Appendix B

Proposed Changes to Threshold Standards

WATER QUALITY

Deep Water (Pelagic) Lake Tahoe

NUMERICAL STANDARDS

~~Reduce dissolved inorganic nitrogen (N) loading from all sources by 25 percent of the 1973-81 annual average.~~ Reduce fine sediment particles (inorganic particle size < 16 micrometers in diameter), total phosphorus, and total nitrogen in order to ~~A~~achieve the following long-term water quality standards for deep water (pelagic zone) Lake Tahoe:

- The annual average deep water transparency as measured by Secchi disk shall not be decreased below 29.7 meters (97.4 feet), the average levels recorded between 1967-1971 by the University of California, Davis.
- Maintain ~~A~~annual mean phytoplankton primary productivity~~:~~ at or below 52gmC/m^2/yr~~.~~
- ~~Winter (December - March) mean Secchi disk transparency: 33.4m.~~

~~POLICY~~

~~This~~ These numerical threshold standards ~~is~~ for Pelagic Lake Tahoe are currently being exceeded and will likely continue to be exceeded until ~~some time after~~ full implementation of the pollutant loading reductions prescribed by the ~~thresholds~~Lake Tahoe Total Maximum Daily Load program and implemented by the State of California and Nevada. The cooperation of the states of California and Nevada will be required to control sources of air pollution which contribute nitrogen loadings to the Lake Tahoe Region.

MANAGEMENT STANDARD

Reduce the loading of dissolved phosphorus, iron, and other algal nutrients from all sources as required to achieve ambient standards for primary productivity and transparency.

Reduce dissolved inorganic nitrogen loads from surface runoff by approximately 50 percent, from groundwater approximately 30 percent, and from atmospheric sources approximately 20 percent of the 1973-81 annual average. This threshold relies on predicted reductions in pollutant loadings from out-of-basin sources as part of the total pollutant loading reduction necessary to attain environmental standards, even though the Agency has no direct control over out-of-basin sources. The cooperation of the states of California and Nevada will be required to control sources of air pollution which contribute nitrogen loadings to the Lake Tahoe Region.

Littoral Lake Tahoe

NUMERICAL STANDARD
Reduce dissolved inorganic nitrogen loading to Lake Tahoe from all sources by 25 percent of the 1973-81 annual average.

MANAGEMENT STANDARD
Reduce dissolved inorganic nitrogen loads from surface runoff by approximately 50 percent, from groundwater approximately 30 percent, and from atmospheric sources approximately 20 percent of the 1973-81 annual average. This threshold relies on predicted reductions in pollutant loadings from out-of-basin sources as part of the total pollutant loading reduction necessary to attain environmental standards, even though the Agency has no direct control over out of Basin sources. The cooperation of the states of California and Nevada will be required to control sources of air pollution which contribute nitrogen loadings to the Lake Tahoe Region.

NUMERICAL STANDARD
Decrease sediment load as required to attain turbidity values not to exceed three NTU. In addition, turbidity shall not exceed one NTU in shallow waters of the Lake not directly influenced by stream discharges.

Reduce the loading of dissolved inorganic nitrogen, dissolved phosphorus, iron, and other algal nutrients from all sources to meet the 1967-71 mean values for phytoplankton primary productivity and periphyton biomass in the littoral zone.

Nearshore Attached Algae
MANAGEMENT STANDARD
Support actions to reduce the extent and distribution of excessive periphyton (attached) algae in the nearshore (littoral zone) of Lake Tahoe.

Aquatic Invasive Species
MANAGEMENT STANDARD
Prevent the introduction of new aquatic invasive species into the region's waters and reduce the abundance and distribution of known aquatic invasive species. Abate harmful ecological, economic, social and public health impacts resulting from aquatic invasive species.

Tributaries

NUMERICAL STANDARD
Attain applicable state standards for concentrations of dissolved in organic nitrogen, dissolved phosphorus, and dissolved iron. Attain a 90 percentile value for suspended sediment concentration of 60 mg/1.

MANAGEMENT STANDARD
Reduce total annual nutrient and suspended sediment load to achieve loading thresholds for littoral and pelagic Lake Tahoe.

Surface Runoff

NUMERICAL STANDARD
Achieve a 90 percentile concentration value for dissolved inorganic nitrogen of 0.5 mg/1, for dissolved

phosphorus of 0.1 mg/1, and for dissolved iron of 0.5 mg/1 in surface runoff directly discharged to a surface water body in the Basin.

Achieve a 90 percentile concentration value for suspended sediment of 250 mg/1.

MANAGEMENT STANDARD
Reduce total annual nutrient and suspended sediment loads as necessary to achieve loading thresholds for tributaries and littoral and pelagic Lake Tahoe.

Groundwater

MANAGEMENT STANDARD
Surface runoff infiltration into the groundwater shall comply with the uniform Regional Runoff Quality Guidelines as set forth in Table 4-12 of the Draft Environmental Threshold Carrying Capacity Study Report, May, 1982.

Where there is a direct and immediate hydraulic connection between ground and surface waters, discharges to groundwater shall meet the guidelines for surface discharges, and the Uniform Regional Runoff Quality Guide lines shall be amended accordingly.

Other Lakes

NUMERICAL STANDARD
Attain existing water quality standards.

AIR QUALITY

Carbon Monoxide

NUMERICAL STANDARD
Maintain carbon monoxide concentrations at or below ~~9~~ 6 parts per million (7 mg/m^3) averaged over 8 hours. ~~provided that each state shall review and certify to TRPA by February 28, 1983, as to what their carbon monoxide standards are as of that date, and this TRPA threshold standard shall be changed effective February 28, 1983, if necessary, to be the applicable state carbon monoxide standard applicable to the respective portions of the region in accordance with Article V (d) of the Compact.~~

MANAGEMENT STANDARD
Reduce traffic volumes on the U.S. 50 Corridor by 7 percent during the winter from the 1981 base year between 4:00 p.m. and 12:00 midnight, provided that those traffic volumes shall be amended as necessary to meet the respective state standards.

Ozone

NUMERICAL STANDARD
Maintain ozone concentrations at or below 0.08 parts per million averaged over 1 hour.

Maintain oxides of nitrogen (NOx) emissions at or below the 1981 level.

Regional Visibility

NUMERICAL STANDARDS[§]
Achieve an extinction coefficient of 25 Mm^{-1} at least 50 percent of the time as calculated from aerosol species concentrations measured at the Bliss State Park monitoring site (visual range of 156 kilometer, 97 miles); and

Achieve an extinction coefficient of 34 Mm^{-1} at least 90 percent of the time as calculated from aerosol species concentrations measured at the Bliss State Park monitoring site (visual range of 115 kilometers, 71 miles).

[§](Calculations will be made on three year running periods. Beginning with the existing 1991-93 monitoring data as the performance standards to be met or exceeded.)

~~Reduce wood smoke emissions by 15% of the 1981 base values through technology, management practices and educational programs.~~

Subregional Visibility

NUMERICAL STANDARD[§]
Achieve an extinction coefficient of 50 Mm^{-1} at least 50 percent of the time as calculated from aerosol species concentrations measured at the South Lake Tahoe monitoring site (visual range of 78 kilometers, 48 miles); and

Achieve an extinction coefficient of 125 Mm^{-1} at least 90 percent of the time as calculated from aerosol species concentrations measured at the South Lake Tahoe monitoring site (visual range of 31 kilometers, 19 miles); and

Calculations will be made on three year running periods. Beginning with the existing 1991-93 monitoring data as the performance standards to be met or exceeded.)

Respirable and Fine Particulate Matter
NUMERICAL STANDARD
Particulate $Matter_{10}$ 24-hour Standard: Maintain Particulate $Matter_{10}$ at or below 50µg/m^3 measured over a 24-hour period in the portion of the Region within California, and maintain Particulate $Matter_{10}$ at or below 150µg/m^3 measured over a 24-hour period in the portion of the Region within Nevada. Particulate $Matter_{10}$ measurements shall be made using gravimetric or beta attenuation methods or any equivalent procedure which can be shown to provide equivalent results at or near the level of air quality standard.

NUMERICAL STANDARD
Particulate $Matter_{10}$ Annual Arithmetic Average - Maintain Particulate $Matter_{10}$ at or below annual arithmetic average of 20µg/m^3 in the portion of the Region within California, and maintain Particulate $Matter_{10}$ at or below annual arithmetic average of 50µg/m^3 in the portion of the Region within Nevada. Particulate $Matter_{10}$ measurements shall be made using gravimetric or beta attenuation methods or any equivalent procedure which can be shown to provide equivalent results at or near the level of air

[§] Amended 03/22/00
[§] Amended 03/22/00

quality standard.

NUMERICAL STANDARD
Particulate Matter$_{2.5}$ 24-hour Standard - Maintain Particulate Matter$_{2.5}$ at or below 35µg/m^3 measured over a 24-hour period using gravimetric or beta attenuation methods or any equivalent procedure which can be shown to provide equivalent results at or near the level of air quality standard.

NUMERICAL STANDARD
Particulate Matter$_{2.5}$ Annual Arithmetic Average - Maintain Particulate Matter$_{2.5}$ at or below annual arithmetic average of 12µg/m^3 in the portion of the Region within California, and maintain Particulate Matter$_{2.5}$ at or below annual arithmetic average of 15µg/m^3 in the portion of the Region within Nevada. Particulate Matter$_{2.5}$ measurements shall be made using gravimetric or beta attenuation methods or any equivalent procedure which can be shown to provide equivalent results at or near the level of air quality standard.

~~Reduce suspended soil particles by 30% of the 1981 base values through technology, management practices and educational programs. Reduce wood smoke emissions by 15% of the 1981 base values through technology, management practices and educational programs. Reduce vehicle miles of travel by 10% of the 1981 base values.~~

Nitrate Deposition

MANAGEMENT STANDARD
Reduce the transport of nitrates into the Basin and reduce oxides of nitrogen (NOx) produced in the Basin consistent with the water quality thresholds.

Reduce vehicle miles of travel in the Basin by 10% of the 1981 base year values.

Odor

POLICY STATEMENT
It is the policy of the TRPA Governing Board in the development of the Regional Plan to reduce fumes from diesel engines to the extent possible.

WILDLIFE
Special Interest Species

NUMERICAL STANDARD
Provide a minimum number of population sites and disturbance zones for the following species:

Species of interest	Population sites	Disturbance zone (mi.)	Influence zone (mi.)
Goshawk	12	~~0.50~~Most suitable 500 acres surrounding nest site including a .25 mile buffer centered on nest sites	3.50
Osprey	4	0.25	0.60
Bald Eagle (Winter)	2	Mapped areas	Mapped areas
Bald Eagle (Nesting)	1	0.50	Variable
Golden Eagle	4	0.25	9.0
Peregrine	2	0.25	7.6

Waterfowl	18	Mapped areas	Mapped areas
Deer	-	Mapped areas	Meadows

Habitats of Special Significance

MANAGEMENT STANDARD

A nondegradation standard shall apply to significant wildlife habitat consisting of deciduous trees, wetlands, and meadows while providing for opportunities to increase the acreage of such riparian associations.

FISHERIES

Stream Habitat

NUMERICAL STANDARD

Maintain the 75 miles of excellent, 105 miles of good, and 38 miles of marginal stream habitat as indicated by the [§]Stream Habitat Quality Overlay map, amended May 1997, based upon the re-rated stream scores set forth in Appendix C-1 of the 1996 Evaluation Report.

Instream Flows

MANAGEMENT STANDARD

Until instream flow standards are established in the Regional Plan to protect fishery values, a nondegradation standard shall apply to instream flows.

POLICY STATEMENT

It shall be a policy of the TRPA Governing Board to seek transfers of existing points of water diversion from streams to Lake Tahoe.

Lahontan Cutthroat Trout

POLICY STATEMENT

It shall be the policy of the TRPA Governing Board to support, in response to justifiable evidence, state and federal efforts to reintroduce Lahontan cutthroat trout.

Lake Habitat

MANAGEMENT STANDARD

A nondegradation standard shall apply to fish habitat in Lake Tahoe. Achieve the equivalent of 5,948 total acres of excellent habitat [§]as indicated by the Prime Fish Habitat Overlay Map ~~dated 5/19/97~~ as may be amended ~~from time to time~~ based on best available science.

[§] Amended 5/28/97