



AIRPORT LAND USE COMPATIBILITY PLAN
FRAZIER LAKE AIRPARK



ADOPTED BY
SAN BENITO COUNTY
AIRPORT LAND USE COMMISSION
HOLLISTER, CALIFORNIA
DECEMBER 18, 2019



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Hollister, California
December 19, 2019

Prepared by
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Mission Statement

The mission of the San Benito Airport Land Use Commission (ALUC) is to protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses.

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Section 1

1 INTRODUCTION AND BACKGROUND

1.1 PURPOSE AND SCOPE

This Airport Land Use Compatibility Plan (ALUCP) 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 ALUCP 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 ALUCP 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 ALUCP 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 (2018) aviation activity and provide at least a 20-year forecast of activity. The updated aviation activity forecasts formed the basis for preparation of 2038 aircraft noise contours. The Airport Layout Plan and updated aviation activity forecasts and 2038 aircraft noise contours formed the basis for preparation of this ALUCP.

1.2 LEGAL AUTHORITY

The Public Utilities Code of the State of California (PUC), Sections 21670 et seq. authorizes 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 and maintain a Airport Land Use Compatibility Plan (ALUCP) for the area surrounding each public-use airport within San Benito County. An ALUCP may also be developed for a military airport at the discretion of the ALUC. 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 airport land use compatibility plan shall include and shall be based on a long-range master plan or an airport layout plan, as determined by the Division of Aeronautics of the Department of Transportation that reflects the anticipated growth of the airport during at least the next 20 years. In formulating an airport land use compatibility plan, the commission may develop height restrictions on buildings, specify use of land, and determine building standards, including soundproofing adjacent to airports, within the airport influence area. The Airport Land Use Compatibility Plan shall be reviewed as often as necessary in order to accomplish its purposes, but shall not be amended more than once in any calendar year.*

1.3 BACKGROUND AND HISTORY

Legislation passed by the State of California in 1967 mandated the creation of an Airport Land Use Commission in each county that had an airport served by a scheduled airline or operated for use by the

general public. In conformance with this legislation the San Benito Council of Governments (COG), an existing decision-making body with representation from the City of Hollister, the City of San Juan Bautista and the County of San Benito, was designated to be the Airport Land Use Commission (ALUC) for San Benito County by the Board of Supervisors. After certification by the California Secretary of State, the Airport Land Use Commission officially came into existence in San Benito County in 1989.

The San Benito County Council of Governments is composed of two representative from the County of San Benito, two representatives from the City of Hollister, and one representative from the City of San Juan Bautista. Each of these agencies has one alternate COG member.

1.4 CONTENTS OF THE AIRPORT LAND USE COMPATIBILITY PLAN

The Airport Land Use Compatibility Plan contains several major elements:

- The existing and planned-for facilities at the Airport that are relevant to preparing the ALUCP;
- Appropriate noise, height, and safety 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 Plans, Specific Plans, Master Plans and/or Zoning Ordinances consistent with the Airport Land Use Compatibility Plan.

The ALUCP establishes an airport land use planning area, referred to as the Airport Influence Area (AIA) (Figure 7), which sets the boundaries for application of ALUC Policy. The ALUCP contains the relevant policies 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 ALUCP is not intended to define allowable 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 ALUCP 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.

The ALUCP does not apply to property owned by the federal government but may be used as a planning guide for land use development.

1.5 TECHNICAL REFERENCE DOCUMENT

A separate Technical Reference Library is being maintained by the County of San Benito. That Technical Reference Library along with the hyperlinks in the bibliography, and the Appendices in the 2012 Hollister ALUCP, are the major reference documents associated with the land use compatibility planning criteria in this ALUCP. The documents will be available for review at San Benito County Planning Office.

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 and is the only public-use irrigated turf runway in the state.

The water runway is used both by based seaplanes, and transient seaplanes needing a rest stop or sanctuary from adverse weather conditions. It is also used as mitigation to reduce rain water runoff from the developed surfaces on the airport, and by the County Vector Control District as an incubator for mosquito fish. Cal-Fire has had helicopters use it as a source of water for fire fighting in the area. The water runway is the only manmade FAA approved water runway in the western United States.

Frazier Lake Airpark is classified as a General Aviation Airport per the definitions in the FAA NPIAS report although it is not listed in this report. 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) (2017-2021)*. Caltrans Division of Aeronautics identifies and lists the Airport as a Community Airport in their *2016 California Aviation System Plan*.

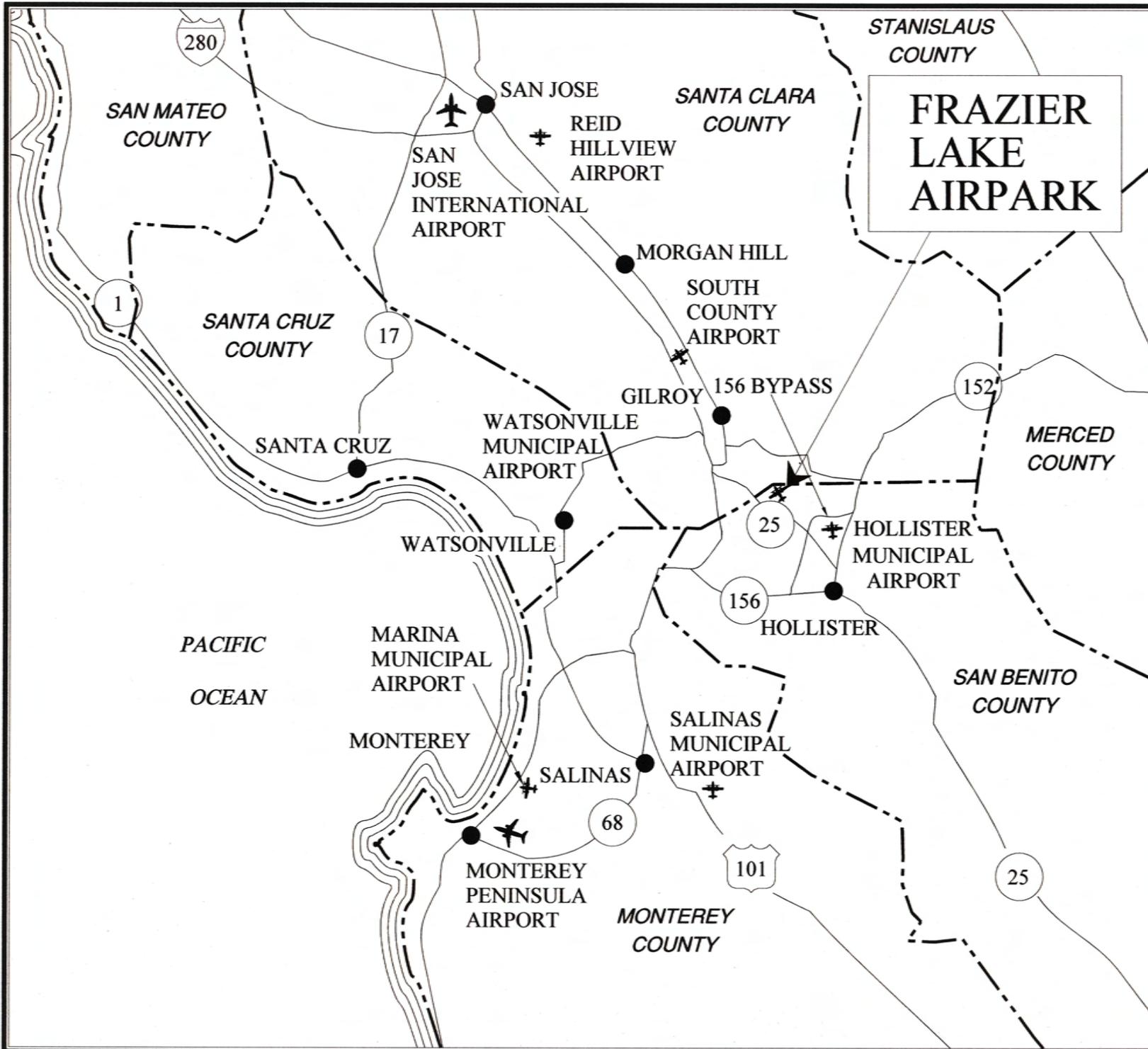
Publicly owned Hollister Municipal Airport (included in the NPIAS) is the nearest airport to Frazier Lake Airpark. Hollister Municipal Airport is located approximately 6 nautical miles southeast of Frazier Lake Airpark in the City of Hollister. Hollister Municipal Airport offers general aviation service and support facilities and is the only other public-use airport in the County. Other public-use airports in the region include the San Martin 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 first 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.



Frazier Lake Airpark

P.O. BOX 513 SAN MARTIN, CA 95405

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.

T ARIES CONSULTANTS LTD.

FRAZIER LAKE AIRPARK		FIGURE NO.
SAN BENITO COUNTY, CALIFORNIA		1
NAME: FLA-01LM	NO: 4170-04	
DATE: 12-13-99	PLOT SCALE: 1"=52,000'	

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:

Runway	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.

Controlling Obstacle/Obstruction:						
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	34:1	33:1	Power Line	40E	1,350 feet along and on the extended runway centerline
23	153	34:1	50:1			
5W	151	20:1	27:1	Power Line	40E	1,100 feet along and feet left of the extended runway centerline
23W	151	20:1	50:1			

The FAA establishes Runway Protection Zones off each runway end to enhance the safety of aircraft operations and the protection of people and property on the ground. The following defines the size of the 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 94 hangars in this area. Services available at the Airport include restrooms, day camping and picnic facilities.

2.2.2 Future Airport Facilities

A GPS 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.) There are two potential routes for these approaches to Frazier Lake Airpark, one coming from over the Hollister Airport for a circle-to-land approach, and the second coming from the west over the Carlyle Hills/Miller area, which would meet the FAA straight-in approach criteria with subsequent lower approach minimums. The missed approach departure paths could be either back over Hollister Airport, or back over the Carlyle Hills area or northwest over San Martin Airport. The Carlyle Hills departure would be preferred to avoid interference with IFR approaches to other airports in the area.

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

2.3 AVIATION ACTIVITY

The original 1984 Frazier Lake Airpark Airport Layout Plan (ALP) is over 30 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 ALUCP is a 20-year planning document, the existing base year (2017) aviation activity was reviewed and updated aviation activity forecasts were prepared through the year 2038. A report on the forecast aviation activity was submitted to the County on September 28, 1999 for review and comment in preparation for development of the 2001 ALUCP. This same forecast is being used for this amended ALUCP. 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 75 in 2017 to 123 by 2038 as shown in Table 2-1. (Over 50 percent of the existing based aircraft at the Airport in 2017 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 2038 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 has expanded to accommodate increasing air carrier activity, general aviation based aircraft have been redistributed to other Bay Area airports. Some of these aircraft owners have moved their aircraft from San Jose International Airport and Palo Alto 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 10,790 in 2017 to 23,990 by 2038.

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.

Table 2 - 1

UPDATED AVIATION ACTIVITY FORECASTS

Frazier Lake Airpark

2018– 2038

	Base Year	Forecast				
	2017	2018	2023	2028	2033	2038
GENERAL AVIATION BASED AIRCRAFT						
Single-engine – piston	73	73	82	94	102	114
Single-engine – turbine	0	0	0	0	0	0
Multi-engine – piston	1	1	2	2	3	4
Multi-engine – turbine	0	0	0	0	0	0
Helicopter	0	0	1	2	3	3
Other (Gliders, Ultralights)	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>3</u>
Total based aircraft	75	75	87	100	111	124
AIRCRAFT OPERATIONS						
General aviation						
-Itinerant	7,190	7,190	8,640	10,600	13,030	15,990
-Local	<u>3,600</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	10,790	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	10,790	10,790	12,960	15,900	19,540	23,990
OPERATIONS PER BASED AIRCRAFT						
	144	144	149	159	176	195
Source: <i>Airport Management</i>						

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 Vaultee 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.

2.3.2.1 General Aviation

The number of annual aircraft operations at Frazier Lake Airpark, as presented in Table 2-1, is forecast to increase from an estimated 10,790 in 2017 to 23,990 by 2038.

2.3.2.2 Air Taxi

In 2017 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 2038.

2.3.2.3 Military

Based on discussions with persons knowledgeable of the Airport and its activities, there were no military operations in 2017, 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.

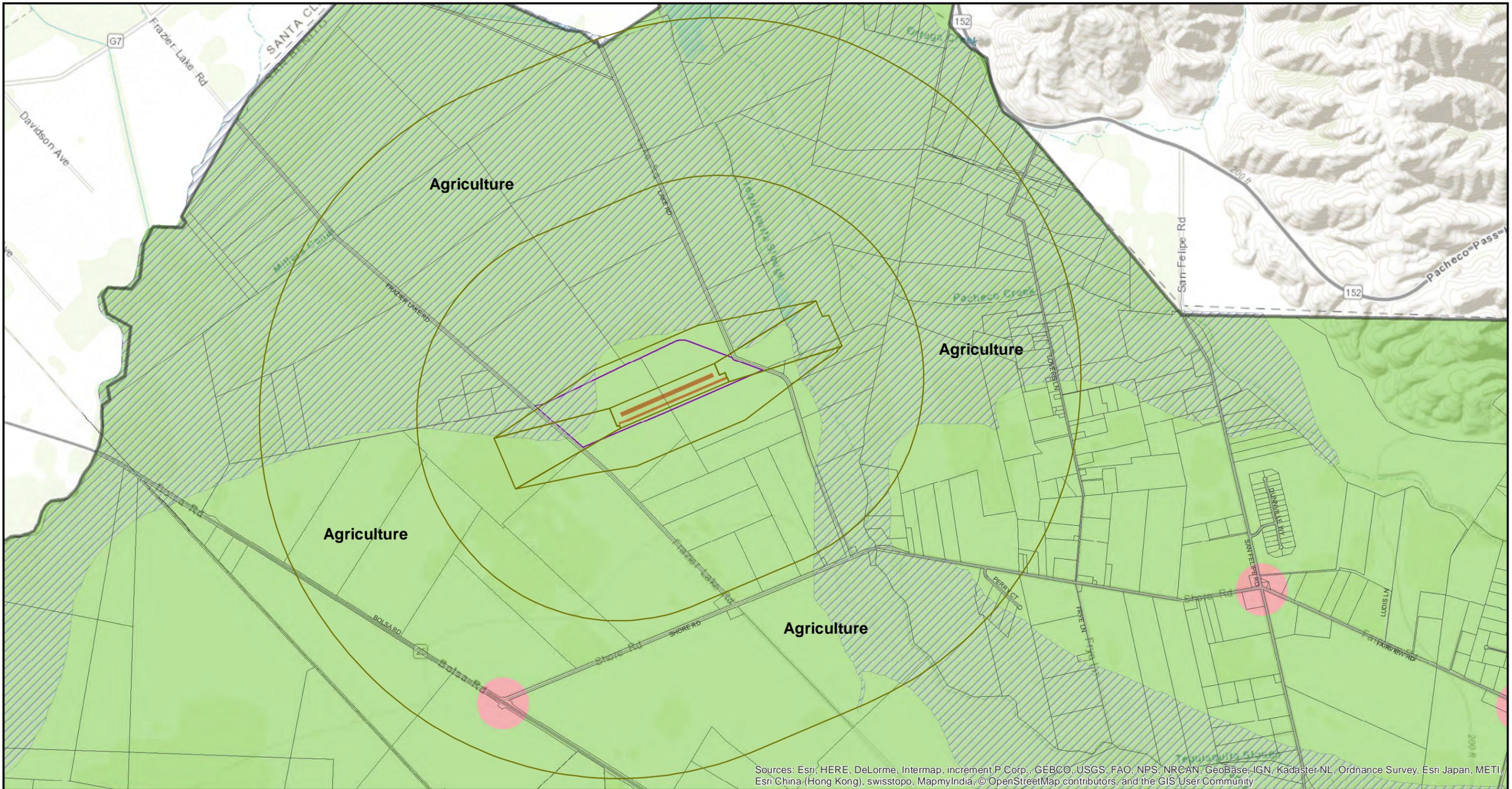
Military helicopter operations are not expected to contribute in a predictable manner to the number of annual airport operations through 2038.

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).

The [California High Speed Rail Authority](#) is studying a San Jose to Merced rail route which appears to run to the immediate north of and nearly adjacent to the Airport property line. Airport management has been in contact with the authority engineers and has attended numerous public meetings pointing out the existence of the unique public-use airport in the immediate vicinity of their planned routing. At this time, it does not appear that the rail line would impact the Airport or interfere with airport operations.

San Benito County planning needs to monitor this design activity to verify that the rail line design complies with the Frazier Lake Airpark ALUCP.



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

General Plan Land Use

Airport Land Use Compatibility Plan Frazier Lake Airpark, San Benito County

Figure 3

Legend

- Agriculture (1du/5 acres or Max. Floor Area ratio 0.5)
- FEMA Flood Zone
- Commercial thoroughfare (Max. Floor Area Ratio: 0.8)
- Runway
- Parcel
- FAR Part 77 Surfaces
- Airport Property

Map prepared January 2019
NOTE: THIS MAP IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR NAVIGATIONAL PURPOSES



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 October 2011 *California Airport Land Use Planning Handbook* (2011 Handbook) published by the California Department of Transportation, Division of Aeronautics (Caltrans). The 2011 Handbook provides guidelines for formulating compatibility criteria and policies for preparing Airport Land Use Compatibility Plans (ALUCPs). 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 2011 Handbook can be viewed by clicking on the hyperlink in the bibliography or going to the following website: <http://www.dot.ca.gov/hq/planning/aeronaut/documents/alucp/AirportLandUsePlanningHandbook.pdf> Note that a local agency is not precluded from establishing land use policies that are more restrictive than those described in this ALUCP.

3.3 NOISE RESTRICTION AREA

Airport noise affects many communities. At certain levels, airport noise can interfere with sleep, conversation, or relaxation. It also may disrupt school and work activities. At even 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 airport. A more general conclusion is that noise may have an additive effect for some people with anxieties, ulcers, and tension illness.

The amount of annoyance that aircraft noise creates among people living and working in the vicinity of an airport varies on an individual basis. Studies show that a certain percentage of people will continue to be annoyed by aircraft noise at any given noise level, regardless of how low that aircraft noise may be.

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 for residential structures 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 land use 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 identified Ldn and CNEL as being equivalent measures of noise. Relative to aviation, it is common to use 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 D*).

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 2011 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 2011 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 and above 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 outdoors noise in the range between 60 and 65 dB CNEL can be attenuated to achieve the 45 dB CNEL level indoors when built using normal standards of construction.

The 2002 Handbook (see Appendix B herein) urges ALUCs to be conservative when establishing noise contours.

3.3.3 Land Use Compatibility Standards - San Benito County

In the Health and Safety Element, HS-8.5 of the San Benito County *2035 General Plan*, the County adopted the 60 dB Ldn (equivalent to 60 dB CNEL) as the clearly acceptable standard for residential uses. Above the 60 dB Ldn, residential uses are normally acceptable, however, the noise exposure is great enough to be of some concern but common building construction will make the indoor environment acceptable, even for sleeping quarters.

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 2038 forecast aircraft operations based on the existing runway configuration. Note that these noise contours are based on 190,000 annual operations, the maximum number possible for this runway (See Appendix B).

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 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 2038 CNEL Noise Exposure Contours

The FAA 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.

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 these 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, 75, and 80 dB CNEL noise contours based on the maximum aircraft operations are illustrated on Figure 4 and discussed below.

3.3.6.1 75 and 80 dB CNEL Noise Levels

The 75 and 80 dB CNEL contours are completely contained within the Airport boundaries.

3.3.6.2 70 dB CNEL Noise Level

The 70 dB CNEL aircraft noise contour is 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.

3.3.6.3 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.

Table 3 - 1

AIRPORT CONFIGURATION AND RUNWAY USE

**Frazier Lake Airpark
2038**

Airport Configuration				
Runway Configuration:	5-23 5W-23W			
Field Elevation: (Runway High Point)	153 feet MSL			
Temporal Distribution of Operations:	90 percent Day 7 percent Evening 3 percent Night			
Runway Use Factors				
Operations by Aircraft Class	Runway 5	Runway 23	Runway 5W	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*

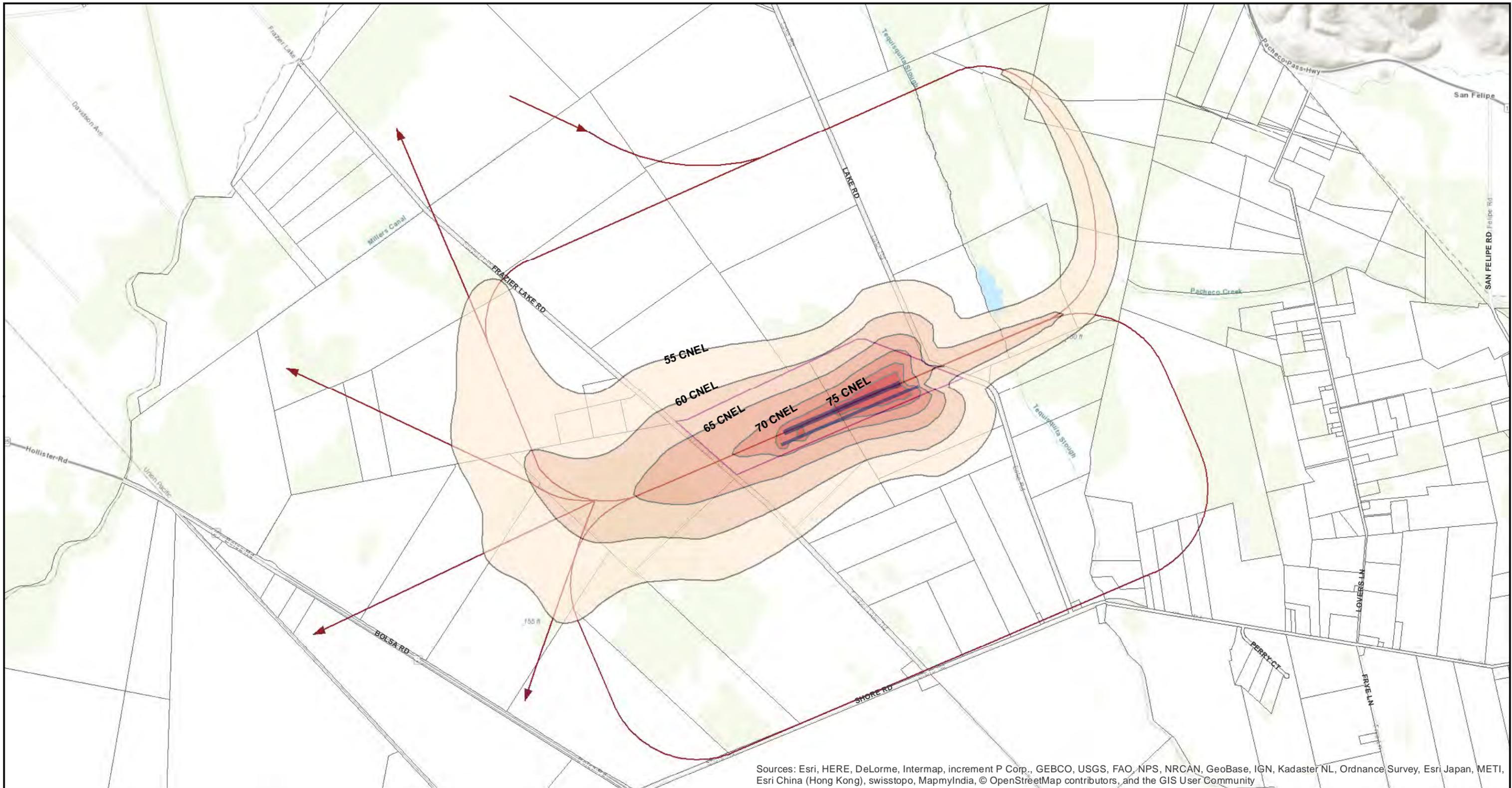
Table 3 - 2

ANNUAL AIRCRAFT OPERATIONS

Frazier Lake Airpark

Generalized Aircraft Type (INM Designation)	Year 2038
Piston Engine Twin Prop (BEC58P)	525
Single-Engine Prop - High Performance (GASEPV)	4,585
Single-Engine Prop - Standard (GASEPF)	18,360
Helicopters	260
Gliders	260

Source: *Airport management*



Legend

- | | | | |
|---|-----------------|---|------------------|
|  | < 55-60 dB CNEL |  | Flight Track |
|  | 60-65 dB CNEL |  | Parcels |
|  | 65-70 dB CNEL |  | Runways |
|  | 70-75 dB CNEL |  | Airport Property |
|  | 75-80 + dB CNEL | | |

Noise Contours

Airport Land Use Compatibility Plan

Frazier Lake Airpark, San Benito County

Figure 4

Map prepared May 2019
 NOTE: THIS MAP IS FOR PLANNING PURPOSES ONLY AND IS NOT
 INTENDED FOR CONSTRUCTION OR NAVIGATIONAL PURPOSES



3.3.6.4 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.

3.3.6.5 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 hazard. Any penetrations of the FAR Part 77 surface are subject to review on a case-by-case basis by the FAA. The FAA evaluates the penetration based on the published flight patterns for the airport, as they exist at that time. If a safety problem is found to exist, the FAA may issue a determination of a hazard to air navigation. The 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.

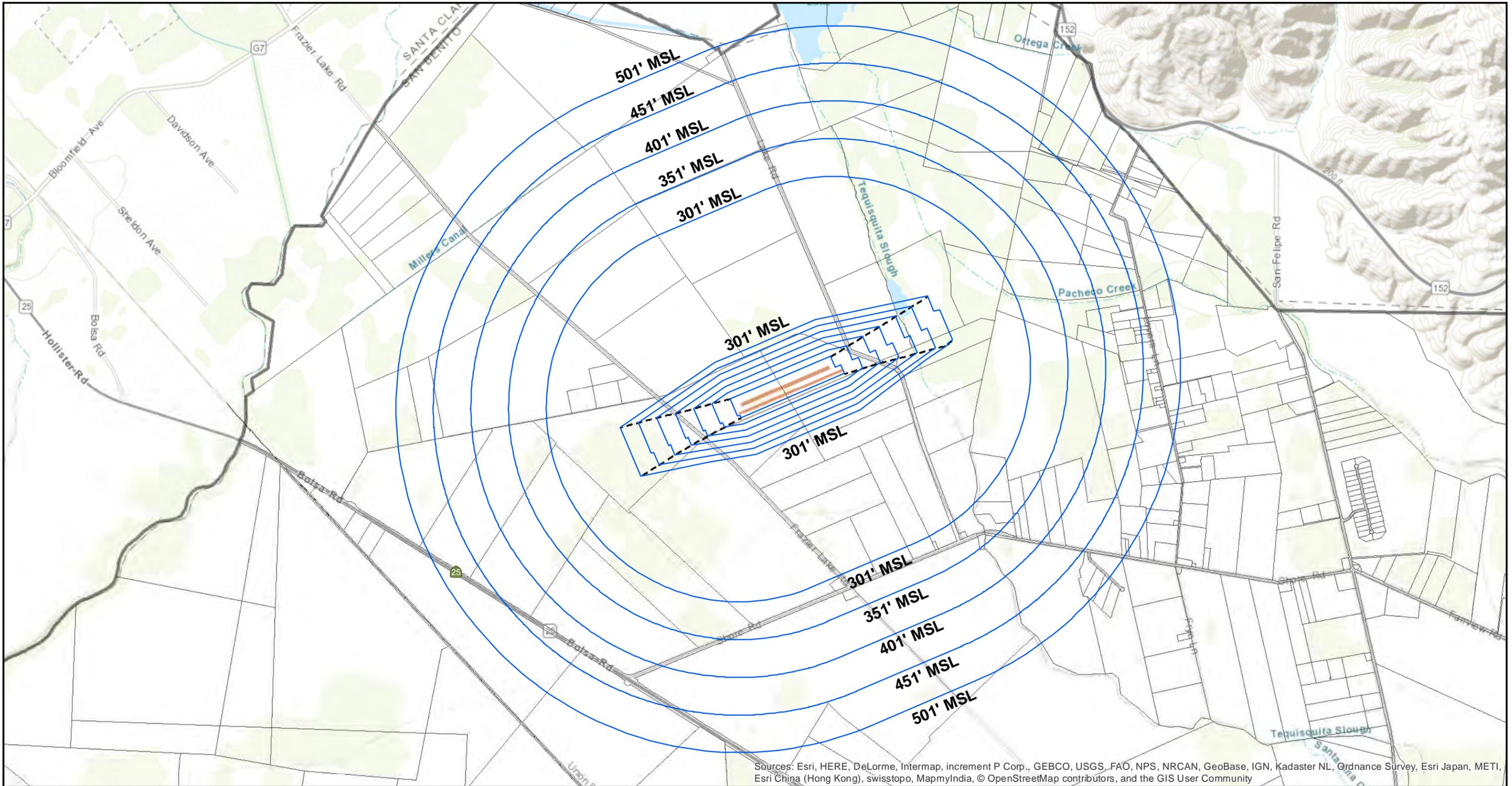
The dimensions of the imaginary surfaces vary depending on the type of approach to a particular runway as illustrated on Figures 5a and 5b for the Airport based on the ultimate dimensions shown on the Airport Layout Plan. Nonprecision runways generally have larger surfaces and flatter approach slopes 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 noted in Table 3-3. 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.



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

FAR Part 77 Surfaces

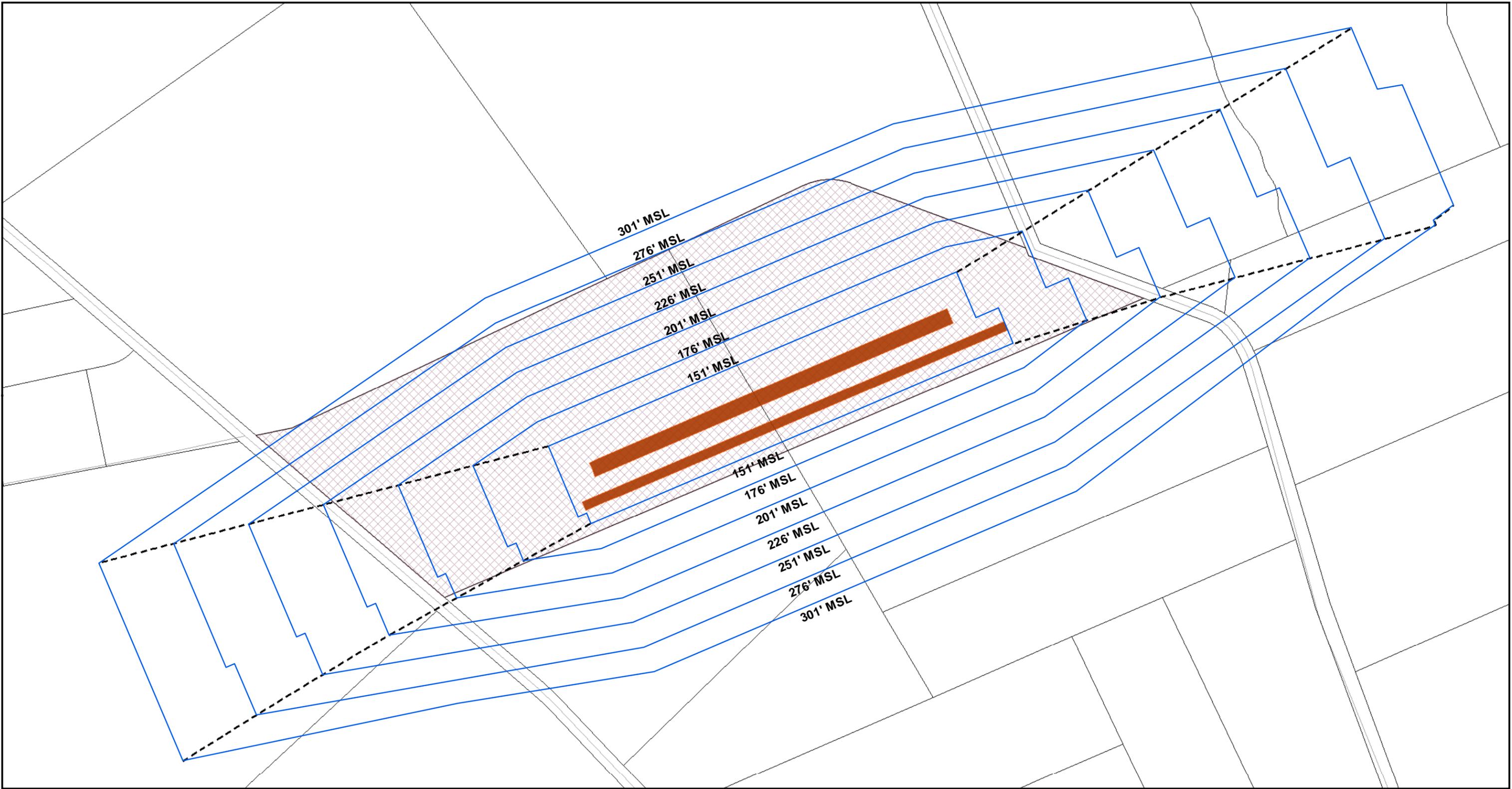
Airport Land Use Compatibility Plan Frazier Lake Airpark, San Benito County Figure 5a

Legend

- FAR Part 77 Surfaces
- Runways
- Parcels



Map prepared May 2019
NOTE: THIS MAP IS FOR PLANNING PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION OR NAVIGATIONAL PURPOSES



Policy Boundaries

- FAR Part 77 Surfaces
- ▬ Runways
- Parcels
- Airport Property

FAR Part 77 Surfaces

Airport Land Use Compatibility Plan Frazier Lake Airpark, San Benito County

Figure 5b

Map prepared May 2019
NOTE: THIS MAP IS FOR PLANNING PURPOSES ONLY AND IS NOT
INTENDED FOR CONSTRUCTION OR NAVIGATIONAL PURPOSES



Table 3-3

FAR PART 77 DIMENSIONS

Frazier Lake Airpark

Runway Type	Runway			
	<u>5</u> Nonprecision	<u>23</u> Nonprecision	<u>5W</u> Visual	<u>23W</u> Visual
Primary Surface				
Length (feet)	2,900	2,900	3,000	3,000
Width (feet)	500	500	250	250
Approach Surface				
Slope	34:1	34:1	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

3.4.3 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.

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 where they intersect.

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. The FAA has established minimum standards for the determination of hazards or obstructions to aviation. Note that the FAA uses current established approaches when they make their determination, they do not consider future approach patterns (GPS for example) that would require a lower protected approach slope, thus the FAR Part 77 surfaces should be the controlling height limit for structures under the approach surfaces.

The FAA permits local agencies such as the ALUC to establish more restrictive criteria for determining if the height of a structure creates a safety hazard to aircraft operations. A determination by the FAA or Caltrans that a project does not constitute a hazard to air navigation does not limit the ALUC from determining that a project may be inconsistent under the policies of this ALUCP.

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 2011 Handbook presents guidelines for the establishment of airport safety areas in addition to those established by the FAA.

Airport safety zones are established to minimize the number of people exposed to potential aircraft accidents in the vicinity of the Airport by imposing density and use limitations within these zones. 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. Aircraft flight tracks are also shown on Figure 4.

In addition, the survivability of aircraft occupants in the event of an emergency landing has been shown to increase significantly if the aircraft is able to reach the ground under control of the pilot. As a result, open area requirements are established for the safety zones in addition to density and use requirements.

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 (RPZ) having the highest exposure followed by the Inner Safety Zone (ISZ), Turning Safety Zone (TSZ), Outer Safety Zone (OSZ) and Sideline Safety Zone (SSZ), with the Traffic Pattern Zone (TPZ) having the lowest level of exposure.

The safety zones defined for the Airport are a composite based on the 2011 Handbook guidelines. The safety zones for the two runways are based on the diagram for a General Aviation airport. Safety zones are exclusive in their coverage, and do not overlay each other. Thus land in the RPZ is only in the RPZ, and is not also in the ISZ or TSZ. The order of precedence is, from highest to lowest: RPZ, ISZ, TSZ, OSZ, SSZ and TPZ. If a development project spans more than one safety zone, each part of the project must meet the requirements for the safety zone in which the land for that portion of the project is located. Thus a single building that extends over two safety zones may have differing height and density-of-use requirements for the two parts of the same physical structure. The following safety zones apply to Frazier Lake Airport based on information presented in the 2011 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 and aircraft occupants. RPZs should be clear of all structures and activities. The RPZ begins at the end of the Primary Surface. 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 and begins 200 feet out from the runway threshold.
- 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 and begins at the runway threshold.

3.5.2 Turning Sector Defined

Some of the safety zones are bounded by a geometric feature defined as a “Turning Sector”. There are four Turning Sectors for this airport, one for each end of each runway. These features are constructed as follows:

3.5.2.1 Runways 5-23 and 5W-23W Turning Safety Zone Construction

Each runway end has a sector, which is bounded on the inside by the extended runway centerline. The radius of these sectors is 3000 ft with the center point located 1000 ft along each runway centerline from the runway departure-end threshold towards the opposite end of the runway. The arc for the sector is swung centered on the extended runway centerline. The interior angle of the sector is 30 degrees on each side of the extended runway centerline, or 60 degrees wide.

- The Turning Sector is defined as the outside bounds of the feature described above.

3.5.3 Inner Safety Zone

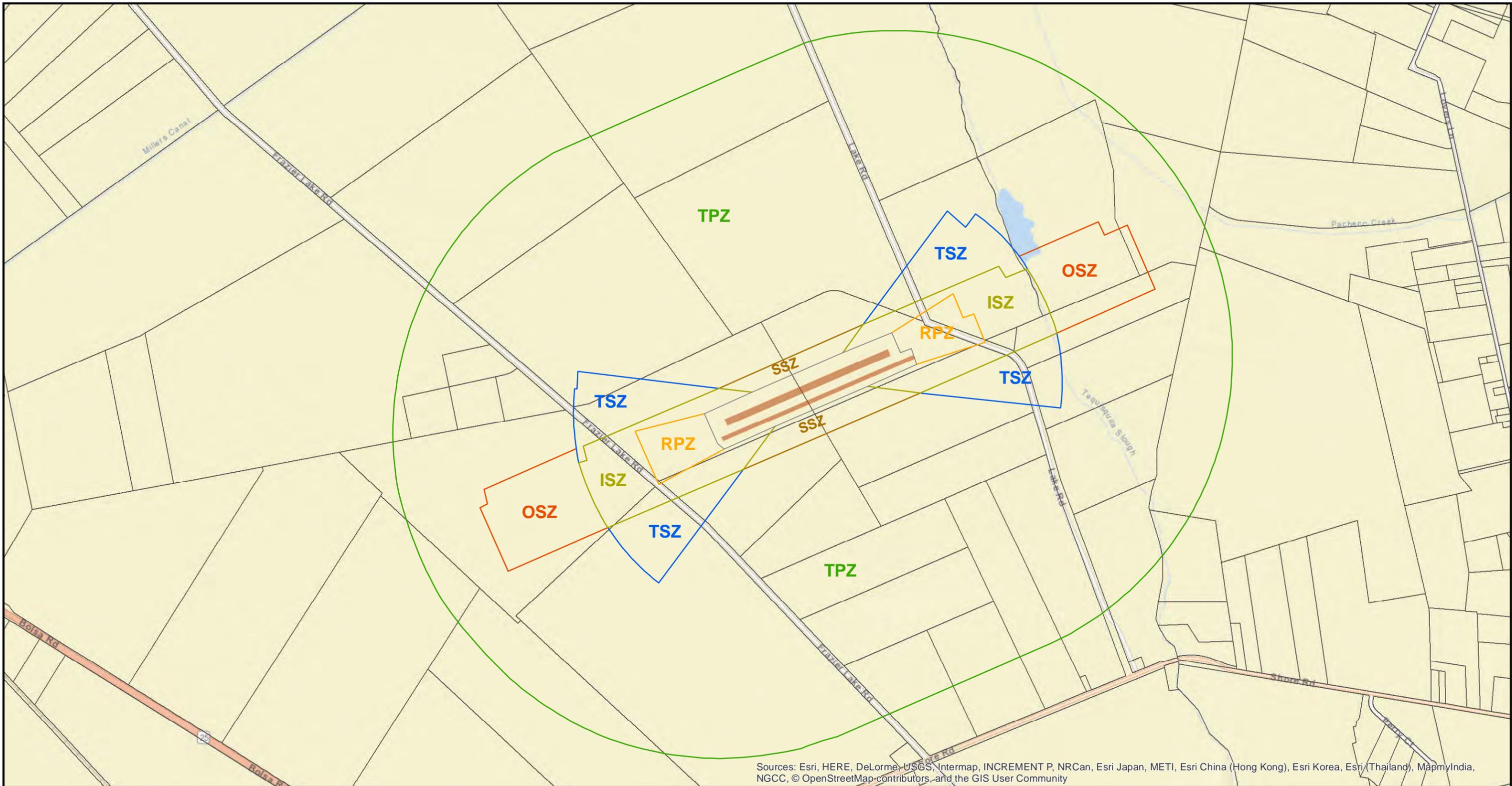
The Inner Safety Zone (ISZ) is located within the Turning Sector boundary described above but excludes the RPZ. The ISZ represents the approach and departure corridors that have the second highest level of exposure to potential aircraft accidents. The ISZ is centered on the runway centerline and extends to the outer edge of the Turning Sector boundary. The length of the runway determines the dimensions.

- The ISZ for both ends of Runway 5-23 and 5W-23W is an area 1000 feet wide, centered on the runway and contained within the Turning Safety Zone.
- The ISZ does not include the area of the RPZ.

3.5.4 Turning Safety Zone

The Turning Safety Zone (TSZ) represents the approach and departure areas that have the third highest level of exposure to potential aircraft accidents. The Turning Safety Zones are defined below.

- The TSZ for both ends of runways 5-23 and 5W-23W are the areas inside the Turning Sector that exclude the Primary Surface, the RPZ and the ISZ.



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Safety Zones

Airport Land Use Compatibility Plan Frazier Lake Airpark, San Benito County

Figure 6

Legend

- Runway Protection Zone
- Traffic Pattern Zone
- Inner Safety Zone
- Turning Zone
- Outer Safety Zone
- Sideline Zone
- █ Runways
- Parcel

Map prepared January 2019
NOTE: THIS MAP IS FOR PLANNING PURPOSES ONLY AND IS NOT
INTENDED FOR CONSTRUCTION OR NAVIGATIONAL PURPOSES



3.5.5 Outer Safety Zone

The Outer Safety Zone (OSZ) extends out from the TSZ. The OSZ is a rectangular area centered along the extended runway centerline starting at the outer end of the TSZ. The length of the runway determines the dimensions.

- The OSZ for both ends of runway 5-23 and 5W-23W is a rectangular area 1000 feet wide and 1500 feet long at the center, centered on the extended runway centerline, starting at the outer edge of the TSZ and ISZ and extending outward from the runway threshold.

3.5.6 Sideline Safety Zone

The Sideline Safety Zone (SSZ) is an area along the length of the outside the Primary Surface intersecting the Turning Safety Zone. Aircraft do not normally over fly this area, except by aircraft losing directional control on takeoff (especially multi-engine aircraft).

- The SSZ for both runways 5-23 and 5W-23W is 1000 feet wide centered on each runway centerline and extends in length to intercept the Turning Zone boundary.
- The SSZ area excludes the Primary Surface.

3.5.7 Traffic Pattern Zone

The Traffic Pattern Zone (TPZ) is within other portions of the airport area that are normally 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 4,500 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 where they intersect.
- The TPZ excludes all other safety zones.

3.6 OVERFLIGHT RESTRICTION AREA

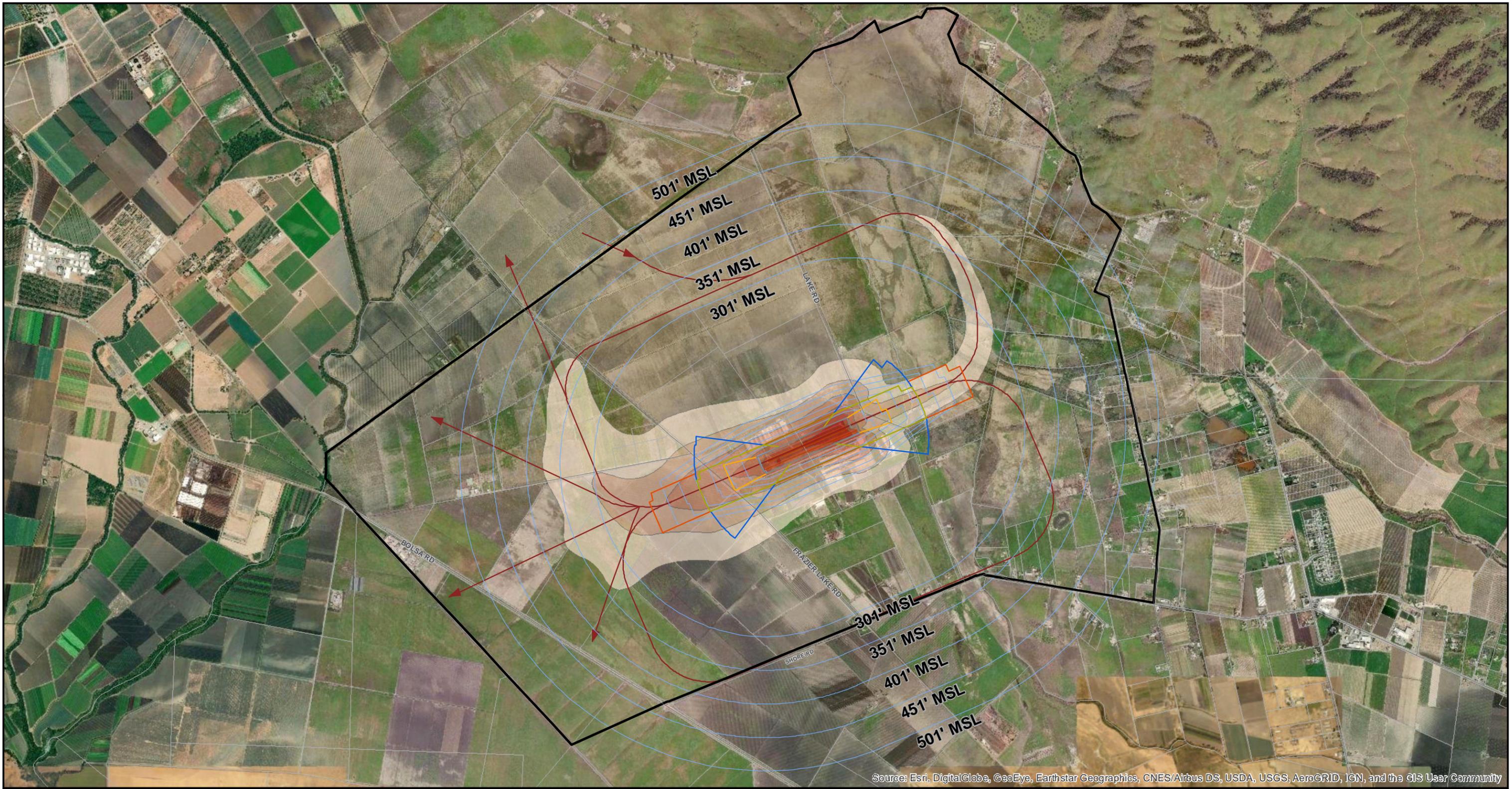
The Airport Influence Area (AIA), presented in Section 3.7, is a composite of the areas surrounding the Airport that are affected by noise, height, and safety considerations. All areas within the AIA should be regarded as potentially subject to aircraft overflights. Although sensitivity to aircraft overflights 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.).

3.7 AIRPORT INFLUENCE AREA

The Airport Influence Area (AIA) is a composite of the areas surrounding the Airport that are affected by noise, height, and safety considerations. The AIA is defined as a feature-based boundary around the Airport within which all actions, regulations and permits must be evaluated by local agencies to determine how the Airport Land Use Compatibility Plan policies may impact the proposed development. This evaluation is to determine that the development meets the conditions specified for height restrictions, and noise and safety protection to the public. [A.B. 332 (Stats. 2003) codified in Public Utilities Code 21674.7(b)].

The Airport Influence Area (Figure 7) is defined as the area bounded by Lovers Lane to Shore Road, west along Shore Road and extended to the railroad tracks, then northwest along the railroad tracks to the Pajaro River, then north along the Pajaro River to Miller's Canal, then northeast along Miller's Canal to the San Benito County line, then east along the county line to Lovers Lane then south to Shore Road.

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.



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Runway Protection Zone
- Inner Safety Zone
- Turning Zone
- Outer Safety Zone
- Sideline Zone
- FAR Part 77 Surfaces
- Airport Influence Area
- Runways
- Parcel
- Flight Track

**Noise Contours
CNEL**

	< 55-60 dB
	60-65 dB
	65-70 dB
	70-75 dB
	75-80 + dB

Airport Influence Area

Airport Land Use Compatibility Plan Frazier Lake Airpark, San Benito County

Figure 7

Map prepared May 2019
NOTE: THIS MAP IS FOR PLANNING PURPOSES ONLY AND IS NOT
INTENDED FOR CONSTRUCTION OR NAVIGATIONAL PURPOSES



4 LAND USE COMPATIBILITY POLICIES

4.1 LAND USE PLANNING ISSUES

The land use planning criteria for the individual land use planning issues applicable to the Airport are discussed in Section 3.0. Figure 7 presents a composite of the land use planning categories and the criteria that establishes the Airport Influence Area (AIA). The San Benito County Airport Land Use Commission (ALUC) and the Airport Land Use Compatibility Plan (ALUCP) 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 (see figure 4), inside which an acoustical analysis is required by the local agency with land use jurisdiction demonstrating how low-density, single-family, multi-family and mobile home dwelling units and schools 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 5000 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 lowest of the Approach Surfaces plus the Transitional Surfaces plus the Horizontal Surface plus the Conical Surface at any point and is defined in Section 3.4 and presented on Figures 5a and 5b.
- **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 defined in Section 3.5 and presented on Figure 6.
- **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 (Figure 7) 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 ALUCP are described below. In addition, actions that are available to the local jurisdictions are also presented.

Implementation of the ALUCP will be the responsibility of the County of San Benito for those areas within the AIA under their jurisdiction. Note that Policies T-1 and T-2 extend countywide. The San Benito County Airport Land Use Commission (ALUC) will provide policy direction, advice, and technical assistance to the County as needed to facilitate implementation of the ALUCP.

4.2.1 San Benito County Airport Land Use Commission Procedures

The San Benito County Airport Land Use Commission shall:

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

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

- Review the General Plan and applicable 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 ALUCP.
- Review all actions, regulations and permits within the AIA for consistency with the adopted Frazier Lake Airpark Airport Land Use Compatibility Plan.
- Review all proposed amendments to the General 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 ALUCP.

- 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 ALUCP or if the ALUCP requires an amendment.

- Review the plans, regulations and other actions 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 off-airport land use planning efforts 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 that a local jurisdiction's General Plan and applicable Specific Plans are consistent with the ALUCP (or the local jurisdiction has overruled the ALUC and made the required findings of consistency with the purposes stated in Public Utilities Code section 21676(a)), to the extent that these are not mandated referrals, the ALUC requires the local jurisdictions to submit referrals to the ALUC for the following proposed developments:

- Any project that requires use of the Infill policies or Reconstruction policy R-3 in order to be deemed consistent with this ALUCP.
- Proposed residential development, including land divisions, within the AIA.
- Major infrastructure development or improvements (e.g., water, sewer, roads) that 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, or other high-density or low-mobility uses 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 and ALUC policies.
- Any proposed land use action by a city or County planning agencies involving a question of compatibility with the Airport's activities. For example, creation of a landfill within the AIA would generally meet all height and density requirements, however the tendency of landfills to attract bird activity may create a safety hazard for airport operations.

- Any proposed project within the AIA that is referred to the ALUC for review by the local agency.

4.2.1.2 Project Submittals

When review of a land use development proposal is required under this ALUCP, the referring agency shall provide the following information to the ALUC in addition to the information required by the city or County:

- A map or maps, drawn to an appropriate scale, showing the location of the project with respect to the Airport Influence Area boundaries, the airport safety zones, the airport noise contours and the FAA Part 77 Surfaces for the airport.
- 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.
- The maximum 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 Administration's evaluation and reply to proponent's notification to the FAA using 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 statutes and regulations, in order that the ALUC's findings may be considered by the local agency prior to finalizing the proposed action.

The ALUC must find a proposal either 1) consistent with the ALUCP or 2) inconsistent with the ALUCP. Additionally, the ALUC can provide recommendations for changes that would enhance the project's compatibility with the ALUCP 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 receipt of the complete (as determined by ALUC staff) Project Submittal package (Section 4.2.1.2). If the proponent desires to request a delay in determination, the proponent must withdraw the project from consideration and reapply at a later date. If the determination is not made within 60 days (or as extended by proponent's request), the proposal shall be considered consistent with the ALUCP.

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

4.2.2 County of San Benito

The County of San Benito shall:

- Adopt the ALUC policies and the AIA boundary maps and any adopted amendments.
- Incorporate the adopted ALUC policies and adopted amendments, boundary maps, and land use recommendations into the local agency's General and/or Specific Plan and Zoning Ordinances within 180 days of adoption or vote to overrule per PUC 21676 (a).
- Provide ongoing review of land uses within the AIA to ensure that land use changes are compatible with ALUC policies and plans. The affected local agency shall work closely with ALUC staff to establish and carry out review coordination with the ALUC.

- Obtain avigation easements for any development within the AIA under County jurisdiction.
- Incorporate the AIA boundary and associated policy maps into the local agency's geographic information system (GIS).

4.2.2.1 Override Notification Process

The affected local agencies, after January 1, 2004, in accordance with PUC 21676 (a), shall:

- Notify the ALUC at least 45 days in advance, of their intent to overrule any ALUC non-consistency determination including a copy of their proposed decision and specific findings.
- Notify the ALUC if and when the local agency overrules any ALUC non-consistency determinations.

4.2.3 Airport Owner/Operator Responsibilities

To ensure that the ALUC is able to fulfill its statutory responsibilities, Frazier Lake Airpark should:

- Notify the ALUC of operational or physical changes at the Airport, such as aircraft flight tracks, airfield configuration, structural development, relocation of facilities, and proposed new and/or updates to planning documents.
- Notify the ALUC of any changes that may affect Federal Aviation Regulations (FAR) Part 77 height restriction surfaces or CNEL aircraft noise contours.
- Provide CNEL noise contour data including the most recent actual data as well as forecasts covering at least twenty years in to the future.

4.3 COMPATIBILITY POLICIES

The compatibility of land uses (temporary or permanent) in the vicinity of the Airport will be evaluated for each of the potential land use impact categories (noise, height and safety) in terms of the compatibility policies established for each category of concern. The graphic illustrations of each area of concern presented in this ALUCP are to be included in the evaluation. The following compatibility policies will be used for ALUC consistency review.

4.3.1 General Compatibility

4.3.1.1 Policies

G-1 In the case of conflicts in any policy between this plan, or any County code, ordinance or regulation, the most restrictive provision shall be applied to the project.

G-2 If a project falls into an area within two or more Airport Influence Areas (AIA), the most restrictive conditions from each separate airport shall apply to the project.

G-3 The Airport is exempt from the policies of this ALUCP for the development of projects on airport property.

G-4 Local jurisdictions should encourage the conversion of land uses that are currently incompatible with this ALUCP to uses that are compatible, where feasible.

G-5 Where legally allowed, dedication of an avigation easement to the County of San Benito shall be required to be offered as a condition of approval on all projects located within an Airport Influence Area, other than reconstruction projects as defined in paragraph 4.3.7. All such easements shall be similar to that shown as Exhibit 1 in Appendix A and recorded on the property deed.

G-6 Any proposed use or activity 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), hunting clubs, rifle ranges, and activities that may produce smoke, dust, or glare. This policy requires the height at maturity of newly planted trees to be considered to avoid future penetration of the FAA FAR Part 77 Surfaces.

G-7 All new exterior lighting or large video displays within the AIA shall be designed so as to create no interference with aircraft operations. 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.

4.3.2 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 2038 Aircraft Noise Contours presented on Figure 4.

4.3.2.1 Policies

N-1 The Community Noise Equivalent Level (CNEL) method of representing noise levels shall be used to determine if a specific land use is consistent with the ALUCP.

N-2 In addition to the other policies herein, the Noise Compatibility Guidelines presented in Table 4-1 shall be used to determine if a specific land use is consistent with this ALUCP.

N-3 Noise impacts shall be evaluated according to the Aircraft Noise Contours presented on Figure 4.

N-4 No residential or transient lodging construction shall be permitted within the 60 dB CNEL contour boundary unless it can be demonstrated that the resulting interior sound levels will be less than 45 dB CNEL and there are no outdoor patios or outdoor activity areas associated with the residential portion of a mixed use residential project of a multi unit residential project. (Sound wall noise mitigation measures are not effective in reducing noise generated by aircraft flying overhead.)

N-5 All property owners within the 60 dB CNEL contour boundary who rent or lease their property for residential use shall include in their rental/lease agreement with the tenant, a statement advising that they (the tenants) are living within a high noise area and the exterior noise level is predicted to be greater than 60 dB CNEL in a manner that is consistent with current state law including AB2776 (2002).

N-6 Residential construction will not be permitted in the area between the 60 dB CNEL contour boundary and the 65 dB CNEL contour boundary unless it can be demonstrated that the resulting interior sound level will be no greater than 45 dB CNEL.

N-7 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.

N-8 Single-event noise levels (SENL) from single aircraft overflights are to be considered when evaluating the compatibility of highly noise-sensitive land uses such as schools, libraries, outdoor theaters, and mobile homes. Single-event noise levels are especially important in the areas regularly overflown by aircraft, but which may not produce significant CNEL contours, such as the down-wind segment of the traffic pattern, and airport entry and departure flight corridors.

Table 4 - 1

NOISE COMPATIBILITY POLICIES

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, condominiums, townhouses	*	**	***	***
Transient lodging - motels, hotels	*	*	**	***
Schools, libraries, indoor religious assemblies, hospitals, nursing homes	*	**	***	***
Auditoriums, concert halls, amphitheaters	**	***	***	****
Sports arena, outdoor spectator sports, parking	*	**	***	***
Playgrounds, neighborhood parks	**	**	***	***
Golf courses, riding stables, water recreation, cemeteries	*	**	**	***
Office buildings, business commercial and professional, retail	*	*	**	**
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. Mobile homes may not be acceptable in these areas. Some outdoor activities might be adversely affected.			
** Normally 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. Outdoor activities may be adversely affected. <u>Residential:</u> Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.			
*** Normally Unacceptable	New construction or development should 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. Outdoor activities are likely to be adversely affected.			
**** Clearly Unacceptable	New construction or development should not be undertaken.			

Source: Based on General Plan Guidelines, Appendix C (2003), Figure 2 and San Benito County 2035 General Plan, Table 9-2

4.3.3 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.

4.3.3.1 Policies

H-1 Any structure or object that penetrates the Federal Aviation Regulations Part 77, Objects Affecting Navigable Airspace, (FAR Part 77) surfaces, as presented in Table 3-3 and illustrated on Figures 5a and 5b will be considered an incompatible land use.

H-2 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).

4.3.4 Tall Structure Compatibility

Structures of a height greater than 200 feet above ground level can be a special hazard to aircraft in flight.

4.3.4.1 Policies

T-1 The applicant for any proposed project anywhere in the County for construction or alteration of a structure (including antennas) higher than 200 feet above ground level shall submit to the FAA a completed copy of FAA Form 7460-1, *Notice of Proposed Construction or Alteration*. A copy of the submitted form shall be submitted to the San Benito County ALUC as well as a copy of the FAA's response to this form.

T-2 Any proposed project anywhere in the County for construction or alteration of a structure (including antennas) higher than 200 feet above ground level shall comply with FAR 77.13(a)(1) and shall be determined inconsistent if deemed to be a hazard by the FAA or if the ALUC determines that the project has any impact on normal aircraft operations or would increase the risk to aircraft operations.

4.3.5 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. Land uses of particular concern are those in which the occupants have reduced effective mobility or are unable to respond to emergency situations.

4.3.5.1 Policies

S-1 These policies and the Safety Zone Compatibility Policies presented in Table 4-2 shall be used to determine if a specific land use is consistent with the ALUCP. Safety impacts shall be evaluated according to the Airport Safety Zones presented on Figure 6.

S-2 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), Turning Safety Zones (TSZs), Sideline Safety Zones (SSZs), and Outer Safety Zones (OSZs) presented in Table 4-2. These uses should also be discouraged in the Traffic Pattern Zones (TPZs).

S-3 Amphitheaters, sports stadiums and other very high concentrations of people shall be prohibited within the Runway Protection Zones (RPZs), Inner Safety Zones (ISZs), Turning Safety Zones (TSZs), Sideline Safety Zones (SSZs), Outer Safety Zones (OSZs) and Traffic Pattern Zones (TPZs) presented in Figure 6.

Table 4 - 2

SAFETY ZONE COMPATIBILITY POLICIES

Frazier Lake Airpark

Safety Zone	Maximum Population Density	Open Space Requirements	Land Use
Runway Protection Zone – RPZ Also known as Zone 1	-0- (No people allowed)	100 percent (No structures allowed)	Agricultural activities, roads, open low-landscaped areas. No structures, trees, telephone poles or similar obstacles. Occasional short-term transient vehicle parking is permitted. No open man-made water retention ponds.
Inner Safety Zone – ISZ Known as Zone 2	Nonresidential, maximum 20 people per acre (includes open area and parking area required for the building’s occupants)	30 percent of gross area open. No structures or concentrations of people within 100 feet of the extended runway centerlines.	<u>Residential</u> – none allowed. <u>Nonresidential</u> – uses should be activities that attract relatively few people. No shopping centers, restaurants, theaters, meeting halls, stadiums, multi-story office buildings, labor-intensive manufacturing plants, educational facilities, day care facilities, hospitals, nursing homes or similar activities. No hazardous material facilities (gasoline stations, etc.). No open man-made water retention ponds.
Turning Safety Zone - TSZ Known as Zone 3	Nonresidential, maximum 60 people per acre (includes open area and parking area required for the building’s occupants)	20 percent of gross area Minimum dimensions: 300 ft long by 75 ft wide parallel to the runways.	<u>Residential</u> – Allow residential infill to existing density (1 dwelling unit per 5 acres). <u>Nonresidential</u> – no regional shopping centers, theaters, meeting halls, stadiums, schools, day care centers, hospitals, nursing homes or similar activities. No hazardous material facilities (gasoline stations, etc.).
Outer Safety Zone – OSZ Known as Zone 4	Nonresidential, maximum 85 people per acre (includes open area and parking area required for the building’s occupants)	20 percent of gross area	<u>Residential</u> – Allow residential infill to existing density (1 dwelling unit per 5 acres). <u>Nonresidential</u> – no regional shopping centers, theaters, meeting halls, stadiums, schools, large day care centers, hospitals, nursing homes or similar activities. No above ground bulk fuel storage.
Sideline Safety Zone - SSZ Known as Zone 5	Nonresidential, maximum 60 people per acre (includes open area and parking area required for the building’s occupants)	30 percent of gross area	<u>Residential</u> – Allow residential infill to existing density (1 dwelling unit per 5 acres). <u>Nonresidential</u> – no regional shopping centers, theaters, meeting halls, stadiums, schools, large day care centers, hospitals, nursing homes or similar activities. No above ground bulk fuel storage.
Traffic Pattern Zone – TPZ Known as Zone 6	No Limit	10 percent of gross area every one-half mile	<u>Residential</u> – Allowed if consistent with County General Plan. <u>Nonresidential</u> – no large sports stadiums or similar uses with very high concentration of people.

Source: Based on 2011 *Airport Land Use Planning Handbook, Ch 4*, prepared by the California Department of Transportation, Division of Aeronautics.

S-4 Storage of fuel or other hazardous materials shall be prohibited in the Runway Protection Zone. Above ground storage of fuel or other hazardous materials shall be prohibited in the Inner Safety Zone and Turning Safety Zone. Beyond these zones, storage of fuel or other hazardous materials not associated with aircraft use should be discouraged.

S-5 In addition to the requirements of Table 4-2, open space requirements, for sites which can accommodate an open space component, shall be established at the general plan level for each safety zone where feasible as determined by the local jurisdiction, 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 buildings, and have minimum dimensions of at least 75 feet wide by 300 feet long along the normal direction of flight. The clustering of development and provision of contiguous landscaping and parking areas will be encouraged to increase the size of open space areas.

S-6 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.

S-7 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 at an airport, other than an FAA-approved navigational signal light or visual approach slope indicator. Lighting if any, shall be in accordance with FAA Advisory Circular 70/7460-1, Obstruction Marking and Lighting.
- 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 (See AC 150/5200-33B), 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, communication or navigation equipment.

S-8 Buildings that would interfere with an aircraft gliding to an emergency landing in a safety zone open area are not permitted.

S-9 In unique cases an exception can be granted, at the discretion of the ALUC, on the basis of mitigation measures proposed by the applicant which would result in the final project improving the overall safety in the safety zones in comparison to the situation existing prior to the project. An example of such a possible mitigation is the removal of existing incompatible structures in exchange for constructing less incompatible structures. The following conditions must be met for this variance to be granted:

- a. There must be a clear, demonstrable net improvement in safety.
- b. The mitigation must provide a permanent improvement in safety. For instance, in the example above, the removed structures could not be replaced by other structures at a later date.

4.3.6 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.

4.3.6.1 Policies

O-1 All new projects within the AIA that are subject to discretionary review and approval shall be required to dedicate an avigation easement to the County of San Benito. The avigation easement shall be similar to that shown as Exhibit 1 in Appendix A.

(In September of 2002 Assembly Bill AB2776 was signed into law and became effective on January 1, 2004. This statute requires that as part of the real estate transfer process, the purchaser be informed if the property is in an Airport Influence Area and if so, the purchaser is to be informed of the potential impacts (noise, in particular) resulting from the associated airport. This information is generally included in the Disclosure Documentation packet provided by the real estate agent to the property buyer.)

4.3.7 Reconstruction

Reconstruction as used in this ALUCP is the rebuilding of a legally established structure in any of the safety zones, in its original location and to its original condition (typically due to a fire, or earthquake damage or destruction). "Original conditions" means the same or lesser footprint, height and intensity of use. Reconstruction projects may be approved under the following policies:

4.3.7.1 Policies

R-1 Reconstruction projects that are not subject to a previous avigation easement shall not be required to provide an avigation easement as a condition for approval.

R-2 Residential reconstruction projects must include noise insulation to assure interior noise levels of less than 45 dB CNEL.

R-3 An application for reconstruction increasing the structure's internal square footage, footprint square footage, height, and/or intensity of use may be approved if the local agency determines that such increase will have no adverse impact beyond that which existed with the original structure. However, a project approved under this policy shall require the property owner to offer and the local agency shall accept an avigation easement to the County of San Benito, similar to Exhibit 1 in Appendix A.

4.3.8 Infill

Infill as used in this ALUCP is defined as the development of vacant or underutilized residential properties located in a safety zone, of less than 0.25 acres in size, in areas that are already substantially developed with uses not ordinarily permitted by the ALUCP compatibility criteria.

Redevelopment is defined as land that previously contained a building that was removed or demolished with the intent of replacing the building with a new building for a different use. Redevelopment is not considered Infill.

In some circumstances, infill projects may be acceptable if the following criteria are met.

4.3.8.1 Policies

I-1 Infill projects must comply with paragraph 4.3.5 and Table 4-2 of this ALUCP with the exception of the land use density requirements.

I-2 Infill projects may be approved if all of the following conditions are met:

- a) The total contiguous undeveloped land area at this location is less than 0.25 acres in size. Note that this means the total contiguous undeveloped land area, not just the land area being proposed for development. Lots larger than 0.25 acres shall not be considered for infill.
- b) The site is already surrounded on three sides and a street, or two sides and two streets, by the same land use as that being proposed.

- c) The ALUC determines that the project will create no adverse safety impacts beyond those that already exist due to the existing incompatible land uses.
- d) The property owner shall offer and the local agency shall accept an avigation easement to the County of San Benito, similar to Exhibit 1 in Appendix A and recorded on the property deed.

Section 5

5 IMPLEMENTATION

5.1 CONSISTENCY WITH LOCAL PLANS AND ZONING

The California State Aeronautics Act {Public Utilities Code: Division 9, Part 1, Chapter 4, Article 3.5, Section 21670 et seq} places the responsibility for implementing and enforcing this Airport Land Use Compatibility Plan (ALUCP) on the local governmental agencies responsible for land use planning within each airport's Airport Influence Area (AIA).

Once the ALUC has adopted a revised (or new) ALUCP, and transmitted that ALUCP to an affected local agency that local agency is mandated to incorporate the ALUCP's provisions into its General and/or Specific Plan(s) within 180 days {Government Code 65302.3(b)}. Implicitly, the local agency is then encouraged to adopt zoning ordinance(s) that implement the policies of their General/Specific Plan(s).

If a local agency decides not to incorporate the ALUCP policies verbatim in its General and/or Specific plans, it may overrule portions (or all of) the ALUCP if it finds that its General and/or Specific Plans are consistent with the State Aeronautics Act, PUC 21670 et seq. The overrule process requires a two-thirds vote of the local agency's governing body, supported by specific findings which demonstrate that the plan(s) satisfy the purposes of the State Aeronautics Act {PUC 21676(a) et seq} and guidance of the state's Airport Land Use Planning Handbook.

During the amendment process and subsequent to adoption of revised General and/or Specific Plan(s) by a local agency, the ALUC is required to promptly review both the draft and final Plan(s) for a ALUCP consistency determination {PUC 21676}.

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. Overly restrictive land use regulations may raise constitutional questions to the taking of private property without just compensation. This is particularly applicable in areas near the ends of the runways where such extreme restrictions may be appropriate. For this reason airport owners/operators are encouraged to purchase an interest in or obtain an easement in the land containing the most restrictive safety zones in order to affect the purposes of this Plan.

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 policies 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 ALUCP, 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 that 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. The FAA No Hazard Determination shall be obtained by the project proponent prior to submitting a referral to the ALUC.
- **Maximum Densities** - The principal noise and safety compatibility standards in the ALUCP 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. When calculating density, the project site shall be the area used in the calculation.
- **Open Space Requirements** - ALUCP 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 against 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's boundaries where some significant degree of restriction or impact is involved.

- **Dedication** - Required dedication of aviation 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 aviation 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 aviation 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 aviation 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. Aviation 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-adjacent 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 A for a typical Deed Notice).

Deed notices are similar to aviation 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 aviation easements is that deed notices only serve as a disclosure of potential overflights, whereas aviation 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 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 ALUCP. 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 Policies 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 city or County Building Department.

LEED Green Building Council. The U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED), Building Design and Construction, Core and Shell Appendix presents a method for calculating approximate building Default Occupancy Count.

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.

Section 6

6 BIBLIOGRAPHY

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7 APPENDIX A

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 _____ herein after 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 official Frazier Lake Airpark Airport 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 ingress 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.

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.

The *Frazier Lake Airpark Airport Land Use Compatibility Plan* identifies Airport Influence Areas. Properties within these areas are routinely subject to overflights by aircraft using the associated 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 such airports should therefore be prepared to accept the inconvenience, annoyance or discomfort from normal aircraft operations. Residents also should be aware that the current volume of aircraft activity may increase in the future in response to increased aircraft ownership, increase in San Benito County population and/or economic growth. Any subsequent deed conveying this parcel or subdivisions there of shall contain a statement in substantially this form.

8 APPENDIX B

Selected Excerpts California Airport Land Use Planning Handbook (January 2002)

Establishing Noise Compatibility Policies

[Page Summary-8] **Basis For Compatibility Zone Delineation**

"Compatibility plans should be based upon the noise contours for the time frame that results in the greatest noise impacts. Usually, this time frame is the long-range future (at least 20 years), but sometimes can be the present or a combination of the two. Also, for busy airports, the capacity of the runway system may be the best representation of potential long-range future activity levels."

[Pages 7-18,19] **Noise Analysis Time Frame**

"State statutes specify that airport land use compatibility plans must be based upon an airport development plan "that reflects the anticipated growth of the airport during at least the next 20 years." Forecasts having the required 20-year time horizon are normally included in airport master plans. The FAA, the Division of Aeronautics, and some regional planning agencies also prepare individual airport forecasts, some extending to 20 years.

"For the purposes of compatibility planning, however, 20 years may be shortsighted. For most airports, a lifespan of more than 20 years can reasonably be presumed. Moreover, the need to avoid incompatible land use development will exist for as long as an airport exists. Once development occurs near an airport, it is virtually impossible or at least very costly and time consuming to change the land uses to ones which would be more compatible with airport activities

"In conducting noise analyses for compatibility plans, the long-range time frame is almost always of greatest significance. Barring vast improvements in aircraft noise reduction technology, the growth in aircraft operations expected at most airports will result in larger noise contours. A possible exception to this trend is that, at some airports, planned changes in runway configuration or approach procedures could result in reduction of noise impacts in some portions of the airport environs. In these instances, a combination of current and future noise contours may be the appropriate basis for compatibility planning.

"Past improvements in aircraft noise reduction technology or, more to the point, the elimination of older, noisier aircraft from the fleet have caused noise contours at some airports to shrink. One result of shrinking contour sizes during the late 1990s was pressure to allow residential and other noise-sensitive development closer to airports. Allowing such development might be reasonable in situations where no potential exists for the contours to expand back to their former size (for example, where policies to limit contour sizes have been adopted). However, whether future technology will again enable significant reduction in noise impacts is uncertain. Thus, looking to the long-range future, the scenario which has the greatest land use planning implications for most airports is that anticipated future growth in airport activity will result in expansion of noise contours."

GUIDANCE

The "at least" phrase in the statutory guidelines deserves emphasis. The 20-year time frame should be considered a minimum for compatibility plans. Noise impacts (as well as other compatibility concerns) should be viewed from the longest practical time perspective."

9 APPENDIX C

Revision History

Amendments Adopted 12-19-2019

1. Updated document to reflect the 2011 edition of the Caltrans Airport Land Use Planning Handbook.
2. Revised Figure 6, Safety Zones to reflect those recommended in the 2011 Caltrans Airport Land Use Planning Handbook.
3. Updated document to reflect the San Benito County 2035 General Plan.
4. Changed base year data from 1998 to 2017.
5. Updated the airport environs and airport activity data.
6. Updated the text in the document to reflect changes since the prior document's adoption
7. Revised cover page; updated text and replaced airport picture.

10 APPENDIX D

Aviation Glossary

Above Ground Level (AGL): An elevation datum given in feet above ground level.

Airport Layout Plan (ALP): A scale drawing of existing and proposed airport facilities, their location on an airport, and the pertinent clearance and dimensional information required to demonstrate conformance with applicable standards.

Avigation Easement: A type of easement that typically conveys the following rights:

> 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 (usually set in accordance with FAR Part 77 criteria).

> A right to subject the property to noise, vibrations, fumes, dust, and fuel particle emissions associated with normal airport activity.

> A right to prohibit the erection or growth of any structure, tree, or other object that would enter the acquired airspace.

> A right-of-entry onto the property, with proper advance notice, for the purpose of removing, marking, or lighting any structure or other object that enters the acquired airspace.

> A right to prohibit electrical interference, glare, misleading lights, visual impairments, and other hazards to aircraft flight from being created on the property.

Based Aircraft: Aircraft stationed at an airport on a long-term basis.

Community Noise Equivalent Level (CNEL): The noise metric adopted by the State of California for evaluating airport noise. It represents the average daytime noise level during a 24-hour day, adjusted to an equivalent level to account for the lower tolerance of people to noise during evening and nighttime periods relative to the daytime period. (State Airport Noise Standards)

Compatibility Plan: As used herein, a plan, usually adopted by an Airport Land Use Commission that sets forth policies for promoting compatibility between airports and the land uses that surround them.

Decibel (dB): A unit measuring the magnitude of a sound, 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. For environmental noise from aircraft and other transportation sources, an A-weighted sound level (abbreviated dBA) is normally used. The A-weighting scale adjusts the values of different sound frequencies to approximate the auditory sensitivity of the human ear.

Deed Notice: A formal statement added to the legal description of a deed to a property and on any subdivision map. As used in airport land use planning, a deed notice would state that the property is subject to aircraft overflights. Deed notices are used as a form of buyer notification as a means of ensuring that those who are particularly sensitive to aircraft overflights can avoid moving to the affected areas.

Dwelling Unit: Any building, structure or portion thereof which is occupied as, or designed or intended for occupancy as, a residence by one or more families, and any vacant land which is offered for sale or lease for the construction or location thereon of any such building, structure, or portion thereof.

Easement: A less-than-fee-title transfer of real property rights from the property owner to the holder of the easement.

Federal Aviation Regulations (FAR) Part 77: The part of Federal Aviation Regulations that deals with objects affecting navigable airspace in the vicinity of airports. Objects that exceed the Part 77 height limits constitute airspace obstructions. FAR Part 77 establishes standards for identifying obstructions to navigable airspace, sets forth requirements for notice to the FAA of certain proposed construction or alteration, and provides for aeronautical studies of obstructions to determine their effect on the safe and efficient use of airspace.

FAR Part 77 Surfaces: Imaginary airspace surfaces established with relation to each runway of an airport. There are five types of surfaces: (1) primary; (2) approach; (3) transitional; (4) horizontal; and (5) conical.

Federal Aviation Administration (FAA): The U.S. government agency that is responsible for ensuring the safe and efficient use of the nation's airports and airspace.

Federal Aviation Regulations (FAR): Regulations formally issued by the FAA to regulate air commerce.

Findings: Legally relevant subconclusions that expose a government agency's mode of analysis of facts, regulations, and policies, and that bridge the analytical gap between raw data and ultimate decision.

General Aviation: That portion of civil aviation that encompasses all facets of aviation except air carriers. (FAA Stats)

Infill: Development that takes place on vacant property largely surrounded by existing development, especially development that is similar in character.

Instrument Approach Procedure: A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing or to a point from which a landing may be made visually. It is prescribed and approved for a specific airport by competent authority.

Mean Sea Level (MSL): An elevation datum given in feet from mean sea level.

Noise Contours: Continuous lines of equal noise level usually drawn around a noise source, such as an airport or highway. The lines are generally drawn in 5-decibel increments so that they resemble elevation contours in topographic maps.

Noise Level Reduction (NLR): A measure used to describe the reduction in sound level from environmental noise sources occurring between the outside and the inside of a structure.

Nonconforming Use: An existing land use that does not conform to subsequently adopted or amended zoning or other land use development standards.

Nonprecision Instrument Runway: A runway with an approved or planned straight-in instrument approach procedure that has no existing or planned precision instrument approach procedure.

Obstruction: Any object of natural growth, terrain, or permanent or temporary construction or alteration, including equipment or materials used therein, the height of which exceeds the standards established in Subpart C of Federal Aviation Regulations Part 77, Objects Affecting Navigable Airspace.

Overflight: Any distinctly visible and/or audible passage of an aircraft in flight, not necessarily directly overhead.

Runway Protection Zone: (RPZ): An area (formerly called a clear zone) off the end of a runway used to enhance the protection of people and property on the ground. (Airport Design AC)

Safety Zone: For the purpose of airport land use planning, an area near an airport in which land use restrictions are established to protect the safety of the public from potential aircraft accidents.

Single Event Noise Exposure Level (SENEL): A measure, in decibels, of the noise exposure level of a single event, such as an aircraft flyby, measured over the time interval between the initial and final times for which the noise level of the event exceeds a threshold noise level and normalized to a reference duration of one second. SENEL is a noise metric established for use in California by the state Airport Noise Standards and is essentially identical to Sound Exposure Level (SEL).

Structure: Something that is constructed or erected.

Threshold: The beginning of that portion of the runway usable for landing

Touch-and-Go: An operation by an aircraft that lands and departs on a runway without stopping or exiting the runway.

Traffic Pattern: The traffic flow that is prescribed for aircraft landing at, taxiing on, or taking off from an airport. The components of a typical traffic pattern are upwind leg, crosswind leg, downwind leg, base leg, and final approach.

Visual Runway: A runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an FAA-approved airport layout plan.