

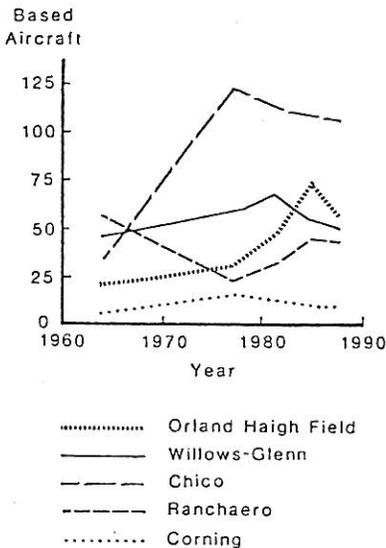
AIRPORT ACTIVITY

AIRPORT ROLE

The role which Orland Haigh Field plays – both in the community it serves and as part of the system of general aviation airports in the central Sacramento Valley – is an important determinant of the Airport's present and future volume and type of activity. The Airport is principally a recreational usage facility and undoubtedly will remain such. Although business-related flying contributes significantly to the activity levels, the Airport is not, nor is it expected to become, a center for corporate aviation.

This role is consistent with the role of Orland as a center for farming and food products processing and, increasingly, as a residential suburb of Chico. The City of Orland regards the Airport as a valuable community asset both in terms of the business and economic benefits it offers and the recreational opportunities it provides. Glenn County supports the Airport as an important transportation facility serving the northern end of the County. Both entities would like to see more development and use of the aviation facilities and other airport property.

Based Aircraft
at Local Airports



HISTORICAL AIRPORT ACTIVITY

Based Aircraft

Total Counts

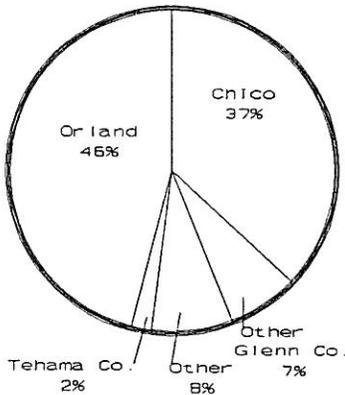
Unlike most airports, Orland Haigh Field has experienced a significant increase in the number of based aircraft during the past 10 years. As of late 1988, some 55 aircraft were based at the Airport. This count represents a decline from the peak of approximately 75 based aircraft reached around 1985, but still an increase from the 40-45 aircraft level of the early 1980's.

The adjacent chart shows the trends in the number of based aircraft at Orland Haigh Field and nearby public-use airports. As can be seen, Orland Haigh Field has passed Willows-Glenn Airport and now has the second highest based aircraft count of any airport in the area.

Distribution

Aircraft based at Orland Haigh Field are almost exclusively light, single-engine airplanes. No twins or business jets are currently based there, although a few have been in the past. Several sailplanes and ultralights constitute the only other types of aircraft presently at the Airport.

Aircraft Owner Distribution



Only about half of Orland Haigh Field's aircraft owners reside or have businesses in Orland. A significant percentage of the Airport's users, though, come from surrounding communities. The largest such group is from Chico – over one-third as of mid 1988.

Aircraft Operations

Total Activity

As with nearly all non-towered airports, no comprehensive counts of aircraft operations are conducted at Orland Haigh Field. Recent estimates by other sources indicate that the current activity is in the 20,000 to 25,000 annual operations range.

Given the number of based aircraft, the volume of fuel sales, and other indicators of aircraft activity, the Airport Master Plan estimates that approximately 23,000 aircraft operations took place at Orland Haigh Field in 1988.

Aviation Safety Record

Aircraft accidents and lesser incidents have been an infrequent occurrences at Orland Haigh Field. National Transportation Safety Board records for the period from 1979 through 1986 show only one accident. The design of airfield facilities did not contribute to the accident nor add to its severity. There is also no indication that airfield facilities or operational procedures were factors in any less severe incidents.

A review of an airport's historical safety record can provide valuable insight into the location of airport hazards and the need for physical or operational improvements to mitigate those hazards.

AVIATION DEMAND FORECASTS

The Master Plan forecasts of future aviation activity at Orland Haigh Field are summarized in Table 6. Projections have been developed for based aircraft, transient aircraft, and aircraft operations. The following paragraphs highlight key rationale behind the forecasts.

Based Aircraft

Forecast Considerations

The demand for based aircraft parking space at an airport is determined by such factors as:

- The population of the airport service area;
- The local economy – its strength and the number, type, and size of local businesses;

Table 6
MASTER PLAN ACTIVITY FORECASTS

	<i>Historical</i>	<i>Projected</i>			
	1988	1993	1998	2003	2008
BASED AIRCRAFT*					
<i>Types</i>					
Single-Engine	55	61	65	67	70
Multi-Engine	0	2	5	7	9
Business Jets	0	0	0	1	1
<i>Storage Demand</i>					
On Tiedowns	5	6	7	8	10
In Hangars	50	57	63	67	70
TOTAL	55	63	70	75	80
TRANSIENT AIRCRAFT					
<i>Parking Demand at Peak Periods</i>	5	6	7	8	10
ANNUAL AIRCRAFT OPERATIONS					
<i>Aircraft Mix</i>					
Single-Engine	22,500	26,400	29,250	31,700	33,800
Multi-Engine	480	1,065	2,200	3,150	4,000
Business Jet	20	35	50	150	200
<i>Type of Operation</i>					
Local	9,500	10,500	11,500	12,500	13,000
Itinerant	13,500	17,000	20,000	22,500	25,000
TOTAL	23,000	27,500	31,500	35,000	38,000
<i>Operations per Based Aircraft</i>	420	435	450	465	475

* The number of based aircraft is highly dependent upon future hangar development and fees charged. Projections assume rates will be commensurate with construction costs.

- The remoteness of the area from major metropolitan centers;
- Facilities and services available at the airport;
- The proximity of other airports and the extent of facilities and services provided; and
- Aircraft ownership and operational costs.

Among these factors, certain trends are evident which will most strongly influence future based aircraft counts at Orland Haigh Field.

- **Population** – State Department of Finance forecasts predict that Glenn county will grow somewhat more slowly than the statewide average over the next 20 years while neighboring Butte County will grow much more rapidly. Orland is expected to continue to be a growth center of Glenn County in part because of spill-over from nearby Chico.
- **Economy** – Although efforts towards diversification of the local economy are being made, agriculture and related businesses will remain dominant for the foreseeable future. No strong trends are apparent which would change the propensity for local businesses to own aircraft.
- **Remoteness** – Despite the distance from Orland to a major metropolitan center, nearby Chico is a large enough community to provide most of the essential urban goods and services. Air travel for personal business and similar purposes thus is not likely to become a major component of Orland Haigh Field usage.
- **Orland Haigh Field Facilities and Services** – The Airport has most of the facilities and services required by the average general aviation user. The large number of low-cost hangar spaces is one of the principal attractions. Orland Haigh Field does not particularly cater to business traffic or larger corporate users. These users typically seek airports having the added flight capabilities provided by a precision instrument approach.
- **Competing Airports** – The Chico Municipal and Ranchoero airports are Orland Haigh Field's most significant competitors. Both have an advantage over Orland in terms of the selection of nearby community facilities and services in the City of Chico. In addition, Chico Municipal Airport has the advantage of having a precision instrument approach and airline service. Ranchoero is a small, private field with limited expansion capacity (none for hangars), but it is expected to remain in operation for the foreseeable future. Where Orland can and does most effectively compete is in lower prices.
- **Aircraft Ownership and Operational Costs** – This factor is essentially neutral in terms of favoring one airport over another. High costs tend to discourage aircraft ownership and use at all airports and have contributed to the decline in general aviation usage not only in California, but nationwide. If current conditions continue, very few small, general aviation aircraft will be added to the fleet nationwide in the coming years. The greatest strength is foreseen to be in the growth of corporate aircraft fleet, a segment of the general aviation fleet not particularly in evidence at Orland Haigh Field. These conditions mean that individual airports can

gain based aircraft only as local factors – such as those mentioned in the preceding paragraph – result in a shift of aircraft from one airport to another.

Other Forecasts

One perspective on the numbers of aircraft which might be based at Orland Haigh Field in the future can be obtained from a review of current Federal Aviation Administration and California State Division of Aeronautics forecasts. The graph to the left illustrates these projections.

As can be seen, the two forecasts start from different base year counts. More importantly, though, are the differences in growth rates. The state forecast, in particular, adheres to the national and statewide forecasts which indicate essentially no increase in the numbers of single-engine aircraft while the older FAA numbers still show continued growth at Orland and most other airports.

Another factor to be recognized is that both are developed in a top-down manner; that is, the forecasts are first determined for the respective geographic areas, then allocated to sub-areas and ultimately to individual airports. Little attention is given to the localized conditions that may cause future activity changes at a specific airport to differ from the norm.

Conclusions

Glenn County currently has one of the highest ratios of based aircraft per capita in the state – some 5.5 aircraft per 1,000 population compared to the statewide average of approximately 1.2. A high ratio is not unusual for a somewhat sparsely populated, rural community, but Glenn County is well above adjacent Butte (1.2), Tehama (1.6), and Colusa (2.0) counties. Much of this high level is undoubtedly due to the influx of aircraft to Orland from the Chico area.

In the state as a whole, the per capita based aircraft ratio will certainly decline in the coming years. Continuation of the existing ratio in Glenn County thus might be considered to represent the highest based aircraft demand likely to be reached. This assumption translates into an addition of 30 to 35 aircraft in the County over the next 20 years. If Orland Haigh Field accommodates 65% to 75% of the total (a higher percentage than now occurs, but not unreasonable if the spill-over from Chico continues), then as many as 85 aircraft could be based there by 2008. The only apparent circumstances which could result in a higher demand at Orland would be the closure of Ranchoero.

For facility planning purposes, selection of a high-range demand forecast is usually an appropriate choice. The Master Plan forecasts presented in Table 6 follow this philosophy. It assures that the unforeseen growth can be accommodated within the scope of the established plan. The timing of new development, though, should be set to stay just slightly ahead of actual demand. Construction too far in advance of demand provides no near-term return on the investment. Lack of new construction, on the other hand, may result in fewer based aircraft at the Airport than the forecasts indicate.

As suggested above, it is not just whether new facilities are constructed, but how much is charged for them, which greatly influence the growth of based aircraft numbers at Orland. One of the reasons for the high number of aircraft presently based at Orland is the unusually low rental rates for hangar space compared to surrounding airports, especially Chico and Ranchoero. The difficulty of obtaining hangar space at the latter airports is also a factor.

Monthly Hangar Rental Rates
(as of early 1989)

Orland Haigh	\$ 50*
Chico Municipal	\$ 47**
Corning Municipal	\$ 25-50
Ranchoero	\$ 95
Willows-Glenn	\$ 22-44

* (for County hangars)
** (land only; hangars privately owned)

The forecasts herein assume that the rates for hangar space at Orland will remain competitive with those of the nearby airports. As discussed in Chapter 9, however, new hangars cannot be financed with rates as low as they are now – significant increases will be required.

Continued use of the Airport by a few sailplanes and ultralights is expected to occur. They are not anticipated to become a sizable component of the Airport's based aircraft. No specific forecasts have been developed.

Transient Aircraft

Unlike based aircraft, for which the parking space demand changes slowly, transient aircraft tiedown demand varies from day to day and even hour to hour. Facilities planning should be designed to accommodate typical peak periods, not the absolute peaks that sometimes occur such as during special events.

Orland is not and will not become a major destination for transient aircraft. Two to three transient aircraft on the ramp at one time is the average current demand, with peak usage of five to six. At the end of the 20-year planning period, a normal peak demand for eight to ten transient aircraft spaces is projected. Additional space should be made available for the occasional overflow.

Aircraft Operations

Forecast Considerations

Among the factors which influence the volume of aircraft operations at a general aviation airport are:

- The number and type of based aircraft;
- The popularity of the airport as a destination or stopover point for transient aircraft;
- The availability of services;
- The amount of flight training which takes place;
- The relative usage of the airport for recreational versus business flying; and
- The presence of physical or operational flight restrictions.

Certain aspects of these influences have been discussed above with respect to Orland Haigh Field's based and transient aircraft parking demands. Three, however, are worth emphasizing in the context of aircraft operations.

- **Services** – One factor which could increase the number of transient operations at the Airport is low-priced fuel. Pilots who fly mostly for recreational purposes often will shop around to obtain fuel at the best local price and fly to whichever airport is least expensive. Such pilots also are often attracted to an airport which offers the low-octane fuel (80-octane aviation gasoline or approved automobile gasoline) preferred for use in many older, single-engine aircraft.
- **Flight Training** – Flight training is another significant variable affecting the volume of aircraft operations at Orland Haigh Field. There are currently no foreseeable trends, either nationally or locally, which would indicate any substantial increases or decreases in future flight training activity.
- **Type of Use** – The Airport is primarily a recreational use facility and is expected to remain that way even though the proportion of business usage is anticipated to increase. Major increases in business traffic are unlikely to occur at Orland given the nature of the Airport and the community. Business flights will continue to be more attracted toward Chico Municipal Airport.

Other Forecasts

The only other forecast of aircraft operations at Orland Haigh Field is one from the State Division of Aeronautics. As with its based aircraft forecast, the State's projection of aircraft operations indicates no change through 2005. Activity would remain constant at around the estimated current level of 24,000 to 25,000 operations per year.

Conclusions

The forecasts in this Master Plan anticipate a moderate increase in aircraft operations. This increase would be generated by:

- The projected increase in the number of based aircraft; and
- A slightly higher utilization rate for each aircraft (the costs of owning an airplane are such that owners who do not often use their planes are likely to sell them to people who will).

As shown in Table 6, the 2008 forecast is for a total of 38,000 annual aircraft operations. Itinerant operations are projected to increase at a rate slightly faster than local operations. Sailplane and ultralight operations will remain a small fraction of total aircraft operations (no more than one to two percent).

CAPACITY ANALYSES

Airfield

The operational capacity of the Orland Haigh Field runway is well above any activity level likely to be reached in the next 20 years. The estimated capacity is approximately 100 operations per hour and 145,000 per year. Sharp peak-period usage and infrequent night-

time activity are considered in the annual capacity figure – more spread out usage would result in a higher effective capacity.

Aircraft Parking

Existing airport facilities accommodate 55 aircraft in hangar spaces and 28 more (based and transient) in established tiedowns. At least 150 additional tiedowns could be provided on the existing asphalt mat. Space for hangar development on the mat is more limited – anywhere from 30 to 100 units, depending on how close the buildings are placed to the runway.

Beyond the mat, approximately 100 acres remain undeveloped on the north and east sides of the Airport which could readily be used for aviation purposes. At average general aviation airport densities, this area could accommodate as many as 800 aircraft. Clearly, only a fraction of this land need be reserved for aviation uses.

Environmental

An important third type of airport capacity is that associated with an acceptable degree of environmental impacts, particularly noise impacts. For many airports in urban areas, future airport development is constrained more by environmental capacity than by either airfield or aircraft parking capacity. This is not expected to occur at Orland Haigh Field. Measures to minimize noise-related conflicts between the Airport and its surroundings are nonetheless important. This topic is addressed in Chapter 8.