

# Lake Tahoe Airport Impacts Report

## DRAFT Executive Summary and Key Findings

*The League to Save Lake Tahoe*

*November 1, 2006*

# Executive Summary

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The time has come for a new public dialogue on the Lake Tahoe Airport, the meadow in which it sits and the river that runs through it. As the City of South Lake Tahoe is requesting new permits for commercial air service and to cut more trees for airport operations, and while an Upper Truckee River restoration project along the airport reach hangs in the balance, choices made about the future of the Lake Tahoe Airport will have wide-ranging consequences.

The League has prepared this “Lake Tahoe Airport Impacts Report” to help the public and decision-makers make educated choices about best future uses of the Lake Tahoe Airport and surrounding land. We hope to stimulate a thoughtful consideration of what sort of airport – if any – is most appropriate for the Lake Tahoe Basin, considering environmental, economic and community costs and benefits, and also considering available alternatives such as increased accessibility to the Reno-Tahoe Airport. The League’s Report is meant to inform questions such as:

- ◇ Is the Lake Tahoe Airport, particularly commercial air service, part of the solution or part of the problem in terms of meeting the widely-supported goal of transporting people to and from the Lake Tahoe Basin in ways that have fewer environmental impacts?
- ◇ Do the economic and transportation benefits from the Lake Tahoe Airport outweigh the costs to the environment, such as air and water pollution, and community, such as noise and tax subsidies? If not, is there a scenario where benefits would outweigh costs?
- ◇ What transportation purpose and need does the Lake Tahoe Airport serve for the Basin economy in relation to nearby airports, particularly the Reno-Tahoe airport?
- ◇ What are the particular environmental and community costs associated with the resumption of commercial service or increased business jet travel to the Lake Tahoe Airport?
- ◇ How do different uses of the Lake Tahoe Airport affect restoration options for the Upper Truckee River, and what affect will those choices have on meeting pollution reduction goals necessary to restore Lake Tahoe’s clarity? If less restoration is done at the airport, will more be required elsewhere?
- ◇ As millions of dollars in public funds are being spent to restore Lake Tahoe’s environment, does it make sense to also be subsidizing an airport that causes a number of substantial environmental impacts?

The League’s report finds that the degree of environmental and community impact rises as the size and scale of aircraft under consideration at Lake Tahoe Airport increases. For example, re-introduction of commercial air service to the South Lake Tahoe Airport would likely emit far more air pollution into the Basin than if the expected passengers instead drove automobiles to the Basin. In general, larger



*The Lake Tahoe Airport sits in a sensitive meadow adjacent to the Upper Truckee River, the largest tributary leading to Lake Tahoe.*

## Executive Summary (cont)

commercial and corporate aircraft require more runway length to safely take-off and land, thereby limiting the scope of restoration of the Airport meadow and adjacent Upper Truckee River, which is the top priority among Tahoe environmental agencies for restoration because it contributes more sediment to Lake Tahoe than any other tributary. Larger commercial and corporate aircraft are generally louder than smaller aircraft, which directly and negatively impact all who live, work or visit near the airport or flight path.

The forum to address such trade-offs and questions as part of a re-assessment of the Lake Tahoe Airport and surrounding land is an update of the Airport Master Plan, which must include an updated environmental analysis of the air, water, noise and other impacts of airport operations.

The City of South Lake Tahoe's representative on the Governing Board of the Tahoe Regional Planning Agency (TRPA) introduced the following amendment to the TRPA's Transportation Goals and Policies Plan, which passed unanimously in October 2004: **"The Airport Master Plan/Settlement Agreement shall be updated.** This update shall be predicated on a study evaluating:

- the potential for both aviation and non-aviation uses of the site
- the role of the proposed uses in Tahoe's transit system
- the appropriate scale of facilities related thereto. Any update that includes regional commercial service shall additionally require a comprehensive feasibility study of the viability of commercial air service."

This provision is a prudent measure that protects the public interest and should be implemented as soon as possible, and before any application for a permit for new commercial air service is reviewed by the TRPA. All who have a stake in Lake Tahoe and its communities deserve the opportunity to weigh in on the best future use of the Lake Tahoe Airport and surrounding land. We hope that this report helps to jump-start and inform this long-overdue public conversation.

*"We hope to stimulate a thoughtful consideration of what sort of airport – if any – is most appropriate for the Lake Tahoe Basin, considering environmental, economic and community costs and benefits..."*



*Should the future of the Lake Tahoe Airport include another round of commercial service? The costs and benefits must be part of a community wide discussion and analyzed in a new Airport Master Plan.*

# Key Findings

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The League's Report analyzes impacts from the Lake Tahoe Airport to air and water quality, noise, trees, fire/emergency services, public recreation access and the economy. A summary of our findings is presented below, followed by a more in-depth discussion of each issue area.

## Air Quality

- ◆ Motor vehicle pollution is a source of degradation to Lake Tahoe which must be reduced. However, we need to find alternative solutions to the automobile that produce *less* pollution, not more.
- ◆ Results suggest that the reintroduction of commercial air service may emit far more air pollution into the Basin's atmosphere than if the passengers instead drove motor vehicles. Naturally, it would not make sense to implement a transportation alternative that would actually *increase* air pollution over automobiles.
- ◆ If passengers on a selected DC9-30 airplane instead carpooled (Tahoe's average carload is 2.7 people/vehicle [per TRPA]) in an *average Tahoe vehicle*, their vehicle would have to be driven 265 miles in order to emit the same amount of nitrogen oxides (NOx) as would be their collective share on the DC9-30 aircraft.
- ◆ When one examines emissions from the Dornier 328-300, an aircraft meeting the 80 dBA arrival standard (per FAA Circular) required by the Airport Settlement Agreement, NOx emissions are actually *worse*. A vehicle carrying the 2.7 passengers would have to be driven 329 miles to emit the same level of NOx as the passengers' collective "share."
- ◆ The relative air pollution from aircraft versus automobiles becomes more dramatic when comparisons are made to emissions from two newer (and therefore "cleaner") vehicles. The League's results suggest a single passenger on a DC9-30 could instead drive a 2005 Ford Expedition 19 times around the lake or a 2005 Subaru Outback 113 times around the lake before emitting their "share" of NOx emissions from the plane.
- ◆ Aircraft emissions were likely underestimated in this report since factors that may result in increased emissions such as Tahoe's elevation were not incorporated into the aircraft emissions model. Additionally, conservative assumptions were favored in estimates where applicable.
- ◆ According to a study by the General Accounting Office in 2003, trends in airplane engine technology show *increases in NOx emissions* in recent years, indicating the gap between motor vehicle emissions (which have improved with time) and aircraft emissions will continue to grow. Further, due to the lag time associated with aircraft engine turn-over, it will likely take decades to realize the complete benefits of any future advances in aircraft engine technology.
- ◆ The goal expressed by some of attracting 100,000 or more annual commercial service passengers could result in additional air pollution in the Tahoe Basin that far *exceeds* the amount of pollution that the TRPA's "vehicle miles traveled" (VMT) standard is intended to reduce. Are locals and visitors willing to drive less to make up for air pollution caused by commercial air service, or will the costs pass along to Lake Tahoe?
- ◆ It is clearly time for the City of South Lake Tahoe and the TRPA to update the 1992 Airport Master Plan and to perform a new, comprehensive analysis of the air quality impacts and other potential environmental impacts of commercial air service.
- ◆ There are many other air pollutants which should be evaluated in terms of the Airport's use as well, such as particle matter (PM), carbon dioxide (CO), lead (which is still used in some aviation fuel), etc.

## Key Findings (cont)

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### **Water Quality**

- ◆ The Lake Tahoe Airport is located in a sensitive environmental area along the Upper Truckee River. The Upper Truckee River contributes about 60% of all stream-loading of fine-grained suspended sediments into Lake Tahoe.
- ◆ An Upper Truckee River restoration project along the Airport reach, funded by the California Tahoe Conservancy, is in jeopardy due to the minimum airport classification acceptable to the City, which allows for the potential of new commercial air service—yet another consequence of commercial service that needs to be considered.
- ◆ Restoration of the Upper Truckee River and airport meadow would provide extensive water quality benefits to Lake Tahoe. However, restoration efforts would be limited by the alleged need to maintain the full runway in place (the recently released, City-funded Lake Tahoe Airport Feasibility Study [2006] concludes that the current runway length of 8,544 feet can not be shortened while still supporting the type of corporate and commercial aircraft the City would like to attract). This finding needs further review, considering airports at similar altitude to Tahoe – Aspen, CO (elev. 7,815') and Jackson Hole, WY (elev. 6,300') – support commercial aircraft with runway lengths of 7,000 feet and 6,300 feet respectively.
- ◆ In general, the larger the aircraft using the Airport, the longer the runway requirement. Decisions about the type of aircraft most appropriate for the Tahoe Basin must consider the degree of SEZ degradation or restoration that accompanies each choice (as well as the other impacts to Tahoe's air quality, noise levels, wildlife, economy and community). Further, the scope of restoration of the Upper Truckee River will affect the scope of projects needed up and downstream as well as reduction strategies that may be applied elsewhere, such as to homes and businesses in the Upper Truckee watershed and/or the City of SLT to potentially the entire Basin in order to meet pollutant load reduction goals for the Lake.
- ◆ Contamination from lead additives still widely used in aviation fuel near the Airport can result from leaks or spills and from the lead-based aviation fuel particulates being blown into the surrounding meadow, forest and waterway. Once in the environment, lead leaches into the soil and the Upper Truckee River, and may potentially contaminate drinking water sources and Lake Tahoe. This issue also requires additional review.



*Extensive erosion is evident along the banks of the Upper Truckee River in the area near the Airport runway*

### **Airport Noise**

- ◆ The Lake Tahoe Airport does not currently have a noise monitoring or tracking system as required, which means there is no enforcement capability for day or night standards.
- ◆ Noise standards limit aircraft between 8 p.m. and 8 a.m to 77.1 decibels (dBA). Without enforcement, residents and visitors are potentially subjected more noise than regulations allow. In fact, public complaints identify nighttime aircraft as a major concern. Additionally, studies have shown that noise levels even far

## Key Findings (cont)

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below the current nighttime standard cause significant sleep disturbance, which is worthy of examination in a Master Plan update.

- ◆ Aircraft that exceed noise standards (per the FAA) have been documented at the Airport. The last year of noise measurement data available (2003) shows over 2,000 instances during which the 80 dBA level was exceeded, including many suspected to be during nighttime hours.
- ◆ The majority of regional commercial aircraft examined in the City's 2006 Lake Tahoe Airport Feasibility Study would require an increase in the current Airport noise limit of 80 dBA. Therefore, an update would be needed to the terms of the Master Plan in addition to a complete environmental review.
- ◆ Public sentiment shows a desire for less noise in the Basin than exists now and more specifically, a reduction or elimination of aircraft noise from airplanes and helicopters (which also need to be evaluated due to the noise impacts at the airport and around the Basin in addition to the numerous public complaints as well).
- ◆ The public can file airport noise complaints electronically (and anonymously) at <http://www.trpa.org/communitycorner/noise/NoiseComplaint.htm>.

### **Tree Removal**

- ◆ The number of trees that need to be cut at the Airport property is dependent on the classification of the Airport. Airport classification dictates which types of aircraft are allowed to use the Airport. Reintroduction of commercial aircraft may require substantial additional tree cutting adjacent to the Upper Truckee River to meet airport safety regulatory requirements.
- ◆ The City of South Lake Tahoe's unauthorized tree-cutting episode in May 2006 was conducted at a level commensurate for large commercial aircraft (C3 Airport category), which are not currently allowed to fly in/out of the Airport. While the City would like to reintroduce commercial aircraft, it does not have a permit to do so. The number of trees that were cut without a permit exceeded the number that would have been required to meet safety regulations for the current level of Airport operations.
- ◆ The Airport classification desired by the City to allow commercial air service may place an Upper Truckee River restoration project adjacent to the airport in jeopardy.



*In May 2006, the City cut over 350 trees at the Airport without the necessary permits.*

### **Fire Safety and Emergency Response**

- ◆ There are four dispatch centers within a 5 to 15 minute response time to combat fires in the Basin: Minden, NV; Big Hill, CA – El Dorado National Forest; Grass Valley, CA; Columbia, CA (northwest of Sonora). Helicopters are available from all centers while air tankers are available at all except Big Hill. Fire-fighting air-tankers can be airborne for four hours at a time.

## Key Findings (cont)

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- ◆ During efforts to fight the Heavenly Gondola Fire and two recent fires near Fallen Leaf Lake this fall, the Lake Tahoe Airport was used only as a refueling station for helicopters, which requires very little service area and can be accomplished at other locations. The air-tankers did not use the Lake Tahoe Airport.
- ◆ CALSTAR is a broadly supported emergency response program which, like fire-fighting service needs, basically requires room for helicopter operations and related support.

### **Public Recreation Access**

- ◆ The Airport maintenance road has been a popular biking, running, dog walking and skiing trail for at least two decades. The City closed off access to the maintenance road this summer alternatively citing vandalism incidents to airport beacons and FAA regulations as the reason for this restriction of public access. The City is currently taking steps to re-open the area to public use, while still protecting beacons and other sensitive airport equipment.



### **Economy and Transportation**

- ◆ The City of South Lake Tahoe owns the Lake Tahoe Airport, which is subsidized every year by City taxpayers at a current level of nearly \$600,000.
- ◆ The income potential for a “first class executive general aviation” airport (corporate/charter) would be about \$150,000/year according to the 2002 Lake Tahoe Airport Strategic Plan. This would still require over \$400,000/year in taxpayer subsidies, as well as substantial investments in capital improvements and maintenance costs to create such a “full service– executive airport.”
- ◆ A primary argument made to support the reintroduction of commercial air service in the Basin is that it will bring additional visitors - and their dollars - to the Basin, providing economic benefit. However, when the level of *induced* passengers is considered (see next point), and the sum of their associated community-wide economic inputs is compared to the sum of all environmental and economic costs of the Airport, there may actually be a *net economic loss* to Tahoe’s community from the reintroduction of commercial service.
- ◆ In a 1987 marketing survey of visitors arriving at Lake Tahoe Airport, 80% of flyers said they would have taken the trip to Tahoe even if no scheduled air service were available (56% said “very likely” and 24% said “somewhat likely”). Only 6% of these flyers said they would have been “very unlikely” to visit (i.e. air service “induced” them to come). It should be noted that the 1987 survey was conducted before budget carriers such as Southwest added frequent service to the Reno Airport (which, for example, offers 11 daily direct flights from Los Angeles [often referred to as a key market for commercial service to the Airport] to Reno).
- ◆ The just-completed “Lake Tahoe Airport Feasibility Study” prepared for the City states, “...the airport does not have any airline service at this time, and is too close to Reno to become a significant airline facility...”. This statement reflects the importance of the need to evaluate whether expanded commercial or corporate service at the Lake Tahoe Airport would eliminate the need for a taxpayer subsidy—something which should be considered in a Master Plan update and associated environmental review.
- ◆ The Feasibility Study goes on to say that “...past history has demonstrated that if adequate airline service is available at the Airport, it will be utilized.” However, sporadic unsuccessful commercial air service was attempted nine times during the 1990s, with each attempt ending in failure.