



March 24, 2009

Tahoe Regional Planning Agency  
P.O. Box 5310  
Stateline, NV 89449

**RE: Comments regarding the Shorezone Adaptive Management Program**

Dear Mr. Chair and Members of the Governing Board,

Thank you for the opportunity to make comments regarding the above program. We have reviewed the information provided on the draft Shorezone Adaptive Management Program (SAMP) and we have a number of concerns and questions that the Governing Board and Staff need to consider. The numerous objections and concerns regarding the program are not necessarily limited to those listed below.

Overall, the Shorezone Ordinances and the SAMP need to do the following: (1) comply fully with the TRPA Compact, including the attainment and maintenance of TRPA's environmental thresholds; (2) comply with the anti-degradation standard applied to Lake Tahoe by the Clean Water Act and Tahoe's designation as an Outstanding National Resource Water (ONRW); and (3) achieve the pollution reduction targets outlined in the Lahontan Regional Water Control Board's Tahoe TMDL. As the SAMP is currently proposed, it will not provide adequate environmental protection, methods, data collection requirements, and funding resources to effectively monitor and provide adaptive management response relating to shorezone development, impacts from motorized boat use, and any mitigation program(s). A fully formulated adaptive management program should have been a component of the Shorezone Ordinance passed in October, 2008; even now, it is lacking in specificity and methodology.

Nearly all of the environmental thresholds affected by Shorezone-related activities are in non-attainment status, such as carbon monoxide, ozone, and particulate matter, all of which all motorized boats emit in high amounts and are associated with detrimental human ailments such as asthma, permanent lung damage, and even premature death in sensitive individuals. TRPA must take the necessary measures to bring thresholds into attainment, not to exacerbate the problem.

### Monitoring of Pollutants

According to the current proposed SAMP Draft, the monitoring procedures and network for air quality and noise still has yet to be developed. The TRPA continues to defer the updated program of work until March 2010. Real scientific monitoring for air, water, noise, and any other applicable threshold standards needs to be conducted in locales where concentrated motor boat usage coincides with large populations of beach goers engaged in such activities as swimming, picnicking, sunbathing, etc... Examples of these areas include Emerald Bay, Zephyr Cove, and Camp Richardson. At a minimum, this monitoring effort needs to be performed during the boating season (May through September) and throughout the year (winter, fall, and spring) to gain better estimates of background emissions and pollutant levels during the off-season that may not be directly associated with boat use. Monitoring in these areas has value, as technically all areas within the Basin need to achieve and maintain threshold standards.

In order to accurately calculate and describe pollutant levels attributed to motorized boat-use, there is a need to monitor winter shorezone conditions for pollution levels (including air, water, and noise pollution) and to then compare them with summer levels. The monitoring data for all environmental threshold standards needs to be available in real time for agency program managers, as well as the public. In addition, evaluations of threshold performance standards and triggers need to be made available.

In the proposed SAMP, the TRPA is planning to monitor for *E. coli* as a water quality standard. Correlating levels of *E. coli* with motorized boat use may present innumerable challenges and may be far more difficult than associating air pollutants directly with boats. *E. coli* contamination may have resulted from many non-littoral sources, such as pet or animal feces deposited in close proximity to a tributary, ruptured sewage line, grazing allotments, and from other upland areas.

### Air Quality Monitoring

Apparently, there appears to be an unwarranted aversion by TRPA Staff to monitor and/or directly measure the actual watercraft (tail-pipe) air quality emissions in Lake Tahoe. TRPA Staff contends that this type of monitoring is difficult on the basis of identifying the contributions by the source (boat, vehicle, truck, etc...), yet the TRPA staff is proposing *E. coli* monitoring, which may be far more problematic for source association.

By monitoring air quality standards year-round in on-the-lake or on-the-shore locales, the background pollution levels from upland vehicular traffic can be established and then compared with the levels during the boating season. Pollution levels identified during the on-the-ground monitoring can then be compared to actual vehicle and boat counts for the same sampling period to better estimate the amount of pollutants contributed by boats collectively.

The TRPA is proposing creating an air quality emissions inventory by asking boat owners a few questions during launch operations at boat ramps, which is wholly inadequate on the following grounds:

1. Without real, on-site monitoring in areas with concentrated boat use (such as Emerald Bay), any threshold standard exceedances would be unknown, thereby potentially

exposing large numbers of beach goers to unhealthy or harmful conditions to ozone exposure, for instance. The lack of monitoring data would therefore render the SAMP totally ineffective, with no adaptive management response possible.

2. The effectiveness of any mitigation program needs to be predicated on actual measurable threshold achievement and maintenance, not just from idealized estimates.
3. Survey responses may be highly inaccurate and may grossly underestimate fuel usage, hours of use, load factors, etc...Even with accurate accounting of hours of engine use and fuel receipts, before and after launch, the actual air quality emissions and impacts would remain unknown, especially in high traffic zones.

Surveys are often biased and contain statistical error. Surveys depend on the subjects' motivation, honesty, memory, and ability to respond. This can be a significant issue when surveying boat-users on fuel consumption. Some owners may not be aware of the boat's fuel efficiency, especially at high altitude. Others may have tried to tune their boats on their own and are unaware that it was insufficient. These kinds of responses and assumptions will ultimately lead to a substantially high rate of error in the calculated boat emissions from surveys. The high rates of error in the boater surveys can be reduced by physically sampling the pollutants produced by the classes and types of boats used on Lake Tahoe, including the pollution rates of improperly tuned boats and boats with incorrect propeller pitch. Overall, the most reliable means of calculating true pollutant levels associated with motorized boat-use is by to physically monitor the emissions coming out of the tail-pipe of a boat).

#### Performance Standards and Triggers

The TRPA needs to fully formulate performance standards and triggers as part of an adaptive management program. For example, a trigger value associated with state or federal human-health based air quality standards needs to be set at some concentration below the actual standard. If this trigger value is reached, it would require prompt response to prevent the actual standard from being exceeded. Contingency plans need to be already in place, so necessary restrictions are implemented. Trigger violations must be reported to the APC and Governing Board on at least a monthly basis during the boating season. Performance standards, trigger values, and the immediate response plans need to be developed in advance in full cooperation with the scientific community based on the "best available science" and with input from the public so as to continue the necessary process of transparency and accountability in all TRPA Shorezone activities.

The current draft of the SAMP describes a process of remediating an impact by first continuing to monitor for that impact for an additional year to determine if the impact is a continuing threat or just a one-time incident. This is unacceptable due to the inherent risks associated with allowing an impact to continue, even for a limited amount of time. In fact, in the case of air quality, there are human health standards for short term exposure. Examining the data a year later will not reverse the damage to humans caused by the pollution. An adaptive management program must identify the processes that will be used to address these circumstances in a timely manner.

### Annual Reporting Requirements

In order for an adaptive management program to be successful at fulfilling the mitigation requirements of the Shorezone Ordinance, it must be analyzed and reviewed on at least an *annual* basis. The first annual report should focus on the determination of existing baseline conditions for Shorezone emissions including air, water, and noise pollution. It should be noted that because impacted thresholds are currently out of attainment, the emission baselines do not represent threshold maintenance levels; rather, baselines should be used to describe current conditions upon which management decisions can be based. In addition to the implementation and effectiveness monitoring components identified in the SAMP, the evaluation of all monitoring data, including exceedences of the performance standards and triggers and associated daily responses and outcomes, must also be included in the annual report.

The currently proposed SAMP cannot make the required environmental findings due to the fact that this project will cause the environmental threshold carrying capacities to be exceeded and it will not be able to attain and maintain all the federal, state, or local air and water quality standards applied to the Tahoe Basin due to the issues addressed above in addition to the fact that the majority of environment threshold carrying capacity standards are in non-attainment.

We have also included an appendix to these comments on the SAMP that addresses questions and concerns with the proposed SAMP as presented in the April TRPA Governing Board packet.

We appreciate the opportunity to provide comments and if you are in need of further information please contact the undersigned.

Thank you,

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The League to Save Lake Tahoe

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## Shorezone Adaptive Management Program Appendix

Questions and concerns associated with the SAMP include, but are not limited to, the items below.

- The “*tracking of the Shorezone permit compliance will provide TRPA with an ability to characterize the implementation and effectiveness of the shorezone regulations...*” (Page 173 of April Governing Board Packet).
  - Although the tracking of permit compliance is an important component of any land-use plan, merely tracking permits for compliance with regulations and programs does not describe the ‘whole’ picture. An effective management program would also track incidences of non-compliance including number of days and types of violations, as well as the response by TRPA to remedy the problem and impacts of the non-compliance.
- The “*review team recommended that the implementation plan for the first year only include monitoring and reporting tasks associated with: 1) Assessing the implementation and effectiveness of the Blue Boating Program, 2) providing an accounting of Shorezone related revenue, and 3) tracking of shorezone permitting, permit compliance, and enforcement activities*” (page 174).
  - The first year of Shorezone monitoring needs to include the establishment of existing baseline conditions including baselines for air, water, and noise pollution. This requirement is significantly important due to the under-estimation of pollutant emissions calculated in the Shorezone FEIS. Existing baselines do not represent the levels of pollutants that are needed to reach and maintain the mandated TRPA environmental thresholds, and this is even more apparent when considering that approximately 75 percent of all threshold standards are out of attainment.
- The external review of the draft Annual Shorezone Report “*by the Tahoe Science Consortium or other external specialist...*” (Page 176).
  - In order to evaluate the validity and accurateness of the Annual Shorezone Report the external review should only be performed by legitimate members of the scientific community, not planning consultants. The scientific community includes, but is not limited to, members of the Tahoe Science Consortium, University of California Davis, and University of Nevada Reno.

- Monitoring Question: *“How many boats (by type) were inspected by the Blue Boating Program for regulation compliance? Of those boats inspected, how many (by type) were in compliance with regulations, and how many were not?”* (Page 178).
  - TRPA will not be able to accurately determine how many boats are in compliance with the BBP, specifically in relation to proper engine tuning and propeller pitch, due to the inability of TRPA staff and boat inspectors to physically determine engine tuning and prop pitch. Note that TRPA staff has already acknowledged that they will not be able to physically check boats for compliance with proper engine tuning and propeller pitch requirements. Furthermore, the boater surveys will be relying on the validity of boater responses concerning engine tuning and prop pitch, which statistically has higher margins of error then compared to physically inspecting and testing boats for compliance.
  
- Monitoring Question: *“Is the Blue Boating Program effective at reducing watercraft sources of water pollution?”* (Page 178).
  - Due to the inaccuracy of the estimated baselines for boat emissions in the Shorezone EIS, this monitoring question cannot be accurately evaluated for efficiency. Baselines for current conditions must first be established by directly monitoring air and water quality to assess current concentrations. A comprehensive monitoring program will also assist the scientific community and TRPA in evaluating the impact of boat emissions on measured air and water quality concentrations.
  
- Monitoring Question: *“Is the Blue Boating Program effective at reducing watercraft sources of noise pollution?”* (Page 179).
  - The performance standard for shorezone noise in relation to CNEL standards should not be based on levels established for 2009. Since it is widely know that upland CNEL and single event noise standards are out of attainment, the establishment of shorezone noise baseline based on current noise levels is unsuitable.