



Airport Land Use Compatibility Plan for the County of Tuolumne, California





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Chapter One

INTRODUCTION

1.1 FUNCTION AND APPLICABILITY OF THE PLAN

The basic function of this *Tuolumne County Airport Land Use Compatibility Plan* is to promote compatibility between the airports in Tuolumne County and the land uses which surround them. As adopted by the Tuolumne County Airport Land Use Commission under the authority of the *California State Aeronautics Act*, Cal, PUC §21001 et seq., the state-mandated plan serves as a tool for use by the Commission in fulfilling its duty to review airport and adjacent land development proposals. Additionally, the plan sets compatibility criteria applicable to local agencies in their preparation or amendment of land use plans and ordinances and to landowners in their design of new development.

The ALUC adopted its original compatibility plan — entitled *Airport Land Use Policy Plan for the Tuolumne County Airport Land Use Commission* — in November 1979 and updated the plan in 2003. The 2003 plan will be replaced with adoption of the new *Airport Land Use Compatibility Plan (ALUCP)* represented by this document.

This ALUCP has been prepared with reference to, and is consistent with, the guidance provided by the California Department of Transportation, Division of Aeronautics (Division) in the 2011 version of the *California Airport Land Use Planning Handbook* (Handbook) pursuant to California Public Utility Code (PUC) Sections 21674.5 and 21674.7.

The plan is primarily concerned with land uses within a roughly 2- to 3-mile vicinity of the two public-use airports in Tuolumne County: Columbia Airport and Pine Mountain Lake Airport. Certain elements of the plan, though, apply countywide to development actions which may have aviation-related compatibility implications. Details regarding the purpose and application of the Compatibility Plan are set forth in the two policy chapters which follow.

1.1.1 Geographic Scope

The geographic scope of the *Tuolumne County Airport Land Use Compatibility Plan* encompasses:

1.1.1.1 Airport Influence Area

- (a) The AIA is defined as “an area, as delineated herein, which is routinely affected by aircraft operations at an airport and within which certain land use actions are subject to ALUC review.” The AIA includes all lands on which the uses could be negatively affected by present or future aircraft operations at Columbia Airport or Pine Mountain Lake Airport, as well as lands on which the uses could negatively affect these airports.



- (b) The specific limits of the influence area for each airport are depicted on **Exhibit 1A** and **Exhibit 1B**. The AIA is also reflected in the county's zoning overlay district (:AIR or airport combining) as set forth in County of Tuolumne Municipal Code Chapter 18.24, also referred to as the Tuolumne County airport influence area ordinance.

1.1.1.2 *Countywide Impacts on Flight Safety* — Other lands, regardless of their location in the County, on which certain land use characteristics could adversely affect the safety of flight in the County. The specific uses of concern are identified in Policy 2.1.5.2.(c).

1.1.1.3 *New Airports* — The site and environs of any new airport which may be proposed anywhere in the County.

Heliports — The site and environs of any public-use or special-use heliport (as defined by the California Department of Transportation) which may exist or be proposed anywhere within Tuolumne County, including incorporated cities.

1.2 **STATUTORY REQUIREMENTS**

1.2.1 **Powers and Duties**

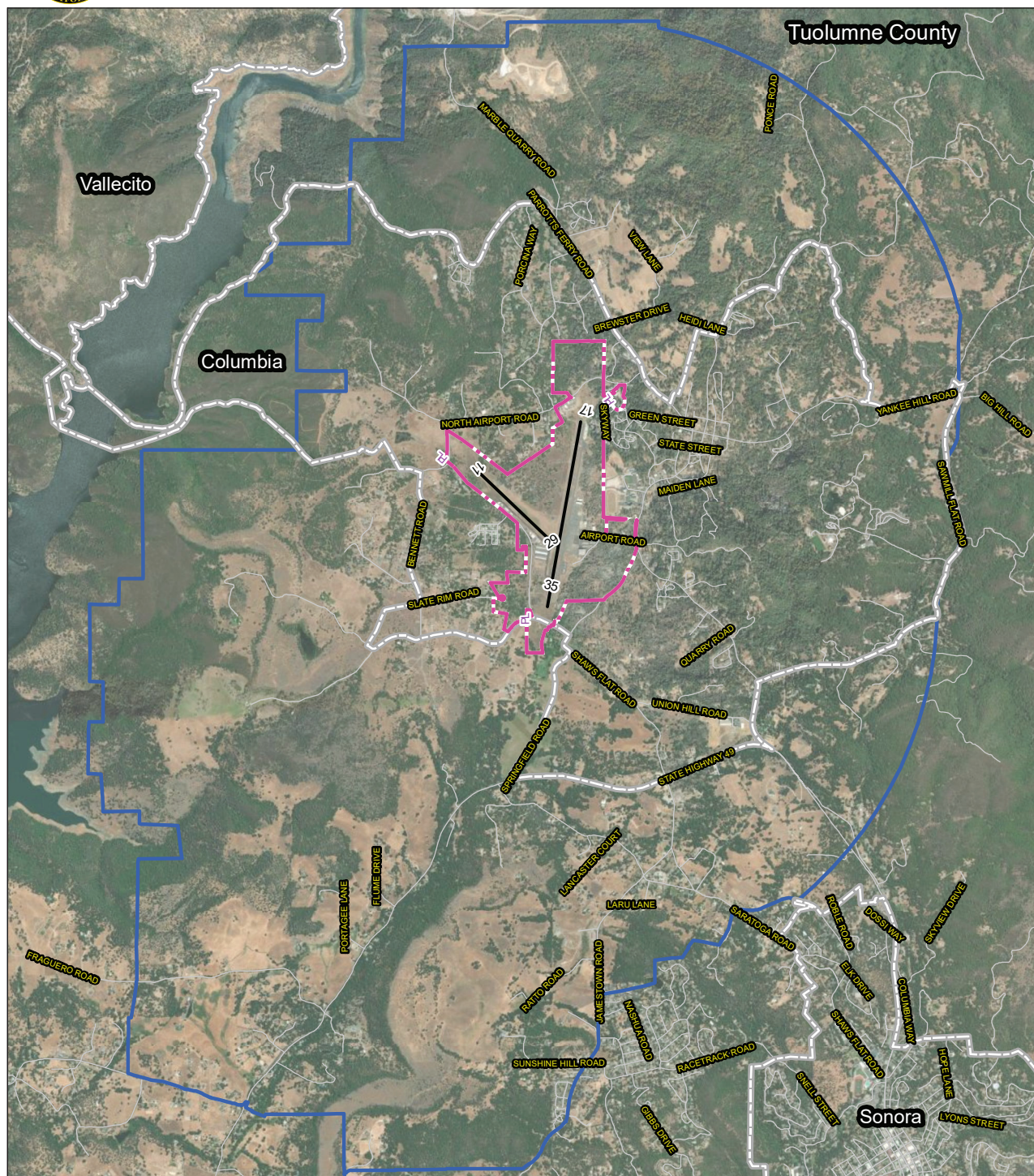
Requirements for creation of airport land use commissions (ALUCs) were first established under the California State Aeronautics Act (Public Utilities Code Sections 21670 et seq.) in 1970. Although the law has been amended numerous times since then, the fundamental purpose of ALUCs to promote land use compatibility around airports has remained unchanged. As expressed in the present statutes, this purpose 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."






The statutes give ALUCs two principal powers by which to accomplish this objective. First, ALUCs must prepare and adopt an airport land use plan. Secondly, they must review the plans, regulations, and other actions of local agencies and airport operators for consistency with that plan.

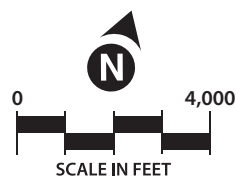
1.2.2 **Limitations**

Also explicit in the statutes are two limitations on the powers of ALUCs. Specifically, ALUCs have no authority over existing land uses or over the operation of airports. Neither of these terms is defined within the statutes, although the interpretation of their meaning is fairly standard throughout the state.

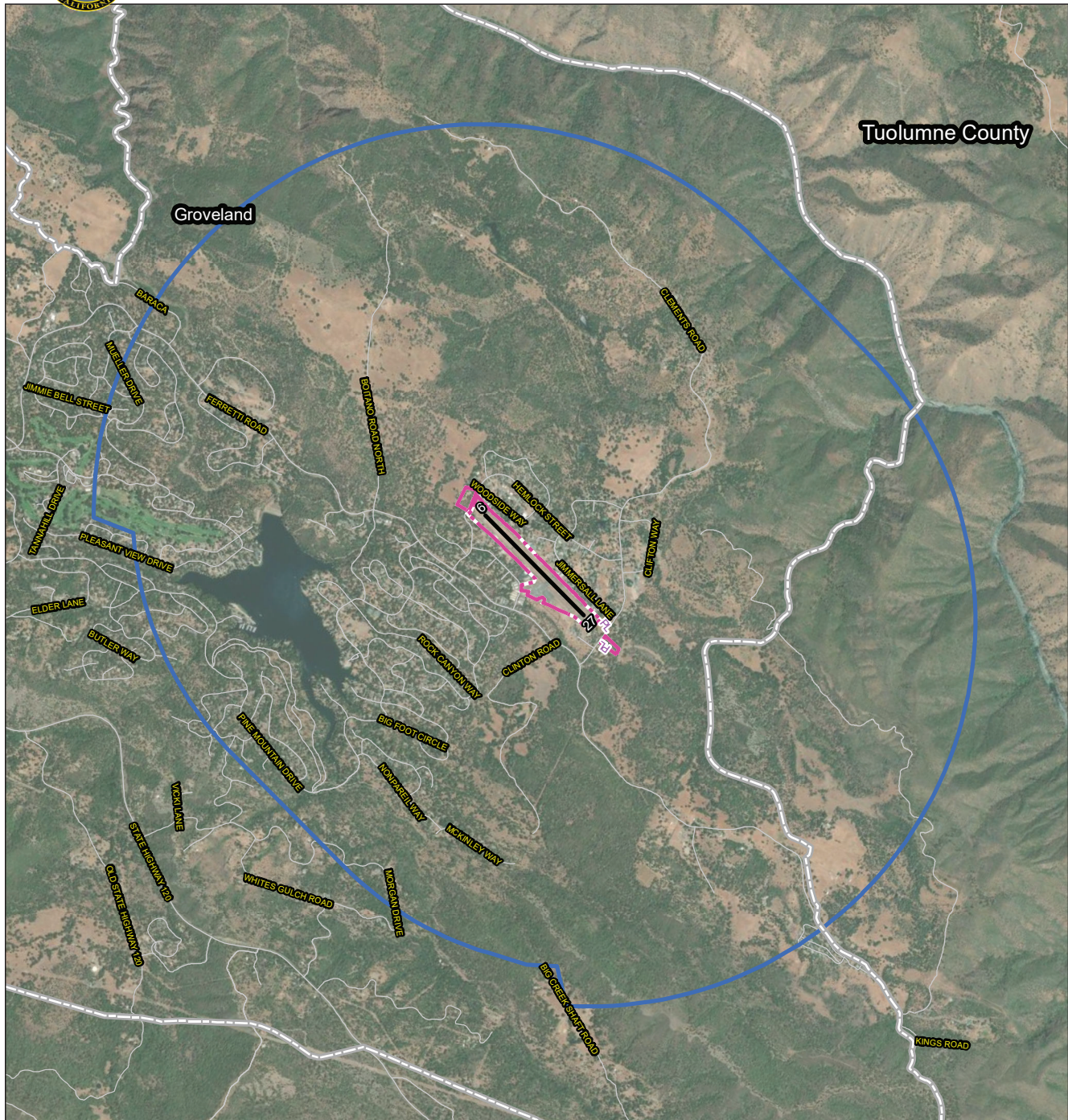







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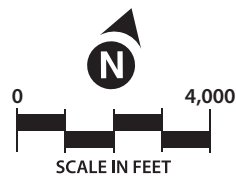
-  Airport Property Boundary
-  Runway Centerlines
-  Municipal Boundaries
-  Existing Airport Influence Area (AIA)
-  Streets



Sources: ESRI Basemap Imagery (2023),
TIGER/Line, Tuolumne County Streets,
Tuolumne County ALUCP Zones.
Coffman Associates Analysis.



- LEGEND**
-  Airport Property Boundary
 -  Runway Centerlines
 -  Municipal Boundaries
 -  Existing Airport Influence Area (AIA)
 -  Streets



Sources: ESRI Basemap Imagery (2023),
TIGER/Line, Tuolumne County Streets,
Tuolumne County ALUCP Zones.
Coffman Associates Analysis.



Existing Land Uses

The precise wording of the Aeronautics Act is that the authority of ALUCs extends only to land in the vicinity of airports which is “not already devoted to incompatible uses” (Section 21674 (a)). The working interpretation of this language is that ALUCs have no state-empowered authority over existing land uses. The question then becomes one of determining what conditions qualify a land use as existing.

For airport land use planning purposes, a land use can generally be considered existing once the local agency has completed all discretionary actions on the project and only ministerial approvals remain. A vacant property thus can be considered “devoted to” a particular use, even if the activity has not begun, once local government commitments along with substantial construction investments by the property owner make it infeasible for the property to be used for anything other than its proposed use. Local government commitment to a proposal can usually be considered firm once a vesting tentative map has been approved.

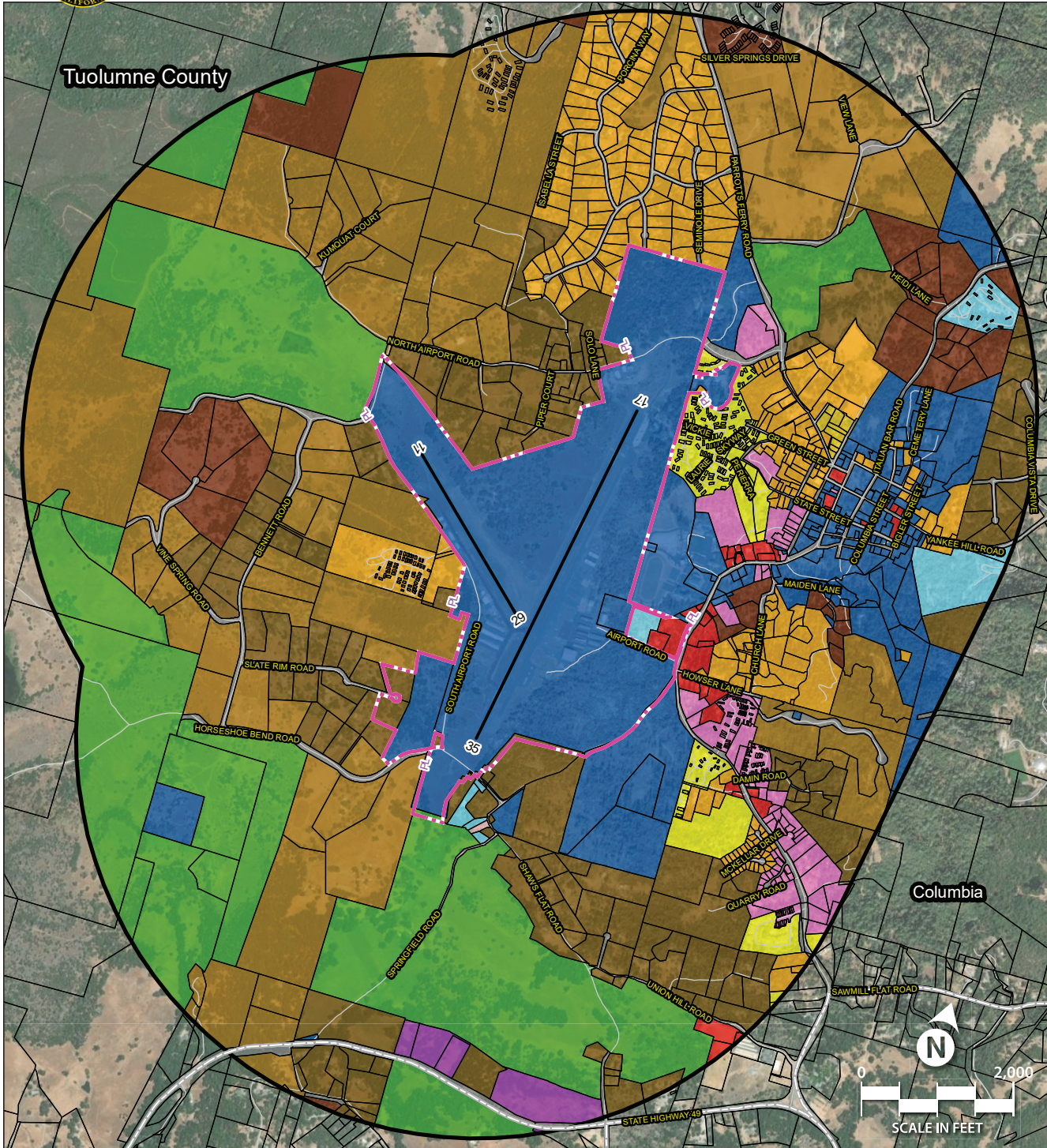
It is important to note here that the Tuolumne County Board of Supervisors has granted the Tuolumne County Airport Land Use Commission certain powers which are additional to the authority established by the Aeronautics Act. As discussed in the next section of this chapter, these powers concern the review of county ministerial actions on land use projects situated within the influence area of the County’s airports.

Existing land uses surrounding each airport are shown on **Exhibit 1C** for Columbia Airport and **Exhibit 1D** for Pine Mountain Lake Airport.

Operation of Airports

Any actions pertaining to how and where aircraft operate on the ground or in the air around an airport are clearly not within the jurisdiction of ALUCs to regulate. ALUC involvement with aircraft operations is limited to taking the operational characteristics into account in the development of land use compatibility plans. This limitation on the jurisdiction of ALUCs cannot, however, be taken to mean that they have no authority with respect to new development on airport property. Indeed, the law specifically requires ALUCs to review proposed airport master plans for consistency with the commission’s plans.

This ALUCP does not apply to any property owned by the United States government, State of California, or any Native American tribe. (Handbook 182/455)



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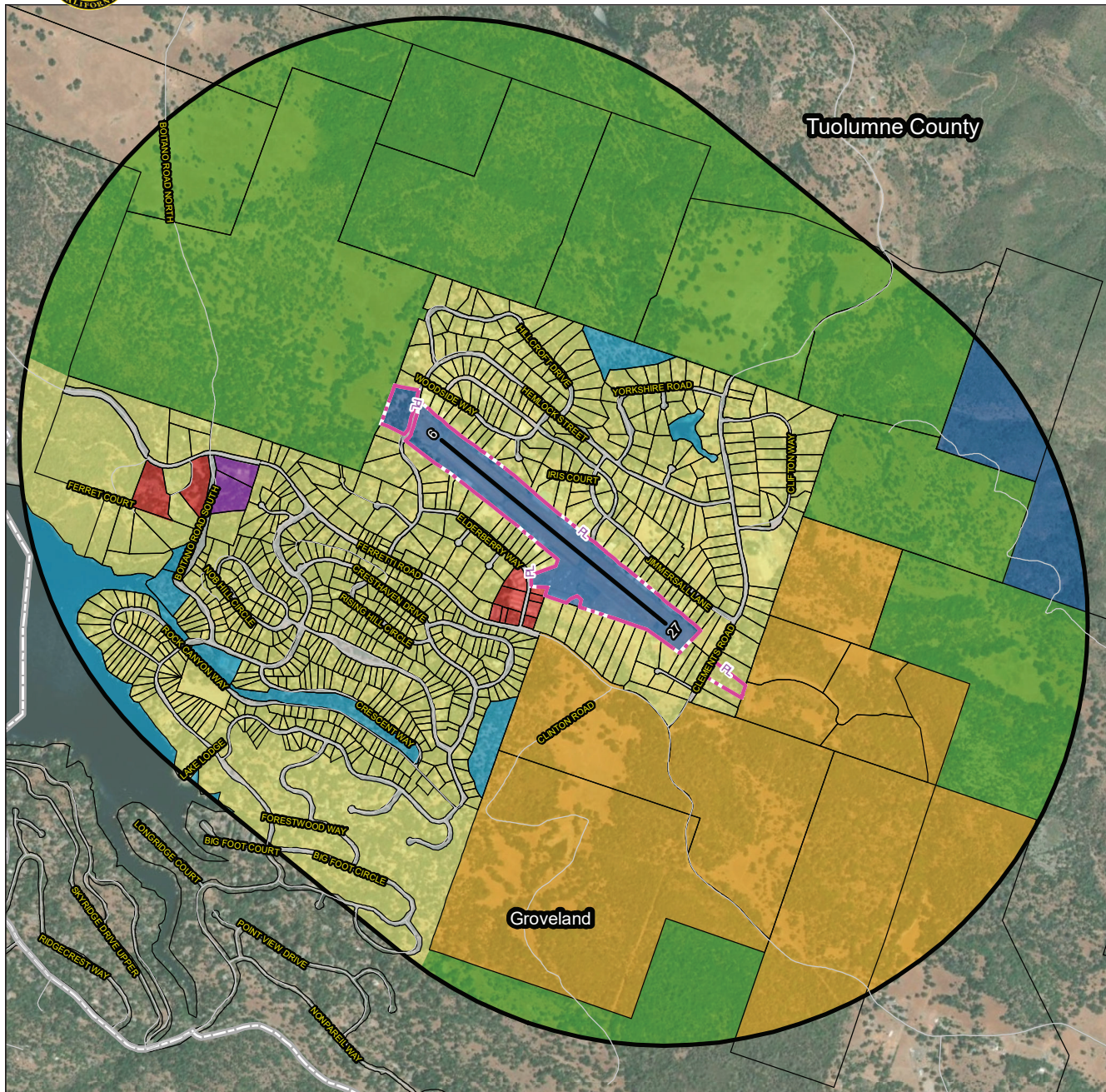
Existing Land Use Parcels

- Airport Property Boundary
- Runway Centerlines
- Municipal Boundaries
- 1-Mile Runway Buffer
- Parcel Boundary
- Streets

- Commercial
- Special Commercial
- Heavy Industrial
- Light Industrial
- Public
- Mixed Use
- High Density Residential
- Medium Density Residential
- Low Density Residential
- Rural Residential
- Homestead Residential
- Estate Residential

- Agriculture
- Parks & Open Space
- Right of Way

Sources: ESRI Basemap Imagery (2023),
TIGER/Line, Tuolumne County Streets,
Tuolumne County Land Use Parcels.
Coffman Associates Analysis.

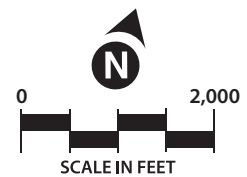


LEGEND

- Airport Property Boundary
- Runway Centerlines
- Municipal Boundaries
- 1-Mile Runway Buffer
- Parcel Boundary
- Streets

Existing Land Use

- Commercial
- Industrial
- Public Use
- Residential
- Rural Residential
- Agriculture
- Parks & Open Space
- Right of Way



Sources: ESRI Basemap Imagery (2023),
TIGER/Line, Tuolumne County Streets,
Tuolumne County Land Use Parcels,
Coffman Associates Analysis.



1.3 RESPONSIBILITIES AND REQUIREMENTS

1.3.1 Tuolumne County Airport Land Use Commission

Pursuant to state law, the Tuolumne County Airport Land Use Commission was established by Tuolumne County Board of Supervisors action in May 1977. Membership on the Commission follows the standard format specified in the law:

- Two members appointed by the Board of Supervisors;
- Two members appointed by cities (as the only incorporated city in the County, the City of Sonora thus has two appointees);
- Two members appointed by airport managers (with the only two airports both County owned, the Airports Director appoints both); and
- A seventh member, representing the general public, appointed by the other six.

The Tuolumne County Community Development staff serve as the Commission Secretary, as outlined in local ordinance 18.24.055 - *Review by the airport land use commission secretary*.

Relationship of ALUC to Tuolumne County Government

The fundamental relationship between the Tuolumne County Airport Land Use Commission and Tuolumne County government is set by the State Aeronautics Act. Although the Commission functions under the general auspices of Tuolumne County government, its decision-making authority is independent of the County Board of Supervisors. The ALUC is not simply an advisory body for the Board of Supervisors in the manner that the Planning Commission is. Rather, it is more equivalent to the Tuolumne County Local Agency Formation Commission (LAFCO). Within the boundaries defined by state law, the decisions of the ALUC are final. The County has certain responsibilities regarding the implementation of this plan – or it can override ALUC actions as specified in the law – but the ALUC does not need Board of Supervisors approval in order to adopt the compatibility plan or carry out ALUC land use project review responsibilities.

1.3.2 Federal Government

The federal government, primarily through the Federal Aviation Administration (FAA), has the authority and responsibility to control aircraft operations associated with airport noise impacts through the following methods:

- **Implement and Enforce Aircraft Operational Procedures.** These include pilot responsibilities, flight restrictions and monitoring careless and reckless operation of aircraft. Where and how aircraft are operated while not on the ground at an airport is under the complete jurisdiction of the FAA.



- **Manage the Air Traffic Control System.** The FAA is responsible for the control of navigable airspace and reviews any proposed alterations in flight procedures for noise abatement based on safety of flight operations, safe and efficient use of navigable airspace, management and control of the national airspace and air traffic control systems, effects on security and national defense and compliance with applicable laws and regulations.
- **Certification of Aircraft.** The FAA requires the reduction of aircraft noise through certification, modification of engines, or aircraft replacement as defined in Code of Federal Regulations Title 14 (14 CFR) Part 36.
- **Pilot Licensing.** Individuals licensed as pilots are trained under strict guidelines concentrating on safe and courteous aircraft operating procedures, many of which are designed to lessen the effects of aircraft noise.
- **FAA Airport Compliance and Grant Assurances:** FAA Order 5190.6B, *FAA Airport Compliance Manual*, defines the airport sponsor's role with regard to land use planning and implementation actions "to reduce the effect of noise on residents of the surrounding area. Such actions include optimal site location, improvements in airport design, noise abatement ground procedures, land acquisition, and restrictions on airport use that do not unjustly discriminate against any user, impede the federal interest in safety and management of the air navigation system, or unreasonably interfere with interstate or foreign commerce." Additionally, upon receipt of FAA grant funding, the airport sponsor agrees to take appropriate action, including the adoption of zoning laws, to the extent reasonable to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations in accordance with FAA Grant Assurance 21, Compatible Land Use.
- **Noise Compatibility Studies.** 14 CFR Part 150 establishes procedures and criteria for the evaluation of airport noise-related impacts. Although the FAA may provide guidance for airport land use compatibility, it has no jurisdiction over local planning decisions.
- **Airport Improvement Program (AIP) Noise Grants.** The FAA AIP funds eligible noise mitigation measures for residences within the 65 DNL and CNEL noise contours surrounding airports.

1.3.3 State of California

California state law regulates the following aspects of airport land use compatibility planning and implementation:

- **Aviation:** The *State Aeronautics Act* governs matters related to aviation in the state of California, and authorizes the California Department of Transportation, Division of Aeronautics (Division), to oversee such matters. In cooperation with, and in support of, the FAA, the Division serves as the advisor to Caltrans, ALUCs, and airport sponsors in safe aviation and land use planning.



- **Land Use:** The State of California grants the authority of land use regulation to local governments. This regulation is accomplished by use of general plans and zoning ordinances. The state has also established airport noise standards, noise insulation standards and requirements for the establishment of an ALUC. State staff may also coordinate with local agencies to encourage environmental mitigation measures intended to discourage the encroachment of incompatible land uses near airport facilities. As with the federal government, local planning decisions are at the discretion of the local jurisdiction and the state may not interfere with these decisions.
- **Real Estate Disclosure:** California State law also requires sellers of real property to disclose any facts materially affecting the value and desirability of the property. Such disclosure is required when the property is either within two miles of an airport or if it is within an Airport Influence Area (AIA). The law defines the AIA as the area where airport-related factors may significantly affect land uses or necessitate restrictions on those uses as determined by an airport land use commission. As outlined in PUC 21675(c), the AIA is usually the planning area designated by an airport land use commission for each airport. The Airport Land Use Commission in Tuolumne County may require additional real estate disclosure by property owners who have submitted formal noise complaints to local airport operators.
- **Noise Insulation Standards:** The California Noise Insulation Standards are found in California Building Code Title 24, Chapter 12, Section 1207. These standards establish uniform minimum noise insulation performance standards to protect persons within new buildings from the effects of noise. These minimum noise insulation performance standards require that the Community Noise Equivalent Level (CNEL) shall not exceed 45 decibels (dB) in any habitable room, with all doors and windows closed.

1.3.4 City and County Governments

Cities and counties may be engaged in the national aviation system by owning and operating an airport. As airport proprietors, cities and counties have limited power to control what types of civil aircraft use the airport, or to impose curfews or other use restrictions if the airport has received federal funds. This power is limited by the rules of 14 CFR Part 161, which states that airport proprietors may not take actions that (1) impose an undue burden on interstate or foreign commerce, (2) unjustly discriminate between different categories of airport users, or (3) involve unilateral action in matters pre-empted by the federal government.

Within the limits of the law and financial feasibility, airport proprietors may mitigate noise or acquire land or partial interests in land, such as air rights, easements, and development rights, to assure the use of property for purposes which are compatible with airport operations.

Cities and counties bear responsibility for the orderly development of areas surrounding the airports within their respective jurisdiction. To achieve this goal, each jurisdiction is charged with making sure all applicable planning documents and building codes are consistent with the ALUCP or go through the overrule process as outlined in Government Code, Section 65302.3. Local jurisdictions that include



territory within the AIA boundary are also obligated to bring local plans into consistency with the ALUCP and submit land use actions, such as general plan or specific plan amendments, revisions to ordinances or regulations, airport plans, and individual development projects to the ALUC for a determination of consistency under Public Utility Code (PUC) Section 21676.

1.4 PLAN IMPLEMENTATION

1.4.1 Tuolumne County General Plan Consistency

As noted above, state law requires each local agency having jurisdiction over land uses within an ALUC's planning area to modify its general plan and any affected specific plans to be consistent with the compatibility plan. The local agency must take this action within 180 days of when the ALUC adopts or amends its plan. The only other course of action permitted for local agencies is to override the ALUC by a two-thirds vote after first holding a public hearing and making findings that the agency's plans are consistent with the intent of state law.

A general plan does not need to be identical with the ALUC plan in order to be consistent with it. To meet the consistency test, a general plan must do two things:

- It must specifically address compatibility planning issues, either directly or through reference to a zoning ordinance or other policy document; and
- It must avoid direct conflicts with compatibility planning criteria.

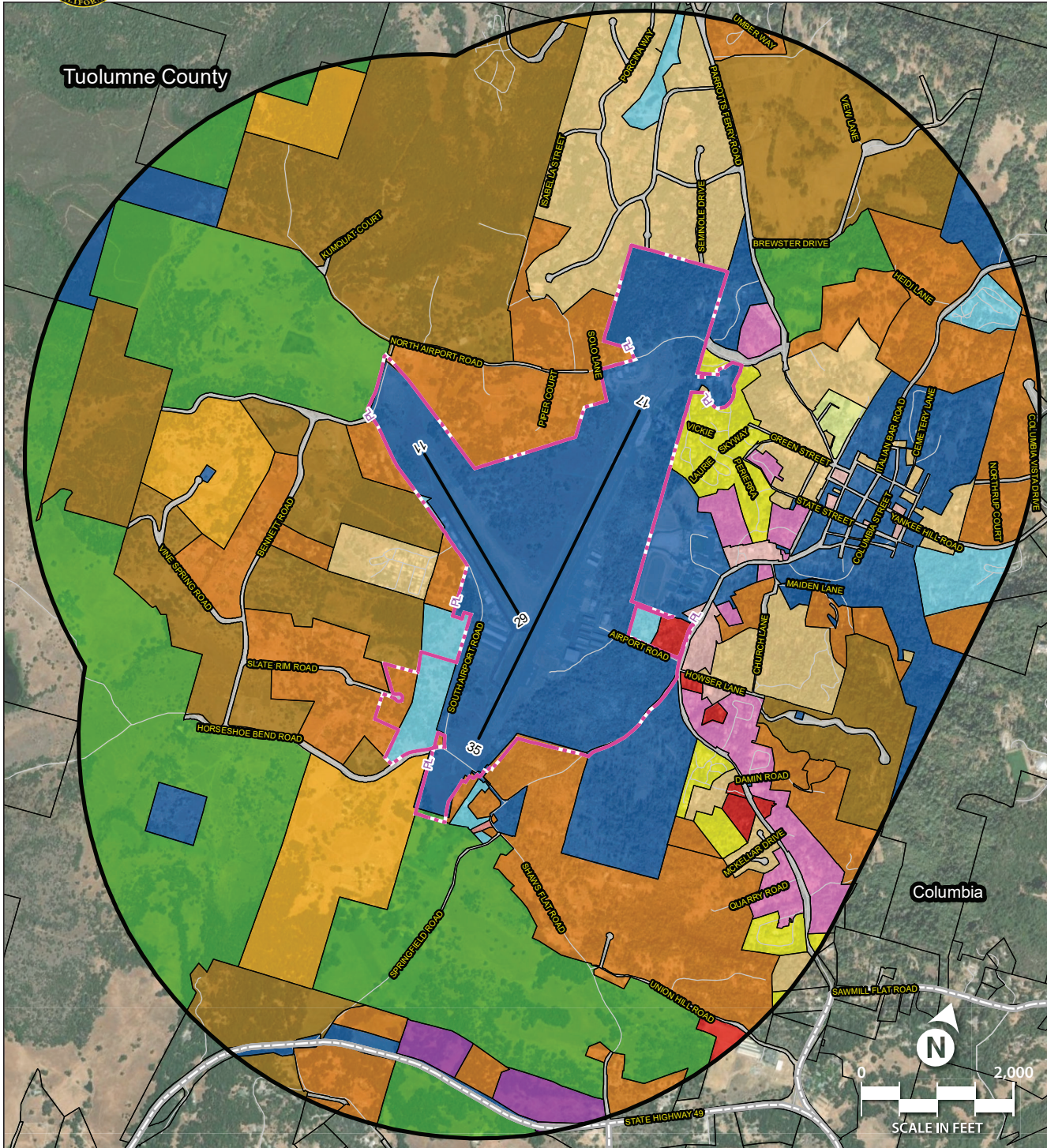
Community general plans often pay little attention to the noise and safety factors associated with airport land use compatibility. Also, some of the designated land uses of property near an airport frequently are contrary to good compatibility planning.

Unlike the typical circumstances, Tuolumne County took special effort to make its General Plan, adopted in December 1996, consistent with the ALUC's Airport Land Use Policy Plan. The General Plan has since been updated and adopted as of January 2019. General plan designations for land uses surrounding each airport are shown on **Exhibit 1E** for Columbia Airport and **Exhibit 1F** for Pine Mountain Lake Airport. Consistency between the 2018 General Plan and this ALUCP is addressed in the following goals and policies:

- Goal 1B: Minimize conflicts between incompatibility land uses.

Policy 1.B.e: Designate land around the County's airports for uses that are consistent with the Tuolumne County Airport Land Use Compatibility Plan and airport master plans.

- Goal 4E: Maintain the viability and future accessibility of the airports and promote the planned development of aviation facilities to meet the general aviation and emergency transportation needs within Tuolumne County.



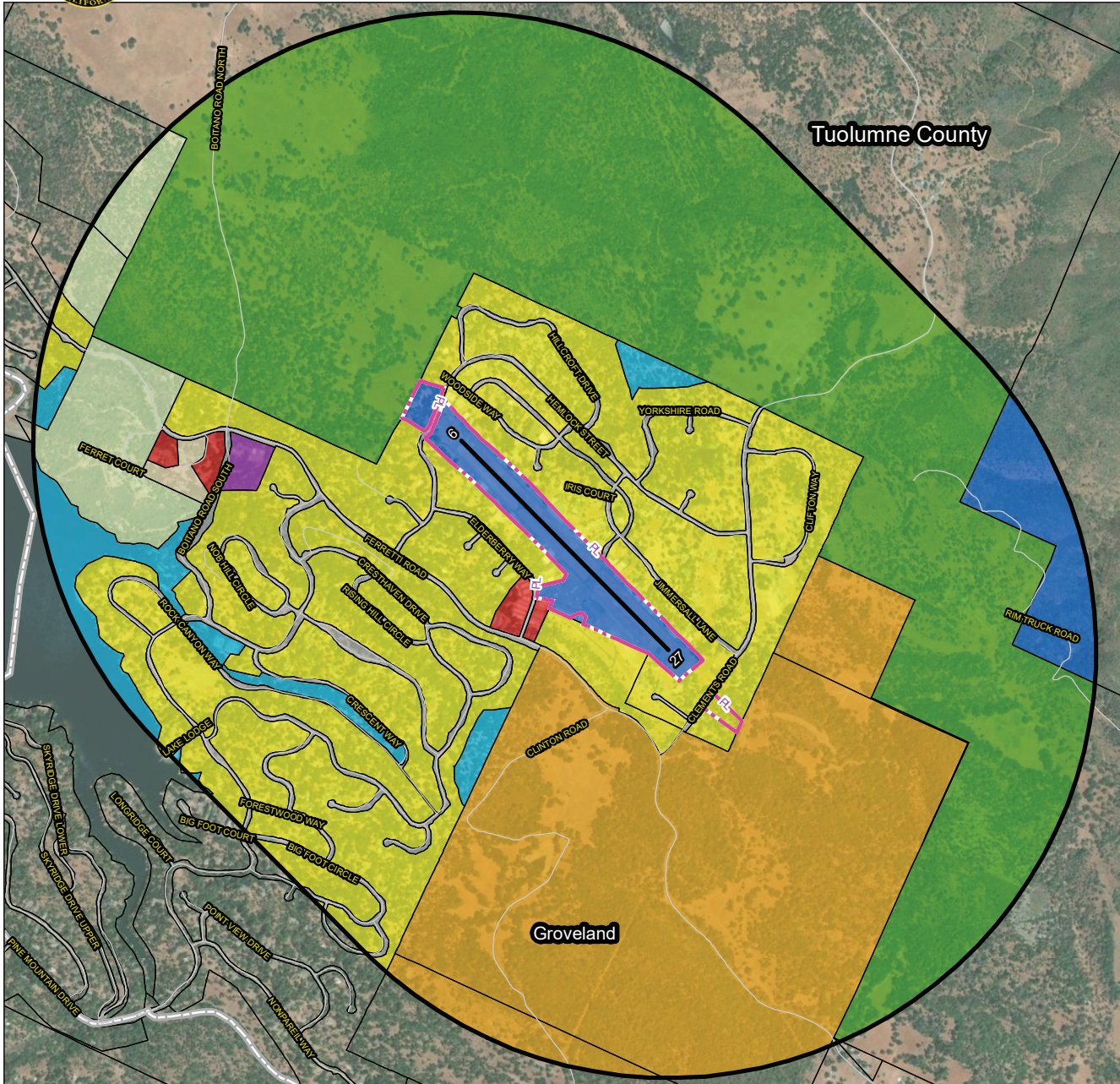
- LEGEND**
- Airport Property Boundary
 - Runway Centerlines
 - Municipal Boundaries
 - 1-Mile Runway Buffer
 - Parcel Boundary
 - Streets

General Plan Parcels

- | | |
|-------------------------|----------------------------|
| Commercial | High Density Residential |
| Special Commercial | Medium Density Residential |
| Neighborhood Commercial | Low Density Residential |
| Heavy Industrial | Large Lot Residential |
| Light Industrial | Homestead Residential |
| Public | Rural Residential |
| Mixed Use | |

- | | |
|--------------|--------------------|
| Agricultural | Parks & Open Space |
| Right of Way | |

Sources: ESRI Basemap Imagery (2023),
TIGER/Line, Tuolumne County Streets,
Tuolumne County General Plan Parcels.
Coffman Associates Analysis.

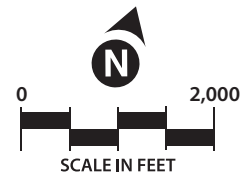


LEGEND

- Airport Property Boundary
- Runway Centerline
- 1-Mile Runway Buffer
- Municipal Boundaries
- Parcel Boundary
- Streets

General Plan Parcels

- Commercial
- Light Industrial
- Public
- High Density Residential
- Homestead Residential
- Estate Residential
- Rural Residential
- Agricultural
- Parks & Open Space
- Right of Way



Sources: ESRI Basemap Imagery (2023),
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Coffman Associates Analysis.



Policy 4.F.c: Seek funding to allow the Airport Land Use Commission to update the Airport Land Use Compatibility Plan periodically to ensure that land use decisions affecting property in the vicinity of the County airports are consistent with the continued safe operation of the airports.

Policy 4.F.e: Review General Plan Amendments, Zone Changes, and development applications within the referral area of a County airport for consistency with the Airport Land Use Compatibility Plan in order to continue safe operation of the airports.

- Goal 5A: Protect the economic base of Tuolumne County and preserve the tranquility of residential areas by minimizing potential conflicts between transportation and stationary noise sources and noise sensitive land uses.

Policy 5.A.4: Require new development located within the Noise Impact Area diagrams identified by the Tuolumne County Airport Land Use Compatibility Plan to be located and designed so that it will not be affected by noise levels exceeding the standards within the Airport Land Use Compatibility Plan.

The ALUC reviewed the draft General Plan and provided recommendations during their meeting on November 8, 2018, prior to its adoption by the Board of Supervisors. The ALUC found the plan text as well as the land use maps for the Columbia and Pine Mountain Lake/Groveland areas to be consistent with the Airport Land Use Policy Plan.

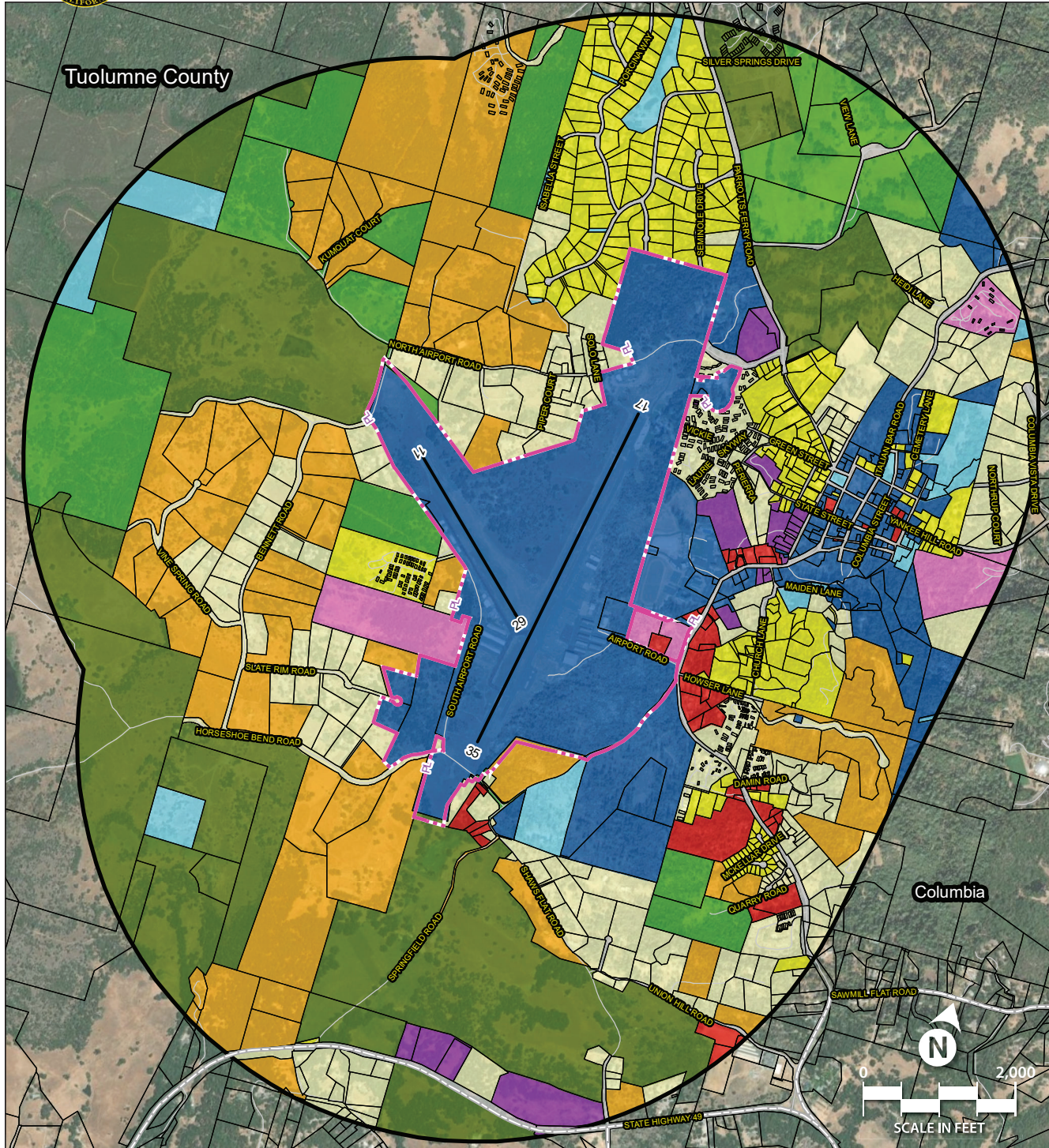
[For an assessment of the consistency between the Tuolumne County General Plan and new ALUC Compatibility Plan policies, see Appendix E herein.]

1.4.2 Tuolumne County Ordinances

Zoning Ordinance

Zoning designations for land uses surrounding each airport are shown on **Exhibit 1G** for Columbia Airport and **Exhibit 1H** for Pine Mountain Lake Airport. State law requires a community's zoning ordinance to be consistent with its general plan, which in turn should mean that the zoning ordinance is consistent with the ALUC plan. Nevertheless, because a zoning ordinance normally contains more detailed land use development standards than are presented in a general plan, conflicts with an ALUC plan can sometimes occur.

In addition to the land use zoning ordinance, Tuolumne County has adopted an *Airport Zoning Ordinance* (Chapter 18.28 of the *Tuolumne County Ordinance Code*) applicable to areas around the Columbia and Pine Mountain Lake airports. This ordinance limits the height of structures and trees within each airport's airspace. Additionally, California Public Utilities Code § 21659, requires a permit from the Department of Transportation or a determination of no hazard to air navigation from the FAA for any persons allowing natural growth at a height that exceeds the FAA Part 77 surface of the airport. These ordinances



LEGEND

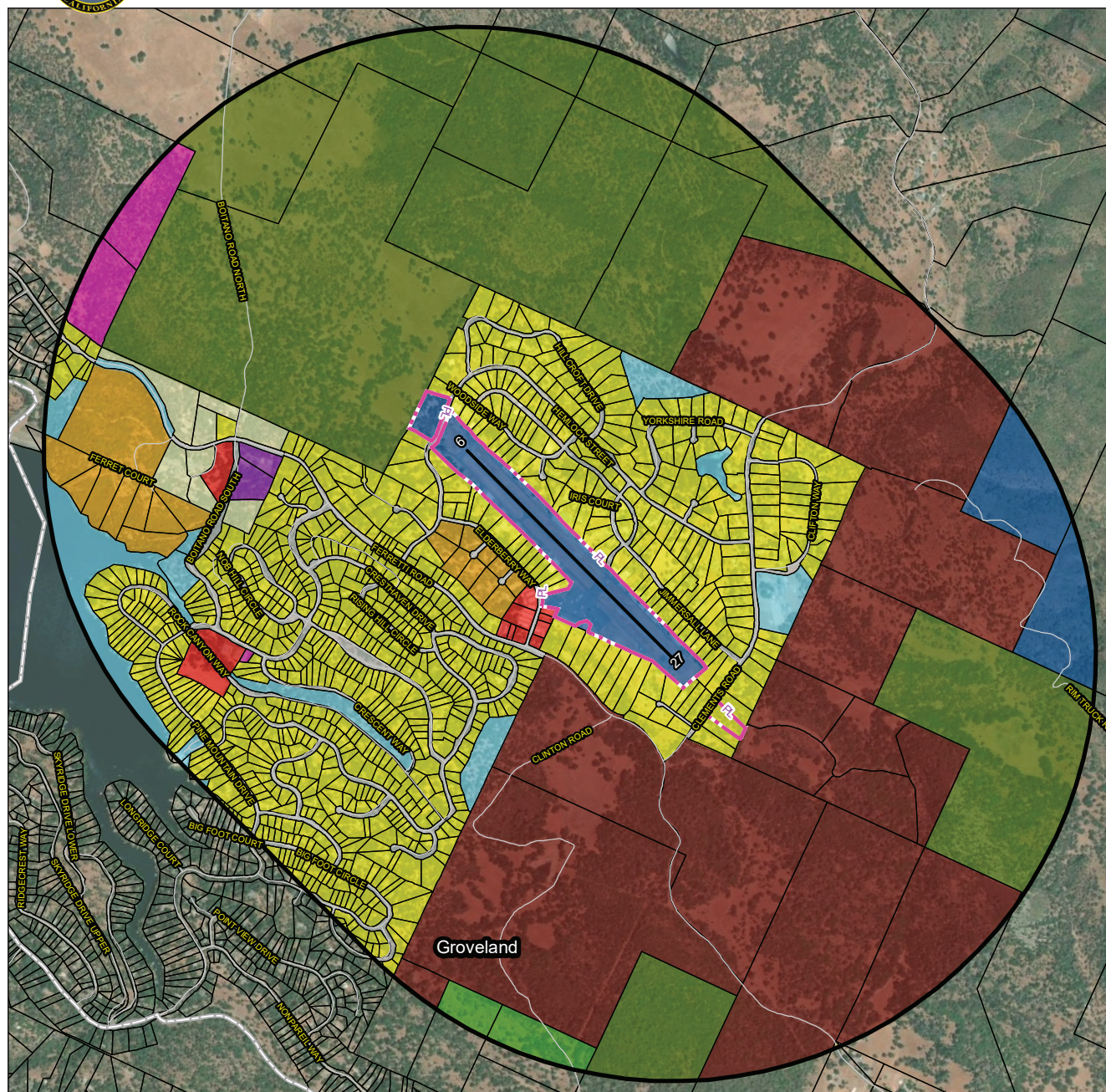
- Airport Property Boundary
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- Parcel Boundary
- Streets

Zoning Parcels

- Commercial
- Industrial
- Public
- Mixed Use
- High Density Residential
- Medium Density Residential

- Low Density Residential
- Agriculture
- Exclusive Agriculture
- Parks & Open Space
- Right of Way

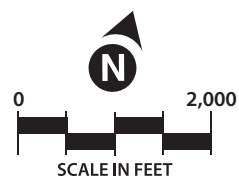
Sources: ESRI Basemap Imagery (2023),
TIGER/Line, Tuolumne County Streets,
Tuolumne County Zoning Parcels.
Coffman Associates Analysis.



Zoning Parcels

- Commerical
- Light Industrial
- Public
- Mixed Use
- High Density Residential
- Medium Density Residential
- Low Density Residential
- Rural Residential & Agriculture
- Agriculture

- Exclusive Agriculture
- Parks & Open Space
- Right of Way



Sources: ESRI Basemap Imagery (2023), TIGER/Line, Tuolumne County Streets, Tuolumne County Zoning Parcels. Coffman Associates Analysis.



will be reviewed and amended as necessary for consistency with the *Compatibility Plan* and to reflect the current configuration of the airport runways and instrument approach procedures.

Airport Combining Zone Concept

One mechanism sometimes used by local jurisdictions to implement various airport land use compatibility criteria and review procedures is to adopt an airport combining zone ordinance. A combining zone serves as an overlay of standard community-wide land use zones and modifies or limits the uses permitted by the underlying zone. Flood hazard combining zoning is a common example. An airport combining zone ordinance can serve as a convenient means of bringing various airport compatibility criteria into one place.

The Tuolumne County *Airport Referral Area Ordinance* together with the *Airport Zoning Ordinance* function in some ways as part of an airport combining zone ordinance. Components necessary to implement ALUC plan policies — such as structural sound attenuation requirements and provisions for a buyer awareness program, for example — have been added since the prior version of this ALUCP was adopted, and can be found in Chapter 17.29 - Airport Combining District, or (:AIR) District, Ordinance 17.49.090 (Noise) and Ordinance 17.49.100 (Deed Notice), respectively.

1.4.3 Other Jurisdictions

There presently is no overlap between the airport referral area boundaries defined by the 1977 *Policy Plan*, as amended, and the boundaries of the City of Sonora, Tuolumne County's only incorporated city. The Sonora city sphere of influence extends into the airport referral area, but land use decisions in this area are made by the County. Consequently, the *Policy Plan* only affects County actions. As referenced in Section 1.3.1, two members of the ALUC are appointed by cities. As the only incorporated city in the County, the City of Sonora currently has two appointees on the ALUC.

These conditions remain the same with respect to the new *Compatibility Plan*. Nevertheless, the new plan accounts for the possibility that the City of Sonora could expand toward the Columbia Airport or perhaps that another city could be incorporated near one of the airports. In such circumstances, the requirement for that jurisdiction to make its general plan consistent with the *Compatibility Plan* would come into effect. Also, most of the *Compatibility Plan* policies set forth in Chapters 2 and 3 would become applicable to the affected city.

1.4.4 ALUCP Amendments

Major amendments (revising the policies in a manner that would change their applicability to a public agency, adding new policies, or revising maps) to the compatibility plan cannot be done more than once



per calendar year.¹ Minor amendments (addressing grammatical, typographical, or minor technical errors that do not affect policies or the manner in which those policies are applied) can be done as often as needed.² ALUCP amendments may address any issue deemed appropriate by the ALUC. State law also requires that the ALUC review updates to airport master plans, airport layout plans, and proposals for airport expansion.³ The ALUCP must be amended as needed to reflect updates and revisions to airport plans, such as the 2019 Airport Layout Plan Update and Master Plan for Columbia Airport.

1.5 PLAN CONTENTS

The most important components of this plan are found in Chapters 2 and 3. Chapter 2 presents airport compatibility and review policies applicable Countywide. Chapter 3 contains the compatibility map for each airport together with individual policies and some explanatory notes for that airport.

The remainder of the document constitutes supporting material. Chapters 4 and 5 contain background information regarding Columbia Airport and Pine Mountain Lake Airport, respectively. The appendices provide other information related to airport land use planning in general and the Airport Land Use Commission in particular.

¹ California Public Utilities Code §21675(a).

² California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, § 2.4.2 ALUCP Amendments,

³ California Public Utilities Code §§21674(d), 21676(c).



Chapter Two

COUNTYWIDE POLICIES

2.1 GENERAL APPLICABILITY

2.1.1 Purpose

The purpose of this Tuolumne County Airport Land Use Compatibility Plan is to establish procedures and criteria by which, in accordance with the California State Aeronautics Act:

2.1.1.1 *Tuolumne County Airport Land Use Commission (ALUC)*

- (a) Can review proposed land use development in Tuolumne County for compatibility with airport activity.
- (b) Can review certain types of airport development proposals which are also subject to ALUC review and are addressed by the Plan.

2.1.1.2 *County of Tuolumne (and any other jurisdiction which may be affected)*

- (a) Can refer specified land use proposals (formal or informal) to the ALUC for review.
- (b) Can make its General Plan and zoning ordinance consistent with the Commission's Compatibility Plan.
- (c) Can make other planning decisions regarding the lands impacted by airport operations.

2.1.2 Definitions

The following definitions apply for the purposes of the policies set forth in this document (additional terms are defined in the *Glossary*):

- 2.1.2.1 *Aeronautics Act*** — Except as indicated otherwise, the article of the California Public Utilities Code (Sections 21670 et seq.) pertaining to airport land use commissions.
- 2.1.2.2 *Airport*** — The Columbia Airport, Pine Mountain Lake Airport, or any other new public-use airport which might be created within the boundaries of Tuolumne County.
- 2.1.2.3 *Airport Influence Area*** — An area, as delineated herein, which is routinely affected by aircraft operations at an airport and within which certain land use actions are subject to ALUC review.
- 2.1.2.4 *Airport Land Use Commission (ALUC)*** — The Tuolumne County Airport Land Use Commission.



- 2.1.2.5** *Avigation Easement* — An easement which conveys rights associated with aircraft overflight of a property, including creation of noise, limits on the height of structures and trees, etc. (see *Glossary*). There are currently three Avigation Easements recorded for Columbia Airport and two Avigation Easements recorded for Pine Mountain Lake Airport, according to the most recent Airport Layout Plan for each airport.
- 2.1.2.6** *Code of Federal Regulations (CFR) - 14 CFR Part 77* — The part of Federal Aviation Regulations which deal with objects affecting navigable airspace in the vicinity of airports. Objects which exceed the Part 77 height limits constitute airspace obstructions.
- 2.1.2.7** *Community Noise Equivalent Level (CNEL)* — The noise metric adopted by the State of California for evaluating airport noise impacts. The noise impacts are typically depicted by a set of contours, each of which represents points having the same CNEL value. California Building Code § 1206.4 stipulates that interior noise levels attributable to exterior sources shall not exceed 45 dB CNEL in any habitable room.
- 2.1.2.8** *Compatibility Plan* — This document, *Tuolumne County Airport Land Use Compatibility Plan*.
- 2.1.2.9** *Compatibility Zone* — Any of the zones set forth herein for the purposes of assessing land use compatibility within the airport influence area.
- 2.1.2.10** *Critical Height Zone* — Locations in the vicinity of an airport which: lie above the surfaces defined by 14 CFR Part 77; and are situated either on points of high terrain (ridge lines or hill tops) or within 50 feet below such points.
- 2.1.2.11** *Deed Notice* — A formal statement added to the legal description of a deed to a property and on any land division map. As proposed in this Plan, it is a notice that property is within an Airport Influence Area Boundary. The notice is recorded and intended as a disclosure of certain airport proximity conditions that may or may not exist on any specific property, at present or in the future. The notice also informs property owners that their property is subject to certain land use measures that may affect future development and the permissible height of vegetation on the property.
- 2.1.2.12** *Existing Land Use* — A land use which either physically exists or for which local government commitments to the proposal have been obtained; that is, no further discretionary approvals are necessary. Local government commitment to a proposal can usually be considered firm once one or more of the following have occurred:
- (a) A tentative parcel or subdivision map has been approved and the original period (before any time extensions are submitted) within which the approval is valid has not expired;
 - (b) A vesting tentative parcel or subdivision map has been approved;
 - (c) A development agreement has been executed and remains in effect;
 - (d) A final land division map has been recorded;
 - (e) A use permit or other discretionary entitlement has been approved and not yet expired.



A land use that has been discontinued for more than 18 months is not considered an existing use. A use may be re-established prior to 18 months (as determined by the local agency) following initial discontinuance without being subject to consistency review. A consistency review is not required if the proposed use re-establishes a use that is the same as the discontinued existing use.

- 2.1.2.13** *Height Caution Zone* — Areas of land in the vicinity of an airport where the ground lies above a 14 CFR Part 77 surface or within 50 feet beneath such surface, but excluding locations within the Critical Height Zone.
- 2.1.2.14** *Heliport* — A helicopter landing facility for which a Heliport Permit is required from the California Department of Transportation. Public-use and special-use heliports (including those at hospitals) are included within this definition, but helipads located on an airport are excluded.
- 2.1.2.15** *Infill* — Development of vacant or underutilized land within areas which are already largely developed or are used more intensively. See Policy 2.2.4.3.(a) for criteria used to identify infill areas for the purposes of the *Compatibility Plan*.
- 2.1.2.16** *Local Jurisdiction* — The County of Tuolumne or any city or other government agency (except agencies of the state or federal government) having jurisdiction over land uses within their boundaries.
- 2.1.2.17** *Major Land Use Action* — Actions related to proposed land uses for which compatibility with airport activity is a particular concern. These types of actions are listed in Policy 2.1.4.2.
- 2.1.2.18** *Nonconforming Use* — A land use which does not comply with a current land use plan or zoning ordinance, but which was legally permitted at the time the plan or ordinance was adopted.
- 2.1.2.19** *Project; Land Use Action; Development Proposal* — Terms similar in meaning and all referring to the types of land use matters which are subject to review by the Airport Land Use Commission (either publicly or privately sponsored).

2.1.3 Types of Airport Impacts

- 2.1.3.1** *Principal Compatibility Concerns* — The Commission is concerned only with the potential impacts related to:
- (a) Exposure to aircraft noise;
 - (b) Land use safety with respect both to people on the ground and the occupants of aircraft;
 - (c) Protection of airport airspace; and
 - (d) General concerns related to aircraft overflights.



- 2.1.3.2** *Other Airport Impacts* — Other impacts sometimes created by airports (e.g., air pollution, automobile traffic, etc.) are not addressed by these compatibility policies and are not subject to review by the Airport Land Use Commission.

2.1.4 Types of Actions Reviewed

- 2.1.4.1** *Actions Which Always Require ALUC Review* — As required by state law, the following types of actions shall be referred to the Airport Land Use Commission for determination of consistency with the Commission's *Plan* prior to their approval by the local jurisdiction:

- (a) The adoption or approval of any amendment to a general or specific plan affecting the property within an airport influence area (State Aeronautics Act Section 21676 (b)).
- (b) The adoption or approval of a zoning ordinance or building regulation which (1) affects property within an airport influence area and (2) involves the types of airport impact concerns listed in Section 2.1.4 (State Aeronautics Act Section 21676 (b)).
- (c) Adoption or modification of the master plan for an existing public-use airport (State Aeronautics Act Section 21676 (c)).
- (d) Any proposal for expansion of an existing airport or heliport if such expansion will require an amended airport permit from the state of California (State Aeronautics Act Section 21664.5).
- (e) Any proposal for a new airport or heliport whether for public use or private use (State Aeronautics Act Section 21661.5) if the facility requires a state airport permit.

- 2.1.4.2** *Other Tuolumne County Actions Requiring ALUC Review* — The "Tuolumne County Airport Referral Area Ordinance" (Chapter 18.24 of the Tuolumne County Code) currently requires that all applications for any type of permit or other County action affecting land or improvements within an airport influence area be submitted to the ALUC for review prior to County approval. Only those actions which the ALUC elects not to review listed in Section 2.1.4.6 are exempt from this requirement. In addition to those actions (listed in Policy 2.1.4.1.) for which ALUC review is required, the ALUC policy shall be to review the following types of *major land use actions* within Tuolumne County jurisdiction:

- (a) Within all compatibility zones:
 - (1) Any project requiring a general plan, specific plan, or zoning ordinance amendment.
 - (2) Discretionary entitlements for proposed residential development, including land divisions, consisting of five or more dwelling units or parcels.
 - (3) Discretionary entitlements for any major development proposal, except those found exempt from the California Environmental Quality Act (CEQA) which are presumed not to have airport land use impacts.
 - (4) Major capital improvements (e.g., water, sewer, or roads) which would promote urban uses in undeveloped or agricultural areas.
 - (5) Proposed land acquisition by a government entity for any facility accommodating a congregation of people (for example, a school or hospital).



- (6) Proposals for new development (including buildings, antennas, other structures, and trees) situated within a Critical Height Zone.¹
 - (7) Proposals for new development (including buildings, antennas, other structures, and trees) more than 50 feet tall located within a Height Caution Zone.¹
 - (8) Proposals for new development (including buildings, antennas, other structures, and trees) within the Caution Area, which includes parcels with ground elevations between 100 feet below and 100 ft above runway end elevation.
 - (9) Any project having the potential to create electrical or visual hazards to aircraft in flight, including:
 - Electrical interference with radio communications or navigational signals;
 - Lighting which could be mistaken for airport lighting;
 - Glare in the eyes of pilots of aircraft using the airport; and
 - Impaired visibility near the airport.
 - (10) Projects having the potential to attract birds to the vicinity of an airport.
 - (11) Any projects initially reviewed by the ALUC secretary and judged to be inconsistent with compatibility policies set forth in the *Compatibility Plan*.
- (b) Within Zone A or Zone B1, in addition to the actions listed in Policy 2.1.4.2.(a):
- (1) Any other land development application off airport property, including projects for which a ministerial permit, such as a building permit, is the only approval action required.
- (c) Other:
- (1) Regardless of location within Tuolumne County, any discretionary entitlement proposal for construction or alteration of a structure (including antennas) taller than 75 feet above the ground level at the site. (Any structures taller than 200 feet also require notification to the Federal Aviation Administration in accordance with Section 77.13(a)(1) of the Federal Aviation Regulations.)
 - (2) Any other proposed land use action, as determined by the Tuolumne County Community Development Department, involving potential conflicts with airport activities.

2.1.4.3 *Tuolumne County Actions Requiring Review by the ALUC Secretary* — For all other Tuolumne County land use actions affecting an airport influence area, the ALUC policy shall be to refer review responsibility to the Commission Secretary. The Secretary can make a compatibility determination regarding these land use actions on behalf of the Commission or may refer the matter to the Commission for decision. Such actions include, but are not limited to, the following:

¹ California Public Utilities Code § 21659 does not allow persons to permit any growth to grow at a height which exceeds the obstruction standards set forth in Title 14 of the Code of Federal Regulations, Part 77, Subpart C, without a permit or FAA determination that the growth does not constitute a hazard to air navigation or would not create an unsafe condition for air navigation.



- (a) Building permit applications for projects on sites located within Zone B2 as defined by the Columbia and Pine Mountain Lake Airport Compatibility Maps, except sites lying within a Critical Height Zone as defined in Policy 2.1.2.11.
- (b) All projects on sites located within Zone C or Zone D, except those projects listed in Policy 2.1.4.2.
- (c) Projects on sites within the Limited Review Area, which have ground elevations 100 feet or more below the runway end elevation.
- (d) Projects which exceed the height limits established under the County Airport Zoning Ordinance, when a variance to the height limits has been previously considered by the Airport Land Use Commission for the project site, and the height of the project is the same as the previously considered variance height.
- (e) Other land use actions referred from the Tuolumne County Community Development Department to the ALUC Secretary for land use compatibility review, but not included in the lists of required ALUC reviews (Policy 2.1.4.1.) or major actions (Policy 2.1.4.2.) — for example, a preapplication checklist. However, any proposals judged by the secretary to be inconsistent or of questionable consistency with ALUC compatibility policies shall be submitted to the Commission for review and final decision.
- (f) Applications for towers within the AIA outside of Zones A-D, which may require an ordinance code change.

2.1.4.4 *ALUC Review of Proposed City Expansion or Incorporation* — As of the adoption date of this *Airport Land Use Compatibility Plan*, the Columbia and Pine Mountain Lake airport influence areas defined herein do not encompass land within the incorporated boundaries or sphere of influence of any incorporated city. However, if a proposal to establish or expand the boundaries of a city or its sphere of influence should come before the Tuolumne County Local Agency Formation Commission (LAFCO) for consideration, the ALUC shall review and comment upon the proposal with regard to its potential effect on airports.

2.1.4.5 *ALUC Review of City Actions* — For any portion of a city which may extend inside the influence area of the Columbia or Pine Mountain Lake airports or a future airport, the ALUC shall have the following review authority:

- (a) The city shall submit to the Commission those actions, as listed in Policy 2.1.4.1., for which ALUC review is mandatory in accordance with state law.
- (b) Until such time as (1) the Commission finds that a city general plan or specific plan is consistent with the *Airport Land Use Compatibility Plan*, or (2) the city has overruled the Commission's determination of inconsistency, the city shall refer all actions, regulations, and permits involving the airport area of influence to the Commission for review (State Aeronautics Act Section 21676.5 (a)). For the purposes of this section, such actions shall be deemed to include all major land use actions listed in Policy 2.1.4.2.



- (c) After a city has revised its general plan or specific plan or has overruled the Commission, the Commission no longer has the authority to require that all actions, regulations, and permits be referred for review. However, the Commission and the local agency can agree that the Commission should continue to review individual projects in an advisory capacity. The types of land use actions which the Commission requests local agencies to continue to submit are those major actions listed in Policy 2.1.4.2.

2.1.4.6 *Actions Not Reviewed* — The following types of land use actions need not be referred to the Airport Land Use Commission or ALUC secretary:

- (a) Subsequent phases of projects which have previously been reviewed by the ALUC and for which all land use compatibility conditions have been met and no new issues have arisen (for example, a building permit on a project for which a land division has previously been reviewed and determined consistent).
- (b) Minor changes to a project provided that such changes do not require new County approval of revisions to discretionary entitlements, and do not modify the height of the structure.
- (c) City of Sonora land use actions not covered under Policies 2.1.4.1. or 2.1.4.2.

2.2 REVIEW OF LAND USE ACTIONS

2.2.1 General

2.2.1.1 *Timing of Project Submittal* — Proposed actions listed in Policy 2.4.1.1 must be submitted to the Commission for review prior to approval by the local government entity. All projects should be referred to the Commission at the earliest reasonable point in time so that the Commission's review (or ALUC Secretary's) can be duly considered by the local jurisdiction prior to formalizing its actions.

2.2.1.2 *Public Input* — Before acting on any plan, regulation, or other land use proposal under consideration, the Commission shall provide public notice and obtain public input where applicable (State Aeronautics Act Section 21675.2 (d))

2.2.2 Review Process for Community Land Use Plans and Ordinances

2.2.2.1 *Initial ALUC Review of General Plan Consistency* — In conjunction with adoption of this Airport Land Use Compatibility Plan, the Commission shall review the general plans and specific plans of affected local jurisdictions to determine their consistency with the Commission's policies as outlined in Section 2.2.4 and Section 2.4.

- (a) Within 180 days of the Commission's adoption or amendment of the Airport Land Use Compatibility Plan, each local agency must amend its general plan and any applicable specific plan to be consistent with the Commission's Plan or, alternatively, adopt findings and override the Commission in accordance with Section 21676 of the Public Utilities Code (Government Code Section 65302.3).



- (b) To facilitate this process, the local agency should submit a draft of the proposed amendment to the Commission for comment prior to taking action on the proposal. ALUC staff will request a proposed draft general plan and specific plan amendments from all affected jurisdictions following adoption or amendment of the Airport Land Use Compatibility Plan.
- (c) In conjunction with its submittal of a general plan or specific plan amendment to the ALUC, a local agency may request that the Commission modify the areas defined as “infill” in accordance with Policy 2.2.4.3.(a). The Commission will include a determination on the infill as part of its action on the consistency of the general and specific plans.

2.2.2.2 *Subsequent Reviews of Community Land Use Plans and Ordinances* — As indicated in Policies 2.14.1.(a) and 2.1.4.1.(b), prior to taking action on an amendment of a general plan or specific plan or the addition or approval of a zoning ordinance or building regulation affecting an airport influence area as defined herein, local agencies must submit the proposed plan, ordinance, or regulation to the Commission for review.

2.2.2.3 *Commission Action Choices* — When reviewing a general plan, specific plan, zoning ordinance, or building regulation for consistency with the *Compatibility Plan*, the Airport Land Use Commission has three choices of action:

- (a) Find the plan, ordinance, or regulation consistent with the *Compatibility Plan*.
- (b) Find the plan, ordinance, or regulation consistent with the *Compatibility Plan*, subject to modifications which the Commission may specify.
- (c) Find the plan, ordinance, or regulation inconsistent with the *Compatibility Plan*. In making a finding of inconsistency, the Commission may note the conditions under which the plan, ordinance, or regulation would be consistent with the *Compatibility Plan*.

2.2.2.4 *Response Time* — The Airport Land Use Commission or ALUC Secretary must respond to a local agency’s request for a consistency determination on a general plan, specific plan, zoning ordinance, or building regulation within 60 days of referral (State Aeronautics Act Section 21676 (d)).

- (a) If the Commission fails to make the determination within that period, the proposed action shall be deemed consistent with the *Compatibility Plan*.
- (b) Regardless of Commission action or failure to act, the proposed action must comply with other applicable local, state, and federal regulations and laws.
- (c) The referring agency shall be notified of the Commission’s action in writing.

2.2.3 Review Process for Major Land Use Actions

2.2.3.1 *Project Submittal Information* — A proposed land use action, submitted to the Commission or ALUC Secretary for review shall include the following information:



- (a) The type of land use action being sought from the local jurisdiction (e.g., zoning change, building permit, etc.).
- (b) Property location data (assessor's parcel number, street address, subdivision lot number).
- (c) A legible, accurately scaled map showing the relationship of the project site to the airport boundary and runways.
- (d) A description of existing and proposed land uses.
- (e) For residential uses, an indication of the potential or proposed number of dwelling units per acre (including any secondary units on a parcel); or, for nonresidential uses, the number of people potentially occupying the total site or portions thereof at any one time
- (f) If applicable, a detailed site plan showing ground elevations, the location of structures, open spaces, and water bodies, and the heights of structures and trees.
- (g) Identification of any characteristics which could create electrical interference, confusing lights, glare, smoke, or other electrical or visual hazards to aircraft flight.
- (h) An environmental document, if one has been prepared and it addresses airport compatibility issues.
- (i) Other relevant information which the Commission or its staff determine to be necessary to enable a comprehensive review of the proposal.

2.2.3.2 *ALUC Secretary's Choices* — When reviewing land use actions in accordance with Policy 2.1.4.3., the ALUC Secretary has two choices of action:

- (a) Find that the proposed project does not contain characteristics likely to result in inconsistencies with the compatibility criteria set forth in this plan. The Secretary is authorized to make a consistency determination for such projects on behalf of the Commission.
- (b) Find that the proposed project may be inconsistent with the *Compatibility Plan*. The Secretary shall forward any such project to the Commission for a consistency determination.

2.2.3.3 *Commission Action Choices* — When reviewing a land use project proposal, the Airport Land Use Commission has three choices of action:

- (a) Find the project consistent with the *Compatibility Plan*.
- (b) Find the project consistent with the *Compatibility Plan*, subject to compliance with such conditions as the Commission may specify. Any such conditions should be limited in scope and described in a manner which allows compliance to be clearly assessed (e.g., the height of a structure).
- (c) Find the project inconsistent with the *Compatibility Plan*. In making a finding of inconsistency, the Commission may note the conditions under which the project would be consistent with the *Plan*.



2.2.3.4 *Consistency Review Timeframe*

ALUC staff must respond to a local agency's request for consistency determination within 30 calendar days after the application is deemed complete by ALUC staff.

The 30-calendar day review period may be extended if the local agency or applicant agrees in writing or verbally consents at a county planning meeting.

2.2.3.5 *Response Time* — State law does not set a time limit for airport land use commissions to review land use actions other than amendment of a general plan or specific plan or the addition or approval of a zoning ordinance or building regulation. Nevertheless, the policy of the Tuolumne County Airport Land Use Commission is that:

- (a) The ALUC Secretary will determine if the referral application is complete and will notify the applicant of completeness in writing within 30 calendar days after receipt of an application. If the application for consistency determination is incomplete, ALUC staff will identify the information required to complete the application and will inform the local agency. If additional information is required, a new 15 calendar day review period begins after the additional information is received by ALUC staff. All information necessary for review of the project (as listed in Policy 2.2.3.1.) must accompany the referral. If ALUC staff do not make a written determination of completeness within 30 calendar days after receipt of an application for consistency determination, the application is considered complete.
- (b) The ALUC Secretary must respond to an applicant or local agency's request for consistency determination within 14 calendar days after the application is deemed complete.

Reviews by the ALUC Secretary shall be completed within 30 days of the date that the application is deemed complete. The 30 calendar day review period may be extended if the local agency or applicant agrees in writing or verbally consents at a county planning meeting.

- (c) Reviews of projects forwarded to the Commission for a consistency determination shall be completed within 60 days of the date of project referral by the ALUC Secretary to the Commission.
- (d) If the ALUC Secretary or the Commission fails to make a determination within the above time periods, the proposed action shall be deemed consistent with the *Compatibility Plan*.
- (e) Regardless of action or failure to act on the part of the ALUC Secretary or the Commission, the proposed action still must comply with other applicable local, state, and federal regulations and laws.
- (f) The project applicant or local jurisdiction shall be notified of the ALUC Secretary's or the Commission's action in writing.

2.2.3.6 *Subsequent Review* — Once a project has been found consistent with the *Compatibility Plan*, it need not be referred for review at subsequent stages of the planning process (e.g., for a zone change after a General Plan Amendment has been reviewed) unless:



- (a) Insufficient information was available at the time of the ALUC's original review of the project to assess whether the proposal would be fully in compliance with compatibility criteria (e.g., the site layout and structure height might not be known at the time a general plan amendment or zone change is requested).
- (b) The design of the project subsequently changes in a manner which could raise questions as to the validity of a previous finding of compatibility as determined by the Airport Land Use Commission Secretary.
- (c) The local jurisdiction concludes that further review is warranted.

2.2.4 Review Criteria for Land Use Actions

2.2.4.1 *Primary Land Use Compatibility Criteria* — The primary criteria for assessing whether a potential land use development is to be judged compatible with a nearby airport are set forth in the Primary Compatibility Criteria matrix, **Table 2A**. These criteria are to be used in conjunction with the compatibility maps for Columbia Airport on **Exhibit 2A** and for Pine Mountain Lake Airport on **Exhibit 2B**, along with the policies for each airport as presented in Chapter 3.

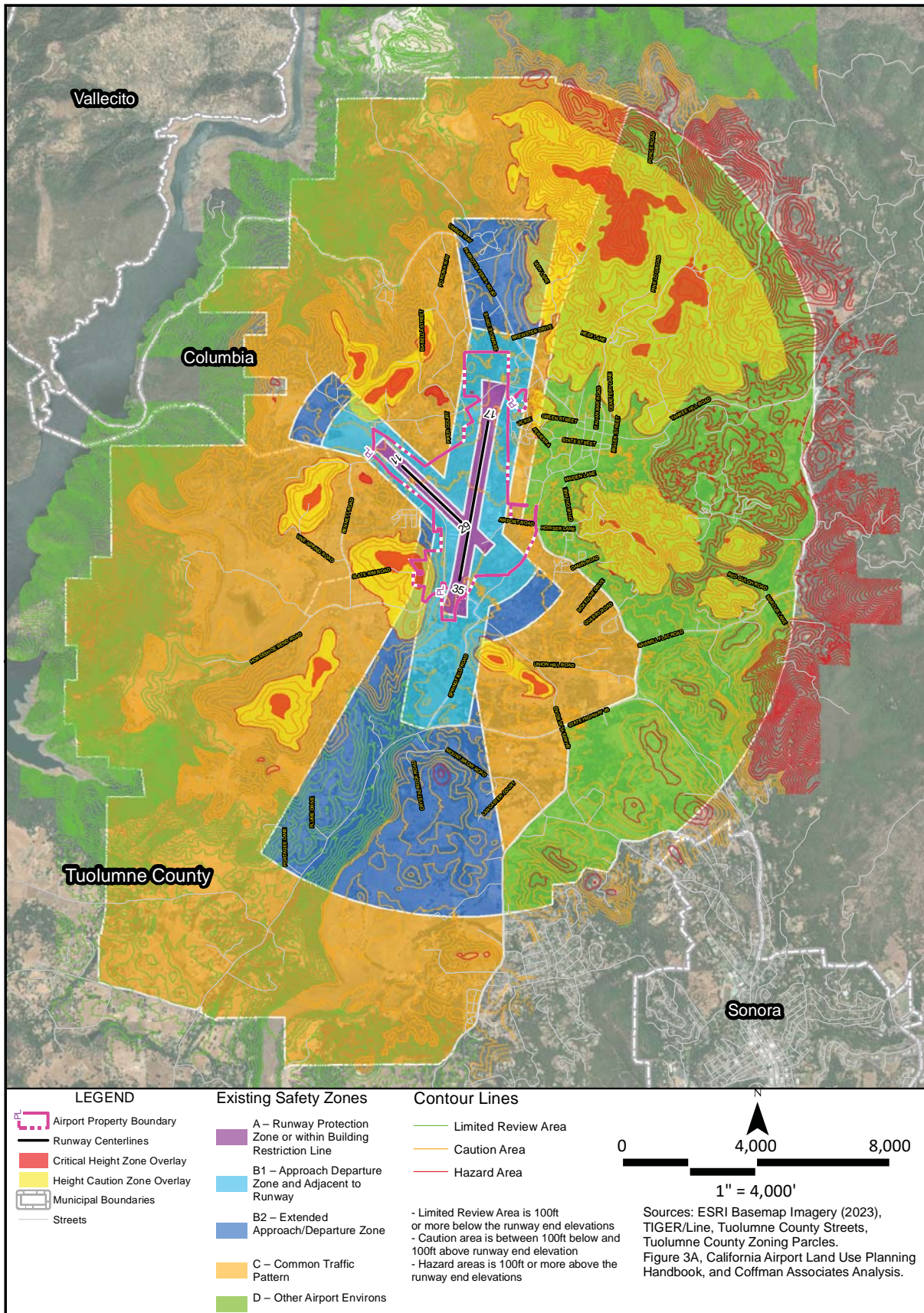
2.2.4.2 *Function of Supporting Criteria* — The Primary Compatibility Criteria matrix represents a compilation of compatibility criteria associated with each of the four types of airport impacts listed in Policy 2.1.4.1. For the purposes of reviewing proposed amendments to community land use plans and zoning ordinances, as well as in the review of most individual development proposals, the criteria in the matrix are anticipated to suffice. However, certain complex land use actions may require more intensive review. The Commission may refer to the supporting criteria, as listed in Section 4, to clarify or supplement its review of such actions.

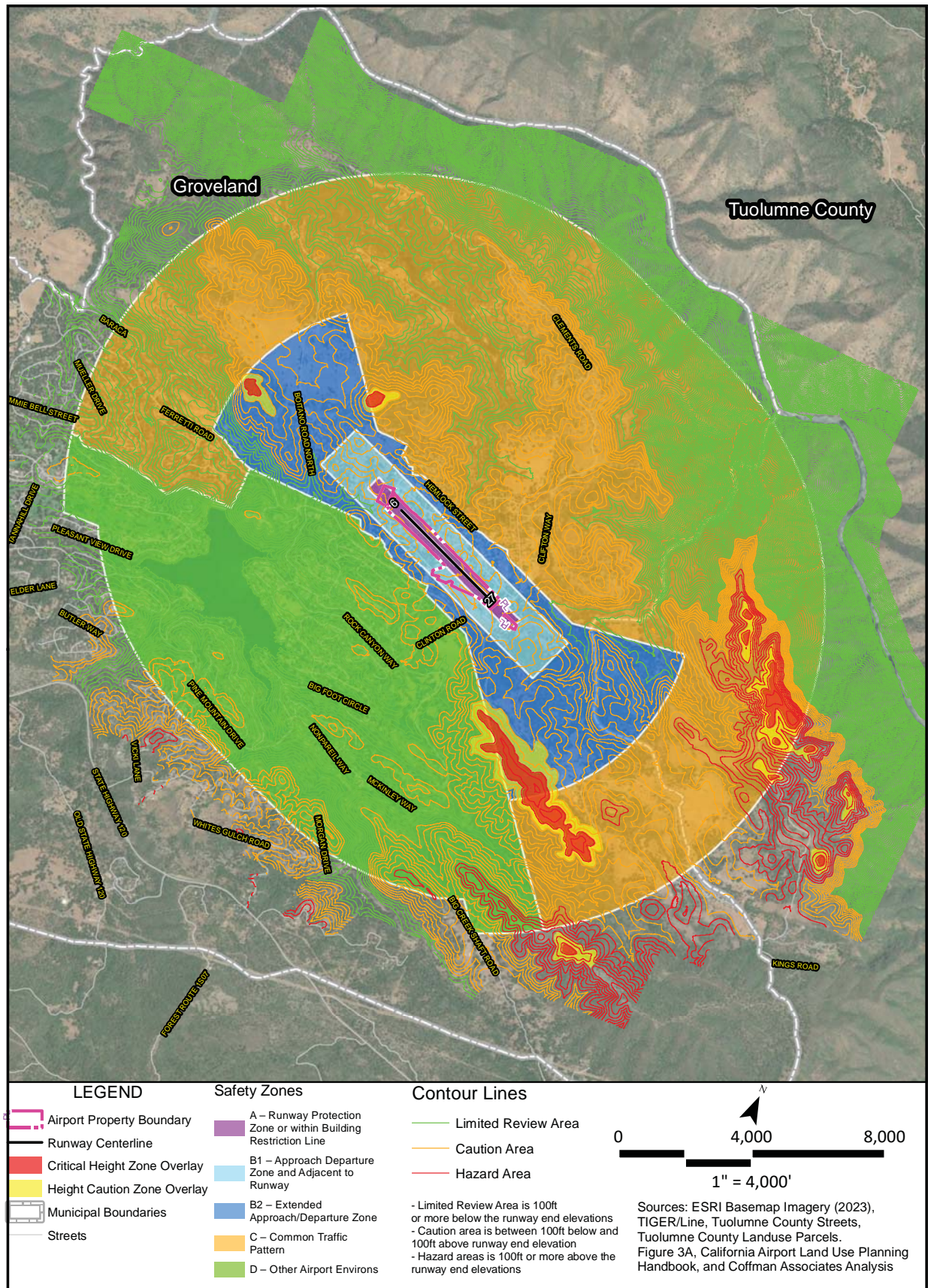
2.2.4.3 *Special Conditions*

(a) *Infill* — Where incompatible development already exists, additional infill development of similar land uses may be allowed to occur even if such land uses are to be prohibited elsewhere in the zone. This exception applies only within *Zone C*.

(1) Parcels can be considered for *infill* development if they meet *all* of the following criteria:

- (a) The parcel size is no larger than 20 acres.
- (b) The site is at least 65% bounded (disregarding roads) by existing uses similar to, or more intensive than, those proposed.
- (c) The proposed project would not extend the perimeter of the area defined by the surrounding, already developed, incompatible uses. Regardless of the surrounding uses, the proposed use shall not have a development intensity more than 50% above the intensity permitted in accordance with the Primary Compatibility Criteria (**Table 2A**). (For example, whereas a minimum lot size of 3.0 acres is normally required in Zone C, the infill policy would allow a 2.0-acre lot.)







- (d) The proposed project will not otherwise increase the intensity and/or incompatibility of use through use permits, density transfers, or other strategy.
- (b) *Nonconforming Uses* — In locations not designated as infill areas, Airport Land Use Commission policy shall be that uses not in conformance with this Compatibility Plan may only be expanded as follows:
 - (1) Nonconforming residential uses may be expanded provided that the expansion does not result in more dwelling units than currently exist on the parcel.
 - (2) A nonconforming nonresidential development may be expanded by no more than 10% of the floor area of the existing structure or 1,000 square feet, whichever is greater.
 - (3) Nonconforming uses may be rebuilt to a density (for residential uses, dwelling units per acre) not exceeding that of the original construction and to a size (for nonresidential uses, building floor area) not exceeding 110% of the original construction. In all cases, however, reconstructed nonconforming uses shall comply with the noise compatibility and airspace protection policies of this compatibility plan.
- (c) *Reconstruction* — Airport Land Use Commission policy shall be that an existing incompatible development which has been fully or partially destroyed may be rebuilt under the following conditions:
 - (1) Nonconforming residential uses may be rebuilt provided that the reconstruction does not result in more dwelling units than currently exist on the parcel.
 - (2) A nonconforming nonresidential development may be rebuilt provided that it has been only partially destroyed and that the reconstruction does not increase the floor area of the previous structure by more than 10% or 1,000 square feet, whichever is greater. Partial destruction shall be considered to mean damage which can be repaired at a cost of no more than 75% of the assessor's full-cash value of the structure at the time of the damage.
 - (3) Any nonresidential use which has been more than 75% destroyed must comply with all applicable standards herein when reconstructed.
- (d) *Parcels Lying within Two or More Compatibility Zones* — For the purposes of evaluating consistency with the compatibility criteria set forth herein, Airport Land Use Commission policy shall be as follows:
 - (1) Any parcel larger than one acre which is split by compatibility zone boundaries shall be considered as if it were multiple parcels divided at the compatibility zone boundary line. However, the intensity of development allowed within the more restricted portion of the parcel can (and is encouraged to) be transferred to the less restricted portion even if the resulting development in



the latter area then exceeds the criteria for that compatibility zone. Parcels less than one acre shall be evaluated for consistency based upon the compatibility zone that covers the majority of the parcel (>50%).

- (2) Transfer of development as described above is also allowed with respect to multiple parcels proposed to be developed as a single project.

(e) *Other Special Conditions* — The compatibility criteria set forth in this *Plan* are intended to be applicable to all locations within each airport's influence area. However, it is recognized that there may be specific situations where a normally incompatible use can be considered compatible because of terrain, specific location, or other extraordinary factors or circumstances related to the site. In these situations, Airport Land Use Commission policy shall be as follows:

- (1) After due consideration of all the factors involved in such situations, the Commission may find a normally incompatible use to be acceptable.
- (2) In reaching such a decision, the Commission shall make all of the following findings based upon substantial evidence in the record:
 - (a) Granting of the special conditions exception would not interfere with the orderly development of the Airport.
 - (b) Granting of the special conditions exception would not interfere with the orderly development of the area surrounding the Airport so as to promote the overall goals and objectives of the California airport noise standards as implemented through the noise policies of the Tuolumne County Airport Land Use Compatibility Plan.
 - (c) Granting of the special conditions exception would allow for the orderly development of the area surrounding the Airport so as to prevent the creation of new noise and safety problems.
 - (d) Granting of the special conditions exception would protect the public health, safety and welfare by providing for the orderly expansion of the Airport.
 - (e) Granting of the special conditions exception would protect the public health, safety and welfare by the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around the Airport to the extent that these areas are not already devoted to incompatible uses.
- (3) The granting of a special conditions exception shall be considered site specific and shall not be generalized to include other sites.
- (4) Special conditions which warrant general application in all or part of the influence area of one airport, but not at others, are set forth in Chapter 3 of this *Compatibility Plan*.



2.2.4.4 Findings as to Similar Uses - Cases may arise where a proposed development project involves a land use that is not explicitly provided for by the land use criteria addressed in Chapter Three of this document. In such cases, conventional rules of reason shall be applied in determining whether the subject land use is substantially similar to any land use specified in the plan criteria. In making these determinations, the reviewing officials shall consult the latest edition of the Handbook, prepared under the direction of the California Department of Transportation and land use classification systems available through the American Planning Association and other authoritative sources. The ALUC shall make the final determination with respect to appropriate land use classification.

2.2.4.5 Change of Use in Existing Buildings - Consistency review is required when a new use is proposed within an existing building. A change of use is defined as a change in density for residential land uses or intensity for non-residential land uses.

- (a) Nonresidential Projects: The maximum intensity of a proposed non-residential project must not exceed the maximum allowable intensity as shown in **Table 2A**.
- (b) Residential Projects: The total density of a conditionally compatible residential project must not exceed the maximum allowable density as shown in **Table 2A**. Construction of a single-family residence, including an accessory dwelling unit, is allowed on a legal lot of record if permitted by the local agency.
- (c) Mixed-use Projects: The maximum density and intensity for conditionally compatible projects are limited as described in **Policy 3.2.6**.

TABLE 2A | Safety Criteria Matrix | Tuolumne County Airport Land Use Compatibility Plan

Zone	Location	MAXIMUM DENSITIES		ADDITIONAL CRITERIA	
		Residential (du/ac) ¹	Other Uses (people/ac) ²	Prohibited Uses ⁴	Other Development Conditions
A	Runway Protection Zone or within Building Restriction Line	None	10	<ul style="list-style-type: none">- All structures except ones required by aeronautical function- Assemblages of people- Objects exceeding 14 CFR Part 77 height limits- Aboveground bulk storage of hazardous materials- Hazards to flight⁴	<ul style="list-style-type: none">- Deed notice recordation³

Continues on next page



TABLE 2A | Safety Criteria Matrix | Tuolumne County Airport Land Use Compatibility Plan (continued)

Zone	Location	MAXIMUM DENSITIES		ADDITIONAL CRITERIA	
		Residential (du/ac) ¹	Other Uses (people/ac) ²	Prohibited Uses ⁴	Other Development Conditions
B1	Approach Departure Zone and Adjacent to Runway	1 d.u. per 10 acres	25	- Children's schools, day care centers, libraries, hospitals, nursing homes	- Locate structures away from extended runway centerline
B2	Extended Approach/Departure Zone	1 d.u. per 3 acres	50	- Highly noise sensitive uses (e.g., outdoor theaters) ⁶ - Aboveground bulk storage of hazardous materials ⁵ - Hazards to flight ⁴	- Additional NLR required for some uses ⁶ - Airspace review required for all objects (B1 zone) - Deed notice recordations ³
C	Common Traffic Pattern	1 d.u. per 3 acres	75	- Children's schools, day care centers, libraries, hospitals, nursing homes - Hazards to flight ⁴	- Deed notice recordations ³
D	Other Airport Environs	No Limit	No Limit	- Hazards to flight ⁴	- Deed notice recordations ³
	Critical Height Zone Overlay	Same as Underlying Compatibility Zone		- Tall objects on high terrain ⁸	- Deed notice recordations ³
	Height Caution Zone Overlay	Same as Underlying Compatibility Zone		Same as Underlying Compatibility Zone	- Airspace review required for objects taller than 50 ft. AGL. ⁹ - Deed notice recordations ³

Table Notes:

1. Residential development should not contain more than the indicated number of primary dwelling units per gross acre. Clustering of units is encouraged – see Policy 2.4.2.6. for limitations. Attached secondary single-family dwellings are allowed where permitted by the Tuolumne County Uniform Zoning Ordinance in Compatibility Zones B2, C and D.
2. The land use should not attract more than the indicated number of people per acre at any time. The usage intensity may be averaged over the entire project site, subject to the limitations set forth in Policy 2.4.2.6. Usage calculations shall include all people who may be on the property (e.g., employees, customers/visitors, etc.) both indoors and outside. These criteria are intended as general planning guidelines to aid in determining the acceptability of proposed uses. Additional guidance is provided by Appendix D.
3. A deed notice shall be recorded for each parcel associated with any land use action or permit for which review by the Airport Land Use Commission or Commission Secretary is required. Such notice shall be issued by the County of Tuolumne for each parcel within an Airport Influence Area Boundary at the time of adoption of this Plan. Additionally, any land division of property for which a notice has been recorded must include a note on any parcel map or subdivision map of the existence of such deed notice. Combining district zoning shall be established for each such parcel.
4. Hazards to flight include physical (e.g., tall objects), visual, and electronic forms of interference with the safety of aircraft operations. See the supporting compatibility policies on airspace protection (Policies 2.4.3.2 and 2.5.3.5.) for details. Land use development, such as golf courses and certain types of crops, as outlined in FAA's Advisory Circular 150/5200-33B, *Hazardous Wildlife Attractants on or Near Airports*, that may cause the attraction of birds to increase is also prohibited.
5. Storage of aviation fuel, other aviation-related flammable materials, and up to 2,000 gallons of nonaviation flammable materials are exempted from this criterion in Zones B1 and B2 (International Fire Code, Chapter 62, Section 6104.2).
6. NLR = Noise Level Reduction; the outside-to-inside sound level attenuation which the structure provides. See supporting compatibility policies on noise (Policy 2.4.1.5.) for details. Examples of highly noise-sensitive outdoor nonresidential uses that should be prohibited include amphitheaters and drive-in theaters. Caution should be exercised with respect to uses, such as poultry farms and nature preserves.
7. See supporting compatibility policies on airspace protection (Policy 2.4.3.2.) for details.
8. Height restrictions — potentially to ground level — required on all objects not shadowed by nearby objects of equal or greater elevation.
9. Objects up to 50 feet tall are acceptable. This height criterion is for general guidance. Shorter objects normally will not be airspace obstructions unless situated at a ground elevation well above that of the airport. Taller objects may be acceptable if determined not to be obstructions. However, the FAA may require Form 7460-1, marking, and lighting of certain objects. Developers proposing structures that could penetrate 14 CFR Part 77 surfaces must file Form 7460 with the FAA to determine if 7460 review is required, consult FAA's Notice Criteria Tool: <https://oeaaa.faa.gov/oeaaa/external/gisTools/gisAction.jsp?action=showNoNoticeRequiredToolForm>



2.3 REVIEW OF AIRPORT MASTER PLANS AND DEVELOPMENT PLANS

2.3.1 Review Process

2.3.1.1 *Project Submittal Information* — An airport master plan or development plan submitted to the Commission for review shall contain sufficient information to enable the Commission to adequately assess the noise, safety, airspace protection, and overflight impacts of airport activity upon surrounding land uses. A master plan report should be submitted, if available. At a minimum, information to be submitted shall include:

- (a) A layout plan drawing of the proposed facility showing the location of: (1) property boundaries; (2) runways or helicopter takeoff and landing areas; and (3) runway protection zones or helicopter approach/departure zones.
- (b) Airspace surfaces in accordance with Federal Aviation Regulations, Part 77.
- (c) Activity forecasts, including the number of operations by each type of aircraft proposed to use the facility.
- (d) Proposed flight track locations and projected noise contours or other relevant noise impact data.
- (e) A map showing existing and planned land uses in the areas affected by aircraft activity associated with implementation of the proposed airport or heliport.
- (f) An environmental document, if one has been prepared and it addresses land use compatibility issues.
- (g) Identification and proposed mitigation of impacts on surrounding land uses.

2.3.1.2 *Commission Action Choices for Plans of Existing Airports* — When reviewing airport master plans for existing airports, the Commission has three action choices:

- (a) Find the airport master plan consistent with the *Airport Land Use Compatibility Plan*.
- (b) Find the airport master plan inconsistent with the Commission's *Plan*.
- (c) Modify the *Airport Land Use Compatibility Plan* (after duly noticed public hearing) to reflect the assumptions and proposals in the airport master plan.

2.3.1.3 *Commission Action Choices for Reviews of New Airports or Heliports* — When reviewing proposals for new airports or heliports, the Commission's choices of action are:

- (a) Determine the proposal as being consistent with the specific review policies listed in Section 3.3 below.
- (b) Adopt a *Compatibility Plan* for the proposed facility and determine the proposal as being consistent with the adopted *Compatibility Plan*. State law requires adoption of such a plan if the airport or heliport will be a public-use facility (State Aeronautics Act Section 21675(a)). The *Compatibility Plan* will be adopted within one year of approval by ALUC staff of receipt of a completed application for a new airport or heliport.
- (c) Determine the proposal as not being consistent with review policies on the basis that the noise, safety, airspace protection, and overflight impacts it would have on surrounding land uses are not adequately mitigated.



2.3.1.4 *Response Time* — The Airport Land Use Commission must respond to a local agency's submittal of an airport master plan or development plan within 60 days from the date of referral (State Aeronautics Act Section 21676(d)).

- (a) If the Commission fails to make a determination within that period, the proposed action shall be deemed consistent with the *Compatibility Plan*.
- (b) Regardless of Commission action or failure to act, the proposed action must comply with other applicable local, state, and federal regulations and laws.
- (c) The referring agency shall be notified of the Commission's action in writing.

2.3.2 Review Criteria for Master or Development Plans of Existing Airports

2.3.2.1 *Substance of Review* — When reviewing airport master plans or development plans for existing airports, the Commission shall determine whether activity forecasts or proposed facility development identified in the plan differ from the forecasts and development assumed for that airport in this *Airport Land Use Compatibility Plan*. Attention should specifically focus on:

- (a) Activity forecasts that are: (1) significantly higher than those in the *Airport Land Use Compatibility Plan*; or which (2) include a higher proportion of larger or noisier aircraft.
- (b) Proposals to: (1) construct a new runway or helicopter takeoff and landing area; (2) change the length, width, or landing threshold location of an existing runway; or (3) establish an instrument approach procedure as requested by the FAA.

2.3.2.2 *Consistency Determination* — The Commission shall determine whether the proposed airport master plan or development plan is consistent with the *Airport Land Use Compatibility Plan*. The Commission shall base its determination of consistency on findings that the forecasts and development identified in the airport master plan would not result in greater noise, overflight, and safety impacts and/or height restrictions on surrounding land uses than are assumed in the *Airport Land Use Compatibility Plan*.

2.3.3 Review Criteria for Proposed New Airports or Heliports

2.3.3.1 *Substance of Review* — In reviewing proposals for new airports and heliports, the Commission shall focus on the noise, safety, airspace protection, and overflight impacts upon surrounding land uses.

- (a) Other types of environmental impacts (e.g., air quality, water quality, natural habitats, vehicle traffic, etc.) are not within the scope of Commission review.
- (b) The Commission shall evaluate the adequacy of the proposed facility design (in terms of federal and state standards) only to the extent that the design affects surrounding land use.

While the ALUC has no legal authority to require alterations to the airfield design, the ALUC may assess the impacts of said airfield design on existing land uses (see 2.3.3.2(a) and (b)).



2.3.3.2 *Airport/Land Use Relationships* — The review shall examine the relationships between existing and planned land uses in the vicinity of the proposed airport or heliport and the impacts that the proposed facility would have upon these land uses. Questions to be considered should include:

- (a) Would the existing or planned land uses be considered incompatible with the airport or heliport if the latter were already in existence?
- (b) What measures are included in the airport or heliport proposal to mitigate the noise, safety, airspace protection, and overflight impacts on surrounding land uses? Such measures might include: (1) location of flight tracks so as to minimize the impacts; (2) other operational procedures to minimize impacts; (3) installation of noise barriers or structural noise insulation; (4) acquisition of property interests (fee title or easements) on the impacted land.

2.4 SUPPORTING COMPATIBILITY CRITERIA

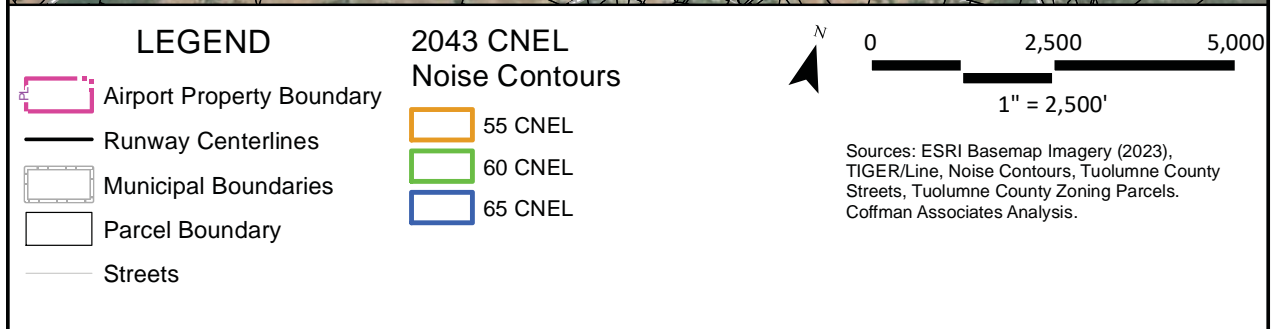
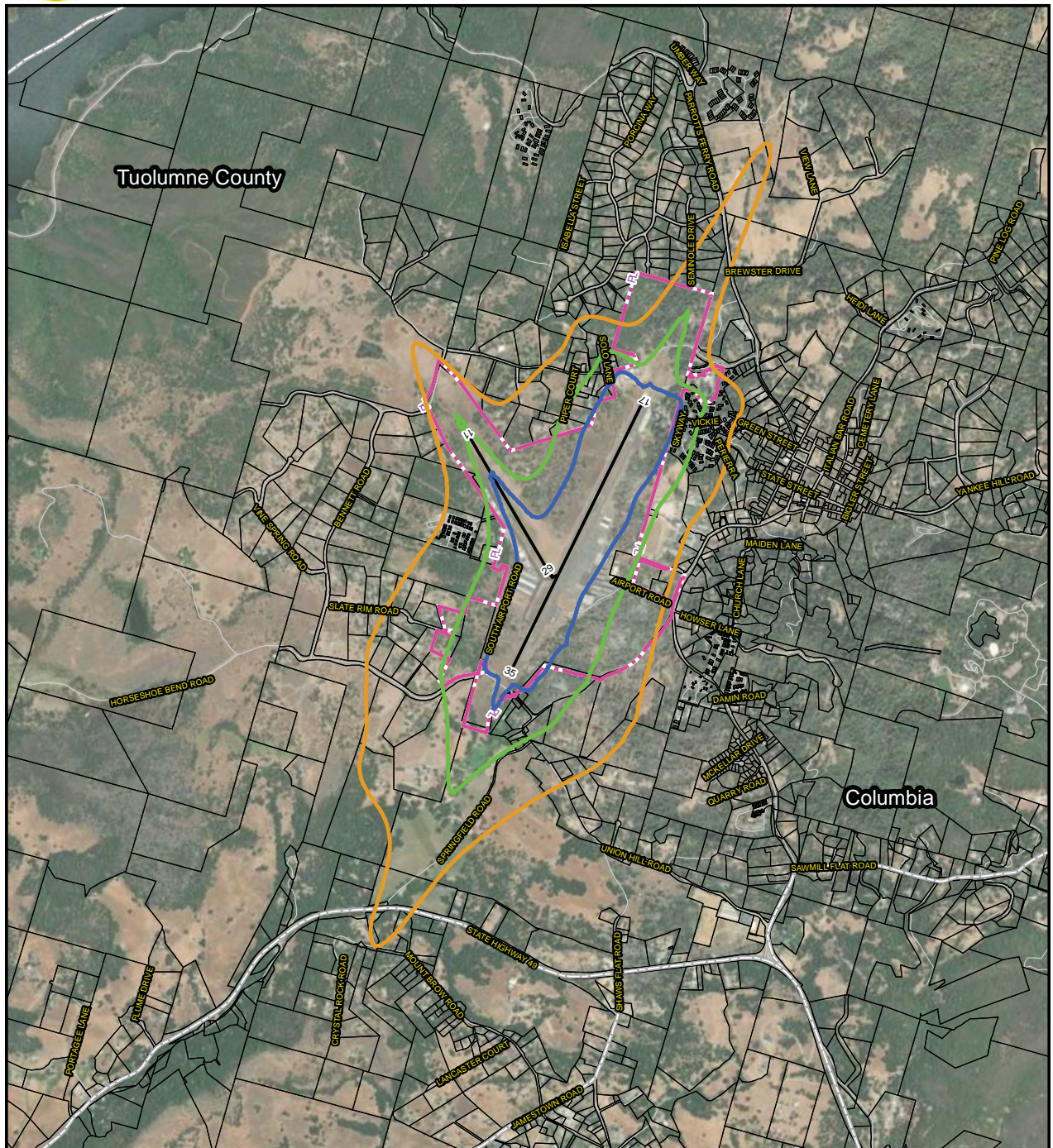
2.4.1 Noise

2.4.1.1. *Projected Noise Levels* — The evaluation of airport/land use noise compatibility shall consider the *future* Community Noise Equivalent Level (CNEL) contours of each airport. **Exhibit 2C** and **Exhibit 2D** show the 2043 noise contours for Columbia Airport and Pine Mountain Lake airport. These contours are calculated based upon aircraft activity forecasts which are set forth in an airport master plan or which are considered by ALUC staff to be plausible (refer to activity data and noise exposure maps in Chapters 4 and 5). ALUC staff should periodically review the projected noise level contours and update them if appropriate.

2.4.1.2. *Application of Noise Contours* — The locations of CNEL contours are among the factors used to define compatibility zone boundaries and criteria. It is intended that noise compatibility criteria be applied at the general plan, specific plan, or other broad-scale level. Because of the inherent variability of flight paths and other factors that influence noise emissions, the depicted contour boundaries are not absolute determinants of the compatibility or incompatibility of a given land use. Noise contours can only quantify noise impacts in a general manner; except on large parcels or blocks of land (sites large enough to have 3 dB or more of variation in CNELs), they should *not* be used as site design criteria. (Note, though, that the airport noise contours set forth in this *Plan* are to be used as the basis for determining compliance with interior noise level criteria as listed in Section 2.4.1.5.)

2.4.1.3. *Noise Exposure in Residential Areas* — The maximum CNEL considered normally acceptable for residential uses in the vicinity of the airports covered by this *Plan* is 55 dB.

2.4.1.4. *Noise Exposure for Other Land Uses* — Noise level compatibility standards for other types of land uses shall be applied in the same manner as the above residential noise level criteria. The extent of outdoor activity associated with a particular land use is an important factor to be considered in evaluating its compatibility with airport noise. Examples of acceptable noise levels for other land uses in an airport's vicinity are presented in **Table 2B**.





LEGEND

- Airport Property Boundary
- Runway Centerline
- Municipal Boundaries
- Parcel Boundary
- Streets

2043 CNEL Noise Contours

- 55 CNEL
- 60 CNEL
- 65 CNEL



0 2,000 4,000
1" = 2,000'

Sources: ESRI Basemap Imagery (2023),
TIGER/Line, Tuolumne County Streets, Noise
Contour Data, Tuolumne County Landuse Parcels.
Coffman Associates Analysis.



TABLE 2B | Noise Compatibility Criteria - Tuolumne County Airport Land Use Compatibility Plan

Land Use Category	CNEL (dB)				
	50-55	55-60	60-65	65-70	70-75
Residential					
Single-family, nursing homes, mobile homes	+	O	–	– –	– –
Multi-family, apartments, condominiums	++	+	O	– –	– –
Public					
Schools, libraries, hospitals	+	O	–	– –	– –
Churches, auditoriums, concert halls	+	O	O	–	– –
Transportation, parking, cemeteries	++	++	++	+	O
Commercial and Industrial					
Offices, retail trade	++	+	O	O	–
Service commercial, wholesale trade	++	++	+	O	O
Warehousing, light industrial, general manufacturing, utilities, extractive industry	++	++	++	+	+
Agricultural and Recreational					
Cropland	++	++	++	++	+
Livestock breeding	++	+	O	O	–
Parks, playgrounds, zoos, golf courses, riding stables, water recreation	++	+	+	O	–
Outdoor spectator sports	++	++	+	O	O
Amphitheaters	++	+	+	O	–
	+	O	–	– –	– –
Land Use	Acceptability	Interpretation/Comments			
++	<i>Clearly Acceptable</i>	The activities associated with the specified land use can be carried out with essentially no interference from the noise exposure.			
+	<i>Normally Acceptable</i>	Noise is a factor to be considered in that slight interference with outdoor activities may occur. Conventional construction methods will eliminate most noise intrusions upon indoor activities.			
O	<i>Marginally Acceptable</i>	The indicated noise exposure will cause moderate interference with outdoor activities and with indoor activities when windows are open. The land use is acceptable on the conditions that outdoor activities are minimal and construction features which provide sufficient noise attenuation are used (e.g., installation of air conditioning so that windows can be kept closed). Under other circumstances, the land use should be discouraged.			
–	<i>Normally Unacceptable</i>	Noise will create substantial interference with both outdoor and indoor activities. Noise intrusion upon indoor activities can be mitigated by requiring special noise insulation construction. Land uses which have conventionally constructed structures and/or involve outdoor activities which would be disrupted by noise should generally be avoided.			
– –	<i>Clearly Unacceptable</i>	Unacceptable noise intrusion upon land use activities will occur. Adequate structural noise insulation is not practical under most circumstances. The indicated land use should be avoided unless strong overriding factors prevail and it should be prohibited if outdoor activities are involved.			



2.4.1.5. Interior Noise Levels — Land uses for which interior activities may be easily disrupted by noise shall be required to comply with the following interior noise level criteria.

(a) The maximum, aircraft-related, interior noise levels which shall be considered acceptable for land uses near airports are:

(1) 45 dB CNEL in:

- Living areas of single- or multi-family residences;
- Hotels and motels;
- Hospitals and nursing homes;
- Churches, meeting halls, office buildings, and mortuaries; and
- Schools, libraries, and museums.

(2) 40 dB CNEL in sleeping areas of single- or multi-family residences.

2.4.1.6. Construction of New or Expanded Airports or Heliports — Any proposed construction of a new airport or heliport or expansion of facilities at an existing airport or heliport which would result in a significant increase in cumulative noise exposure (measured in terms of CNEL) shall include measures to reduce the exposure to a less-than- significant level. For the purposes of this *Plan*, a noise increase shall be considered significant if:

- (a) In locations having an existing ambient noise level of less than 55 dB CNEL, the project would increase the noise level by 5.0 dB or more.
- (b) In locations having an existing ambient noise level of between 55 and 60 dB CNEL, the project would increase the noise level by 3.0 dB or more.
- (c) In locations having an existing ambient noise level of more than 60 dB CNEL, the project would increase the noise level by 1.5 dB or more.

2.4.2 Safety

2.4.2.1. Objective — The intent of land use safety compatibility criteria is to minimize the risks associated with an off-airport aircraft accident or emergency landing.

- (a) Risks both to people and property in the vicinity of an airport and to people on board the aircraft shall be considered.
- (b) More stringent land use controls shall be applied to the areas with greater potential risk.

2.4.2.2. Risks to People on the Ground — 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) A method for determining the concentration of people for various land uses is provided in Appendix D.



- 2.4.2.3. Land Uses of Particular Concern** — Land uses of particular concern are ones in which the occupants have reduced effective mobility or are unable to respond to emergency situations. Children’s schools and day care centers (with 7 or more children), hospitals, nursing homes, and other uses in which the majority of occupants are children, elderly, and/or handicapped shall be prohibited within *Compatibility Zones A, B1, B2, and C*.

2.4.3 Airspace Protection

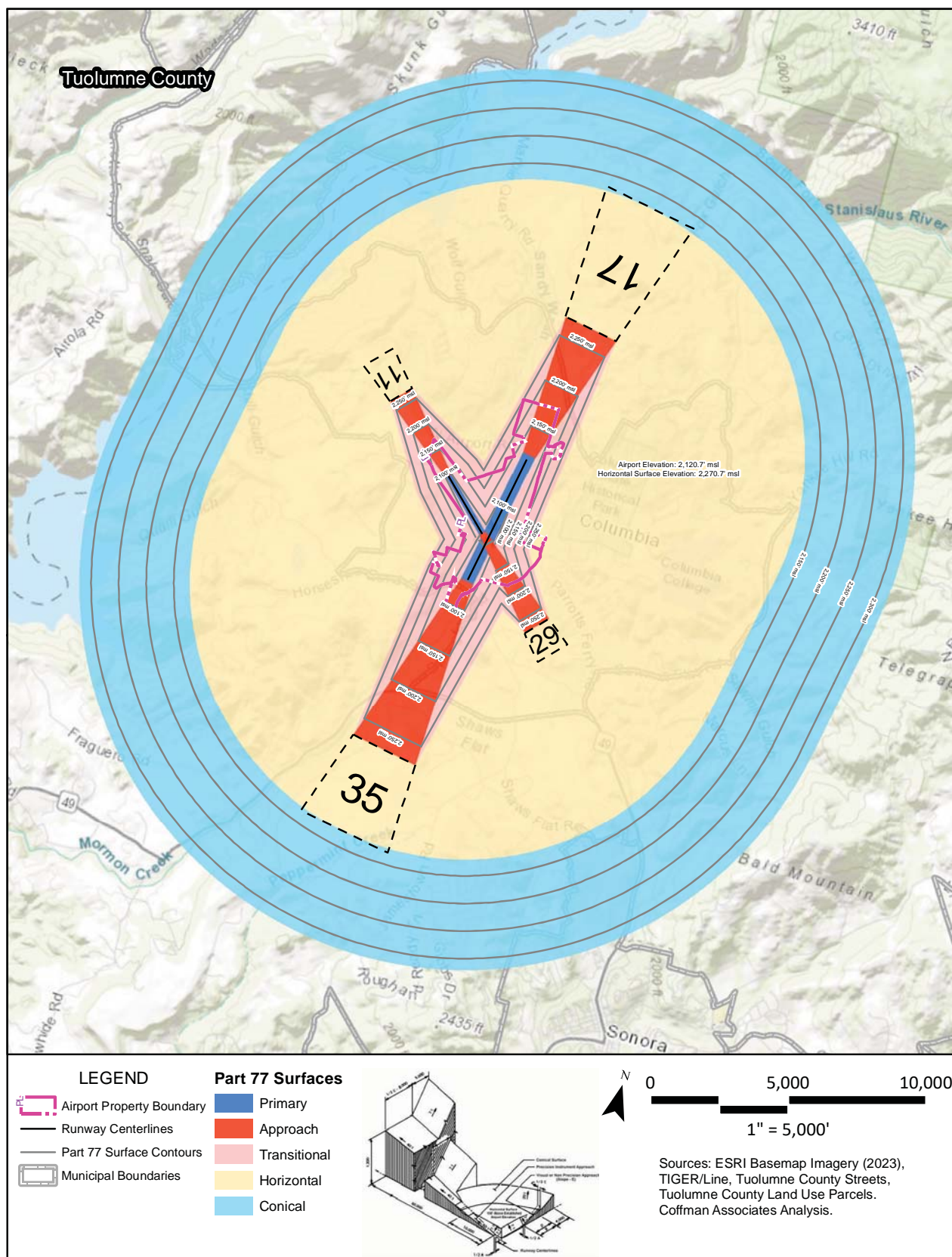
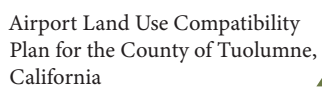
- 2.4.3.1. Basis for Height Limits** — The criteria for limiting the height of structures, trees, and other objects in the vicinity of an airport shall be based upon Part 77, Subpart C, of the Code of Federal Regulations (CFR) and with the United States Standard for Terminal Instrument Procedures (TERPS). **Exhibit 2E** and **Exhibit 2F** show the Part 77 surfaces for Columbia Airport and Pine Mountain Lake Airport.

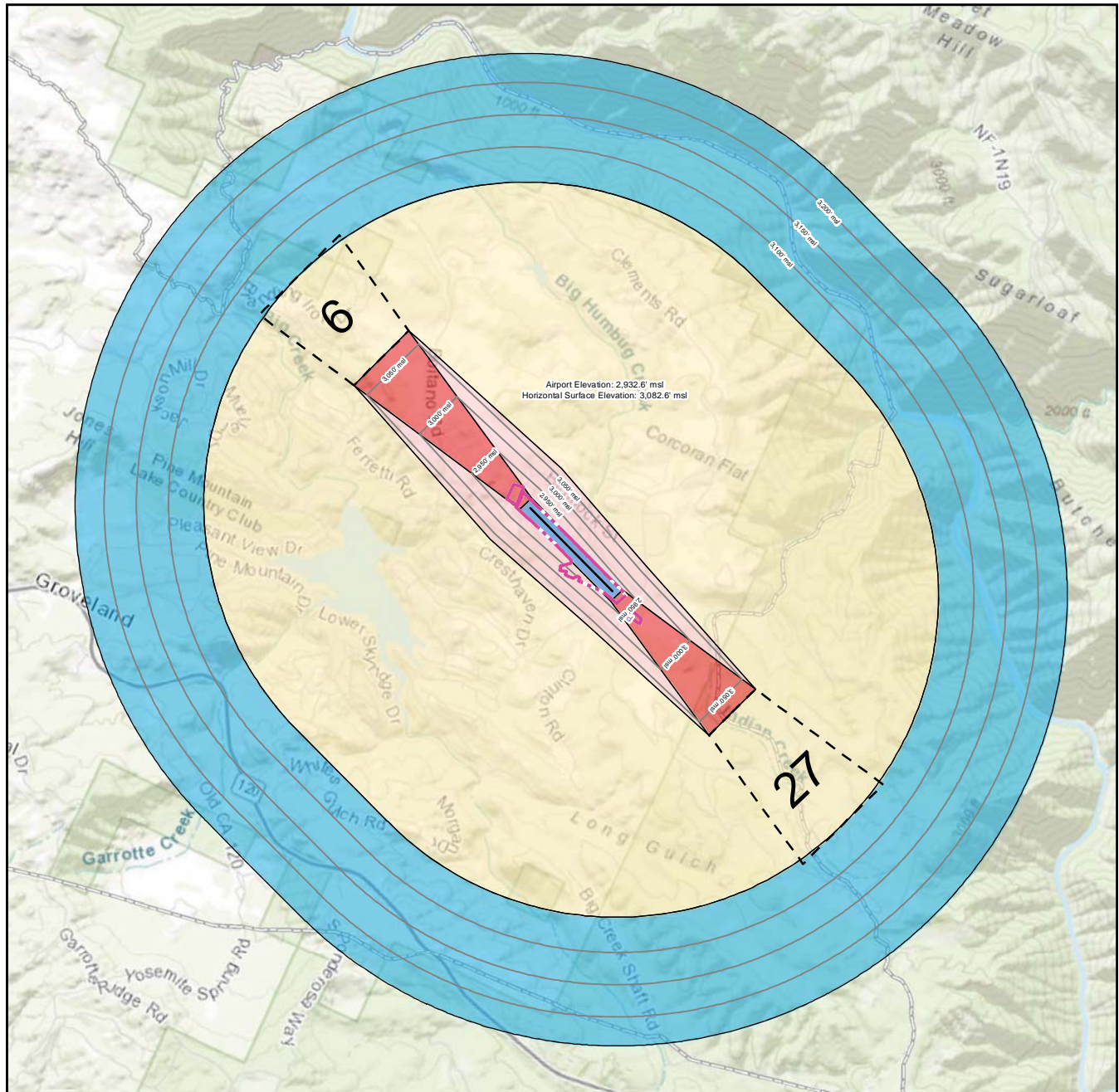
- (a) Certain modifications to the basic 14 CFR Part 77 standards are incorporated into the following policies in recognition of the terrain conditions near the airports in Tuolumne County.
- (b) Airspace plans depicting the critical areas for airspace protection around the Columbia Airport and Pine Mountain Lake Airport are provided in Chapters 4 and 5, respectively.

- 2.4.3.2. Height Restrictions** — The height of objects which are subject to review by the Airport Land Use Commission within the influence area of each airport shall be reviewed, and restricted if necessary, according to the criteria indicated for each of the following height overlay zones. The locations of these zones are depicted on the respective *Compatibility Map* for each airport.

- (a) Critical Height Zone (see **Exhibit 2A** and **Exhibit 2B**):

- (1) This zone encompasses the highest land areas near an airport. Specifically, these are locations which: lie above the surfaces defined by 14 CFR Part 77; and are situated either on points of high terrain (ridge lines or hill tops) or within 50 feet below such points. Additionally, all locations within Compatibility Zones A and B1 are considered to be within the Critical Height Zone.
- (2) Height restrictions — potentially to ground level — are required on all objects not shadowed by nearby objects of equal or greater elevation. For purposes of this section, objects do not include vegetation. Such restrictions shall be set in accordance with the airspace surfaces defined by Part 77 of the Code of Federal Regulations.
- (3) All proposed projects within the Critical Height Zone are subject to ALUC review.
- (4) Height Caution Zone (see **Exhibit 2A** and **Exhibit 2B**): This zone encompasses other areas of high terrain surrounding the Critical Height Zone. Specifically, these are locations where the ground lies above a 14 CFR Part 77 surface or within 50 feet beneath such surface, but excluding locations within the Critical Height Zone. All locations within Compatibility Zone B2 also are considered to be within the Height Caution Zone.





Sources: ESRI Basemap Imagery (2023),
TIGER/Line. Coffman Associates Analysis.



- (5) Objects up to 50 feet tall are acceptable and do not require ALUC review for the purposes of height factors. However, the FAA may require Form 7460-1, marking, and lighting of certain objects.
 - (6) Projects subject to review by the Airport Land Use Commission which propose objects taller than 50 feet shall be reviewed by the Airport Land Use Commission for protection of navigable airspace. Developers proposing structures that could penetrate 14 CFR Part 77 surfaces must file Form 7460 with the FAA to determine if 7460 review is required and consult FAA's Notice Criteria Tool.
 - (7) Remainder of Airport Influence Area: Generally, there is no concern with regard to any object up to 75 feet tall unless it is located on high ground. A solitary object (e.g., an antenna) on high ground is a particular concern.
 - (8) The ALUC secretary shall review any development proposals requiring a variance from County zoning height standards.
- (b) During review of projects subject to its review, the Airport Land Use Commission may require conditions to protect navigable airspace, including the following:
- (1) Restrict the height of structures, trees and other objects;
 - (2) Require the removal or aeronautical marking of objects exceeding the established height limit; and
 - (3) Prohibit electrical interference, glare, confusing lights, smoke and/or other potential hazards to flight from being created on the property.
- (c) Existing trees which exceed the height limits described in Policy 2.4.3.2 or could grow to exceed the height limits, will be required to be removed, topped or fitted with aeronautical marking when the tree has been determined to be a hazard to flight by the Airport Land Use Commission or the FAA. Note that California Public Utilities Code § 21659 does not allow persons to permit any growth to grow at a height which exceeds the obstruction standards set forth in Title 14 of the Code of Federal Regulations, Part 77, Subpart C, without a permit or FAA determination that the growth does not constitute a hazard to air navigation or would not create an unsafe condition for air navigation.

2.4.4 Overflights

2.4.4.1. Nature of Concern — Overflight compatibility concerns encompass a combination of noise and safety issues. Although sensitivity to aircraft overflights varies from one person to another, overflight sensitivity is particularly important with regard to residential land uses.

- (a) For the purposes of the *Compatibility Plan*, the frequency of overflights, the typical overflight altitude, the noise levels of individual aircraft operations, the characteristics of the noise (helicopter noise being particularly intrusive), and the perceived necessity of the noise (noise from fire attack aircraft being considered more acceptable than



noise from other loud aircraft) are the principal determinants of where overflights are considered to be a potential concern.

(b) The area of overflight concerns is the same as the airport influence area for each airport.

2.4.4.2. Buyer Awareness Measures — Because all of the airport influence area is subject to aircraft overflights, it is important that prospective purchasers of property within this area, particularly residential properties, are informed about the property's proximity to a nearby airport.

- (a) California state statutes (Business and Professional Code Section 11010 and Civil Code Sections 1102.6, 1103.4, and 1353) require, as part of residential real estate transactions, that information be disclosed regarding whether the property is situated within an airport influence area.
- (b) With certain exceptions, these state requirements apply both to the sale or lease of newly subdivided lands and to the sale of existing residential property.
- (c) The statutes define an *airport influence area (AIA)* as "the area in which current or future airport-related noise, overflight, safety, or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses as determined by an airport land use commission." The AIA for each airport is depicted on the exhibits listed below:

(d) Where disclosure is required, the following statement shall be provided:

NOTICE OF AIRPORT IN VICINITY: This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you.

(e) For the purposes of this compatibility plan, the above real estate disclosure provisions of state law shall continue in effect as Airport Land Use Commission policy with respect to new development, even if the law is rescinded. Furthermore, each land use jurisdiction affected by this compatibility plan should adopt a policy designating the airport influence area as the area wherein disclosure of airport influences is required in conjunction with the transfer of residential real estate. Such policy should require signs providing the above notice be prominently posted in the real estate sales office and/or other key locations at any new project within the AIA. Such local jurisdiction policies should also be applied to lease or rental agreements for existing residential property. Mandatory deed notice recordation, required for all parcels within the AIA in accordance with the criteria shown on **Table 2A**, also serves as a real estate disclosure notification tool.



2.4.4.3. *Land Use Conversion* — The compatibility of uses in the airport influence areas shall be preserved to the maximum feasible extent. Particular emphasis should be placed on preservation of existing agricultural and open space uses.

- (a) The conversion of land from existing or planned agricultural, industrial, or commercial use to residential uses within Compatibility Zones A, B1, and B2 is strongly discouraged.
- (b) In Compatibility Zone C, general plan amendments (as well as other discretionary actions such as rezoning, subdivision approvals, use permits, etc.) which would convert land to residential use or increase the density of residential uses should be subject to careful consideration of overflight impacts.



Chapter Three

INDIVIDUAL AIRPORT POLICIES AND COMPATIBILITY MAPS

3.1 GENERAL BASIS FOR COMPATIBILITY ZONE BOUNDARIES

The general concepts used to develop the compatibility zone boundaries for Columbia and Pine Mountain Lake airports are outlined below. These basic, aviation-oriented, boundaries were then modified to take into account the distinct geographic features and existing land uses around each airport. The compatibility zone boundaries represent a composite of noise, safety, airspace protection, and overflight concerns. As overlays of the compatibility zones, the height zones further address airspace protection requirements. The height overlay zone policies apply in addition to the policies of the underlying compatibility zone.

3.1.1 Compatibility Zone A

Zone A includes airport runways and immediately adjacent areas wherein uses are restricted to aeronautical functions in accordance with Federal Aviation Administration standards. The lateral limits of Zone A are defined by the airfield building restriction lines as depicted on the Airport Layout Plan for each airport. The length of Zone A is set to encompass the runway protection zone located at each end of the runway. Runway protection zone dimensions are defined by Federal Aviation Administration airport design standards and consider the runway approach type and the type of aircraft the runway is intended to accommodate. In addition to being an area of high risk, Zone A also is subject to high noise levels. Most of Zone A at both Columbia and Pine Mountain Lake airports lies within the respective 65-dB CNEL contours.

3.1.2 Compatibility Zone B1

Zone B1 generally surrounds Zone A, including areas both immediately beyond the runway protection zones and adjacent to the runways. These are locations where noise levels and risks are both high. Zone B1 encompasses areas impacted by noise levels of 60 dB CNEL or greater. Areas overflowed by aircraft at altitudes of less than 200 to 300 feet are included as well. Additionally, restrictions on heights of objects are essential for airspace protection purposes.



3.1.3 Compatibility Zone B2

Zone B2 is the extended approach/departure zone for each airport and may also include some land adjacent to the runways. This zone is affected by moderate degrees of both noise and risk. The 55-dB CNEL contour falls within this zone. Aircraft overfly much of this area at altitudes of less than approximately 600 feet on either visual or straight-in instrument approaches. According to the data presented in the Caltrans *Handbook*, 40% to 50% of off-runway, airport-related aircraft accidents occur within Zones B1 and Zones B2 for airports comparable to Columbia and Pine Mountain Lake airports.

3.1.4 Compatibility Zone C

The outer boundary of Zone C is defined as the area commonly overflown by aircraft at an altitude of 1,000 feet or less above ground level. Included are locations beneath the traffic pattern and pattern entry points. Annoyance associated with aircraft overflights is the major concern within Zone C. Although the traffic pattern zone lies mostly outside the 55-dB CNEL contour, land uses are nevertheless subjected to frequent aircraft noise events.

3.1.5 Compatibility Zone D

Zone D includes other areas within the airport vicinity which are overflown less frequently or at a higher altitude by aircraft arriving and departing the airport.

3.1.6 Critical Height Zone Overlay

The Critical Height Zone is designed to assure that objects on high terrain or near the runway ends of each airport do not pose hazards to flight. The zone includes ridge lines, other high points, and terrain within 50 feet in elevation of these locations. The 50-foot height is intended to represent the tallest likely height of an antenna on top on a building or the typical height of a tall tree. Management of existing and new vegetation by property owners in the zone is critical to protecting the safety of aircraft operations in the area. Lands within Compatibility Zones A and B1 also are considered to be within the Critical Height Zone because protection of the airspace above these areas is critical to the safety of aircraft approaching and departing a runway.

3.1.7 Height Caution Zone Overlay

The Height Caution Zone surrounds the areas of high terrain included in the Critical Height Zone. The concept used in defining this zone is that objects less than 50 feet in height will be shadowed by objects on nearby higher terrain and thus will not constitute hazards to flight even if they are above an airspace surface defined by Federal Aviation Regulations (FAR) Part 77. Said objects do not include trees or other



vegetation that can be easily removed from the site subsequent to development. The Height Caution Zone also encompasses the lands within Compatibility Zone B2. Again, 50-foot objects are acceptable in Zone B2 in that they will not penetrate the FAR Part 77 approach or transitional surfaces (unless they are in the Critical Height Zone). In each of these areas, any proposed objects taller than 50 feet must be reviewed on a case-by-case basis to assure that they will not be hazards to flight.

3.2 COLUMBIA AIRPORT

3.2.1 Compatibility Map Delineation

3.2.1.1 *Compatibility Map* — The Compatibility Map for Columbia Airport is presented in **Exhibit 1A** and is to be used in conjunction with the criteria set forth in **Table 2A**.

3.2.1.2 *Boundary Determinants*

- (a) Zone B2 extends farther to the south than it does beyond the other runway ends because nearly all approaches and departures by fire attack aircraft and the preponderance of nighttime operations by all aircraft types are concentrated over this area. Also, the airport's only instrument approach procedure is from the south. For all runway ends, Zone B2 is weighted toward the side of the runway on which the traffic pattern is located.
- (b) Zone C, as well as the overall airport influence area boundary, has been extended west to encompass the relatively wide traffic pattern flown at the airport. The western boundary follows the New Melones Reservoir property line. Southwest of the airport, the Zone C boundary encompasses both the traffic pattern for Runway 11-29 and the flight tracks of occasional aircraft which turn slightly eastward when departing Runway 17.
- (c) Zone D on the east side of the airport is included in order to establish buyer awareness measures and to encompass the rising terrain to the northeast. On the southeast, the outer boundary is drawn contiguous with the Sonora city limits.

3.2.2 Additional Compatibility Policies

3.2.2.1 Notwithstanding the countywide policy regarding infill development (Policy 2.2.4.3.(a)), lands along the southwest side of Parrotts Ferry Road between Springfield Road and Highway 49 and lying within 750 feet of the road right-of-way may be developed to a maximum residential density of 15 dwelling units per acre. The limits of this area are marked with an asterisk (*) on the Columbia Airport Compatibility Map (**Exhibit 2A**). For nonresidential development, no special exceptions are provided by this policy --- the criteria of Policy 2.2.4.3(a) shall apply.



3.3 PINE MOUNTAIN LAKE AIRPORT

3.3.1 Compatibility Map Delineation

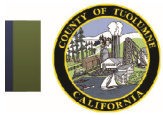
3.3.1.1 *Compatibility Map* — The Compatibility Map for Pine Mountain Lake Airport is presented in **Exhibit 2B** and is to be used in conjunction with the criteria set forth in **Table 2A**.

3.3.1.2 *Boundary Determinants*

- (a) The different character of the aircraft mix at Pine Mountain Lake Airport compared to Columbia Airport allows Zone B1 to be slightly narrower adjacent to the runway. However, Zone B2 extends along the runway length in order to encompass more of the 55-dB CNEL contour.
- (b) Zone B2 is angled southward on the runway's east end to take into account the Runway 27 GPS approach which is offset 20 degrees from the extended runway centerline. The north-side traffic pattern is reflected in the northward angle of Zone B2 at both runway ends.
- (c) The limits of Zone C are intended to encompass the common traffic pattern.
- (d) The limits of Zone D are intended to encompass the Horizontal and Conical Surfaces of Part 77 of the Federal Aviation Regulations.

3.3.2 Additional Compatibility Policies

None.



Appendix A

HISTORY OF THE TUOLUMNE COUNTY ALUCP

The following excerpt from the existing airport land use compatibility plan (ALUCP) discusses the history of the current plan:

Although the 1977 Policy Plan has served the ALUC and Tuolumne County well, it is now more than 20 years old and much of its content is outdated. Many changes have been made to the state laws governing ALUCs since the original plan was adopted. Most of these changes involve procedures by which ALUCs operate and are rather narrow in scope. Perhaps most significant among the amendments is the requirement for local general and specific plans to be made consistent with the Commission's plan. It was in conjunction with this 1982 amendment that the authority of ALUCs to review individual development proposals was modified as discussed above. Another statute change made at that time was to reduce the vote requirement for a local agency to override an ALUC decision from four fifths to two thirds.

More important with respect to preparation of ALUC plans was completion of the Caltrans 1993 Airport Land Use Planning Handbook, which was superseded in January 2002 by the California Airport Land Use Planning Handbook. State law now requires ALUCs to be 'guided by' information in the Handbook when formulating or amending compatibility plans. Also, another statute enacted in 1994 creates a tie between the Handbook and California Environmental Quality Act (CEQA) documents. Lead agencies are now required to use the Handbook as 'a technical resource' when assessing airport-related noise and safety impacts of projects located in the vicinity of airports.

The major issues associated with this draft Airport Land Use Compatibility Plan have been discussed at several meetings of the Tuolumne County Airport Land Use Commission. Additionally, public input was solicited at two workshops held early in the plan preparation process. The draft plan was widely circulated to affected agencies and the general public and was the subject of a public hearing by the Commission.

On June 24, 1999, the Tuolumne County Airport Land Use Commission approved the Tuolumne County Airport Land Use Compatibility Plan. On July 21, 1999, the Airport Land Use Commission rescinded its approval of the Airport Land Use Compatibility Plan on the advice of County Counsel.

On January 31, 2001, the Airport Land Use Commission conceptually approved the Revised Draft Tuolumne County Airport Land Use Compatibility Plan. The Revised Draft Plan consisted of the Draft Airport Land Use Compatibility Plan as modified by the following four addendums adopted by the Commission:

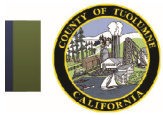


- Revised Addendum, dated June 11, 1999, which added Policy 4.2.6, regarding clustering on development sites and identified an infill area along the southwest side of Parrotts Ferry Road between Springfield Road and State Route 49.
- Addendum #2, dated July 10, 2000, which replaced the use of the Airport Aviation and Airspace Utilization Easement with a deed notice and airport combining zoning district.
- Addendum #3, dated August 15, 2000, which revised Policy 2.4.3 to address specific residential parcels located within Compatibility Zone A at the eastern end of Runway 9-27 at the Pine Mountain Lake Airport.
- Addendum #4, dated September 27, 2000, which expanded the airport influence area boundary and Compatibility Zone D boundary associated with the Pine Mountain Lake Airport to include the horizontal and conical surfaces of Part 77 of the Federal Aviation Regulations.

In the Fall of 2002, following review of the Revised Draft Plan by County Counsel, the Commission again conceptually approved the Plan with the following revisions:

- Clarified the authority of the Airport Land Use Commission under existing state law and the authority granted to the Commission by Tuolumne County for review of land development applications.
- Eliminated the requirement for dedication of an Aviation Easement for land development projects proposed in Compatibility Zones A and B1 and the critical Height Zone.
- Revised the Deed Notice required to be attached to the deed of each parcel located within an airport influence area boundary upon adoption of the plan.

Prior to acting on the Revised Draft Airport Land Use Compatibility Plan, the Tuolumne County Airport Land Use Commission will conduct a public hearing to receive comments from all interested parties.”



Appendix B

COLUMBIA AIRPORT SUPPORTING INFORMATION

Appendix B provides an overview of Columbia Airport's setting, current airport facilities, and plans for the airport's development. This appendix also includes supporting information for the airport's compatibility zones and noise contours presented in the airport land use compatibility plan (ALUCP) update for Tuolumne County, California.

SETTING

Columbia Airport (O22) is a public-use airport located in the foothills of the Sierra Nevada mountains on the western border of Tuolumne County. The airport is approximately four miles northeast of the City of Sonora – which is the county seat and the only incorporated city in Tuolumne County – and one mile to the southwest of the Columbia, CA, census-designated place. Columbia Airport sits on approximately 356 acres of land at an elevation of 2,121 feet above mean sea level. The 2023 - 2027 *National Plan of Integrated Airports* (NPIAS) classifies the airport as a local general aviation facility, and the 2020 *California Aviation System Plan* (CASP) places the airport in the Regional – Recreation functional class. Tuolumne County owns and operates Columbia Airport.

AIRPORT INFORMATION

AIRPORT FACILITIES

Columbia Airport has two runways, asphalt Runway 17-35 and turf Runway 11-29, as well as three helipads. **Table B1** provides additional details about the airport's facilities.

Runway 17-35 is 4,673 feet long and 75 feet wide. It is constructed of asphalt and is in good condition. The runway load-bearing strength for single-wheel landing gear aircraft is up to 30,000 pounds. There are non-precision runway pavement markings that are in good condition and medium intensity runway lights with non-lighted touchdown points and runway end identifier lights (REILs). The traffic pattern for Runway 35 is a standard left-hand pattern, whereas Runway 17 has a non-standard right-hand traffic pattern. Both runway ends have a two-box visual approach slope indicator (VASI-2) on the left, with a 4.55-degree glide angle for Runway 17 and a 4.00-degree glide angle for Runway 35. Runway 35 also has an RNAV (GPS) approach procedure.

Runway 11-29 is the crosswind turf runway at Columbia Airport. It is 2,607 feet long and 50 feet wide. It is in good condition with markings for numbers only on Runway 29. There are no runway edge lights or approach lighting; however, there are unlighted touchdown points. The runway is designated for daytime use only. Runway 29 has a standard left-hand traffic pattern and Runway 11 has a non-standard right-hand traffic pattern. There are no REILs and no visual or instrument approach aids.



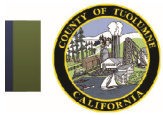
In addition to the Columbia Air Attack Base helipad, there are two unmarked helipads and one marked helipad located on the apron near the end of Runway 35. There are no visual or instrument approach aids associated with the helipads.

In addition to the runways and helipad, the airport parking aprons provide 113 marked tiedown spaces for aircraft parking, 33 separate hangar facilities, and vehicle parking on the east side of the airport. There is an administration building with associated parking. The airport is bounded by a secure eight-foot-high perimeter fence. There is one FBO on site which owns and maintains the airport's fuel-farm and self-service fueling facility. The airport is home to a fly-in campground that is open to the public.

TABLE B1 | Columbia Airport Facilities

	Runway 17-35	Runway 11-29
RUNWAYS		
Length (feet)	4,673	2,607
Width (feet)	75	50
Threshold Displacement (feet)	598 (Rwy 17) / 384 (Rwy 35)	N/A
Runway Pavement Surface Material	Asphalt	Turf
Runway Pavement Condition	Good	Good
Runway Pavement Load-Bearing Strength (lbs.)		
Single Wheel	30,000	N/A
Dual Wheel	N/A	N/A
Double Tandem	N/A	N/A
Double Dual Tandem	N/A	N/A
Runway Pavement Markings		
Type	Non-Precision	Numbers Only (Rwy 29)
Condition	Good	Fair
Runway Lighting		
Runway Edge Lighting	MIRL	None
Taxiway Lighting	MITL nearest runway	No
Touchdown Point	Yes (no lights)	Yes (no lights)
Traffic Pattern	Right Left	Right Left
Runway End Identifier Lights (REILs)	Yes	No
VISUAL APPROACH AIDS		
Type	VASI-2	N/A
Glide Path	4.55 degrees / 4.00 degrees	N/A
INSTRUMENT APPROACH AIDS		
Instrument Landing System (ILS)	No	No
Global Positioning System (GPS)	RNAV (GPS) Approach – Runway 35	No
VOR/DME	No	No
Weather and Communication	AWOS, CTAF, PCL	
Visual Aids	Rotating beacon (2), lighted wind cone, tetrahedron, segmented circle	
N/A = not applicable AWOS = automated weather observing system CTAF = common traffic advisory frequency PCL = pilot-controlled lighting MIRL = medium intensity runway lights		
MITL = medium intensity taxiway lights VASI-2 = two-box visual approach slope indicator VOR/DME = very high frequency omnidirectional range distance measuring equipment		

Sources: Airport Facility Directory (May 2023); FAA Form 5010-1, Airport Master Record



FUTURE AIRPORT PLANS

Future plans for Columbia Airport are considered in this ALUCP Update, as discussed in the *Columbia Airport Master Plan* and depicted on the airport's current Airport Layout Plan (ALP).

The *Columbia Airport Master Plan* (October 2019) ultimate development concept is considered in the exhibits and maps produced in this ALUCP update. The master plan recommended concept includes a 140-foot runway extension to Runway 17-35 to better accommodate CalFire's aerial firefighting operations, as well as operations by additional turboprop and business jet aircraft. The displaced landing threshold would be maintained in its current location, resulting in no change to the runway protection zone (RPZ) for Runway 35; however, the departure RPZ would shift 140 feet further south and would be mostly contained within an existing aviation easement. Additional airfield geometry changes are also recommended in order to meet safety/separation standards, including relocating the Runway 29 threshold 202 feet to the northwest and decreasing the ultimate length of turf Runway 11-29 to 2,405 feet. It is noted that the relocation of Taxiway A has the potential to significantly impact CalFire's Columbia Air Attack Base landside facility. Apron expansions are recommended to increase aircraft and helicopter parking apron space, resulting in the proposed relocation of a helipad on the north side of the main aircraft parking apron, as well as construction of an additional helipad on the west side of the airport adjacent to turf Runway 11-29.

COMPATIBILITY ZONES

The Airport Influence Area (AIA) for Columbia Airport is shown on **Exhibit 1A**. The AIA is the same AIA addressed by the existing ALUCP. The compatibility zones addressed by this plan – shown on **Exhibit 2A** – were also retained from the existing ALUCP zones.

NOISE

The standard methodology for analyzing noise conditions at airports involves the use of a computer simulation model. The Airport Environmental Design Tool (AEDT) Version 3e is accepted by the State of California and required by the FAA for developing noise exposure contours. The AEDT is the model used to develop the noise exposure contours for this ALUCP. The following sections describe the noise modeling inputs for the Columbia Airport noise exposure contours, shown on **Exhibit 2C**.

AIRCRAFT OPERATIONS AND FLEET MIX

As outlined in Public Utilities Code (PUC) Section 21675(a), the noise contours included in an ALUCP must reflect the anticipated growth of the airport during at least the next 20 years. **Table A1** summarizes the 2037 operations for Columbia Airport using the FAA's Terminal Area Forecast (TAF) for fiscal years 2016-2045 and includes the aircraft types used in the noise model. Airfield observations and based aircraft



lists were used to determine the types of aircraft that frequently use the airport. To accurately represent the noise conditions at the airport, the AEDT provides aircraft noise data for many of the aircraft operating in the national fleet.

The selection of individual aircraft types is important to the modeling process because different aircraft types generate different noise levels. The aircraft fleet mix for Columbia Airport was derived from the 2019 *Columbia Airport Master Plan* and interviews with the airport manager. **Table B2** summarizes the generalized fleet mix data input into the noise analysis.

A variety of general aviation single-engine fixed-propeller aircraft are modeled with the general aviation single-engine piston, variable (GASEPV) and general aviation single-engine piston, fixed (GASEPF) aircraft in the AEDT. The GASEPV represents many single-engine general aviation aircraft, including the Mooney M-20, Cessna 172 and 180, and Piper Cherokee Arrow. The general aviation single-engine fixed-pitch propeller model, the GASEPF, also represents several single-engine general aviation aircraft. These include the Cessna 150, Piper Archer, and the Piper Tomahawk.

TABLE B2 | Columbia Airport – Aircraft Fleet Mix and Operations

Operations	AEDT Designator	2023 ¹	2043 ²
Itinerant			
Single-Engine, Fixed	GASEPF	10,010	14,494
Single-Engine, Variable	GASEPV	10,009	14,494
Multi-Engine Piston	BEC58P	1,000	1,132
Turboprop	DHC6	2,048	3,511
Small Turbojet	CNA55B	50	283
Medium Turbojet	CL600, CNA750	40	283
Helicopter	SA350D, S65, B212	1,200	3,738
Subtotal		24,357	37,935
Local			
Single-Engine, Fixed	GASEPF	9,650	15,004
Single-Engine, Variable	GASEPV	9,650	15,004
Multi-Engine Piston	BEC58P	1,000	1,132
Turboprop	DHC6	500	906
Helicopter	B212	500	566
Subtotal		21,300	32,612
Grand Total		45,657	70,547

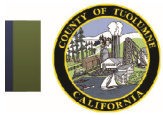
¹FAA 5010 Airport Master Record, operations for 12 months ending June 25, 2019

²Total operations forecast reflects a compound annual growth rate (CAGR) of 1.57%, as discussed in Chapter Two – Forecasts of the 2019 *Columbia Airport Master Plan*

Sources: Coffman Associates analysis; Columbia Airport Master Plan (2019)

Time-of-Day

The time of day during which aircraft operations occur is important as input to the AEDT due to the 10-decibel nighttime (10:00 p.m. to 7:00 a.m.) and 4.8-decibel evening (7:00 p.m. to 10:00 p.m.) weighting of flights.



Since Columbia Airport is not equipped with an airport traffic control tower (ATCT), time-of-day information was estimated based upon airport staff interviews and time-of-day activity levels at similar airports. Currently, most operations occur during the daytime hours, with an estimated one percent occurring during evening hours and approximately one percent occurring during nighttime hours.

Runway Use

Runway usage data is also an essential component for developing noise exposure contours. Based on a review of regional airport activity and wind conditions, as discussed in the 2019 *Columbia Airport Master Plan*, the following assumptions were made for runway use:

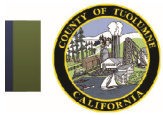
- Runway 17 – 80 percent of itinerant and general aviation operations
- Runway 35 – 20 percent of itinerant operations, 15 percent of general aviation operations
- Runway 11 – 5 percent of general aviation operations only
- Runway 29 – 5 percent of general aviation operations only

Flight Tracks

A review of local flight procedures was used to develop consolidated flight tracks for use in the AEDT. The traffic pattern for Runway 17 and Runway 11 is right-hand, and the traffic pattern for Runway 35 and Runway 29 is left-hand. Accordingly, it is assumed that touch-and-go traffic occurs to the west of the airport for Runway 12-30 and to the southwest of the airport for Runway 1-19.

Flight Profiles

The standard arrival profile used in the AEDT program is a three-degree approach. No indication was given by airport staff that there was any variation on this standard procedure for civilian aircraft; therefore, the standard approach was included in the model as representative of local operating conditions.



Appendix C

PINE MOUNTAIN LAKE AIRPORT

SUPPORTING INFORMATION

Appendix C provides an overview of Pine Mountain Lake Airport's setting, current airport facilities, and plans for the airport's development. This appendix also includes supporting information for the airport's compatibility zones and noise contours presented in the airport land use compatibility plan (ALUCP) update for Tuolumne County, California.

SETTING

Pine Mountain Lake Airport (E45) is a public-use airport located approximately three miles northeast of Groveland in the Pine Mountain Lake community of southwestern Tuolumne County, with proximity to Yosemite National Park. The airport sits on approximately 56 acres of land at an elevation of 2,933 feet above mean sea level. The 2023 - 2027 *National Plan of Integrated Airports* (NPIAS) lists the airport as an unclassified general aviation airport, and the 2020 *California Aviation System Plan* (CASP) places the airport in the Community – Recreation functional class. Pine Mountain Lake Airport was established as a private airport in 1970, was deeded to the county in 1973, and has since been publicly owned and operated by Tuolumne County.

AIRPORT INFORMATION

AIRPORT FACILITIES

Pine Mountain Lake Airport has one asphalt runway: Runway 9-27. **Table C1** provides additional details about the airport's facilities.

Runway 9-27 is 3,624 feet long and 50 feet wide. It is constructed of asphalt and is in good condition. The runway load-bearing strength for single-wheel landing gear aircraft is up to 12,000 pounds. There are non-precision runway pavement markings that are in good condition and medium intensity runway lights with non-lighted touchdown points. The traffic pattern for Runway 9 is a standard left-hand pattern, whereas Runway 27 has a non-standard right-hand traffic pattern. Both runway ends have a two-box visual approach slope indicator (VASI) on the left with a 4.50-degree glide angle for Runway 9 and a 4.00-degree glide angle for Runway 27. Both runway ends have GPS instrument approach procedures.

There is one FBO on site, which owns and maintains the airport's fuel farm and self-service fueling facility. The airport is home to the Pine Mountain Lake Aviation Association.



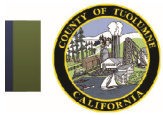
TABLE C1 | Pine Mountain Lake Airport Facilities

Runway 9-27	
RUNWAYS	
Length (feet)	3,624
Width (feet)	50
Threshold Displacement (feet)	No
Runway Pavement Surface Material	Asphalt
Runway Pavement Condition	Good
Safety Areas	West end – 200' gravel East end – 100' gravel
Runway Pavement Load-Bearing Strength (lbs.)	
Single Wheel	12,000
Dual Wheel	N/A
Double Tandem	N/A
Double Dual Tandem	N/A
Runway Pavement Markings	
Type	Non-precision
Condition	Good
Runway Lighting	
Runway Edge Lighting	MIRL
Taxiway Lighting	Runway exit lights
Touchdown Point	Yes (no lights)
Traffic Pattern	Right Left
Runway End Identifier Lights (REILs)	Yes
VISUAL APPROACH AIDS	
Type	VASI-2 / PAPI
Glide Path	4.50 degrees / 4.00 degrees
INSTRUMENT APPROACH AIDS	
Instrument Landing System (ILS)	No
Global Positioning System (GPS)	RNAV (GPS) Approach Runway 09
VOR/DME	No
Weather and Communication	AWOS, CTAF
Visual Aids	Lighted wind cone, beacon
N/A = not applicable AWOS = automated weather observing system CTAF = common traffic advisory frequency PCL = pilot-controlled lighting MIRL = medium intensity runway lights	
MITL = medium intensity taxiway lights PAPI = precision approach path indicator VASI-2 = two-box visual approach slope indicator VOR/DME = very high frequency omnidirectional range distance measuring equipment	

Sources: Airport Facility Directory (May 2023); FAA Form 5010-1, Airport Master Record

FUTURE AIRPORT PLANS

Future plans for the airport are based on the airport's current airport layout plan (ALP). No changes to the runway are anticipated.



COMPATIBILITY ZONES

The Airport Influence Area (AIA) for Pine Mountain Lake Airport is shown on **Exhibit 1B**. The AIA is the same AIA addressed by the existing airport land use compatibility plan (ALUCP). The compatibility zones addressed by this plan – shown on **Exhibit 2B** – were also retained from the existing ALUCP zones.

NOISE

The standard methodology for analyzing noise conditions at airports involves the use of a computer simulation model. The Airport Environmental Design Tool (AEDT) Version 3e is accepted by the State of California and required by the FAA for developing noise exposure contours. This is the model used to develop the noise exposure contours for this airport land use compatibility plan (ALUCP). The following sections describe the noise modeling inputs for the Pine Mountain Lake Airport noise exposure contours which are shown on **Exhibit 2D**.

AIRCRAFT OPERATIONS AND FLEET MIX

As outlined in Public Utilities Code (PUC) Section 21675(a), the noise contours included in an ALUCP must reflect the anticipated growth of the airport during at least the next 20 years. **Table C2** summarizes the 2037 operations for Pine Mountain Lake Airport using the FAA's *Terminal Area Forecast* for fiscal years 2016-2045, and also includes the aircraft types used in the noise model. Airfield observations and based aircraft lists were used to determine the types of aircraft that frequently use the airport. To accurately represent the noise conditions at the airport, the AEDT provides aircraft noise data for many of the aircraft operating in the national fleet.

The selection of individual aircraft types is important to the modeling process because different aircraft types generate different noise levels. The aircraft fleet mix for Pine Mountain Lake Airport was derived from the 2006 *Pine Mountain Lake Airport Master Plan*, the 2023 *Pine Mountain Lake Airport Aviation Demand Forecast Study*, and interviews with the airport manager. **Table C2** summarizes the generalized fleet mix data input into the noise analysis.

A variety of general aviation single-engine fixed-propeller aircraft are modeled with the GASEPV and GASEPF aircraft in the AEDT. The GASEPV represents many single-engine general aviation aircraft, including the Mooney M-20, Cessna 172 and 180, and Piper Cherokee Arrow. The general aviation single-engine fixed-pitch propeller model (the GASEPF) also represents several single-engine general aviation aircraft. These include the Cessna 150, Piper Archer, and the Piper Tomahawk.



TABLE C2 | Pine Mountain Lake Airport – Aircraft Fleet Mix and Operations

Operations	AEDT Designator	2023 ¹	2043 ²
Itinerant			
Single-Engine, Fixed	GASEPF	3,498	4,683
Single-Engine, Variable	GASEPV	3,498	4,683
Multi-Engine Piston	BEC58P	804	1,077
Turboprop	CNA208	150	201
Small Turbojet	CNA510	150	201
Helicopter	B206L	150	201
Subtotal		8,250	11,046
Local			
Single-Engine, Fixed	GASEPF	3,027	4,053
Single-Engine, Variable	GASEPV	3,027	4,053
Multi-Engine Piston	BEC58P	696	932
Subtotal		6,750	9,038
Grand Total		15,000	20,084

¹FAA 5010 Airport Master Record, operations for 12 months ending June 25, 2022

²Total Operations Forecast reflects a compound annual growth rate (CAGR) of 1.47%, as discussed in the *Pine Mountain Lake Airport Aviation Demand Forecast Study (2023)*

Sources: Coffman Associates Analysis; *Pine Mountain Lake Airport Aviation Demand Forecast Study (2023)*; *Pine Mountain Lake Airport Master Plan (2006)*

Time-of-Day

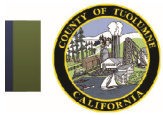
The time of day during which aircraft operations occur is important as input to the AEDT due to the 10-decibel nighttime (10:00 p.m. to 7:00 a.m.) and 4.8-decibel evening (7:00 p.m. to 10:00 p.m.) weighting of flights.

Since the airport is not equipped with an airport traffic control tower (ATCT), time-of-day information was estimated based on airport staff interviews and time-of-day activity levels at similar airports. Currently, most operations occur during the daytime hours, with an estimated eight percent occurring during evening hours and approximately two percent occurring during nighttime hours.

Runway Use

Runway usage data is also an essential component for developing noise exposure contours. Based on a review of regional airport activity and wind conditions, as discussed in the 2006 *Pine Mountain Lake Airport Master Plan*, the following assumptions were made for runway use:

- Runway 27 – 70 percent
- Runway 9 – 30 percent



Flight Tracks

A review of local flight procedures was used to develop consolidated flight tracks for use in the AEDT. The traffic pattern for Runway 9 is right-hand and the traffic pattern for Runway 27 is left-hand. Accordingly, it is assumed that touch-and-go traffic occurs to the south of the airport.

Flight Profiles

The standard arrival profile used in the AEDT program is a three-degree approach. No indication was given by airport staff that there was any variation on this standard procedure for civilian aircraft; therefore, the standard approach was included in the model as representative of local operating conditions.