



July 31, 2008

Tahoe Regional Planning Agency
PO Box 5310
Stateline, Nevada 89449

RE: Comments regarding the Mobility 2030 – Regional Transportation Plan

To Whom It May Concern:

The League to Save Lake Tahoe is highly concerned that Mobility 2030 does not quantify threshold attainment within the Regional Transportation Plan. Although the League supports specific measures within the plan that will reduce dependency on the private automobile such as increasing bike lanes, sidewalks, and public transit, concern remains that the overall plan does not address the impacts to the environmental thresholds in specific quantitative terms. The TMPO and the TTD need to direct the next twenty years of transportation changes in a manner that assists TRPA in attainment and maintenance of the thresholds.

STATISTICS

The League is concerned that the statistics presented in this document are not detailed enough and may even be construed as misrepresentative. In order to make a full evaluation, the statistics must be more fully characterized. The League is especially concerned as to how this will relate to vehicle miles traveled (VMT) and its subsequent effects on air quality, green house gases, water quality, lake clarity, and other threshold standards. Data needs to be displayed and compared for weekends, weeks, seasons, and years; and different regions, counties, cities, busy intersections, and thoroughfares into the Basin (Highways 267, 50, 89, etc...). If necessary, an appendix should be created in order to include a more comprehensive presentation of data. For example, Labor Day weekends need to be compared for all years in all the locales listed above, in addition to merely Basin-wide. Referencing Figures 1.9, 1.10, 1.11, and 1.12 are these traffic volumes figures representing the whole Basin or just one location within the Basin? Similarly, Figure 1.13 needs to be a year round assessment of VMTs instead of merely presenting estimates for August, and once again for a variety of locales.

The League is also concerned with the population statistics presented in the Draft Mobility 2030 report. For instance, referring to Figures 1.1 and 1.2, the side bar claims that according to the 2000 Census Survey, the year round population of the Tahoe Basin has decreased by 7,662. However, upon closer examinations of the graphs, it is plain that from 1995 to 2005 there is a clear increase in all counties within the basin. Although there undoubtedly was a decrease in population from 2000 to 2005, the overall trend still demonstrates an obvious increase in resident population, albeit, that rate of increase may be slowing. In regards to Figure 1.3, the claim is that the year-round resident population is declining. However, the figures only show differences between primary and secondary residence for one year, and does not examine these differences over time.

TRANSIT

The League believes that the beneficial effects of public transit on threshold attainment will only be achieved by utilizing the best available technology and by promoting alternative modes of transportation. Furthermore, it must be demonstrated that ridership levels throughout the Basin are high enough to justify the emissions produced by the vehicles and routes served. Detailed data and graphs need to be presented regarding public transit ridership as it relates to emissions, in the form of emissions per person per mile. The types of emission that should be accounted for are CO, NO_x, PM_{2.5}, PM₁₀, as well as greenhouse gases.

Mass Transit and Alternative Vehicles

In order to reach the Compact goal of reducing air pollution caused by motor vehicles the TRPA should promote not only the use of alternative fuel transit vehicles, but also transit vehicles that utilize hybrid technology. Hybrid transit vehicles would complement the Mass Transit Goal of promoting the use and strategic expansion of environmentally conscious mass transit. The League feels that hybrid vehicles would provide significant environmental improvements over other alternative fuel vehicles such as compressed natural gas (CNG) vehicles.

Hybrid mass transit vehicles have been found to emit 95 percent less particulate matter (PM), 40 percent less nitrogen oxides (NO_x), and 30 percent less greenhouse gases than traditional diesel mass transit vehicles (SFMTA, 2007). Hybrid mass transit vehicles are being successfully used in major city transit departments such as New York City, Seattle, and San Francisco. Hybrid vehicles not only reduce air pollution attributed to mass transit systems, but also create less engine noise, increase fuel economy, extend brake life, produce less greenhouse gases, and have the benefit of less engine wear and tear. The greater cost difference of hybrid mass transit vehicles over traditional diesel mass transit vehicles is compensated over the fuel and maintenance cost savings over the life of the hybrid vehicle.

The California Air Resources Board considers the following to be alternative fuels: natural gas, propane, ethanol, methanol, gasoline (when used in hybrid-electric

technology), hydrogen, electricity, fuel cells, or other advanced technologies (such as solar). Each of these alternative fuels have benefits over traditional diesel powered mass transit vehicles, such as reducing reliance on foreign oil supplies, reduced fuel costs, emission reductions, and reduced operating and maintenance costs over the life of a vehicle. It should be noted that some alternative fuel technologies are better than others. For example, the New York City transit district has found their fleet of CNG buses to have a fuel cost per mile 53 percent higher than their diesel hybrid fleet of buses. They also found the maintenance costs of their hybrid fleet to be lower than the CNG fleet. Cost considerations as well as environmental benefits need to be considered when addressing the use of alternative fuel mass transit vehicles over diesel-hybrid mass transit vehicles. The League would recommend pursuing the mass transit vehicles that reap the greatest environmental benefits in terms of air quality. The use of hybrid mass transit vehicles in the Tahoe Basin would be a step in the right direction for reducing air pollution related to motor vehicles, and a means to reach the Compact goals and thresholds related to transportation and air quality.

Waterborne Transit

The League supports the use of waterborne transit only under the following conditions:

- 1) Only watercraft using the best available green technology will be used for transit such as boats that are powered by solar energy or wind power. If a backup carbon source needs to be utilized, the watercraft should be fitted with a catalytic converter to reduce emissions. It needs to be emphasized that traditional motorized watercraft produce emissions that are magnitudes higher than emissions from automobiles.
- 2) Waterborne transit will only be utilized after a full environmental assessment is performed demonstrating that there will be no negative impacts to the thresholds with particular concern to water and air quality.

Bicycle and Pedestrian Trails

The League supports the overall goals of the proposed Lake Tahoe Regional Transportation Plan in aspects that relate to improving the Basin's current bicycle and pedestrian trail system in order to promote low-impact means of transportation and recreation. The League is a strong advocate for low-impact recreation around the Tahoe Basin, and the use of bicycles as an alternative-mode of transportation. Improving the existing infrastructure of the Basin's bicycle and pedestrian trails is an imperative step towards reaching the transportation goals as stated in the TRPA Compact of reducing dependency on the automobile by making more effective use of existing transportation modes, and to reduce to the extent feasible air pollution that is caused by motor vehicles. We support such improvements to the existing trail infrastructure provided that the TRPA considers all possible impacts to the sensitive environment of the Lake Tahoe Basin, and that no projects will further inhibit the attainment of the environmental thresholds required by the Tahoe Regional Planning Compact.

The League would also like to stress the importance of not only promoting and increasing recreational uses of bicycle and pedestrian trail systems throughout the Basin, but also the importance of daily commuters utilizing the trail systems. Urban and commercial areas throughout the Basin need to include redevelopment projects that promote the use of Pedestrian and Transit-Oriented Development (PTOD) in such a way as to encourage the use of bicycle and pedestrian trails as a main alternative mode of transportation for residents and tourists alike. PTOD plans need to be designed in such a way as to not adversely impact attainment of environmental thresholds and being so should not increase overall impervious coverage throughout the Basin, in fact the use of pervious surfaces for bike paths needs to be requisite. Redevelopment of existing bicycle and pedestrian trails should be encouraged and promoted in conjunction with PTOD projects. Existing and future infrastructure plans and redevelopments need to consider promoting the use of trail systems by providing sufficient maintenance to trail systems where applicable and consistent with the issue of safety and the practicality.

Overall, the League would like to stress the importance of improving and maintaining environmental thresholds while at the same time improving the existing bicycle and pedestrian infrastructure. The increased use of bicycles and pedestrian traffic throughout the Basin will help to reduce air and noise pollution, as well as automobile traffic congestion. The TRPA needs to take measures to insure progress towards the attainment of environmental thresholds for all projects, whether focused on bicycle and pedestrian goals or otherwise.

WATER QUALITY

The League to Save Lake Tahoe is supportive of the Regional Transportation Plan's (RTP) efforts to establish additional bike lanes, improved mass transit, and expanded sidewalks and pedestrian areas. However, there is concern that TMPO is missing out on the opportunity to direct these projects with water quality enhancements at the forefront of designs and operations.

Parking Lots

Mobility 2030 needs to address the effects of new impervious coverage created by additional parking lots by instituting environmental design guidelines with emphasis on water quality improvements and maximizing infiltration capacity. Any new parking lots need to include the most up to date technology including the best on-site infiltration basin systems.

Sidewalks

New sidewalks should not only be designed with pedestrian improvements in mind, but should be engineered with the best possible technology to improve water quality. The Mobility 2030 document should set guidelines that new sidewalks utilize pervious materials, that landscaping should be designed to assist in infiltration of stormwater

runoff, and that numerous stormwater treatments features such as swales be installed and subsequently maintained on a frequent basis.

Operations and Maintenance

As stated on pg. 44, “Complete Streets strategies also require that routine roadway maintenance practices are conducted....” However, the document includes insufficient details on maintenance. It is imperative that detention basins and other stormwater facilities are properly maintained on a frequent basis. Otherwise, they lose their effectiveness at trapping pollutants. Although the strategies section references snow removal, there is no mention of the impacts of winter road sanding on lake clarity and the use of street sweepers in removing the fine sediment created from roadway sanding. Proper street sweeping is crucial in retaining fine sediments and preventing them from entering the lake. Although, the document references the use of “advanced weather information” there is no mention of using this information to guide the de-icing and sanding of roadways. Proper use of advanced weather information can allow for a minimized amount of sand and de-icing materials to be used which translates to a reduction in pollutants to the lake. The RTP should provide guidelines for the best way to maintain winter roadways with the least amount of impact to lake clarity which should incorporate the best possible sanding and sweeping practices including the purchase of the best available street sweepers such as the Tymco DST-6 and the use of inert sanding materials to prevent phosphorus and other nutrients from binding to the ground up sediments.

Environmental Stormwater Strategies

The section entitled **Environmental Stormwater Strategies** describes what Caltrans, NDOT, and local jurisdictions have done and what they are planning to do. However, the document which is supposed to be a guiding document, gives no guidance as to how these strategies should best be implemented, what has worked, what has not worked, and what should and should not be encouraged. It is imperative that TMPO directs the RTP to provide an overall strategy, framework, and outline for the steering of these projects.

Lane Reduction

Sanding of roadways is one of the major culprits in diminishing lake clarity. Research has demonstrated that wintertime road dust emissions are four times greater than in summertime as a result of the application of traction control materials (Kuhns et al., 2007). The RTP should encourage lane reduction as this directly relates to a decrease in roadway area needing sanding. For example in the Kings Beach Commercial Core, the reduction of a one mile roadway from a four lane to a three lane road will result in a decrease of 51 tons of sand per year needed for winter road maintenance (Appendix A).

Mobility 2030, a guiding document, is severely insufficient at providing framework and guidelines for the integration of water quality improvements into transportation engineering in the Tahoe Basin for the next twenty years. The League would like to see

the incorporation of water quality improvements into the document's guidelines for parking lot engineering, sidewalk and bike path design, operations and maintenance, as well as substantial charting of environmental stormwater strategies for the next twenty years.

AVIATION-TAHOE VALLEY AIRPORT

The League is highly concerned with the Mobility 2030 goal of encouraging and maintaining air service “to the extent that it increases mobility and public safety without compromising environmental thresholds” (Mobility 2030 p. 30). During take-offs and landings, airplanes emit levels of nitrous oxides many orders of magnitude higher than the automobile, along with high amounts of carbon monoxide and particulate matter, thus threatening attainment of the thresholds standards, such as ozone. Furthermore, the RTP is required to address not only TRPA environmental thresholds, but is also subject to the goals of AB32, California's Global Warming Solutions Act. The Mobility 2030 document itself states, “Aviation service enhancements are also considered to increase greenhouse gas emissions as air travel is one of the most energy-intensive forms of travel” (Mobility 2030, p. 68). It is the League's contention that due to impacts on global warming, air quality, and subsequent negative impacts to lake clarity, that the RTP should be encouraging implementing a reduction of air service not an increase of air service.

Water Quality

The Tahoe Valley Airport is located in sensitive land habitat in the Upper Truckee River Watershed. Anthropogenic events have caused this area to become badly degraded, impacting the area's ability to enervate flood waters, retain nutrient and sediment loads, recharge groundwater supplies, and support river, riparian, and upland wildlife habitats. As the largest tributary flowing into Lake Tahoe, the Upper Truckee River delivers approximately eight tons of suspended sediment into the Lake per day. The size of the floodplains surrounding the Upper Truckee River are only a fraction of the size necessary to combat nutrient loading, and the riverbanks are threatened by the continuing erosion of its banks – the leading causes of such high amounts of sediments from the Upper Truckee River watershed into Lake Tahoe. The League supports down-sizing of the current airport and restoration of the surrounding airport meadow and riparian areas due to the following points:

- The size of the Upper Truckee River floodplain has already been negatively impacted by the development of the Tahoe Valley Airport. Expansion of aviation facilities would only compound the issues that have already caused the river, riparian, and upland habitat to become degraded.
- Climate change models predict that flood events in the future will occur with greater frequency and severity – compounding the need for fully functioning floodplains. Climate change scenarios need to be analyzed before aviation expansion is considered; Lake Tahoe will be severely impacted by pollutant loading if floodplain areas are not completely restored.

- The Lahontan Regional Water Quality Control Board (LRWQCB) is urging that pollutant loading and runoff from upland sources throughout the Basin be drastically reduced. Given that the Tahoe Valley Airport is located within the Upper Truckee River Watershed – the most polluting watershed to Lake Tahoe in the Basin – it is imperative that action be taken to reduce the amount of pollutant loading from this source.
- A report issued by the LRWQCB and Nevada Division of Environmental Protection (NDEP) - Integrated Water Quality Management Strategy Project Report – identified the City of South Lake Tahoe as a jurisdiction with one of the largest total surface fine sediment particle loads in the Basin – contributing 19% of the Basin-wide total. El Dorado County contributed another 10% to the Basin-wide total. Restoration of wetland environments in the Upper Truckee River Watershed is critical to the health of Lake Tahoe.
- Under current legislation, the Tahoe Valley Airport is not authorized to accommodate commercial airliners. The market for direct commercial service into Lake Tahoe should be investigated before expansions of current aviation facilities are considered, as well as the societal and environmental costs of such commercial service. Lake Tahoe is in close proximity to two airports (Sacramento and Reno) that provide commercial service to the Region. Instead of expanding direct commercial service in Lake Tahoe, the Regional Transportation Plan should set the expansion of inter-regional and intra-regional transportation as a priority over commercial service expansions of the Tahoe Valley Airport.
- According the Environmental Protection Agency, one acre of wetland can store 1-1.5 million gallons of floodwater. If an area the size of 1,500 feet long and 150 wide were removed from the Lake Tahoe Airport runway and subsequently restored, the wetland environment surrounding the Airport would be increased by over 5 acres, which translates to 5-7.5 millions gallons of floodwater treatment capacity and would have the beneficial effect of protecting communities downstream of the airport.
- Reaches all along the Upper Truckee River are being restored to improve flood attenuation, potential for overbank flooding, groundwater recharge, nutrient and sediment retention, and aquatic, riparian, and upland habitat benefits. Increasing the capacity of the Tahoe Valley Airport would undermine the goals, purpose and need of the restoration projects planned for upstream and downstream environments.
- The usefulness of wetlands in reducing downstream flooding increases with (1) an increase in wetland area, (2) the distance the wetland is downstream, (3) the size of the flood, (4) the closeness to an upstream wetland, and (5) the lack of other upstream storage areas such as reservoirs (Wetlands, 2000).

- Maintaining the Airport at its current capacity or expanding it would have long-term negative effects due to the continued use of winter roadway de-icing materials.

Air Quality

The League's 2006 Lake Tahoe Airport Impacts 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. The following points demonstrate why expansion and continuing operation to the Tahoe Valley Airport would continue to degrade air quality thresholds in the Basin:

- Results from the League's Lake Tahoe Airport Impacts Report 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 carpoled (Tahoe's average carload is 2.7 people per 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.
- 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?
- 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.
- 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.
- 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.

Noise Impacts

The Airport Master Plan Settlement Agreement of 1992 (SA) contains a number of noise requirements, including noise monitoring, reporting and enforcement. However, noise has not been monitored since the spring of 2004 and the frequently-inoperable monitoring system coupled with lack of reporting system resulted in no enforcement in 2003 as well (2003 Annual Noise Report to TRPA). Therefore, the noise-related measures required by the Settlement Agreement are clearly not being met; there is currently no noise monitoring system in place and yet planes which may exceed noise limits continue to fly in and out of the Airport day and night with no consequence. The majority of commercial aircraft that the Airport would like to attract all have approach and takeoff noise levels above the required noise level of 80 dBA, which was set during the 1992 Settlement Agreement. The following points demonstrate why expansion and continuing operation to the Tahoe Valley Airport would continue to degrade noise quality thresholds in the Basin:

- 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 to 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 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.
- 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. A Master Plan update should also address noise impacts from helicopters flying at both the Airport and around the Basin, as they have generated numerous public complaints as well.

Overall, the League would like to stress that the TRPA and the TMPO need to give environmental thresholds a higher priority in the RTP, and that such thresholds as water and air quality need to be the background for all transportation projects. We would also like to stress the importance of improving existing road and bicycle/pedestrian trails over the addition of new surfaces, which will create more soil coverage. Of a high concern with the League is the continuing service and expansion of the Tahoe Valley Airport. We would recommend that the Airport be re-evaluated for both environmental and societal costs associated with the continued existence of this heavily subsidized transportation facility.

Summary

We appreciate the opportunity to provide comments and if you are in need of further information please contact us at 530-541-5388.

Thank you,

Flavia Sordelet
Program Advocate
The League to Save Lake Tahoe

References:

Chandler, K., E. Eberts, and L. Eudy. 2006. New York City transit Hybrid and CNG Transit Buses: Interim Evaluation Results. National Renewable Energy Laboratory. Technical Report: NREL/TP-540-38843.

Kuhns, H., D. Zhu, A. Gillies, V. Etyemezian, and S. Brown, 2007. Measurement and Modeling of Fugitive Dust Emissions from Paved Road Travel in the Lake Tahoe Basin. Prepared for the EPA by the Desert Research Institute and the Nevada Tahoe Conservation District.

Mitsch, William J. & James G. Gosselink. 2000. Wetlands. John Wiley and Sons Inc. Canada.

San Francisco Municipal Transportation Agency. "Muni Hybrid Buses." 2007. < <http://www.sfmta.com/cms/mfleet/hybrids.htm> > (29 Jul. 2008).

The League to Save Lake Tahoe. 2006. Lake Tahoe Airport Impacts Report.