has been revised to read:

  The environmental and infrastructure constraints analysis system should to determine future zoning classifications, land use densities, and to evaluate future development projects.

- OCEP-27 has been revised to read:

  Protective land use designations and zoning classifications should established for sensitive lands such as areas of resource production, steep canyons, and stream corridors, and areas or significant natural resource value.

- In addition, identified policy OCEP-17 has been renumbered to OCEP-21.

Conclusions

Even though the potential impacts to topography resulting from future build out and construction activities has been reduced in the revised draft *General Plan*, the policy statements/mitigation measures are still in place to assure that any resultant effects on the topographic setting of the town will be less than significant.

3.3 GEOLOGY/SEISMICITY

Setting

The discussion of the geologic/seismicity setting contained in Section 3.2 of Volume III, *Environmental Setting Document*, is still accurate and unchanged as a result of the revised draft *General Plan*.

Impacts

Identified Impact Nos. 3.3-1, 3.3-2 and 3.3-3 listed on 4-7 and 4-8 of the EIR are still valid under the revised draft *General Plan*, because as the town grows and develops, people will still be exposed to potential hazards associated with earthquakes, landslides, volcanic eruption and dam inundation. However, because the projected build out and ultimate population over the fifteen-year planning period has been lessened, the potential impacts have likewise been lessened.

Policy/Mitigation

The policy statements contained in the draft *General Plan* that are intended to mitigate potential geologic and seismic impacts/hazards to a level of insignificance still remain in the revised draft *General Plan*. However, SI-6 and SI-7 have been combined and renumber to SI-5, and SI-8 has been renumbered to SI-6.

Conclusions

Even though the projected build out and future population growth have been reduced in the revised draft *General Plan*, the potential geologic/seismic hazards will still exist. The goals, objective, policies and implementation measures intended to mitigate these potential impacts have been retained to assure that the potential effects will be less than significant.

3.4 SOILS

Setting

The discussion provided in Section 3.4 of Volume III, *Environmental Setting Document*, is still accurate, and is unchanged as a result of the revised draft *General Plan*.

Impacts

Identified Impact Nos. 3.4-1 and 3.4-2 on pages 4-11 and 4-14 of the draft EIR are still valid, yet their potential has been reduced because the huild out potential and population projections have been reduced.

Policy/Mitigation

The policy statements contained in the original draft *General Plan* that are intended to mitigate potential impacts to soils, such as conversion of agricultural and timber lands to urban uses, and disturbance/erosion of soils all remain in the revised draft *General Plan*, yet have been renumbered.

- In addition, LUP-84 has been renumbered to LUP-70 and modified to read:

  Encourage Butte County to maintain the urban reserve policy for the area south of town limits and work with Butte County officials to develop appropriate policies for the growth and development of the area north of Paradise.

Conclusions

Even though the potential impacts to soils resulting from future build out have been reduced in the revised draft *General Plan*, the policy statements/mitigation measures are still in place to assure that the effects on soils in the town resulting from plan implementation will be less than significant.

3.5 AIR QUALITY

Setting

The description of air quality in the Paradise planning area contained in Sections 4.2 and 16.4 of Volume III, *Environmental Setting Document*, is still accurate and unchanged as a result of the revised draft *General Plan*.

Impacts

Identified Impact Nos. 3.5-1, 3.5-2 and 3.5-3 listed on pages 4-16 and 4-19 of the draft EIR are still valid under the revised draft *General Plan*. These identified impacts include a potential cumulative degradation of regional air quality resulting from build out and increased automobile usage, generation of air pollution resulting from construction activities, and a potential increase in source emissions resulting from increased industrial and business developments. However, the potential for these impacts is lessened in the revised draft *General Plan*, because build out projections and population estimates have been reduced.

Policy/Mitigation

The policy statements contained in the draft *General Plan* that are intended to lessen the potential air quality impacts resulting from plan implementation still remain in the revised draft *General Plan*, yet have been renumbered. In addition, some of the policy statement have been modified.

- OCEI-15 has been renumbered to OCEI-25, and modified to read:

  Eliminate leaf burning after establishing a program for disposing of yard debris in an environmentally sensitive manner.

- In addition, original CP-15, CP-12, OCEI-14 and OCEI-31 have been deleted because they were either redundant or infeasible.

Section 3.5 in the draft EIR also includes an important mitigation measure (No. 3.5-1 on page 4-20) beyond the draft *General Plan* policy statements. It calls for the Butte County Air Pollution Control District to install and maintain an air monitoring station in the Town of Paradise. Comments received from the Butte County APCD on the draft EIR were not adverse to this suggested mitigation measure.

Conclusions

Even though the build out projections and population estimates have been reduced in the revised draft *General Plan*, significant cumulative impacts to the local and regional air quality will result from implementation. This is due to the fact that all of Butte County is currently not in compliance with state air quality standards. Any increase in ozone or PM-10 resulting from mobile source emission will add to the cumulative degradation of air quality. However, the reduction in build out and projected future population represents less of a contribution to the cumulative impacts than proposed in the original draft *General Plan*, and analyzed in the draft EIR.

The mitigation measure calling for the Butte County APCD to install and maintain an air monitoring station in the town is still appropriate because of the areawide status as a nonattainment area for ozone.

3.6 HYDROLOGY

Setting

The discussion of the hydrologic setting, water quality, and town and district responsibilities contained in Section 5.0 of Volume III, *Environmental Setting Document*, is still accurate and unchanged as a result of the revised draft *General Plan*.

Impacts

The potential impacts to the town hydrologic setting resulting from *General Plan* implementation identified in the draft EIR include, on and offsite flooding, degradation of surface water quality and contamination of the watershed, degradation of groundwater quality, and the potential to encounter unsafe drinking water. All of these identified potential impacts are valid under the revised draft *General Plan*, because opportunities for land use development and construction activities will continue to be available during the fifteen-year planning period. However, because the build out projections and resulting population estimates have been reduced, the potential for these impacts to occur and be significant is reduced.

Policy/Mitigation

The policy statements contained in the draft *General Plan* that are intended to lessen potential impacts to the local hydrologic setting and water quality are for the most part retained in the revised draft *General Plan*. However, the following have been deleted because they are either redundant, infeasible, or they no longer are applicable: SP-10, OCEP-38, LUP-16, LUI-7, OCEI-40.

- In addition LUP-15 has been renumbered to LUP-19, and modified to read:

  Land Use densities should primarily be based upon the degree of infrastructural and environmental constraints affecting properties in the town.

- LUP-57 has been renumbered to LUP-47, and modified to read:

  Residential densities shall be consistent with the standards for onsite wastewater disposal, and other infrastructural constraints, and should provide for minimum lot sizes of one-third acre in new developments.

Mitigation Measure No. 3.6-1 on page 4-29 of the draft EIR calls for compliance with federal storm water collection and disposal standards. This mitigation measure is still valid and is retained.

Conclusions

Even though the project build out and population estimates have been reduced in the revised draft *General Plan*, potential hydrologic impacts still exist. The policies and mitigation measures intended to lessen potential impacts to a level of insignificance have been retained, modified, and/or deleted based upon their applicability given the revisions to the draft *General Plan*.

3.7 VEGETATION AND WILDLIFE

Setting

The description of vegetation and wildlife in the planning area found in Section 6.0 of Volume III, *Environmental Setting Document*, is still valid and unchanged as a result of the revised draft *General Plan*.

Impacts

The potential impacts to wildlife and vegetation resulting from build out under the draft *General Plan* include potential loss of vernal pools and wetlands (secondary study area), potential impacts to wildlife resources, and potential loss of sensitive plant populations. All of these potential impacts are valid, yet reduced under the revised draft *General Plan*, because build out and population growth have been reduced.

Policy/Mitigation

The policy statements contained in the draft *General Plan* intended to lessen potential impacts to vegetation and wildlife resources have for the most part been retained in the revised draft *General Plan*. However, all have been renumbered and the following have been modified or deleted:

- OCEP-27 has been modified to read:

  Protective land use designations and zoning classifications should be established for sensitive lands such as areas for resource protection, steep canyons, and stream corridors, and areas of significant natural resource value.

- OCEP-3 has been deleted because it could produce other significant environmental impacts.

- OCEP-6 has been deleted because it is financially infeasible.

- OCEP-7 has been deleted because it is redundant.

In addition, the draft EIR recommends a number of mitigation measures separate from the *General Plan* policies that are intended to reduce potential impacts to a level of insignificance. These include Mitigation Measure Nos. 3.7-1, 3.7-2, 3.7-3 and 3.7-4. These suggested mitigation measures are still valid and recommended for adoption.

Conclusions

Even though the projected build out and population estimates have been reduced in the revised draft *General Plan*, the potential impacts to wildlife and vegetation will still exist, but to a lesser degree. Regardless, the majority of policy statements and mitigation measures designed to lessen these impacts have been retained in the revised draft *General Plan*.

Impacts upon wildlife resources is no longer considered a significant unavoidable cumulative impact because residential densities in the southern portion of town have been drastically reduced, the revised draft *General Plan* emphasizes growth management based upon environmental and infrastructural constraints, the existence of the town tree ordinance, and the lack of vernal pools or wetlands within the primary planning area.

3.8 NOISE

Setting

The discussion of the Paradise noise environment contained in Section 7.0 of Volume III, *Environmental Setting Document*, is still accurate and unchanged as a result of the revised draft *General Plan*.

Impacts

The identified potential noise impacts resulting from *General Plan* implementation listed on pages 4-40, 4-41 and 4-43 of the original draft EIR are still valid under the revised draft *General Plan* because as the town grows and develops, roadway noise will increase, the Skypark Airport may expand, and new noise sources may be introduced into the community. However, because build out projections and population estimates have been reduced, it is anticipated that potential noise impacts will likewise be reduced over the fifteen-year planning period.

Policy/Mitigation

The policy statements contained in the original draft *General Plan* that are intended to lessen potential noise impacts still remain in the revised draft *General Plan*, with the exception of NP-10, which has been deleted because it is redundant with other policy statements.

Conclusions

Even though the projected build out and population estimates have been reduced in the revised draft *General Plan*, the policy statements and mitigation measures intended to lessen potential noise impacts have been retained.

3.9 LIGHT AND GLARE

Setting

The description of light and glare in the Paradise community contained in Section 8.0 of Volume III, *Environmental Setting Document*, is still accurate and unchanged as a result of the revised draft *General Plan*.

Impacts

The identified impacts listed on page 4-45 of the draft EIR are still valid under the revised draft *General Plan*. The potential for light and glare resulting from development in previously undeveloped areas will be reduced because development opportunities, in terms of potential build out have been reduced. However, some degree of potential new sources of light and glare still remain.

Policy/Mitigation

The policy statements contained on page 4-46 of the draft EIR (CI-20 and OCEP-60) have been deleted in the revised draft *General Plan*, because they were either infeasible or the intent is accomplished by other means, such as existing town adopted ordinances.

Conclusions

Even though the build out projections and population estimates have been reduced in the revised draft *General Plan*, the potential light and glare impacts resulting from *General Plan* implementation still remain to some degree. However, it is anticipated that the existing zoning, subdivision, building, and other town ordinances and codes will successfully regulate construction to eliminate potential light and glare impacts. Therefore, no policy statements or separate mitigation measures are necessary in the revised draft *General Plan*.

3.10 LAND USE AND POPULATION

Setting

The description of land use and population in the Paradise planning area contained in Sections 9.0 and 11.0 of Volume III, *Environmental Setting Document*, are still accurate and valid under the revised draft *General Plan*. The land use designation map has been revised to reduce potential build out and ultimate population growth. Table 3.3-1 in the draft EIR (2-2 in Volume I, *draft Policy Document*), has also been revised to clearly show the new build out and population estimates resulting from the revised draft *General Plan*.

Impacts

The potential impacts to land use and population resulting from implementation of the revised draft *General Plan* listed on pages 4-49, 4-50 and 4-51 of the draft EIR are still valid. However, the potential has been decreased because of a reduction in the build out projects and population estimates in the revised draft *General Plan*.

Policy/Mitigation

Even though build out projections and population estimates have been reduced, most of the policy statements contained in the original draft *General Plan* intended to lessen impacts associated with land use and population have been retained in the revised version. However, all have been renumbered, and the following have been either modified, or deleted:

- LUG-2 has been modified to read:

  Accommodate a rate of growth consistent with the physical and infrastructural limitations in Paradise.

- LUG-17 has been deleted because of redundancy.

- LUP-55 has been renumbered to LUP-45 and modified to read:

  New higher density land use development should only be permitted in areas compatible with surrounding land uses, infrastructure capabilities, and established service levels.

- LUP-92 has been deleted because the sewer project is no longer active.

- SP-14 has been deleted because of redundancy.

- OCEG-1 has been deleted because of redundancy.
- OCEG-2 has been deleted because of redundancy.
- OCEG-6 has been revised to read:

  Preserve and protect naturally sensitive areas, and significant natural features in Paradise, such as trees, views, stream courses, wildlife habitat and clean air.

- LUP-87 has been deleted because of redundancy.
- LUP-88 has been deleted because its intent is covered by existing town ordinances.

Conclusions

Even though the build out projections and population estimates have been reduced in the revised draft *General Plan*, the policy statements/mitigation measures have for the most part been retained. Many have been renumbered to reflect editing for redundancy and/or the combining of goals and policies. Some have been modified to better reflect the growth management thrust of the plan.

3.11 HOUSING

Setting

The description of housing in Paradise contained in Section 12.0 of Volume III, *Environmental Setting Document*, has been expanded to provide additional background information. The original discussion is still valid, yet enhanced by the new language.

Impacts

The potential impacts to the town and its housing stock resulting from the implementation of the housing element have been lessened because the build out projections and population estimates have been reduced. However, the identified potential impacts are still valid to some degree.

Policy/Mitigations

The policy statements contained in the draft *General Plan* have been renumbered and the following have been either deleted or modified to reflect the revisions to the housing element:

- HG-1 has been renumbered to HG-3 and modified as follows:

  Develop objectives that will lead to the provision of affordable housing as required by the California Department of Housing and Community Development and the Butte County Association of Governments.

- HG-5 has been renumbered to HG-2 and modified as follows:

  Achieve an adequate supply of safe, decent housing for all the citizens of Paradise.

- HG-6 has been renumbered to HG-1 and modified as follows:

  Encourage the production of all housing types, from affordable to exclusive, consistent with the overall goals, objectives and policies of the Paradise *General Plan*.

- HO-3 has been deleted and its intent incorporated into other objectives.

- HP-12 has been deleted.

- HP-15 has been renumbered to HP-1 and modified as follows:

  The town shall encourage a full range of housing types, including both lower and higher density housing, as physical and infrastructure constraints permit.

Conclusions

The housing element in the revised draft *General Plan* has been geared towards rehabilitation of existing units rather than the creation of new units. Even with the reduced build out projections and population estimates, many of the policy statements/mitigations have been retained, or modified to reflect the revised approach to housing. It is anticipated that the policy statements contained in the revised policy document will assure that impacts related to the provision of housing will be lessened to a level of insignificance.

3.12 HEALTH HAZARDS AND SAFETY

Setting

The description of the existing conditions related to health and safety hazards contained in Section 10.0 of Volume III, *Environmental Setting Document*, is still accurate and unchanged as a result of the revised draft *General Plan*.

Impacts

The identified health and safety impacts contained on pages 4-56 and 4-57 of the draft EIR are still valid under the revised draft *General Plan*. These potential impacts include exposure to nuisance and disease vectoring mosquitos and ticks, and increased traffic congestion leading to potential degradation of evacuation routes. However, the reduced build out projections and population estimates will reduce these impacts accordingly.

Policy/Mitigations

The policy statements/mitigation measures contained in the draft *General Plan* that are intended to lessen potential impacts related to health and safety hazards still remain in the revised draft *General Plan*. However, policy CP-8 has been renumbered to CP-6.

Conclusions

While the potential impacts related to health and safety hazards has been reduced as a result of the revised draft *General Plan*, the policy statements and mitigation measures remain unchanged. This will assure that potential impacts are lessened to a level of insignificance.

3.13 TRANSPORTATION AND CIRCULATION

Setting

The description of the transportation and circulation setting in Paradise contained in Section 13.0 of Volume III, *Environmental Setting Document*, and the traffic data tables (Appendix "F") in the same document are still accurate

and unchanged as a result of the revised draft *General Plan*. The circulation diagram has been modified to better reflect the growth management thrust of the revised *General Plan*.

Impacts

The identified transportation and circulation impacts listed on pages 4-59 and 4-65 of the draft EIR are still valid under the revised draft *General Plan*. These potential impacts include cumulative increases in traffic, increases in congestion on many local streets, and specific cumulative impacts to Pearson Road, because of a lack of east-west connector streets in the southern portion of town. Based upon the reduction of estimated population and reduced build out projections over the fifteen-year planning period contained in the revised draft *General Plan*, these impacts will likewise be reduced. In addition, the proposed business park land use designation for lands along lower Neal Road has been deleted to eliminate the potential adverse traffic/circulation impacts that could require road widening.

Policy/Mitigation

The policy statements/mitigation measures contained in the draft *General Plan* that are intended to lessen potential transportation and circulation impacts still remain in the revised draft *General Plan*. However, because of the reduction in build out projections and population estimates, the calculated average daily traffic volumes have been reduced, yet CP-1 has been retained to strive for a planning area level of service (LOS) "D" or better. The "D" level of service (LOS) would potentially be reached upon build out along the central portion of the Skyway within the town.

In addition, suggested Mitigation Measure No. 3.13-1 on page 4-66 of the draft EIR has been modified to eliminate Roe Road as a possible east-west roadway connection during the fifteen-year planning period. With reduced build out and ultimate population in the revised draft policy document, the need for east-west roadway connections is potentially lessened.

The "S-R" (Suburban-Residential) land use designation identified in Section 3.13 of the draft EIR has been modified to "R-R" (Rural-Residential). In addition Tables 3-13-3, 3.13-5 and 3.13-6 have been revised to be consistent with the growth management thrust of the draft *General Plan*.

Conclusions

The reduction in potential build out and estimated future population in the revised draft *General Plan* will lessen potential impacts related to transportation and circulation. Some of the policy statement(s) and mitigation measures have been revised, yet will still assure that alternatives for resolving any significant adverse impacts related to traffic can be successfully mitigated.

TABLE 3.13-3
LAND USE INCREASES
AND AVERAGE DAILY TRIP GENERATION

Land Use	Dwelling Units	1,000 Square Feet	Average Daily Trips	Average Daily Trips
A-R (Agricultural-Residential)	1,253		7,142	
R-R (Rural-Residential)	1,908		10,876	
T-R (Town-Residential)	156		1,185	
M-R (Multi-Family Residential)	537		2,954	
N-C (Neighborhood-Commercial)		38.670		1,307
C-C (Central-Commercial)		87.120		3,485
T-C (Town-Commercial)		451.380		18,298
B-P (Business-Park)		572.100		25,401
L-I (Light-Industrial)		1006.240		562
C-S (Community-Service)		196.020		2,941
Totals	**3,854**	**2,675,924**	**22,157**	**51,994**

Source: Dowling Associates, 1992.

TABLE 3.13-5
DETAIL OF AVERAGE DAILY TRIP GENERATION

Traffic Zone	Land Use	Dwelling Units	1,000 Square Feet	Daily Trip Rate	Daily Two-way Trips
1	T-R	10		7.66	76.6
1	R-R	10		7.66	76.6
1	T-C		60.100	40.00	2404
2	R-R	15		7.66	114
3	T-R	10		7.66	76.6
3	R-R	15		7.66	115
4	R-R	20		7.66	154
5	C-S		65.340	15.00	980
5	R-R	20		7.66	154
6	A-R	10		7.66	76.6
6	R-R	56		7.66	535
7				15.00	0
8				15.00	0
9				15.00	0
10	A-R	9		7.66	68
10	R-R	57		7.66	436
11	A-R	6		7.66	46
11	R-R	21		7.66	160
11	T-C		10.780	40.00	431
11	N-C		11.000	40.00	440
12	R-R	6		7.66	46
12	T-C		10.890	40.00	436
13	R-R	21		7.66	160
14	A-R	28		7.66	214
14	R-R	25		7.66	192
15	R-R	3		7.66	22
16	A-R	35		7.66	268
16	R-R	80		7.66	612

Traffic Zone	Land Use	Dwelling Units	1,000 Square Feet	Daily Trip Rate	Daily Two-way Trips
17	T-R	12		7.66	91.92
18	R-R	10		7.66	76.6
19	R-R	10		7.66	76.6
20	T-C		10.890	40.00	436
21	T-C		10.890	40.00	436
22	M-F	12		5.50	66
22	R-R	47		7.66	360
23	T-R	16		7.66	123
23	M-F	11		5.50	60.5
23	R-R	30		7.66	230
24	R-R	6		7.66	46
25				15.00	0
26				15.00	0
27				15.00	0
28	M-F	8		5.50	44
29	T-R	17		7.66	130
30				15.00	0
31	T-C		36.480	40.00	1459
32	T-C		17.970	40.00	719
32	T-R	8		7.66	62
33	R-R	30		7.66	230
33	T-C		38.115	40.00	1525
34	R-R	20		7.66	153
35	C-C		87.120	40.00	3485
35	T-C		10.890	40.00	436
36	M-F	75		5.50	412.5
37	T-C		21.780	40.00	871
38	R-R	50		7.66	384
39	R-R	30		7.66	230
39	T-R	20		7.66	153
40	A-R	10		7.66	76.6

Traffic Zone	Land Use	Dwelling Units	1,000 Square Feet	Daily Trip Rate	Daily Two-way Trips
40	N-C		10.890	120.00	1307
40	R-R	30		7.66	230
40	T-R	10		7.66	76.6
41	A-R	3		7.66	22
41	R-R	40		7.66	306
41	T-R	14		7.66	107
42	A-R	3		7.66	22
42	R-R	54		7.66	414
42	T-C		21.780	40.00	871
43	A-R	3		7.66	22
43	R-R	54		7.66	414
44	A-R	2		7.66	16
44	R-R	54		7.66	414
46	R-R	50		7.66	384
47	C-S		21.780	15.00	327
48				15.00	0
49	R-R	14		7.66	108
50	A-R	10		7.66	76.6
50	M-F	200		5.50	1100
51	R-R	165		7.66	1602
51	M-F	21		5.50	115.5
51	T-C		21.780	40.00	871
52	L-I		729.630	6.97	5086
53	A-R	59		7.66	452
53	L-I		196.020	6.97	1366
54	A-R	50		7.66	383
54	R-R	47		7.66	360
55	A-R	50		7.66	383
55	R-R	50		7.66	383
56	M-F	30		5.50	165
56	R-R	20		7.66	154

Traffic Zone	Land Use	Dwelling Units	1,000 Square Feet	Daily Trip Rate	Daily Two-way Trips
57	A-R	60		7.66	460
57	R-R	75		7.66	575
58	R-R	42		7.66	322
58	T-C		10.890	40.00	436
59	A-R	61		7.66	467
59	M-F	15		5.50	82.5
59	R-R	30		7.66	230
59	T-C		10.890	40.00	436
60				15.00	0
61	R-R	40		7.66	306
62	A-R	56		7.66	429
62	T-R	3		7.66	22
63	T-C		21.780	40.00	871
64	T-C		10.890	40.00	436
65	R-R	93		7.66	712
65	T-R	20		7.66	153
66	A-R	120		7.66	919
66	R-R	65		7.66	498
67				15.00	0
68				15.00	0
69	T-C		43.560	40.00	1742
70	M-F	23		5.50	126.5
70	T-C		38.115	40.00	1525
70	T-R	3		7.66	22
71	R-R	5		7.66	38
72	A-R			7.66	0
72	T-C		10.890	40.00	436
72	T-R	24		7.66	184
73	L-I		80.586	6.97	562
74	B-P		300.200	14.37	4314
74	C-S		108.900	15.00	1634

Traffic Zone	Land Use	Dwelling Units	1,000 Square Feet	Daily Trip Rate	Daily Two-way Trips
75	R-R			7.66	0
76	A-R	58		7.66	444
77	A-R	8		7.66	62
77	R-R	258		7.66	1976
78	A-R			7.66	0
78	R-R			7.66	0
78	M-F			5.50	0
79	A-R	558		3.76	2098
79	A-R	390		3.76	1466
80	M-F	100		5.50	550
80	R-R	20		7.66	153.20

Source: Dowling Associates, 1992.

TABLE 3.13-6
PROJECTED TRAFFIC VOLUMES, LANE REQUIREMENTS CLASSIFICATION AND LEVELS OF SERVICE

Roadway Segment	Existing Two-Way Volume	Projected Two-Way Volume	Proposed Lanes (#)	Divided/ Undivided	Proposed Classification	LOS D Threshold	LOS
Skyway							
South of Neal	20,370	23,726	4	D	Arterial	27,000	C
Neal to Pearson	26,880	40,301	4/6	D	Arterial	27,000/40,000	F/D-E
Pearson to Elliott	22,372	32,651	4/6	D	Arterial	27,000/40,000	F/C
Elliott to Oliver	24,258	34,578	4/6	D	Arterial	27,000/40,000	F/C-D
Oliver to Maxwell	22,218	31,786	4/6	D	Arterial	27,000/40,000	F/C
Maxwell to Bille	21,490	29,830	4/6	D	Arterial	27,000/40,000	F/C
Bille to Wagstaff	15,554	22,890	4	D	Arterial	27,000	C
Wagstaff to Clark	11,298	16,937	4	U	Arterial	21,000	C
Clark to Pentz	15,316	20,088	4	U	Arterial	21,000	D
North of Pentz	15,008	20,557	4	D	Arterial	27,000	C
Clark Road							
South of Pearson	8,010	18,074	4	U	Arterial	21,000	C
Pearson to Elliott	14,570	22,076	4	D	Arterial	27,000	C
Elliott to Bille	16,930	24,153	4	D	Arterial	27,000	C
Bille to Wagstaff	16,980	21,504	4	D	Arterial	27,000	C
Wagstaff to Skyway	9,180	11,978	2	D	Arterial	13,000	C
Pentz Road							
South of Pearson	4,630	7,780	2	U	Collector	8,000	C
Pearson to Bille	3,590	8,765	2	D	Collector	9,000	C
Bille to Skyway	4,910	6,270	2	U	Collector	8,000	C
Neal Road							
South of Skyway	3,934	5,302	2	U	Collector	16,000	C
Pearson Road							
Skyway to Clark	10,850	19,187	4	U	Arterial	21,000	C
Clark to Edgewood	6,310	12,690	2	U	Arterial	13,000	D
Edgewood to Pentz	4,340	8,826	2	U	Arterial	10,500	C
Elliott Road							
Skyway to Clark	11,396	14,942	4	U	Arterial	21,000	D
Clark to Sawmill	7,500	8,027	2	U	Collector	8,000	D
Sawmill to Pentz	N/A	3,347	2	U	Collector	8,000	C
Bille Road							
Skyway to Clark	8,246	12,012	2	U	Arterial	13,000	D
Clark to Sawmill	5,390	8,675	2	D	Collector	9,000	D
Sawmill to Pentz	3,720	6,567	2	U	Collector	8,000	C
Wagstaff Road							
Skyway to Clark	6,146	8,595	2	U	Arterial	10,500	C
Clark to Pentz	5,490	7,369	2	U	Collector	9,000	C
Sawmill Road							
Pearson to Bille	2,420	2,670	2	U	Collector	8,000	C
South of Pearson	830	1,178	2	U	Collector	8,000	C

Roadway Segment	Existing Two-Way Volume	Projected Two-Way Volume	Proposed Lanes (#)	Divided/ Undivided	Proposed Classification	LOS D Threshold	LOS
Rocky Lane Wagstaff to Skyway	924	924	2	U	Collector	8,000	C
Maxwell Drive Elliott to Skyway	2,996	3,249	2	U	Collector	8,000	C
Central Park Drive Maxwell to Clark	2,160	2,601	2	U	Collector	8,000	C
Nunneley Road Pearson to Sawmill	2,730	3,123	2	U	Collector	8,000	C
Buschmann Road Foster to Clark	2,560	2,631	2	U	Collector	8,000	C
Roe Road Neal to Foster	500	1,000	2	U	Collector	8,000	C
South Libby Road South of Pearson	500	1,000	2	U	Collector	8,000	C
Edgewood Lane South of Pearson	500	1,000	2	U	Collector	8,000	C

Source: **Dowling Associates** standard traffic model - figures are projected for the year 2008.

3.14 PUBLIC FACILITIES AND SERVICE

Setting

The descriptions of Paradise law enforcement, fire protection, solid waste, schools, and park and recreation facilities contained in Chapter 14 of Volume III, *Environmental Setting Document*, are still accurate and valid under the revised draft *General Plan*. The discussion of wastewater found in Section 14.9 of that document has been revised to reflect the changes in the revised plan.

Impacts

The identified potential impacts to public services resulting from implementation of the draft *General Plan* are all still valid under the revised draft *General Plan* except for Impact No. 3-14.10. This impact relates to the potential effects of constructing a formal community collection sewer system, which was a strong assumption in the original plan. The revised draft *General Plan* states that discussions concerning some form of community sewer system may occur within the fifteen-year life of the plan, but it no longer is an objective calling for construction to be completed with three to four years after plan adoption. It is therefore concluded that the potential for impacts resulting from the construction activities are significantly reduced.

In addition, it is assumed that because the build out projections and population estimates have been reduced, potential impacts resulting from plan implementation will likewise be reduced.

Policy/Mitigation

Most of the policy statements/mitigations measures listed to offset the potential impacts related to public services have been retained in the revised draft *General Plan*. All have been renumbered, and the following have been deleted because of redundancy and/or they are no longer needed to provide mitigation: LUP-19, LUP-20, LUI-14, OCEP-20, OCEP-34, OCEP-41.

- In addition, LUP-25 has been revised to read:

  The town should designate general locations for new schools, fire stations, and parks/open space, in the planning area, and shall reflect the general location of these future facilities on the land use diagram. The actual location of fire stations shall be in conformance with the criteria established in the safety element. The actual location of new parkland shall be in conformance with the criteria established in the open space/conservation/energy element.

- SI-6 has been renumbered SI-5, and has been combined with original SI-7.

- LUP-11 has been renumbered to LUP-14, and revised to read:

  Growth and land use development should be linked to the availability of public services and facilities, and to the degree of overall infrastructural and environmental constraints affecting property in the Town of Paradise.

Conclusions

Even though the projected build out and population estimates have been reduced as a result of the revised draft *General Plan*, the policy statements and mitigation measures have basically been retained. Some have been either modified or deleted depending upon their applicability given the thrust of the revised draft *General Plan*.

Increased water consumption is no longer considered a significant unavoidable cumulative impact because of the dramatic reduction in potential build out and total population estimates in the planning area. In addition, the revised draft *General Plan* emphasizes growth management based upon environmental and infrastructural constraints analysis. If domestic water service or water for fire protection cannot be assured, a development proposal cannot be approved by the town.

3.15 SCENIC AND CULTURAL RESOURCES

Setting

The description of the town history, and scenic and cultural resources within the planning area contained in Sections 3.1 and 3.15 of Volume III, *Environmental Setting Document*, are still valid and accurate under the revised draft *General Plan*.

Impacts

The two identified impacts relating to scenic and cultural resources involve the potential disturbance of archaeological sites and scenic resources resulting from implementation of the plan and future build out. These impacts still have the potential to occur, yet their likelihood are lessened because of the reductions in build out potential and population estimates.

Policy/Mitigation

Most of the policy statements/mitigation measures contained in the draft *General Plan* intended to lessen potential impacts upon cultural resources have been retained in the revised draft *General Plan*. However, all have been renumbered, and some have been deleted because they were either redundant, infeasible, or no longer necessary. The following policy statements have been deleted: LUP-79, LUP-66, OCEP-44, OCEP-66, OCEI-26, OCEI-28.

Conclusions

The reduction in build out projections and population estimates reduces the potential for the impacts to occur. The remaining policy statements and mitigations measures provide reasonable and appropriate assurances that all potential impacts to cultural resources will be lessened to a level of insignificance.

4.0 SUMMARY OF POTENTIAL IMPACTS

The draft EIR concludes that implementation of the original draft *General Plan* would result in the following three significant unavoidable cumulative impacts:

1. Degradation of air quality
2. Increased water consumption
3. Degradation of wildlife resources

Air Quality

While the degradation of air quality must still be considered an unavoidable cumulative impact, its severity has been significantly reduced by the reduction in potential build out units and total population estimates established in the revised draft *General Plan*.

Water Consumption

Water consumption will increase as a result of the revised draft *General Plan*. Obviously, the demand for domestic water service and water for fire protection will not be as great with the implementation of the revised plan, because

build out projections and population estimates have been reduced. In addition, the revised draft *General Plan* emphasizes a growth management strategy based upon the analysis of environmental and infrastructural constraints. If domestic water service or water for fire protection cannot be delivered to a proposed development in the future, the development cannot be permitted under the policies of the revised draft *General Plan*.

Wildlife

As a result of the revised draft *General Plan*, the degradation of wildlife resources has been reduced to a level of insignificance. This is due to the dramatic reduction of potential residential densities in the southern portion of town, the existence of the town tree ordinance, reduced densities and intensities in the southerly secondary planning area, and the lack of wetlands and/or vernal pool areas within the primary study area. In addition, the revised draft *General Plan* emphasizes a growth management strategy based upon environmental and infrastructural constraints.

5.0 GENERAL PLAN ALTERNATIVES

The discussion of *General Plan* (project) alternatives found in Chapter four of the draft EIR is still valid and important. However, the revised draft *General Plan* constitutes a sixth alternative for consideration. Alternatives one through four were created by the four citizen subcommittees, and the fifth, which is described as the environmentally superior alternative was a hybrid of the first four. The General Plan Revision Steering Committee had melded many of the components of the four citizen subcommittee alternatives into a "preferred alternative, which become the draft *General Plan*.

The revised draft *General Plan* as described in the second section of this EIR addendum, is considered a more environmentally superior alternative than the previous "preferred alternative" (original draft *General Plan*) for the following reasons:

1. Build out projections in both the primary and secondary planning areas have been significantly reduced.

2. Population estimates within the planning area have been significantly reduced.

3. The safeguards, standards, and mitigation measures contained in the original draft *General Plan* intended to prevent incompatible and significantly increased growth in the secondary and tertiary planning areas have been retained in the revised draft *General Plan*.

6.0 MANDATORY CEQA SECTIONS

Sections 5.1 through 5.5 of the draft EIR are still accurate and valid as a result of the revised draft *General Plan*. The identification of air quality and water consumption as significant cumulative impacts still exist, yet are reduced because build out projections and population estimates have been significantly reduced.

7.0 *ADDENDUM TO THE FINAL ENVIRONMENTAL IMPACT REPORT AS IT RELATES TO THE PROPOSED 1994 PARADISE GENERAL PLAN AMENDMENT TO THE TEXT OF THE HOUSING ELEMENT (GA-98-001)*

TOWN OF PARADISE

ADDENDUM TO THE "FINAL ENVIRONMENTAL IMPACT REPORT" FOR THE 1994 PARADISE GENERAL PLAN AS IT RELATES TO THE PROPOSED 1994 PARADISE GENERAL PLAN AMENDMENT TO THE TEXT OF THE HOUSING ELEMENT (GA-98-001)

PREPARED JUNE 12, 1998
TOWN OF PARADISE
COMMUNITY DEVELOPMENT DEPARTMENT, PLANNING DIVISION

The proposed amendment to the 1994 Paradise General Plan entails a proposal to establish minor text changes of the housing element in response to comments received from the State Department of Housing and Community Development and in order to make the Paradise Housing Element in compliance with current State housing element law.

This addendum has been prepared pursuant to Section 15164 of the California Environmental Quality Act. As set forth in Section 15164, the Addendum does not require circulation for public review. In compliance with Section 15162 of the California Environmental Quality Act the following findings are made for the Addendum:

- **No substantial changes are proposed in the project which would require major revisions of the EIR.**

DISCUSSION: The Town of Paradise is proposing the establishment of text amendments to the housing element of the 1994 Paradise General Plan in response to comments received from the State Department of Housing and Community Development. The amendment entails text changes to the housing element that expand or add discussion of the following topics: 1) analysis of governmental constraints upon housing, 2) identification and analysis of lands suitable for residential development as related to zoning and available public facilities and services, and 3) an analysis of existing assisted housing developments that are eligible to change from low-income housing uses, etc. The topics discussed within the proposed housing element text amendments do not involve any new significant environmental effects nor any increase in the severity of previously identified significant effects of the 1994 Paradise General Plan EIR.

- **No substantial changes occurred with respect to the circumstances under which the project is undertaken which will require major revision of the previous EIR due to the effects or a substantial increase in the severity of previously identified significant effects.**

DISCUSSION: As indicated above, no new impacts are associated with the changes to the text of the housing element.

- **New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time that the previous 1994 Paradise General Plan EIR was certified as complete.**

DISCUSSION: No new information which would result in a significant impact not identified in the 1994 Paradise General Plan EIR has surfaced as a result of this proposed Town of Paradise action (GA-98-001).

It is concluded that the text changes of the housing element to be established by this proposed amendment to the 1994 Paradise General Plan does not require the preparation of a subsequent EIR due to the reasons stated above, and that the use of an Addendum is consistent with the provisions of the California Environmental Quality Act.

NOTE: On July 7, 1998 the Town Council of the Town of Paradise adopted this amendment document.