



COMPREHENSIVE LAND USE PLAN FRAZIER LAKE AIRPARK



ADOPTED BY
SAN BENITO COUNTY
AIRPORT LAND USE COMMISSION
HOLLISTER, CALIFORNIA
NOVEMBER 15, 2001

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November 15, 2001

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Section 1

1 INTRODUCTION AND BACKGROUND

1.1 PURPOSE AND SCOPE

This Comprehensive Land Use Plan (CLUP) is intended to safeguard the general welfare of the inhabitants within the vicinity of the Frazier Lake Airpark (also referred to as the "Airport" throughout this report). This CLUP is also intended to ensure that surrounding land uses do not affect the Airport's continued operation for the next twenty-year planning period.

Specifically, the CLUP seeks to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities adversely affect navigable airspace. The implementation of this CLUP is expected to prevent future incompatible development from encroaching on the Airport and allow for its development in accordance with the 1984 *Frazier Lake Airpark Layout Plan* that was approved by San Benito County (the County) in October 1984 and that was approved by the Caltrans Division of Aeronautics (Caltrans) on July 18, 1984.

The aviation activity forecasts for the Airport were updated to reflect the existing (1998) aviation activity and provide at least a 20-year forecast of activity. The updated aviation activity forecasts formed the basis for preparation of 2020 aircraft noise contours. The Airport Layout Plan and updated aviation activity forecasts and 2020 aircraft noise contours formed the basis for preparation of this CLUP.

1.2 LEGAL AUTHORITY

The Public Utilities Code of the State of California, Sections 21670 et seq. requires each county to establish an Airport Land Use Commission (ALUC) and defines its range of responsibilities, duties and powers. The San Benito County Council of Governments has assumed the duties and responsibilities of the Airport Land Use Commission. The composition of the ALUC includes two members from the county, two members from the City of Hollister, and one member from the City of San Juan Bautista.

Section 21675 requires the ALUC to formulate a comprehensive land use plan for the area surrounding each public-use airport within San Benito County. The County has two public-use airports, Frazier Lake Airpark, and the Hollister Municipal Airport. Section 21675 also specifies that comprehensive land use plans will:

- (a) provide for the orderly growth of each public airport and the area surrounding the airport within the jurisdiction of the Commission, and will safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general. The Commission plan shall include a long-range master plan that reflects the anticipated growth of the airport during at least the next 20 years. This plan shall not be inconsistent with the State Master Airport Plan. In formulating a land use plan, the Commission may develop height restrictions on buildings, may specify use of land, and may determine building standards, including soundproofing adjacent to airports, within the planning area. The comprehensive land use plan shall not be amended more than once in any calendar year.*

1.3 CONTENTS OF THE COMPREHENSIVE LAND USE PLAN

The Comprehensive Land Use Plan contains several major elements:

- The existing and planned-for facilities at Frazier Lake Airpark that are relevant to preparing the CLUP;
- Appropriate noise, height, and safety restriction policies and land use compatibility standards;

- Specific findings of compatibility or incompatibility with respect to existing land uses, proposed General Plan land uses, or existing zoning controls; and
- Specific actions that need to be taken to make the County of San Benito General Plan and/or Zoning Ordinances consistent with the Comprehensive Land Use Plan.

The CLUP establishes an airport land use planning area, referred to as the Airport Influence Area (AIA), which sets the boundaries for application of ALUC Policy. The CLUP contains the relevant policies and guidelines for land use compatibility and specific findings of compatibility or incompatibility of land uses within the AIA. Of particular interest to the ALUC are areas "not already devoted to incompatible uses" and, more specifically, undeveloped lands within the AIA. The planning effort is focused on identifying these lands because the policies and standards of the plan are intended to control the compatibility of future development in these areas.

The CLUP is not intended to set forth land use for a specific parcel of land, although the plan establishes development standards or restrictions that may limit or prohibit certain types of uses and structures on a parcel. The CLUP is not retroactive with respect to existing incompatible land uses, but discusses actions to be taken when expansion, replacement or other significant changes are made to incompatible land uses.

1.4 TECHNICAL REFERENCE DOCUMENT

A separate Technical Reference Document is being prepared for the County of San Benito. The Technical Reference Document will contain the major reference documents associated with the land use compatibility planning criteria in this CLUP. The Document will be available for viewing at the City of Hollister Community Development Department offices along with the Hollister Municipal Airport Technical Reference Document.

Section 2

2 FRAZIER LAKE AIRPARK AND ENVIRONS

2.1 AIRPORT ROLE

Frazier Lake Airpark is geographically located in the northwest area of San Benito County approximately 8 miles northwest of Hollister, 40 miles southeast of San Jose, and 40 miles northeast of Monterey. The Airport is located on 156 acres of land, at an elevation of 153 feet above mean sea level. The Airport is owned and operated by the Frazier Lake Airpark Corporation. The location of the Airport with respect to nearby communities and other airports is illustrated on Figure 1.

Frazier Lake Airpark is unique in two respects; one of its runways is irrigated turf, the other runway surface is water. The turf runway attracts pilots from other airports due to the unique experience of landing on a grass surface. The water runway is used both by based aircraft, and transient seaplanes needing a rest stop or sanctuary from adverse weather conditions.

Frazier Lake Airpark is classified as a General Aviation Airport. General Aviation Airports are airports that do not have scheduled commercial air-carrier service. General Aviation Airports are the most convenient source of air transportation for about 19 percent of the U.S. population and are particularly important to rural areas based on the latest publication of the Federal Aviation Administration's (FAA) *National Plan of Integrated Airport Systems (NPIAS)* (1998-2002).

Publicly owned Hollister Municipal Airport (included in the NPIAS) is the nearest airport to Frazier Lake Airpark. Hollister Municipal Airport is located approximately 6 nautical miles southeast of Frazier Lake Airpark in the City of Hollister. Hollister Municipal Airport offers general aviation service and support facilities and is the only other public-use airport in the County. Other general aviation airports in the region include the South County Airport, located 10 nautical miles to the northwest; the Watsonville Municipal Airport, located 16 nautical miles to the west; and the Salinas Municipal Airport located 19 nautical miles to the south.

The Airport has been used by aircraft from Hollister Municipal Airport as a temporary basing site during the times when Hollister Municipal Airport was not available for use.

2.2 AIRPORT LAYOUT PLAN

The previous Frazier Lake Airpark Airport Layout Plan was approved by the Caltrans Division of Aeronautics on July 18, 1984. The current Airport Layout Plan (ALP), illustrated on Figure 2, delineates the layout of existing and proposed airport facilities. This ALP has been reviewed by the FAA and was accepted by the Burlingame office on February 22, 2001. This Airport Layout Plan was also submitted to Caltrans for their review and was accepted on March 29, 2001. The Caltrans-approved ALP is used by Caltrans for Airport Improvement Program (AIP) grant funds for eligible construction and development projects. FAA approval is a prerequisite for an instrument approach procedure to the Airport.

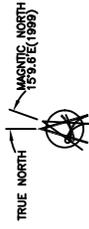
Selected data about the existing Airport facilities and information about its planned development are presented in the following paragraphs.

2.2.1 Existing Airport Facilities

The existing airfield consists of two parallel runways, Runways 5-23 and 5W-23W. Runway 5-23 is an irrigated grass surface 2,500 feet long by 100 feet wide. This runway is equipped with low intensity runway lights (LIRLs), with runway end identifier lights (REILs) on Runway 23. Runway 5W-23W is a waterway (seaplane lane) 3,000 feet long by 60 feet wide by 24 inches deep. This runway has no runway lights and is intended for daylight visual use only. The existing maximum gross weights of aircraft by gear configuration are as follows:

LOCATION MAP

LEGEND	
	INTERSTATE HIGHWAY
	U.S. HIGHWAY
	CALIFORNIA STATE HIGHWAY
	AIR CARRIER AIRPORT
	GENERAL AVIATION AIRPORT

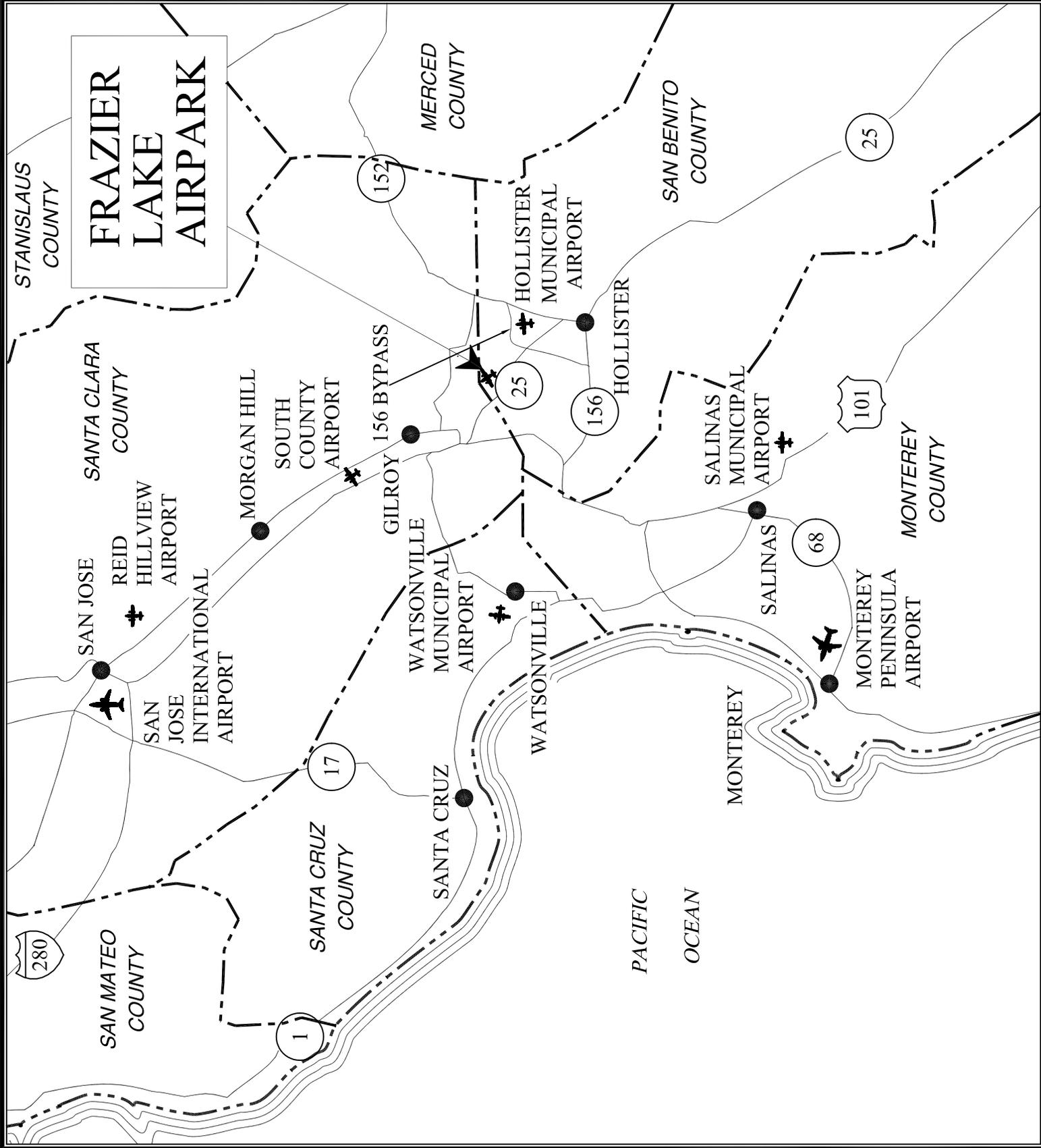


NO GRAPHIC SCALE

NOTE:
THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR NAVIGATIONAL PURPOSES.

TR ARIES CONSULTANTS LTD.

FIGURE NO. **1**
 FRAZIER LAKE AIRPARK
 SAN BENITO COUNTY, CALIFORNIA
 NAME: FLA-011LM NO: 4170404
 DATE: 12-13-99 PLOT SCALE: 1"=52,000'



Aircraft Maximum Gross Weight (pounds)

	Landplane	Seaplane
5-23	6,700 lbs.	
5W-23W		3,000 lbs.

Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*, defines imaginary surfaces that are used to identify obstructions to air navigation. The following tabular data shows the FAR Part 77 approach slopes, compared with existing obstacle/obstruction controlled approach slopes and other information relative to the controlling obstacle/obstructions based on the latest FAA Form 5010-1, Airport Master Record for Frazier Lake Airpark.

<u>Controlling Obstacle/Obstruction:</u>						
Location from Runway Threshold Related to Extended Runway Centerline						
Runway No.	Elevation	FAR Part 77 Slope	Actual Slope	Type of Obstruction	Height Above Runway Threshold	Location
5	153	20:1	33:1	Power line	40E	1,350 feet along and on the extended runway centerline
23	153	20:1	50:1			
5W	151	20:1	27:1	Power line	40E	1,100 feet along and on the extended runway centerline
23W	151	20:1	50:1			

Runway Protection Zones are areas established off each runway end to enhance the protection of people and property on the ground. The following defines the ultimate Runway Protection Zones for each runway.

Runway No.	Protection Zone	Length (feet)	Inner Width (feet)	Outer Width (feet)
5	Non-precision	1,000	500	800
23	Non-precision	1,000	500	800
5W	Visual	1,000	250	450
23W	Visual	1,000	250	450

Caltrans requires that the airport sponsor have adequate property interest in the Runway Protection Zones (RPZs) as a condition of receiving certain grants. Portions of the Runway 5 and 5W Runway Protection Zones are outside the Airport boundary.

The main entrance to the Airport is from Frazier Lake Road on the west side of the Airport. The aircraft basing areas are located on the northwest side of the Airport. There are 20 aircraft tiedown spaces and 89 hangars in this area. Services available at the Airport include restrooms, pay telephone, day camping and picnic facilities.

2.2.2 Future Airport Facilities

A GPS Non-precision Instrument Approach is anticipated for Runway 5-23 within the 20-year planning period. (The FAA has indicated an eventual goal of at least one instrument approach for all public use airports.)

In addition, the 1980 Airport Use Permit provides for additional facilities including hangars, tiedowns, an aviation fuel facility and a clubhouse facility.

2.3 AVIATION ACTIVITY

The earlier 1984 *Frazier Lake Airpark Airport Layout Plan* (ALP) is over 15 years old, and the forecast aviation activity is out of date. The 1981 *Environmental Assessment/Environmental Impact Report for the Frazier Lake Airpark project* (EA/EIR) stated that 100 aircraft would be based at the Airport. Aircraft noise contours prepared for EA/EIR were based on an estimated 110,000 annual aircraft operations. However, no technical analysis was presented in the EA/EIR to support this number of annual aircraft operations.

As the CLUP is a 20-year planning document, the existing base year (1998) aviation activity was reviewed and updated aviation activity forecasts were prepared through the year 2020. A report on the forecast aviation activity was submitted to the County on September 28, 1999 for review and comment in preparation of the CLUP. A summary of the existing and forecast aviation activity is presented in Table 2-1 and discussed in the following paragraphs.

2.3.1 Based Aircraft

The number of based operational aircraft at Frazier Lake Airpark is forecast to increase from 79 in 1998 to 123 by 2020 as shown in Table 2-1. (Over 92 percent of the existing based aircraft at the Airport in 1998 are registered to owners residing in Santa Clara County.) The growth in forecast-based aircraft at the Airport is due in part to the population increases forecast for the County. In addition, based on forecast employment data, over one-half the total population employed in the County by 2020 will be commuting to jobs or businesses located outside the County. This 150 percent increase in employment will contribute to a number of aircraft being relocated from other airports.

As the San Jose International Airport is expanded to accommodate increasing air carrier activity, general aviation based aircraft will be redistributed to other Bay Area airports. Some of these aircraft owners will move their aircraft from San Jose International Airport to Frazier Lake Airpark.

As economic conditions improve, the pilots currently located at the Airport are likely to purchase an additional aircraft with different characteristics to allow them to enjoy a different aspect of flight activity.

2.3.2 Aircraft Operations

The number of annual aircraft operations at Frazier Lake Airpark, as presented in Table 2-1, is forecast to increase from an estimated 9,800 in 1998 to 23,990 by 2020.

2.3.2.1 General Aviation

Since no commercial passenger (air carrier) operations are forecast for the planning period, general aviation will continue to account for all of the operations at the Airport, increasing from an estimated 9,800 annual operations in 1998 to 23,990 annual operations by 2020.

Table 2 - 1

UPDATED AVIATION ACTIVITY FORECASTS

Frazier Lake Airpark

1998 – 2020

	Base Year	Forecast				
	1998	2000	2005	2010	2015	2020
GENERAL AVIATION BASED AIRCRAFT						
Single-engine	77	80	84	94	102	114
Multi-engine – propeller	1	1	2	2	3	4
Multi-engine – jet	0	0	0	0	0	0
Helicopter	1	1	2	2	3	3
Other	<u>0</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>3</u>
Total based operational aircraft	79	83	90	100	111	123
AIRCRAFT OPERATIONS						
General aviation						
-Itinerant	6,400	7,190	8,640	10,600	13,030	15,990
-Local	<u>3,200</u>	<u>3,600</u>	<u>4,320</u>	<u>5,300</u>	<u>6,510</u>	<u>8,000</u>
Subtotal – general aviation operations	9,800	10,790	12,960	15,900	19,540	23,990
Air Taxi	0	0	0	0	0	0
Military	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total operations	9,800	10,790	12,960	15,900	19,540	23,990
OPERATIONS PER BASED AIRCRAFT	124	130	144	159	176	195
Source: Airport Management						

Local Operations. Local operations are performed by aircraft operating in the local traffic pattern and aircraft departing for, or arriving from, local practice areas. These operations include training operations (referred to as touch-and-goes) by both aircraft based at the Airport and aircraft from other airports in nearby counties. (Frazier Lake Airpark is an attractive practice surface due to it having the only public use irrigated grass runway in California.) The local operations include the activities of based aircraft pilots maintaining their landing skills and activities of itinerant aircraft pilots who come to practice landing on the grass runway. Local operations also are forecast to include glider operations at the Airport.

Local operations are forecast to remain constant at 33 percent of total general aviation aircraft operations and will continue to account for the smaller number of general aviation operations.

Itinerant Operations. Itinerant operations are conducted by aircraft that takeoff from one airport and land at another airport, or the reverse. They include the operations of aircraft based at the Airport and flights of other aircraft to and from the Airport. The itinerant operations at the Airport include aircraft based on the airport used for personal business and recreational activities. These types of aircraft operations include multiengine aircraft such as the Beech Baron, single-engine seaplanes and single-engine land planes. Several antique military aircraft such as the Stearman PT-13, Navy N3N, Aeronca L2, Stinson L5, Ryan PT-22 and Vultee BT-13 are also based at the Airport and are on display as a museum several times during the year. The operations of these aircraft are included in itinerant operations when the aircraft are taken to airshows outside the area. Other activities, including rides in these older aircraft, are included in the local operations described above.

Itinerant operations are forecast to remain constant at 67 percent of total general aviation aircraft operations over the forecast period and will continue to account for the larger number of aircraft operations.

2.3.2.2 Air Taxi

In 1998 there were no Air Taxi operations at the Airport. Air taxi operations include the unscheduled "for hire" operations carrying passengers and cargo to and from the area including any operations by bank couriers or other small package carriers. Based on discussions with persons knowledgeable of the Airport and its activities, no Air Taxi operations are foreseen through the year 2020.

2.3.2.3 Military

Based on discussions with persons knowledgeable of the Airport and its activities, there were no military operations in 1998, although a limited number of military helicopter operations did occur in 1997. The runways are not suitable for fixed-wing military aircraft. Current military aircraft require runways of greater length than those at the Airport.

Military helicopter operations are not expected to contribute in a predictable manner to the number of annual airport operations through 2020.

2.4 AIRPORT ENVIRONS

Figure 3 presents the land use designations within the Airport environs based on the current San Benito County General Plan. The Airport property is within the limits of San Benito County. The predominant land uses in the Airport environs are Agricultural Productive (AP) and Agricultural Rangeland (AR).

GENERAL PLAN LAND USE



NOTE:
THIS DRAWING IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR NAVIGATIONAL PURPOSES.

NO.	DATE	REVISIONS

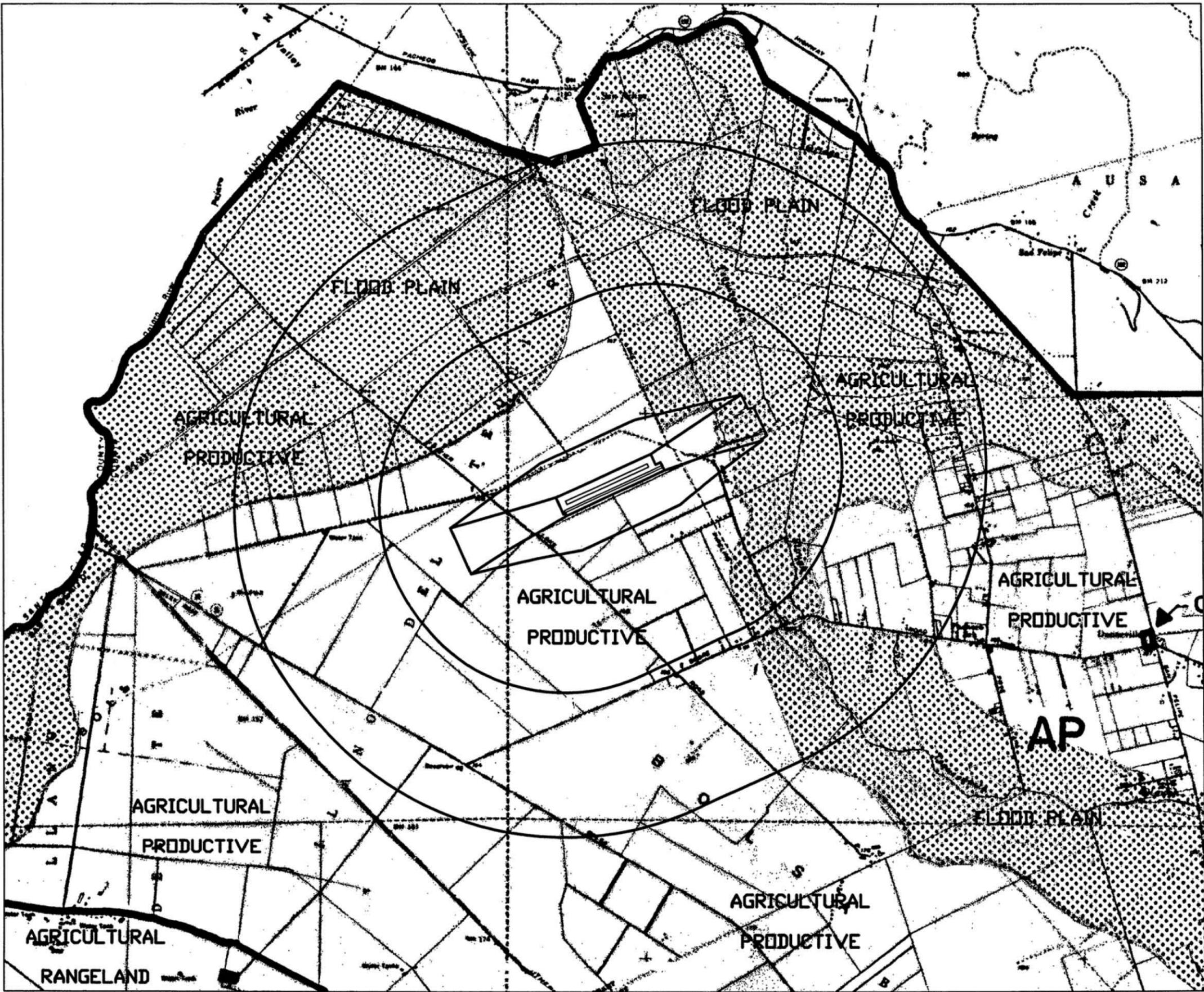
FAA APPROVED:
REFER TO LETTER DATED

WALTER WINDUS, PE

FRAZIER LAKE AIRPARK
SAN BENITO COUNTY, CALIFORNIA

NAME: FLA-01-GPLU-D NO: 4300-16
DATE: 02-05-01 PLOT SCALE:

FIGURE
3
OF
7



Section 3

3 LAND USE COMPATIBILITY GUIDELINES

3.1 OVERVIEW

Land use compatibility policies and standards are based on community values, sound technical knowledge, and acceptable analytical methods. These policies and compatibility criteria form the basis for evaluating existing land use compatibility and provide the foundation for the San Benito County Airport Land Use Commission (ALUC) policies. These standards focus on the three areas of ALUC responsibility including aircraft noise, the control of structures in navigable airspace, and the safety of persons on the ground. These compatibility criteria are contained in relevant State and Federal statutes and regulations and are discussed in this section.

Federal, State and other local agencies have developed and published guidelines for airport land use compatibility planning. Unfortunately, no civilian or military authority has established regulations or statutes that specify a single methodology for mitigating the incompatibilities between an airport and its environs, nor have such incompatibilities been adequately defined. The enabling legislation for the San Benito County Airport Land Use Commission offers some guidance while directing the Commission to provide for the orderly growth of the Airport and the area surrounding the Airport, and to safeguard the general welfare of the inhabitants within the vicinity of the Airport and the public in general. The legislation further enables the Commission to develop height restrictions on buildings, to specify the use of land, to determine building standards, including soundproofing, and to assist local agencies in ensuring compatible land uses in the vicinity of the Airport to the extent that the land in the vicinity of the Airport is not already devoted to incompatible uses. The Commission is also empowered to coordinate planning at the State, regional and local levels so as to provide for the orderly development of air transportation, while at the same time protecting the public health, safety, and welfare.

3.2 LAND USE COMPATIBILITY CRITERIA

The principal source for airport land use compatibility planning is the December 1993 *Airport Land Use Planning Handbook* (1993 Handbook) published by the California Department of Transportation, Division of Aeronautics (Caltrans). The 1993 Handbook provides guidelines for formulating compatibility criteria and policies for preparing Comprehensive Land Use Plans (CLUPs). Noise and safety compatibility concepts and issues are presented, and copies of relevant legislation and examples of mitigation measures, such as model noise and aviation easements are included. The 1993 Handbook is available for viewing at the City of Hollister Community Development Department offices.

3.3 NOISE RESTRICTION AREA

Airport noise affects many communities. At lower levels, airport noise can interfere with sleep, conversation, or relaxation. It also may disrupt school and work activities. At higher levels, airport noise may make outdoor activities impossible and may begin to raise health concerns with respect to hearing loss and stress-related problems. However, hearing damage from airport noise may not be a problem for nearby neighbors because noise levels are simply not of sufficient intensity to cause such damage. An exception to this is the exposure a ground crew member receives during the handling of a jet aircraft. Similarly, medical studies are inconclusive on a cause-and-effect relationship for non-auditory health concerns near airports. A more general conclusion is that noise may have an additive effect for some people with anxieties, ulcers, and tension illness.

All levels of government share responsibility for addressing the airport noise issue. The Federal government establishes noise standards for aircraft as published in Federal Aviation Regulations (FAR) Part 36, *Noise Standards: Aircraft Type and Airworthiness Certification*, and conducts research on noise abatement techniques and noise compatibility. The preparation of a special airport noise study under the provisions of FAR Part 150, *Airport Noise Compatibility Planning*, provides technical assistance to the airport operator in planning and implementing a noise compatibility program. The State of California also prescribes noise standards for all airports as defined in Title 21, *Airport Noise Standards*, of the California

Code of Regulations, and sets noise insulation standards as defined in Title 24, *California Building Standards Code* of the California Building Standards Commission. The airport operator may develop airport noise control programs and enact operational restrictions to control and reduce noise levels in the community. Finally, local governments have the responsibility to limit the exposure of the population to excessive airport noise levels through the planning and zoning process.

3.3.1 Airport Noise Descriptors

To adequately address the airport noise issue, local governments need a standard way to measure and describe airport noise and establish land use compatibility guidelines. The County of San Benito has adopted the Community Noise Equivalent Level (CNEL) for determining land use compatibility in the community environment.

The Community Noise Equivalent Level (CNEL) descriptor is a method of averaging single-event noise levels over a typical 24-hour day and applying penalties to noise events occurring during the evening (7 p.m. to 10 p.m.) and night (10 p.m. to 7 a.m.) hours. CNEL is usually defined in terms of average annual conditions, so that the CNEL measured on a given day may be either less than or greater than the annual average.

The State of California uses the CNEL descriptor to describe land use compatibility with respect to aircraft noise exposures. CNEL is the noise descriptor standard defined in Title 21 of the California Code of Regulations, *Airport Noise Standards*, and the standard specified for evaluation of exterior and interior noise impacts in Title 24 of the California Building Standards Commission, *California Building Standards Code*. The CNEL is identified as one of two noise descriptors used in the preparation of a noise element of a general plan according to guidelines established by the Office of Noise Control, California Department of Health Services (now documented as *General Plan Guidelines, Appendix A*).

The Federal Aviation Administration (FAA) recognizes the CNEL as essentially equivalent to the Yearly Day-Night Average Sound Level (DNL), which is the basis for FAA recommendations for land use compatibility with respect to aircraft noise described in FAR Part 150, *Airport Noise Compatibility Planning*.

The decibel (dB) is the unit of measurement for the magnitude of a sound. A decibel is equal to the logarithm of the ratio of the intensity of the sound to the intensity of an arbitrarily chosen standard sound, specifically a sound just barely audible to an unimpaired human ear (e.g., 55, 60, 65, 70 and 75 dB).

3.3.2 Land Use Compatibility Standards – California

Land use compatibility guidelines for airport noise are included in the 1993 Handbook. Amendments to the law enacted in October 1994 mandate the use of these guidelines in the preparation of airport land use plans. These guidelines were originally developed in 1983 after considering State Office of Noise Control (ONC), FAA, and U.S. Department of Housing and Urban Development (HUD) guidelines together with a review of available airport land use plans. Existing Federal and State laws were reviewed as part of the updated 1993 Handbook. The State ONC criteria established the 60 dB CNEL as a residential threshold value to distinguish normally acceptable from conditionally acceptable situations.

The Caltrans guidelines for land use compatibility standards extend below the Federal 65 dB CNEL, as the Federal threshold does not sufficiently explain the annoyance area surrounding general aviation airports. The frequency of operations from some airports, visibility of aircraft at low altitudes and typically lower background noise levels around many general aviation airports are all believed to create a heightened awareness of general aviation activity and potential for annoyance outside of the 65 dB CNEL contour.

At the 60 dB CNEL level, the California Building Code, Section 1208A.8.3 requires an acoustical analysis of proposed residential structures, other than detached single-family dwellings, to achieve an indoor noise level of 45 dB CNEL.

The noise attenuating properties of existing types of construction were considered in setting state standards. Typical wood frame construction with drywall interiors provides noise reduction of between 15 and 20 dB. Thus, residential units exposed to outdoor noise in the range between 60 and 65 dB CNEL can be attenuated to achieve the 45 dB CNEL level indoors.

3.3.3 Land Use Compatibility Standards - San Benito County

In the August 1984 *Amended Noise Element* of the San Benito County General Plan, the County adopted the 60 dB CNEL as the clearly acceptable standard for residential uses. Beyond the 60 dB CNEL, residential uses are normally acceptable, however, the noise exposure is great enough to be of some concern.

3.3.4 Frazier Lake Airpark Noise Contours

An analysis of annual aircraft operations and related noise levels for Frazier Lake Airpark was made to prepare CNEL noise exposure maps for the year 2020 forecast aircraft operations based on the existing runway configuration.

The Federal Aviation Administration's (FAA) Integrated Noise Model (INM) Version 5.2a was used to prepare CNEL noise exposure maps based on the FAA aircraft noise level database and airport operational factors described below. The INM was developed by the FAA and represents the Federally-sanctioned and preferred method for analyzing aircraft noise exposure. Version 5.2a is the currently available version of the INM, which incorporates an updated database of aircraft performance parameters and noise levels.

3.3.5 Aircraft Operations

Aircraft operational factors that can significantly affect overall noise levels as described by CNEL include the aircraft fleet mix, the number of daily operations and the time of day when aircraft operations occur. Runway use factors also significantly influence CNEL values. Trip length can affect aircraft single-event noise levels. An aircraft that is prepared for a long flight may carry more fuel and passengers than that for a short flight. The INM applies corrections to air carrier aircraft takeoff profiles to account for these differences, but makes no corrections to general aviation aircraft takeoff profiles.

Aircraft operational assumptions for the Airport were based upon analyses of airport activity provided by Airport Management. These assumptions are summarized in Tables 3-1 and 3-2.

Twin engine aircraft are represented by the INM BEC58P aircraft. The high-performance single-engine propeller aircraft such as the Cessna 210 were represented by the INM GASEPV aircraft, and standard single-engine propeller aircraft were represented by the INM GASEPF aircraft type. Single-engine fixed-pitch propeller aircraft (GASEPF) were assumed for 70 percent of the touch-and-go operations.

Descriptions of aircraft flight tracks were developed for use in the INM through discussions with Airport Management and review of the assumptions used for previous descriptions of aircraft operations at the Airport. Based on these data, generalized flight tracks were prepared for use in the noise modeling process to describe areas with a concentration of aircraft overflights. It is recognized that variations in flight paths occur at the Airport and that the tracks used for this analysis are a general representation of those flight tracks.

3.3.5.1 2020 CNEL Noise Exposure Contours

The Integrated Noise Model (INM) Version 5.2a was used to prepare CNEL noise exposure contours for the Airport based on the aircraft noise level and operational factors described in the previous sections.

Table 3 - 1

AIRPORT CONFIGURATION AND RUNWAY USE

Frazier Lake Airpark

2020

Airport Configuration				
Runway Configuration:	05-23 05W-23W			
Field Elevation:	153 feet MSL			
Temporal Distribution of Operations:	90 percent Day 7 percent Evening 3 percent Night			
Runway Use Factors				
Operations by Aircraft Class	Runway 05	Runway 23	Runway 05W	Runway 23W
<i>Takeoffs:</i>				
GA Aircraft	5%	90%	1%	4%
All Others	25%	75%	0%	0%
<i>Landings:</i>				
GA Aircraft	5%	90%	1%	4%
All Others	25%	75%	0%	0%

Source: Airport Management

Table 3 - 2
ANNUAL AIRCRAFT OPERATIONS
Frazier Lake Airpark
2020

Generalized Aircraft Type	Year 2020
GA Jet (Stage 2)	0
GA Jet (Stage 3)	0
Turbo Prop Twin	0
Piston Engine Twin Prop	525
Single-Engine Prop - High Performance	4,585
Single-Engine Prop - Standard	18,360
Helicopters	260
Gliders	260

Source: Airport Management

Version 5.2a, the most recent version of the INM, incorporates an updated database of aircraft performance parameters and noise levels.

User inputs to the INM include the following:

- Airport altitude and mean temperature
- Runway configuration
- Aircraft flight track definition
- Aircraft stage length (not applicable to Frazier Lake Airpark)
- Aircraft departure and approach profiles
- Aircraft traffic volume and fleet mix
- Flight track utilization by aircraft types

The INM database includes aircraft performance parameters and noise level data for numerous commercial, military and general aviation aircraft classes. When the user specifies a particular aircraft class from the INM database, the model automatically provides the necessary inputs concerning aircraft power settings, speed, departure profile, and noise levels. INM default values were used for all fixed-wing aircraft types.

After the model had been prepared for the various aircraft classes, INM input files were created containing the number of operations by aircraft class, time of day and flight track for annual average day aircraft operations and future operations.

From this data, the INM produces lines of equal noise levels, i.e. noise contours. The location of these noise contours become less precise with distance from the runway since aircraft do not follow each flight track exactly as defined in the model. However, they are accurate enough to indicate general areas of likely community response to noise generated by aircraft activity and serve as the basis for land use compatibility determinations.

3.3.6 Impacts on Land Use

The 55, 60, 65, 70, and 75 dB CNEL noise contours based on the forecast aircraft operations in 2020 are illustrated on Figure 4 and discussed below.

3.3.6.1 75 and 70 dB CNEL Noise Levels

The 75 and 70 dB CNEL aircraft noise contours are generally contained within the Airport boundaries with the following exceptions: The 70 dB CNEL contour extends approximately 100 feet beyond the Airport boundary to the northeast and approximately 200 feet beyond the airport boundary to the east over areas designated by the County as Agricultural Productive.

3.3.6.2 65 dB CNEL Noise Level

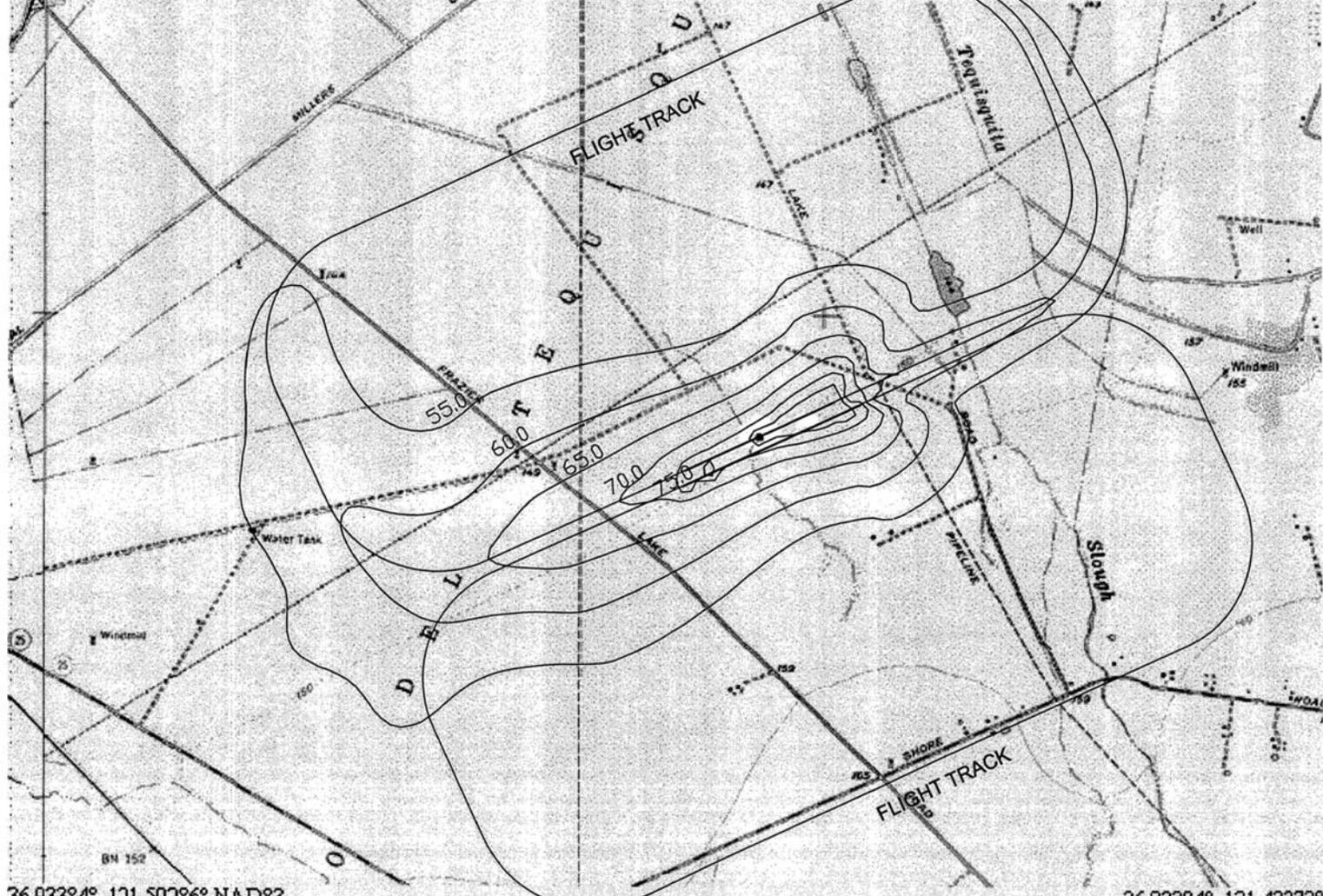
The 65 dB CNEL aircraft noise contour is also generally contained within the Airport boundary with the following exceptions: The 65 dB CNEL contour extends beyond the Airport boundary by about 500 feet to the northeast and southeast over areas designated by the County as Agricultural Productive. It also extends beyond the Airport boundary by about 300 feet to the south, and 1000 feet to the southwest along the extended runway centerline over areas designated by the County as Agricultural Productive.

3.3.6.3 60 dB CNEL Noise Level

The 60 dB CNEL aircraft noise contour extends beyond the Airport boundary to the north through the southwest. To the southwest along the extended runway centerline, the 60 dB CNEL contour extends about 3,500 feet beyond the Airport boundary across Frazier Lake Road and to the northeast, the 60 dB CNEL contour extends 3000 feet beyond the Airport boundary across Lake Road. Both are over areas designated by the County as Agricultural Productive.

36.97172°, 121.50286°

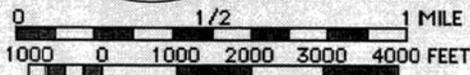
36.97172°, 121.43272°



36.93384°, 121.50286° NAD83

36.93384°, 121.43272°

TN \star /MN
15°



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Frazier Lake Airport

FIG. 904 013 SAN MATEO, CA 94040

2020 AIRCRAFT NOISE CONTOURS



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WALTER WINDUS, PE

FRAZIER LAKE AIRPARK
SAN BENITO COUNTY, CALIFORNIA

FIGURE
4
OF
7

NAME: FLAG-NOISE-0 NO: 4300-16
DATE: 02-05-01 PLOT SCALE:

3.3.6.4 55 dB CNEL Noise Level

The 55 dB CNEL aircraft noise contour extends considerably beyond the Airport boundary in all directions. The 55 dB CNEL contour extends about 5,000 feet to the southwest and curves to the north outside the Airport boundary across Frazier Lake Road and over areas designated by the County as Agricultural Productive. To the northeast, the 55 dB CNEL contour extends about 4,000 feet beyond the Airport boundary across Lake Road and curves up to the north over areas designated by the County as Agricultural Productive.

The 55 dB CNEL contour also extends up to 1500 feet southeast of the Airport boundary and 1000 feet northwest of the Airport boundary, again over areas designated by the County as Agricultural Productive.

3.4 HEIGHT RESTRICTION AREA

Airport vicinity height limitations are required to protect the public safety, health, and welfare by ensuring that aircraft can safely fly in the airspace around an airport. This protects both those in the aircraft and those on the ground who could be injured in the event of an accident. In addition, height limitations are required to protect the operational capability of airports, thus preserving an important part of National and State aviation transportation systems.

Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*, establishes imaginary surfaces for airports and runways as a means to identify objects that are obstructions to air navigation. Each surface is defined as a slope ratio or at a certain altitude above the Airport elevation.

FAA uses FAR Part 77 obstructions standards as elevations above which structures may constitute a safety problem. Any penetrations of the FAR Part 77 surface are subject to review on a case-by-case basis. If a safety problem is found to exist, FAA may issue a determination of a hazard to air navigation. FAA does not have the authority to prevent the encroachment, however California law can prevent the encroachment if the FAA has made a determination of a hazard to air navigation. The local jurisdiction can establish and enforce height restrictions.

The dimensions of the imaginary surfaces vary depending on the type of approach to a particular runway as illustrated on Figure 5 for the Airport based on the ultimate dimensions shown on the Airport Layout Plan. Nonprecision runways generally have larger surfaces and flatter approach slopes than visual runways. Table 3-3 tabulates the imaginary surfaces described below:

3.4.1 Primary Surface

A surface longitudinally centered along a runway, and extending 200 feet beyond each end of the instrument runways. For Runway 5-23 the width is 500 feet and the primary surface extends 200 feet beyond each end of the runway. For Runway 5W-23W the width is 250 feet and the primary surface extends only to the ends of the runway.

3.4.2 Approach Surface

A surface longitudinally centered on the extended runway centerline, extending outward and upward from each end of the primary surface. An Approach Surface is applied to each end of each runway based upon the type of approach available or planned for that runway end. The inner edge of the Approach Surface is the same width as the Primary Surface and it extends for a length of 5000 feet at a slope of 20:1. Runway 5-23 Approach Surface has a width of 2000 feet at the outer end and Runway 5W-23W Approach Surface has a width of 1250 feet at the outer end.

3.4.3 Transitional Surface

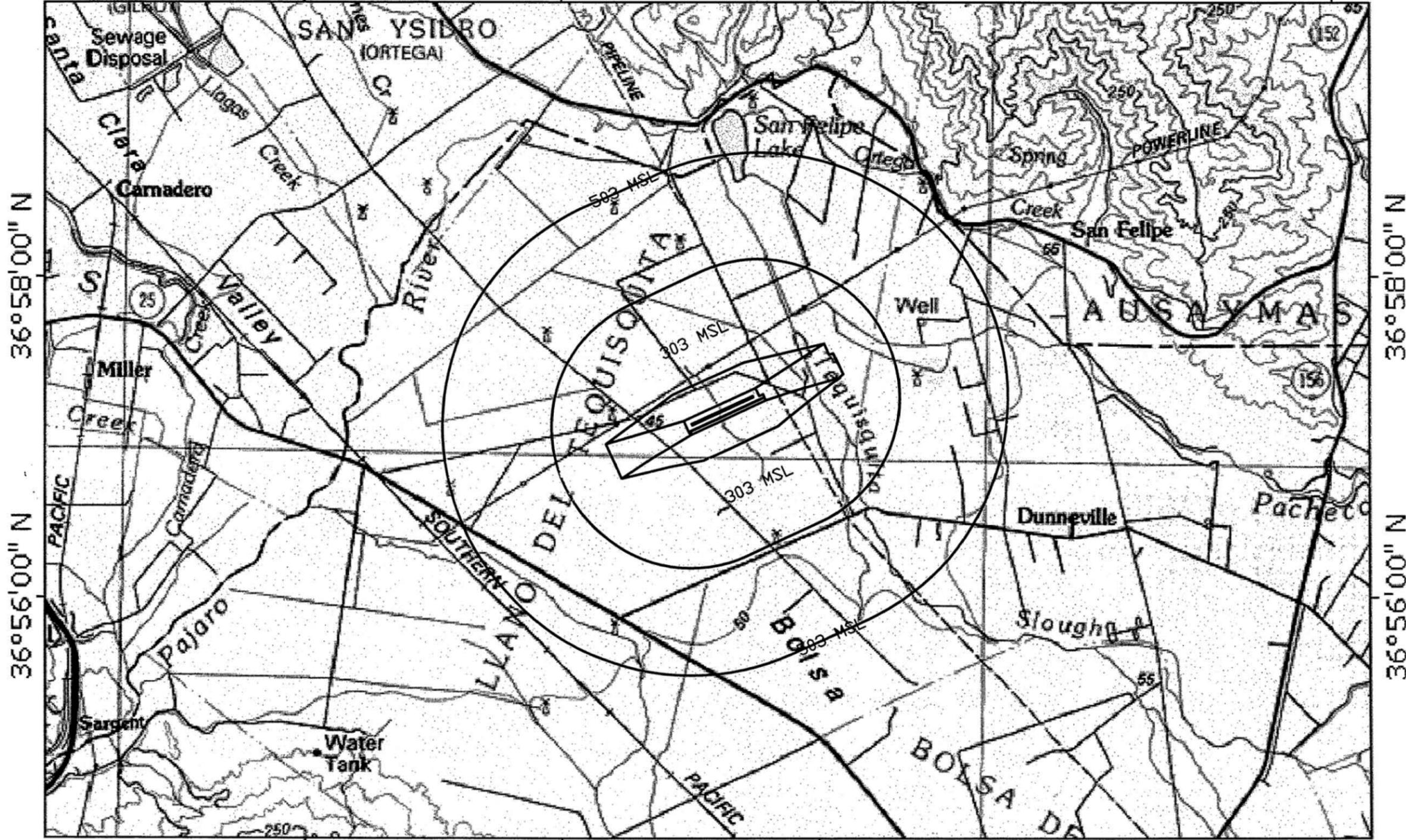
A surface extending outward and upward from the sides of the Primary Surface and from the sides of the Approach Surfaces at a slope of 7 to 1.

121°31'00" W 121°29'00" W 121°27'00" W WGS84 121°23'00" W

**Frazier Lake
Airpark**

P.O. BOX 513, SAN MARTIN, CA 95985

FAR PART 77 SURFACES



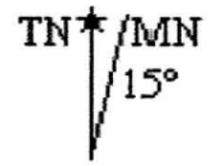
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WALTER WINDUS, PE

FRAZIER LAKE AIRPARK	FIGURE 5 OF 7
SAN BENITO COUNTY, CALIFORNIA	
NAME: FLA-01-PT77-D	NO: 4300-16
DATE: 02-05-01	PLOT SCALE:



121°31'00" W 121°29'00" W 121°27'00" W WGS84 121°23'00" W

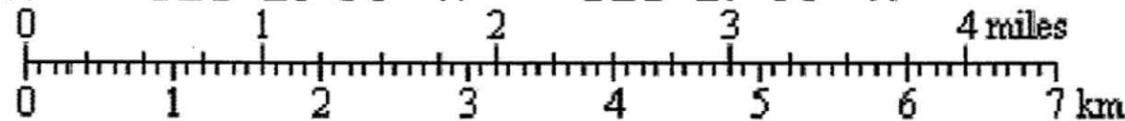


Table 3 - 3
FAR PART 77 DIMENSIONS
Frazier Lake Airpark

Runway Type	Runway			
	<u>23</u> Nonprecision	<u>05</u> Nonprecision	<u>23W</u> Visual	<u>05W</u> Visual
Primary Surface				
Length (feet)	2,900	2,900	3,000	3,000
Width (feet)	500	500	250	250
Approach Surface				
Slope	20:1	20:1	20:1	20:1
Length (feet)	5,000	5,000	5,000	5,000
Inner Width	500	500	250	250
Outer Width	2,000	2,000	1,250	1,250
Transitional Surface				
Slope	7:1	7:1	7:1	7:1
Horizontal Surface				
End Radius (feet)	5,000	5,000	5,000	5,000
Elevation (feet MSL)	303	303	303	303
Conical Surface				
Slope	20:1	20:1	20:1	20:1
Width (feet)	4,000	4,000	4,000	4,000

Source: Federal Aviation Regulations, Part 77

3.4.4 Horizontal Surface

A horizontal plane 150 feet above the established airport elevation (the highest point of an airport's usable landing area measured in feet above mean sea level), the perimeter of which is constructed by swinging arcs 5,000 feet out for Runway 5-23 and Runway 5W-23W, from the center of each end of the Primary Surface of each runway and connecting the adjacent arcs with lines tangent to these arcs.

3.4.5 Conical Surface

A surface extending outward and upward from the periphery of the Horizontal Surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

3.4.6 Summary

Where imaginary surfaces overlap, such as in the case where the Approach Surface penetrates and continues upward and outward from the Horizontal Surface, the lowest surface is used to determine whether or not an object would be an obstruction to air navigation.

Any proposed new construction or expansion of existing structures that would penetrate any of the FAR Part 77 imaginary surfaces of the Airport is considered an incompatible land use, unless either the FAA has determined that the proposed structure does not constitute a hazard to air navigation or the Caltrans Aeronautics Program has issued a permit allowing construction of the proposed structure.

3.5 SAFETY RESTRICTION AREA

Safety of people on the ground and in the air and the protection of property from airport-related hazards are among the responsibilities of the Airport Land Use Commission. The 1993 Handbook presents guidelines for the establishment of airport safety areas.

Airport safety zones are established to minimize the number of people exposed to potential aircraft accidents at the Airport. Figure 6 illustrates the airport safety zones for Runways 5-23 and 5W-23W at the Airport. The safety zones are related to runway length and expected use and planned instrument flight rules (IFR) approach procedures. In addition, aircraft flight tracks are also shown on Figure 6.

Exposure to potential aircraft accidents diminishes with distance from the airport runways. The safety zones shown below are in descending order of exposure to potential aircraft accidents, with the Runway Protection Zone having the highest exposure followed by the Inner and Outer Safety Zones, with the Traffic Pattern Safety Zone having the lowest level of exposure.

The following safety zones apply to Frazier Lake Airpark based on information presented in the 1993 Handbook:

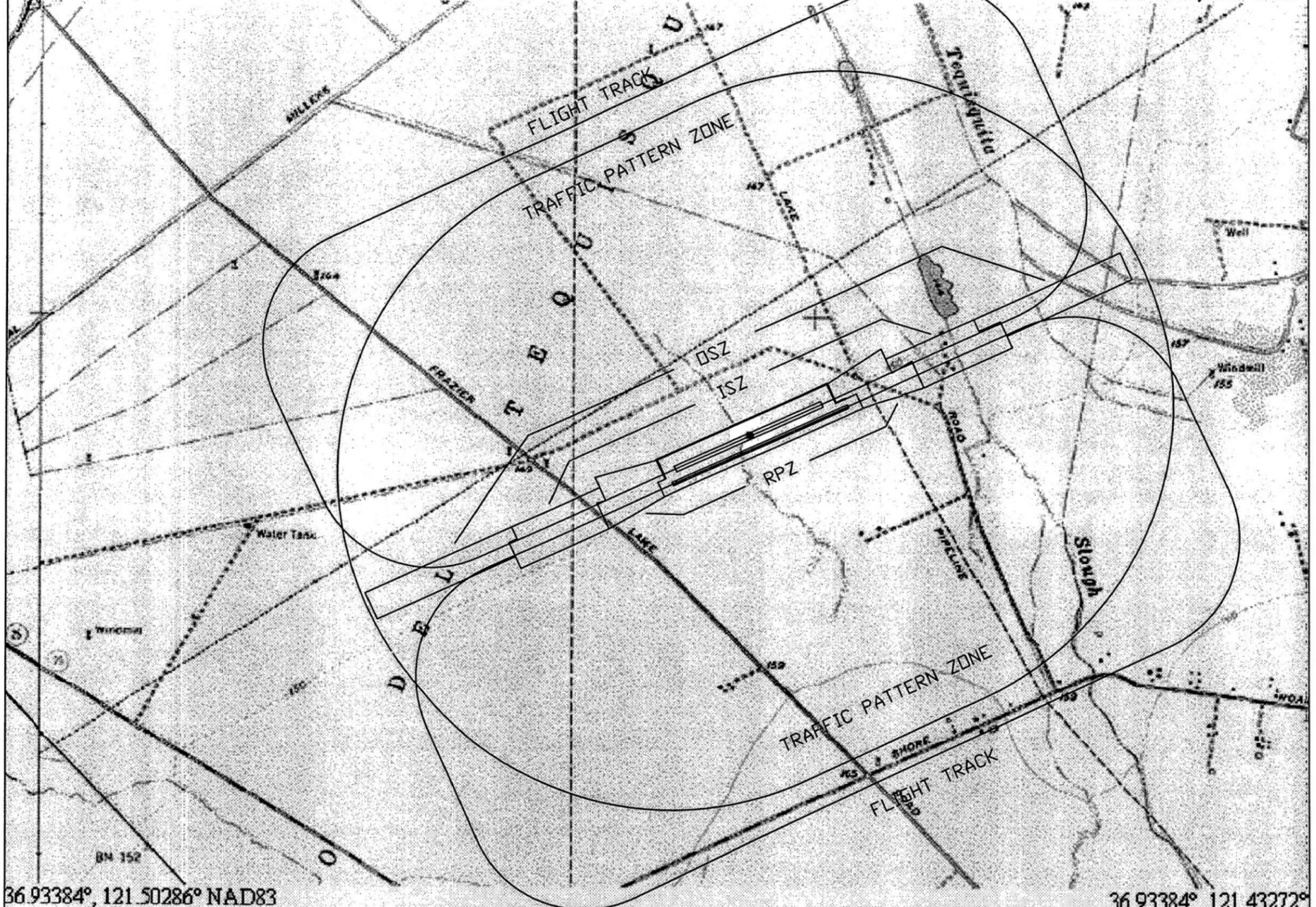
3.5.1 Runway Protection Zone

The function of the Runway Protection Zone (RPZ) is to enhance the protection of people and property on the ground. RPZs should be clear of all structures and activities. The RPZ begins at the end of the Primary Surface, 200 feet out from the runway threshold. It is a trapezoidal area centered on the extended runway centerline. The size is related to the expected aircraft use and the visibility minimums for that particular runway.

- Runway 5-23: The RPZ for Runway 5-23 is 1,000 feet long, with an inner width of 500 feet and an outer width of 800 feet.
- Runway 5W-23W: The RPZ for Runway 5W-23W is 1,000 feet long, with an inner width of 250 feet and an outer width of 450 feet.

36.97172°, 121.50286°

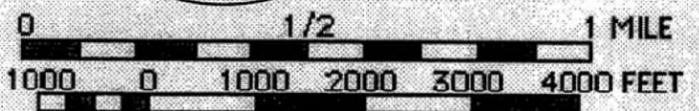
36.97172°, 121.43272°



36.93384°, 121.50286° NAD83

36.93384°, 121.43272°

TN* / MN
15°

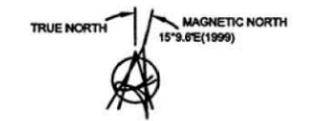


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Frazier Lake Airpark

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AIRPORT SAFETY ZONES



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FRAZIER LAKE AIRPARK	FIGURE 6 OF 7
SAN BENITO COUNTY, CALIFORNIA	
NAME: FLA-01-AA-D	NO: 4300-16
DATE: 02-05-01	PLOT SCALE:

3.5.2 Inner Safety Zone

The Inner Safety Zone (ISZ) is located next to the RPZs and represents the approach and departure corridors that have the highest level of exposure to potential aircraft accidents. The ISZ is a rectangular area centered along the extended runway centerline starting at the outer width of the RPZ. The length of the runway determines the dimensions.

- The ISZ for both ends of Runway 5-23 and 5W-23W are 1,500 feet long and 450 feet wide.

3.5.3 Outer Safety Zone

The Outer Safety Zone (OSZ) is extended out from the ISZ and is typically established for runways that are long and/or have instrument approach capabilities. The OSZ is a rectangular area centered along the extended runway centerline starting at the outer end of the ISZ. The length of the runway determines the dimensions.

- The OSZ for both ends of Runway 5-23 is 2,500 feet long and 450 feet wide.

3.5.4 Traffic Pattern Zone

The Traffic Pattern Zone (TPZ) is within other portions of the airport area that are routinely overflown by aircraft. The potential for aircraft accidents is relatively low and the need for land use restrictions are minimal. The TPZ is the area underlying a portion of the Horizontal Surface.

- The perimeter of the TPZ is constructed by swinging arcs of 5,000 feet out for Runways 5-23 and 5W-23W from the center of each end of the primary surface of each runway and connecting the adjacent arcs with lines tangent to these arcs.

3.6 OVERFLIGHT RESTRICTION AREA

The Airport Influence Area (AIA) presented in Section 4.0 is a composite of the areas surrounding the Airport that are affected by noise, height, and safety considerations. All areas within the AIA should be regarded as potentially subject to aircraft overflights. Although sensitivity to aircraft overflights will vary from one person to another, overflight sensitivity is particularly important within residential land uses and certain agricultural uses (open-air turkey farming, etc.).

The compatibility of land uses within the AIA should be preserved to the maximum extent feasible with particular emphasis on the preservation of existing agricultural and open space uses. The conversion of land from existing or planned agricultural, industrial, or commercial use to residential uses should be the subject of careful consideration of the potential impacts of aircraft overflights.

Section 4

4 COMPREHENSIVE LAND USE PLAN

4.1 LAND USE PLANNING ISSUES

The land use planning criteria for the individual land use planning issues applicable to Frazier Lake Airpark (the Airport) are discussed in Section 3.0. Figure 7 presents a composite of the land use planning categories and the criteria which establishes the Airport Influence Area (AIA). The San Benito County Airport Land Use Commission (ALUC) and the Comprehensive Land Use Plan (CLUP) for the Airport address policies based on the following criteria:

- **Noise Restriction Area.** The Noise Restriction Area is defined as the 55 dB CNEL contour, above which an acoustical analysis is required by the County demonstrating how low-density, single-family, duplex and mobile home dwelling units have been designed to meet an interior noise level of 45 dB CNEL.
- **Height Restriction Area.** The Height Restriction Area is to protect the airspace around the Airport. The Horizontal Surface is 150 feet above the Airport elevation of 153 feet above mean sea level, the perimeter of which is constructed by swinging arcs 5,000 feet out from the ends of the Primary Surfaces for Runway 5-23 and for Runway 5W-23W. The Conical Surface extends outward and upward from the periphery of the Horizontal Surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet. The Height Restriction Area is defined as the Approach Surfaces plus the Transitional Surfaces plus the Horizontal Surface plus the Conical Surface.
- **Safety Restriction Area.** The Safety Restriction Area is to provide land use safety with respect to people and property on the ground and the occupants of aircraft. The safety zones applicable to the Airport are discussed in Section 3.5 and presented on Figure 7.
- **Overflight Restriction Area.** The Overflight Restriction Area is a composite of the areas surrounding the Airport that are areas affected by noise, height, and safety considerations. All areas within the AIA should be regarded as potentially subject to aircraft overflights as discussed in Section 3.6.

4.2 JURISDICTIONAL RESPONSIBILITIES

The policies set forth in this section contain criteria intended to prevent future conflicts between airport operations and surrounding land uses. Implementation of these criteria requires action by the local jurisdictions that have control over the land uses in the Airport Influence Area (AIA) presented on Figure 7.

The jurisdictional responsibilities for implementation of the CLUP are described below. In addition, actions that are available to the local jurisdictions are also presented.

Implementation of the CLUP will be the responsibility of the County of San Benito for those areas within the AIA under their jurisdiction. The San Benito County Airport Land Use Commission (ALUC) will provide policy direction, advice, and technical assistance to the County.

4.2.1 San Benito County Airport Land Use Commission

The San Benito County Airport Land Use Commission shall:

- Adopt the airport land use policies and the AIA boundary maps. The CLUP and its planning boundary maps shall, upon adoption, be subject to annual review by the ALUC and be updated as required.

Amendments to the CLUP are limited to no more than once per calendar year.

- Review the General Plan, Area Plans, Specific Plans, zoning and building regulations for the County of San Benito to determine if such plans and regulations are consistent with the policies of this CLUP.

Until the ALUC has determined that the General Plans, Area Plans, and Specific Plans of the County are consistent, or until the County has overruled the ALUC's determination, all discretionary permits shall be referred to the ALUC for a consistency determination.

- Review all proposed development that requires amendments to the General Plans, Area Plans, Specific Plans, and zoning and building regulations that may affect land use in the AIA.

The ALUC shall determine if the proposed amendments are consistent or inconsistent with this CLUP.

- Review proposed changes to the Frazier Lake Airpark Master Plan or Airport Layout Plan or modifications to the aircraft flight tracks, new aircraft noise contours, or any other development that would alter the land use compatibility issues addressed in Section 3.0.

The ALUC shall determine if the proposed changes are consistent with this CLUP or if the CLUP requires an amendment.

- Review exceptional cases and appeals of local government decisions relating to proposed land use where there is a conflict with ALUC plans and policies. A review of land use issues within the AIA relating to ALUC policies may be requested by any member of the ALUC, or by the Board of Directors of Frazier Lake Airpark as the owner and operator of the Airport.
- Coordinate airport land use decisions of the County of San Benito and Federal and State agencies concerned with airport land use.
- Gather and disseminate information relating to airport land use and aircraft noise, height and safety factors that may affect land use.

4.2.1.1 Review of Development Projects

Once the ALUC has determined the County General Plan and Zoning are consistent (or inconsistent) with the CLUP, the ALUC will review the following proposed development.

- Proposed residential development, including land divisions, consisting of five or more dwelling units or parcels within the AIA.
- Request for variance from the County's Airport Safety Overlay Zone.
- Major infrastructure development or improvements (e.g., water, sewer, roads) which would promote urban development within the AIA.
- Proposed land acquisition by any entity for the purpose of developing a school, hospital, nursing home, library, outdoor theater, etc. within the AIA.
- Any proposal anywhere in the County for construction or alteration of a structure (including antennas) higher than 200 feet above ground level, to verify compliance with FAR 77.13.
- Any proposed land use action determined by County planning agencies to involve a question of compatibility with the Airport activities.

4.2.1.2 Project Submittals

When review of a land use development proposal is required under this CLUP, the applicant shall provide the following information to the ALUC in addition to the information required by the County:

- A map, drawn to an appropriate scale, showing the relationship of the project to the Airport boundary and runways.
- A detailed site plan showing ground elevations, location of structures, open spaces and the heights of structures and landscaping.
- A description of permitted or proposed land uses and restrictions on the uses.
- An indication of the potential or proposed number of dwelling units per acre for residential uses and the number of people potentially occupying the total site or portions of the site at any one time.
- Any project submitted for airport land use compatibility review for reasons of height-limit issues shall include a copy of the Federal Aviation Regulations Part 77, *Objects Affecting Navigable Airspace*, notification to the FAA on FAA Form 7460-1, *Notice of Proposed Construction or Alteration*.

4.2.1.3 Review Process

The proposed actions referred to in Section 4.2.1.1 shall be referred to the ALUC at the earliest possible time but no later than the time allowed in the applicable government code, in order that the ALUC's findings may be considered by the local agency prior to finalizing the proposed action.

The ALUC may find a proposal either 1) consistent with the CLUP or 2) inconsistent with the CLUP. The ALUC can provide recommendations for changes that would enhance the project's compatibility with the CLUP or the ALUC can state under which conditions the proposal would be consistent.

The ALUC must take action on a request for a consistency determination within 60 days of the referral. If the determination is not made within 60 days, the proposal shall be considered consistent with the CLUP.

The ALUC may, at the request of the local jurisdiction or interested party, provide an interpretation of any of the policies found in this CLUP.

4.2.1.4 County of San Benito

The County of San Benito shall:

- Adopt the ALUC policies and the AIA boundary maps.
- Incorporate the adopted ALUC policies, boundary maps, and land use recommendations into the County General Plan and Zoning Ordinance.
- Provide ongoing review of land uses within the AIA to ensure that land use changes are compatible with ALUC policies and plans. The County will work closely with ALUC staff to establish and carry out review coordination with the ALUC.
- Obtain aviation easements for any development within the AIA under County jurisdiction.
- Incorporate the AIA boundary maps into the geographic information system (GIS) currently being pursued by the County.

4.3 COMPATIBILITY POLICIES

The compatibility of land uses in the vicinity of the Airport will be evaluated for each of the potential land use impact categories in terms of the compatibility guidelines established for each category of concern in relation to the graphic illustrations of each area of concern presented in Section 3.0. The following compatibility guidelines will be used for ALUC consistency review.

4.3.1 Noise Compatibility

The objective of noise compatibility criteria is to minimize the number of people exposed to frequent and/or high levels of aircraft noise.

The Noise Compatibility Guidelines presented in Table 4-1 shall be used to determine if a specific land use is consistent with the CLUP. Noise impacts shall be evaluated according to the 2020 Aircraft Noise Contours presented on Figure 4.

- The maximum CNEL considered clearly acceptable for residential uses in the vicinity of the Airport is 55 dB CNEL.
- Noise level compatibility standards for other types of land uses shall be applied in the same manner as the above residential noise level criteria. Table 4-1 presents acceptable noise levels for other land uses in the vicinity of the Airport.
- Single-event noise levels should be considered when evaluating the compatibility of highly noise-sensitive land uses such as schools, libraries, and outdoor theaters. Single-event noise levels are especially important in the areas regularly overflowed by aircraft, but which do not produce significant CNEL contours.

4.3.2 Height Compatibility

The objective of height compatibility criteria is to avoid development of land uses, which, by posing hazards to flight, can increase the risk of an accident occurring.

Any structure or object that penetrates the Federal Aviation Regulations Part 77, *Objects Affecting Navigable Airspace*, (FAR Part 77) surfaces as presented earlier in Table 3-3 and illustrated on Figure 5, will be considered an incompatible land use.

- Any project that may exceed a FAR Part 77 surface must notify the Federal Aviation Administration (FAA) as required by FAR Part 77, Subpart B on FAA Form 7460-1, *Notice of Proposed Construction or Alteration*. (Notification to the FAA under FAR Part 77, Subpart B, is required even for certain proposed construction that does not exceed the height limits allowed by Subpart C of the FARs).

In addition, the following proposed alterations or developments will be reviewed for potential impacts to aircraft in flight:

- Any proposed uses that may cause a hazard to aircraft in flight are not permitted within the AIA. Such uses include electrical interference, high intensity lighting, attraction of birds (certain agricultural uses, sanitary landfills), and activities that may produce smoke, dust, or glare.
- All new exterior lighting within the AIA shall be designed so as to create no glare or interference with aircraft in flight. Such lighting shall be constructed and located so that only the intended area is illuminated and off-site glare is fully controlled. The lighting shall be arrayed in such a manner that it cannot be mistaken for airport approach or runway lights by pilots.

Table 4 - 1

NOISE COMPATIBILITY GUIDELINES

Frazier Lake Airpark

LAND USE CATEGORY	CNEL			
	55-60	60-65	65-70	70-75
Residential – low density Single-family, duplex, mobile homes	*	**	***	***
Residential – multi-family	*	**	***	***
Transient lodging - motels, hotels	*	*	**	***
Schools, libraries, churches, hospitals, nursing homes	*	**	***	***
Auditoriums, concert halls, amphitheaters	**	***	***	****
Sports arena, outdoor spectator sports	*	**	***	***
Playgrounds, neighborhood parks	**	**	***	***
Golf courses, riding stables, water recreation, cemeteries	*	**	**	***
Office buildings, business Commercial and professional	*	*	**	**
Industrial, manufacturing, utilities, agriculture	*	*	*	**
* Clearly Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.			
** Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. <u>Residential:</u> Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. Some outdoor activities may be adversely affected.			
*** Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. <u>Residential:</u> Outdoor activities are likely to be adversely affected.			
**** Clearly Unacceptable	New construction or development should generally not be undertaken.			

Source: Based on San Benito County Amended Noise Element, General Plan Revision, August 1984, Page 30

4.3.3 Safety Compatibility

The objective of safety compatibility criteria is to minimize the risks associated with potential aircraft accidents. These include the safety of people on the ground and the safety of aircraft occupants.

The Safety Zone Compatibility Guidelines presented in Table 4-2 shall be used to determine if a specific land use is consistent with the CLUP. Safety impacts shall be evaluated according to the Airport Safety Zones presented on Figure 6.

- Land uses of particular concern are those in which the occupants have reduced effective mobility or are unable to respond to emergency situations. Schools, hospitals, nursing homes, and other uses in which the majority of occupants are children, elderly, and/or disabled shall be prohibited within the Runway Protection Zones (RPZs), Inner Safety Zones (ISZs), and Outer Safety Zones (OSZs) presented in Table 4-2. These uses should also be discouraged in the Traffic Pattern Zones (TPZs).
- Storage of fuel or other hazardous materials shall be prohibited in the Runway Protection Zone and Inner Safety Zone. Beyond these zones, storage of fuel or other hazardous materials not associated with aircraft use should be discouraged.
- Open space requirements shall be established at the general plan level for each safety zone as individual parcels may be too small to accommodate the minimum-size open space requirement. To qualify as open space, an area must be free of structures, walls, large trees or poles and overhead wires, and have minimum dimensions of at least 75 feet by 300 feet. The clustering of development and provision of contiguous landscaping and parking areas will be encouraged to increase the size of open space areas.
- The principal means of reducing risks to people on the ground is to restrict land uses so as to limit the number of people who might gather in areas most susceptible to aircraft accidents. A method for determining the concentration of people for various land uses is presented in Section 5.0, Implementation.

The following uses shall be prohibited in all airport safety zones:

- Any use which would direct a steady light or flashing light of red, white, green, or amber colors associated with airport operations toward an aircraft engaged in an initial straight climb following takeoff or toward an aircraft engaged in a straight final approach toward a landing or an airport, other than an FAA-approved navigational signal light or visual approach slope indicator.
- Any use that would cause sunlight to be reflected towards an aircraft engaged in an initial straight climb following takeoff or towards an aircraft engaged in a straight final approach towards a landing at an airport.
- Any use which would generate smoke or water vapor, or which would attract large concentrations of birds, or which may otherwise negatively affect safe air navigation within the area.
- Any use which would generate electrical interference that may be detrimental to the operation of aircraft and/or aircraft instrumentation.

Table 4 - 2

SAFETY ZONE COMPATIBILITY GUIDELINES

Frazier Lake Airpark

Safety Zone	Maximum Population Density	Maximum Coverage By Structures	Land Use
Runway Protection Zone – RPZ	10 people per acre confined to the sides and outer end of the RPZ	-0-	No residential - no special functions (schools, hospitals, storage of flammable materials, etc.) or large concentrations of people
Inner Safety Zone – ISZ	Nonresidential 40-60 people per acre	25 percent of net area	Very low-density residential. 10 acres or more per dwelling unit - Nonresidential uses should be activities that attract relatively few people - No concentrations of people directly on the extended centerline of the runway -No special functions (schools, hospitals, storage of flammable materials, etc.)
Outer Safety Zone – OSZ	Nonresidential 60-100 people per acre	50 percent of gross area or 65 percent of net area, whichever is greater	Rural residential, 2-5 acres per dwelling unit - Small neighborhood shopping centers and two-story office buildings are permitted - No special functions (schools, hospitals, etc.)
Traffic Pattern Zone – TPZ	Nonresidential 150 people or more per acre	50 percent of gross area or 65 percent of net area, whichever is greater	Residential subdivision densities of 4-6 dwelling units per acre are permitted -Special functions (schools, hospitals, nursing homes, etc.) should be discouraged unless no other feasible alternatives are available
Source: Based on 1993 <i>Airport Land Use Planning Handbook</i> prepared by the California Department of Transportation, Division of Aeronautics			

4.3.4 Overflight

The objective of the overflight compatibility criteria is to assist those persons who are highly-annoyed by overflights or have an above-average sensitivity to aircraft overflights to avoid living in locations where these impacts may occur.

All new landowners and uses within the AIA shall provide an aviation easement to the County of San Benito. The aviation easement shall be mutually agreeable to the Airport Land Use Commission, the County, and the landowner. The language of the easement may differ depending on the zone in which the affected property is located.

The County shall establish method(s) of notifying buyers of new developments within the AIA of potential airport impacts. The notification may take the form of deed noticing or real estate disclosure statements. A copy of the method(s) to be used for such notification shall be forwarded to the Airport Land Use Commission.

The County is encouraged to provide for the same type of notice for existing land uses.

Section 5

5 IMPLEMENTATION

5.1 CONSISTENCY WITH LOCAL PLANS AND ZONING

Current law assumes the ALUC is an independent body and that conflicts might arise between ALUC policies and County policies. If County plans or ordinances are determined by the ALUC to be inconsistent with the CLUP, the law requires a County to hold a public hearing to consider amending the General Plan and/or any applicable specific plans or zoning ordinances. Until the County amends the various plans and ordinances for consistency with the ALUC policies, or otherwise overrides the ALUC determination, all actions, regulations, or permits within the AIA must be referred to the ALUC for a consistency determination.

The following were reviewed for consistency with the CLUP:

- County of San Benito, *General Plan*, adopted by the San Benito County Board of Supervisors on July 26, 1994.
- County of San Benito, *Airport Safety Overlay Zone*, Ordinance No. 523, adopted by the County Board of Supervisors on October 19, 1987.
- County of San Benito, *Amended Noise Element, General Plan Revision*, amended August 1984.
- County of San Benito, *San Benito County Transportation Element*, amended May 26, 1992 by Resolution 92-59.

The general plan of the County of San Benito designates land uses within the Airport Influence Area that are consistent with this CLUP.

The County adopted Airport Safety Overlay Zone ordinances in October 1987 based on the Frazier Lake Airpark Airport Layout Plan approved by Caltrans on July 18, 1984. This ordinance should be updated to incorporate the refined Safety and Height Zoning Criteria and include the areas surrounding Frazier Lake Airpark based on the Federal Aviation Regulations (FAR) Part 77, Objects Affecting Navigable Airspace, surfaces as presented in this CLUP.

The County *Airport Safety Overlay Zone* is to establish special regulations and development policies in areas adjacent to airports for the purpose of assuring land use compatibility and safety of persons and property. The AIA boundary maps and planning policies presented in this CLUP should be incorporated into the County ordinance. The *Amended Noise* and *Transportation Elements* of the County's *General Plan* will also require updating to be consistent with this CLUP.

5.2 LAND USE DESIGNATIONS

The most fundamental means of assuring compatibility between an airport and surrounding land uses is by the designation of appropriate land uses in local general plans, specific plans, and zoning ordinances. Even with the designation of appropriate land uses, the long-term maintenance of airport and land use compatibility is often difficult to achieve.

Land use designations can be limited in the degree of restrictiveness that can be applied. If the land use restrictions eliminate all reasonable economic use of private property, they can be considered an unfair taking and result in inverse condemnation. This is particularly applicable in areas near the ends of the runways.

Land use designations for an area for different uses than already exist may encourage change in the long term, but it may not eliminate existing incompatible uses. Other actions such as fee simple acquisition may be necessary to bring about the changes.

5.2.1 Airport Overlay Zones

One way of achieving aviation-oriented land use designations is adoption of an overlay or combining zone. An overlay zone supplements local land use designations by adding specific noise and, often more importantly, safety criteria (e.g., maximum number of people on the site, site design, and open space criteria, height restrictions, etc.) applicable to future development in the AIA.

An airport overlay zone has several important benefits. Most importantly, it permits the continued utilization of the majority of the design and use guidelines contained in the existing zones. At the same time, it provides a mechanism for implementation of restrictions and conditions that may apply to only a few types of land uses within a given land use category or zoning district. This avoids the need for a large number of discrete zoning districts. It also enables local jurisdictions to use the policies provided in the CLUP, rather than through redefinition of existing zoning district descriptions.

The County should consider the following for inclusion in the Airport Overlay District Zone (Airport Safety Overlay Zone):

- **Noise Insulation Standards** - In areas that will potentially be impacted by noise, the Airport Overlay District Zone could be used to assure compliance with the State statutes regarding interior noise levels. The Overlay District Zone could specify the construction techniques necessary to meet the requirements.
- **Height Limitations** - Restrictions on the height of buildings, antennas, trees, and other objects near the Airport, as defined by Federal Aviation Regulations (FAR) Part 77, Subpart C, and regulated by the California Aeronautics Law, can be implemented as part of the Airport Overlay District Zone.
- **FAA Notification Requirements** - The Airport Overlay District Zone also can be used to assure that project developers are informed about the need for compliance with the notification requirements of FAR Part 77. Subpart B of the regulations requires that the proponent of any project which exceeds a specified set of height criteria submit a FAA Form 7460-1 *Notice of Proposed Construction or Alteration* to the FAA prior to commencement of construction. The height criteria associated with this notification requirement are lower than those in FAR Part 77, Subpart C, which define airspace obstructions. The purpose of the notification is to determine if the proposed construction would constitute a potential hazard or obstruction to flight. Notification is not required for proposed structures that would be shielded by existing structures or by natural terrain of equal or greater height, where it is obvious that the proposal would not adversely affect air safety.
- **Maximum Densities** - The principal noise and safety compatibility standards in the CLUP are expressed in terms of dwelling units per acre for residential uses and people per acre for other land uses. These standards can either be included as is in the Airport Overlay District Zone or used to modify the underlying land use designations. For residential land uses, the correlation between the compatibility criteria and land use designations is direct. For other land uses, the implications of the density limitations are not as clear. One step that can be taken by local governments is to establish a matrix indicating whether specific types of land uses are or are not compatible with each of the four compatibility zones. To be useful, the land use categories will need to be more detailed than typically provided by general plan or zoning ordinance land use designations.
- **Open Space Requirements** - CLUP criteria regarding AIA open space suitable for emergency aircraft landings can be implemented by the Airport Overlay District Zone. These criteria are most effectively carried out by planning at the general or specific plan level, but may also need to be addressed in terms of development restrictions on large parcels.

5.2.2 Avigation Easements

Avigation easements are another type of land use control measure available to local jurisdictions. Historically, avigation easements have been used to establish height limitations, prevent other flight hazards, and prevent noise impacts. More recently, they have been used as a form of buyer awareness - the recording of an easement with the title to a property ensures that prospective buyers of the property are informed about the airport impacts. (See the Appendix for a typical Avigation Easement).

An avigation easement applies only to the specific property to which it is attached and it is binding on all subsequent owners of the property. Avigation easements can be obtained either by purchase or by required dedication.

- **Purchase** - Acquisition of avigation easements for a monetary amount is usually done by the airport owner, which may or may not be the same as the local land use jurisdiction. In most instances, the purchase of avigation easements is limited to property within Runway Protection Zones or elsewhere very close to the airport boundaries where some significant degree of restriction or impact is involved.
- **Dedication** - Required dedication of avigation easements is sometimes set as a condition for local jurisdiction approval of a proposed land use development, especially a residential development, in the vicinity of an airport. Generally, when avigation easements are obtained in this manner, they are primarily intended to serve as a comprehensive and stringent form of a buyer awareness measure.

A standard avigation easement conveys the following property rights from the owner of the property to the holder of the easement:

- **Overflight** - A right-of-way for free and unobstructed passage of aircraft through the airspace over the property at any altitude above a surface specified in the easement (in accordance with Federal Aviation Regulations Part 77 and/or criteria for terminal instrument procedures).
- **Impacts** - A right to subject the property to noise, vibration, fumes, dust, and fuel particle emissions associated with airport and aircraft activity.
- **Height Limits** - A right to prohibit the construction or growth of any structure, tree, or other object that would penetrate the acquired airspace.
- **Access and Abatement** - A right-of-entry onto the property, with appropriate advance notice, for the purpose of removing, marking, or lighting any structure or other object that enters the acquired airspace.
- **Other Restrictions** - A right to prohibit electrical interference, glare, misleading light sources, visual impairments, and other hazards to aircraft from being created on the property.

Easements that convey only one or more of these rights are common. An easement containing only the first two rights is usually referred to as an overflight or noise easement. The latter three rights are often collectively called a height-limit or airspace easement. Overflight easements are useful in locations sufficiently distant from an airport where height limits and other restrictions are not a concern. Height-limit easements have most frequently been obtained by purchase of properties close to an airport where restrictions on the height of objects are necessary. Because height-limit easements do not include the overflight easement rights, there is little apparent advantage to obtaining them rather than a complete avigation easement.

5.2.3 Buyer Awareness Measures

Buyer awareness is an umbrella category for types of airport/land use compatibility measures whose objective is to ensure that prospective buyers of property in the vicinity of an airport are made aware of the airport's existence and the impacts that the airport activity has on surrounding land uses. Avigation easements are the most definitive form of a buyer awareness measure. Buyer awareness can also be successfully implemented through other types of programs. Two primary methods are deed notices and real estate disclosure statements.

- **Deed Notices.** Deed notices are statements, attached to the deed to a property, disclosing that the property is subject to routine overflights and associated noise and other impacts by aircraft operating at a nearby airport. An ideal application of deed notices is as a condition of approval for development of residential land use in airport-vicinity locations where neither noise nor safety are significant factors, but frequent aircraft overflights may be annoying to some people. In addition to being recorded with the deed to a property, the notices should be included on parcel maps and any tentative or final subdivision maps. (See the Appendix for a typical Deed Notice).

Deed notices are similar to avigation or other aviation-related easements in that they become part of the title to a property and thus are a permanent form of buyer awareness. The distinguishing difference between deed notices and avigation easements is that deed notices only serve as a disclosure of potential overflights, whereas avigation easements convey an identified set of property rights. In locations where height limitations or other land use restrictions are unnecessary, deed notices have the advantage of being less cumbersome to define. Also, they have less appearance of having a negative effect on the value of the property.

- **Real Estate Disclosure Statements.** A more comprehensive form of buyer awareness program is to require that information about an airport's influence area be disclosed to prospective buyers of all airport-vicinity properties prior to the transfer of title. The advantage of this type of program is that it applies to previously existing land uses as well as to new development.

This type of program can be implemented through adoption of a local ordinance requiring real estate disclosure upon the transfer of title or it can be established in conjunction with the adoption of an airport overlay zone. Notification describing the zone and discussing its significance could be formally sent to all local real-estate brokers and title companies. The brokers would be obligated by State law to pass it along to prospective buyers after receiving this information.

At a minimum, the area covered by a real estate disclosure program should include the Airport Influence Area as established in the CLUP. The boundary also could be defined to coincide with the boundaries of an airport overlay zone.

5.2.4 Methods of Calculating Density and Building Occupancy

The Safety Compatibility Guidelines for non-residential uses limit the persons per acre in certain safety zones. Determining the maximum number of persons likely to occupy a structure is not an exact science, however, the following methods are available to provide a reasonable estimate of how many persons will use a proposed facility.

- **Parking Ordinance.** Most jurisdictions have parking regulations, which specify how many parking spaces are required for particular types of uses. Once an assumption is made regarding the number of persons per vehicle, an estimate can be made of the maximum number of persons that could occupy the structure. The assumption of persons per vehicle must be based on the type of use.
- **Number of Seats.** If the proposed use provides seating for its patrons, such as a restaurant, it is relatively easy to determine the maximum number of people that could occupy the structure.

- **Uniform Building Code.** The Uniform Building Code (UBC) specifies a certain number of square feet per occupant that are required for certain uses. This number can be determined through contact with the County Building Department.
- **Similar Uses.** Certain uses may require an estimate based on a survey of similar uses. This method is more difficult but is appropriate for uses which, because of the nature of the use, cannot be reasonably estimated based on parking or square footage.

5.2.5 Infill Considerations

Infill is the development of vacant or underutilized properties in areas that are already substantially developed with uses not ordinarily permitted by the CLUP compatibility criteria. The expansion or replacement of existing uses normally permitted by a zoning ordinance may be permitted within the confines of the existing parcel on which the use is located. In all applications for infill development, the property owner shall be required to provide an aviation easement.

Section 6

6 BIBLIOGRAPHY

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7 APPENDIX

Sample Implementation Documents

Some ALUC approvals may require the dedication of Avigation Easements or use of Deed Notices in selected areas around the Airport. Examples might be the dedication of Avigation Easements for any development within the Traffic Pattern Zone, especially within the Safety Zones and Runway Protection Zones. Deed Notices might be more appropriate for development outside the Traffic Pattern Zone but within the Airport Influence Area.

Examples of these documents are presented on the following pages.

Exhibit 1 – Avigation Easement

Exhibit 2 – Deed Notice

Exhibit 1
Sample Avigation Easement

This indenture made this ____ day of _____ 20 __, between _____ hereinafter referred to as Grantor, and the County of San Benito a political subdivision in the State of California hereinafter referred to as Grantee.

The Grantor, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, does hereby grant to the Grantee, its successors and assigns, a perpetual and assignable easement over the following described parcel of land in which the Grantor holds a fee simple estate. The property which is subject to this easement is described as _____ on "Exhibit A" attached and is more particularly described as follows:

[Insert legal description of real property]

The easement applies to the airspace above an imaginary plane over the real property. The plane is described as follows:

The imaginary plane above the hereinbefore described real property, as such plane is defined by Part 77 of the Federal Aviation Regulations and consists of a plane [describe approach, transition, or horizontal surface]: the elevation of said plane being based upon the Frazier Lake Airpark Airport official runway end elevation of 153 feet Above Mean Sea Level (AMSL), as determined by a San Benito Engineering survey dated February 11, 2000 the approximate dimensions of which said plane are described and shown on Exhibit A attached hereto and incorporated herein by reference.

The aforesaid easement and right-of-way includes, but is not limited to:

- (1) For the use and benefit of the public, the easement and continuing right to fly, or cause or permit the flight by any and all persons, or any aircraft, of any and all kinds now or hereafter known, in, through, across, or about any portion of the Airspace hereinabove described; and
- (2) The easement and right to cause or create, or permit or allow to be caused or created within all space above the existing surface of the hereinabove described real property and any and all Air-space laterally adjacent to said real property, such noise, vibration, currents and other effects of air, illumination and fuel consumption as may be inherent in, or may arise or occur from or during the operation of aircraft of any and all kinds, now or hereafter known or used, for navigation of or flight in air; and
- (3) A continuing right to clear and keep clear from the Airspace any portions of buildings, structures, or improvements of any kinds, and of trees or other objects, including the right to remove or demolish those portions of such buildings, structures, Improvements, trees, or other things which extend into or above said Airspace, and the right to cut to the ground level and remove, any trees which extend into or above the Airspace; and
- (4) The right to mark and light, or cause or require to be marked or lighted, as obstructions to air navigation, any and all buildings, structures, or other improvements, and trees or other objects which extend into or above the Airspace; and
- (5) The right of egress to, passage within, and egress from the hereinabove described real property, for the purposes described in subparagraphs (3) and (4) above at reasonable times and after reasonable notice.

For and behalf of itself, its successors and assigns, the Grantor hereby covenants with the County of San Benito, for the direct benefit of the real property constituting the Frazier Lake Airpark Airport hereinafter described, that neither the Grantor, nor its successors in interest or assigns will construct, erect, or grow in or upon the hereinabove described real property, nor will they permit to allow, any improvement, tree or other object which extends into or above the or which constitutes an obstruction to air navigation, or which obstructs or interferes with the use of the easement and rights-of-way herein granted.

The easements and rights-of-way herein granted shall be deemed both appurtenant to and for the direct benefit of that real property which constitutes the Frazier Lake Airpark Airport, in the County of San Benito, State of California; and shall further be deemed in gross, being conveyed to the Grantee for the benefit of the Grantee and any and all members of the general public who may use said easement or right-of-way in landing at, taking off from or operating such aircraft in or about the Frazier Lake Airpark Airport, or in otherwise flying through said Airspace.

This grant of easement shall not operate to deprive the Grantor, its successors or assigns, of any rights which may from time to time have against any air carrier or private operator for negligent or unlawful operation of aircraft.

These covenants and agreements run with the land and are binding upon the heirs, administrators, executors, successors and assigns of the Grantor, and, for the purpose of this instrument, the real property firstly hereinabove described is the servient tenement and said Frazier Lake Airpark Airport is the dominant tenement.

DATED: _____

STATE OF CALIFORNIA } ss
COUNTY OF SAN BENITO }

On _____, before me, the undersigned, a Notary Public in and for said County and State, personally appeared _____, and _____ known to me to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same.

WITNESS my hand and official seal.

Notary Public

Exhibit 2
Sample Deed Notice

The following statement should be included on the deed and recorded by the County for any property located within the Airport Influence Area. This statement should also be included on any parcel map, tentative map or final map for subdivision approval for any property within the Airport Influence Area.

This property is in the area subject to overflights by aircraft using Frazier Lake Airpark airport, and as a result, residents may experience inconvenience, annoyance or discomfort arising from the noise or sight of such operations. State law (Public Utilities code sections 21670 et. Seq.) establishes the importance of public use airports to protection of the public interest of the people of the State of California. Residents of property near a public use airport should therefore be prepared to accept such inconvenience, annoyance or discomfort from normal aircraft operations. Any subsequent deed conveying parcels or lots shall contain a statement in substantially this form.