COUNTY OF ORANGE
LOSS OF PROPERTY VALUE AND PROPERTY TAX REVENUE ATTRIBUTABLE TO EL TORO AIRPORT NOISE

By Larry Bales,
Auditor-appraiser

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Summary:

Several studies confirm that real estate values are negatively impacted near the flight paths of major airports. The same is expected to occur in Orange County if El Toro is converted to a commercial airport.

This report estimates the total dollar amount of that negative impact on property owners and the resultant loss of property tax revenue to the County. While it is impossible to be exact in this analysis, the three major determinants of property value loss have already been quantified in official reports. These are 1) the percentage impact on real estate by aviation noise, 2) the amount and location of noise from El Toro operations and 3) the total value of the impacted flight path property. Consequently, a reasonable order of magnitude estimate can be made.

Several studies, involving a number of airports, provide data on a likely percentage loss in real estate values due to airport noise of varying intensity. A study commissioned by the Federal Aviation Administration is most useful in this connection.

The County's Environmental Impact Report 573 provides data on the amount of airport noise that will result from development of an airport at El Toro.

The dollar amount of assessed property value in locations throughout Orange County is a matter of public record. The actual market value for the property is greater than the assessed value by a percentage that can be estimated by experience.

Combining these three key statistics into a simple model enables the writer to estimate, with reasonable results, how much value the property impacted by noise from a commercial airport at El Toro will lose.

The total actual market value of real estate in the 15 most impacted Orange County cities is approximately $126 billion. The loss of value due to airport noise will vary from city to city by location relative to the airport and flight paths.

The resultant cost to residential and business property owners will be approximately $1.1 to $3.5 billion dollars of lost equity. The latter figure more than doubles the cost of the airport project.

The loss of property tax revenue to the County of Orange General Fund, if El Toro Airport is built, is based on the loss in real value and is in the range of $11 to $35 million per year.

The impact of airport noise on property values:

Three major studies of the impact of airport noise on property values have been identified and used in this study. They support the general contention that people do not care to live, shop, play, go to school or work in airport impacted areas.

1. Randall Bell MAI, is a nationally recognized expert in the field of diminution of property values due to detrimental conditions. In 1997, he wrote to the Orange County Board of Supervisors with results of studies conducted by his firm in the environs of Los Angeles International, Ontario and John Wayne airports.

- "The impact on single family residences ranges from –15.1% to –42.6, and averages –27.4%. This does not include the costs of noise mitigation measures that individual homeowners may incur. The rental rates for the LAX office are from 19.1% to 43.3% lower than any other office market in the surrounding South Bay area. Combined with the effects of also having the highest vacancy rate of 38.1%."

2. In 1994, the consulting firm of Booz-Allen & Hamilton, Inc. was commissioned by the Federal Aviation Administration to prepare a study entitled, The Effect of Airport Noise on Housing Values: A Summary Report. Clearly, the FAA was concerned about this matter. The study examined several airport environs. It developed a methodology for evaluating the impact of noise on values, by comparing market prices in similar neighborhoods that differed only in the level of airport related noise.

- The study found that the effect of noise on prices was highest in moderately priced and expensive neighborhoods. For two moderately priced "paired" neighborhoods north of LAX, the study found "an average 18.6 percent higher property value in the quiet neighborhood, or 1.33 percent per dB of additional quiet."

3. A 1996 study, funded by a grant from the Legislature of the State of Washington, used somewhat similar methodology and found that the proposed expansion of the Seattle-Tacoma Airport would cost five nearby cities $500 million in total property values and $22 million in real-estate tax revenue.

- This loss in tax revenue is in the magnitude projected by our study for Orange County - a reasonable confirmation of the conservative nature of the El Toro study, given the higher price of property in the Southland.

- The study found that "a housing unit in the immediate vicinity of the airport would sell for 10.1 percent more—if it were located elsewhere." The study also concluded that, "all other things remaining equal, the value of a house and lot increases by about

3.4% for every quarter of a mile the house is farther away from being directly underneath the flight track of departing/approaching jet aircraft"

The 1.33- percent differential in property value per decibel, developed for the FAA, is used in the calculations for Orange County because of the federal sponsorship of the study that developed the statistic, and because of its usefulness in our calculation model. The other studies corroborate the FAA finding.

In this intentionally conservative analysis of El Toro, no properties are assumed to lose 20 percent in value, despite the fact that greater negative impact being identified in some studies at other airports.

No impact is included for negative factors such as pollution, traffic and general urban blight near airports.

The amount of airport noise in from El Toro

In October 2001, the County of Orange Board of Supervisors certified Environmental Impact Report 573, which contains maps of the projected noise footprint for an El Toro airport. Some airport proponents have criticized the EIR and argue that aircraft actually may fly over more densely populated residential neighborhoods to the west of the airport.

However, for the purpose of this study, it is most conservative to use the official county environmental study. The County also contends that there will be no homes subjected to greater than 65 dB. Many informed parties believe that the actual impacts may be greater. This study relies on the County position that there are no homes subjected to greater than 65-dB noise.

The noise estimates made in this study are the following:

It is assumed that the noise level in the area would average about 50-55 dB CNEL were there no airport. Some locations, near roadways would be noisier and some areas would be quieter. For example, the John Wayne Airport noise abatement program has collected data at monitoring station 10N near the edge of the JWA approach path. For calendar year 2001, the average ambient noise level, without aircraft noise, at this location was 49.1 dB. Most other stations have ambient readings centered on about 55 dB.

Some averaging has been employed to estimate the decibel noise level at locations that do not fall exactly on the EIR contour lines. For example, property midway between the 60 and the 65-dB lines is treated as though it is exposed to 62.5 dB.

Any small inaccuracies in the noise level estimates may go either way and are not likely to produce a major change in the conclusions of the study.

Property values selected for the study.

The County Assessors Office maintains detailed records of full cash value on the assessed roll ("assessed") valuations. For property that has not recently changed hands, the actual market value can be substantially greater than the assessed value.

Actual market value is the statistic that is most impacted by airport noise. For this study, experience suggests that setting the market value at 25 percent higher than the assessed value is a very conservative approach. In no case will the market value be less than the assessed value since the property owner has the right to appeal any such determination. Full market value often exceeds assessed value by up to 40 percent.

In this study, 15 cities that are likely to experience aircraft overflights, in part or in the whole, have been examined. This study does not contemplate impacts on other areas that could be affected if the flight paths change.

This study does not consider whether the development of an airport at El Toro might raise property values in other cities. The calculation would be too speculative. For example, noise impacts in Orange County cities might encourage some purchasers to select real estate in north San Diego, south Los Angeles or west Riverside Counties but calculating the effect requires too much conjecture.

If employers relocate because of declining quality-of-life in Orange County, there could be a benefit to communities outside of this region.

The study also does not consider the potential increase in property values in Newport Beach and other locations close to John Wayne Airport if they experience less noise. On October 15, 2001 Gary Simon, Executive Director of the County's El Toro Local Redevelopment Authority, wrote to the Supervisors, "All of the FAA approved forecasts approved for the project and EIR indicate that when El Toro commences operations, the commercial activity level at JWA will drop by nearly 50%." No CNEL data is available for this eventuality.

In this study, the total assessed and market values are calculated for each of the cities examined. The portion of the city falling in each of several noise zones is estimated from maps. The estimated increase in noise, in decibels, is calculated by subtracting the EIR forecast of airport noise level dB from the assumed 50 and 55dB baseline levels without an airport

The estimated increase in noise level is then multiplied by the FAA generated statistic of 1.33- percent property value differential per dB of airport noise. This provides a range of estimates for the impact of the airport on the market value in each area.

Property tax revenue is calculated at 1.25 percent of the full cash value on the assessed roll, which is the general rule in Orange County in conformance with California Proposition 13.

Conclusions

The calculation method is simple and conservative. This study relies on data generated by a FAA sponsored study of aircraft noise impacts on property values and on the most recent County environmental impact report of expected noise levels near El Toro. The findings are consistent with data from other airport environs.

Noise from an airport at El Toro is determined to reduce the actual market value of real estate owned by residents and businesses in Orange County by $1.1 to $3.5 billion. The latter figure more than doubles the cost of the airport project.

The loss in market value will result in an estimated $11 to $35 million annual loss of property tax revenue to the County General Fund. This loss will have to be made up in some other way, such as through a reduction in public services.

About the author

Mr. Larry Bales is an auditor-appraiser with 33 years of experience in Orange County government. He resides in Tustin. He holds an Advanced Appraisal Certificate from the State of California. Mr. Bales is a candidate for the office of Orange County Assessor.