TAHOE REGIONAL PLANNING AGENCY
ADVISORY PLANNING COMMISSION

NOTICE IS HEREBY GIVEN that the Advisory Planning Commission of
the Tahoe Regional Planning Agency will conduct its regular meeting at
9:30 a.m. on April 11, 1990, at the TRPA office, 195 U.S. Highway 50, Zephyr
Cove, Round Hill, Nevada. The agenda for said meeting is attached hereto
and made a part of this notice.

April 2, 1990

David S. Ziegler
Executive Director

By: Gary D. Midkiff
Assistant Executive Director

This agenda has been posted at the TRPA office and at the following post
offices: Zephyr Cove and Stateline, Nevada, and Al Tahoe and Tahoe Valley,
California.
TAHOE REGIONAL PLANNING AGENCY
ADVISORY PLANNING COMMISSION

TRPA Office, 195 U.S. Highway 50
Zephyr Cove, Round Hill, Nevada

April 11, 1990  9:30 a.m.

All items on this agenda are action items unless otherwise noted.

AGENDA

I  CALL TO ORDER AND DETERMINATION OF QUORUM

II  APPROVAL OF AGENDA

III  DISPOSITION OF MINUTES

IV  PUBLIC HEARING AND RECOMMENDATION

A. Adoption of Marina Master Plan Guidelines

B. Adoption of Threshold Indicators and Targets for Air Quality, Chapter 32 (Regional Plan and Threshold Review)

C. Adoption of MOUs Between TRPA and Caltrans and TRPA and the Nevada Department of Transportation

V  PLANNING MATTERS

A. Discussion of Incline Village Community Center Draft EIS

B. Amendment of the Regional Transportation Plan Regarding Unbuilt U.S. 50 Freeway Right-of-Way Within the City of South Lake Tahoe and El Dorado County

C. Update on Sierra Ski Ranch EIS/EIR Comments

VI  REPORTS (No Action)

A. Executive Director

B. Legal Counsel

C. APC Members

D. Public Interest Comments

VII  PENDING MATTERS

VIII  ADJOURNMENT
MEMORANDUM

March 30, 1990

To: Advisory Planning Commission

From: TRPA Staff

Subject: Adoption of Marina Master Plan Guidelines

PROPOSED ACTION: The proposed action is to review and comment on the Marina Master Plan Guidelines, to hold a public hearing on the matter, and recommend their approval by the Governing Board.

BACKGROUND: Marinas which will be expanded by more than ten slips and ten buoys require a TRPA approved master plan for the expansion pursuant to Chapter 16 of the Code. The Water Quality Management Plan (208 Plan) commits TRPA to provide guidelines for the preparation of marina master plans.

For the last several months, TRPA staff met regularly with a committee composed of representatives of agencies having responsibilities pertaining to marinas, marina owners and their representatives, and interested members of the public. The Final Draft Master Plan Guidelines are the product of those meetings.

Appendix B of the guidelines, Environmental Documentation Procedures, is being prepared separately and will be added when it has been approved.

At the March meeting, the APC reviewed and commented on the draft guidelines and held a public hearing. Some changes based upon the APC and public comments have been incorporated into the final draft.

RECOMMENDATIONS: Staff recommends that the APC review and comment on the contents of the final draft of the Marina Master Plan Guidelines. The public will have the opportunity to be heard again regarding the draft guidelines. Following the hearing, staff recommends that APC recommend that the Governing Board approve the Marina Master Plan Guidelines.

ATTACHMENTS: Attachment A is a copy of final draft of the Marina Master Plan Guidelines for the Preparation of Marina Master Plans Pursuant to Chapter 16, TRPA Code of Ordinances.

If you have any questions or comments on the guidelines, call Jean Shaffer at (702) 588-4547.

/js
3/30/90

AGENDA ITEM IV.A.
Regional Plan for the Lake Tahoe Basin

Marina Master Plan Guidelines
MARINA MASTER PLAN GUIDELINES

FOR THE PREPARATION OF MARINA MASTER PLANS

PURSUANT TO CHAPTER 16, TRPA CODE OF ORDINANCES

FINAL DRAFT

March 20, 1990

Tahoe Regional Planning Agency
GUIDELINES FOR THE PREPARATION OF MARINA MASTER PLANS

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Appendix A. Water Quality Standards

Appendix B. Environmental Documentation Procedures
Marinas provide a major means of public access to Lake Tahoe. Seeing the Tahoe Basin from the Lake gives the viewer a very different and revealing perspective and appreciation of the area than from any viewpoint on land.

A well designed and prosperous marina can be a significant benefit to the surrounding community, lending it tone and atmosphere while adding to the general economic base. Conversely, a marina which is ill designed, managed, or maintained, or still worse, a defunct marina, can detract from the community. In addition, a poorly functioning or abandoned marina invites environmental degradation and may be a safety hazard. The goal of all parties concerned with marina planning and operation is that marinas make a positive contribution to the Lake Tahoe community and environment.

The adopted TRPA environmental thresholds for recreation are encompassed in the following policy statement:

"It shall be the policy of the TRPA Governing Body in the development of the Regional Plan to preserve and enhance the high quality recreational experience, including preservation of high-quality undeveloped shorezone and other natural areas. In developing the Regional Plan, the staff and Governing Body shall consider provisions for additional access, where lawful and feasible, to the shorezone and high quality undeveloped areas for low density recreational uses.

It shall be the policy of the TRPA Governing Body in development of the Regional Plan to establish and ensure a fair share of the total Basin capacity for outdoor recreation is available to the general public".

Marinas can make an important contribution toward meeting the recreation threshold in ensuring that high quality recreational opportunities are available to the general public.

The TRPA staff wish to take this opportunity to thank those who have contributed considerable time and effort to make these Marina Master Plan Guidelines a useful tool for marina expansion. All those who have participated in the meetings leading to the development of these guidelines have been dedicated to making marinas a beneficial contribution to the recreational experience at Lake Tahoe.
CHAPTER I. PURPOSE OF THE GUIDELINES

Any marina expansion of more than 10 slips and 10 buoys or any new marina requires a TRPA approved master plan* prepared in accordance with Chapter 16 of the TRPA Code of Ordinances. The Water Quality Management Plan (TRPA, 1989) specified that TRPA would develop guidelines for preparing marina master plans.

Adoption of a master plan is an amendment to the Regional Plan which has some very specific procedural requirements. The master plan is a supplement to the applicable plan area statement (PAS) or community plan (CP). The master plan must be consistent with the applicable PAS or CP. One of a master plan's functions is to provide a more detailed description of an important element of the area involved.

The purpose of the Marina Master Plan Guidelines is to assist the master plan's proponent in preparing the master plan and its environmental documentation for adoption by the TRPA Governing Board.

These guidelines are also intended to provide a degree of consistency in the development and approval of master plans. The master plan guidelines spell out the general requirements of a master plan and help clarify for the plan's proponent the process of development and adoption of the master plan. Because each master plan will be tailored to the site, additional elements may emerge during the process that are not specified in these guidelines but which must be addressed in the plan. Conversely, inapplicable requirements may be eliminated with a brief statement explaining why they do not apply.

The guidelines provide a framework for the review of master plans and projects within the master plan area. The master plan guidelines should simplify the process for both the project proponent and the reviewers. A master plan should provide a detailed enough description of the proposed facility to serve as a handbook for the future development and operation of the marina. A master plan can be amended, as an amendment to the Regional Plan, if it becomes apparent that community, operational, or mitigation needs have changed.

Approval of a master plan is not a project approval, nor is it a guarantee of approval of projects within the context of the master plan. Projects called for in the master plan will still require all applicable permits. Permit applications will be reviewed for consistency with the master plan and applicable regulations and will be verified by site visits.

* Chapter 16 of the TRPA Code of Ordinances refers to both master plans and specific plans. A master plan is a project oriented plan. A specific plan is a comprehensive long-range program for the further development of a facility or an area. The procedure and requirements for both kinds of plans are the same, so in the interest of simplicity, the term master plan in these guidelines will refer to both.
In the course of preparing the Master Plan Guidelines, TRPA staff met regularly with and/or sent copies of memoranda and drafts of the Guidelines for review to representatives of agencies having responsibilities regarding the Lake Tahoe shoreline, including the U.S. Coast Guard, the U.S. Army Corps of Engineers, the U.S. Forest Service, the U.S. Fish and Wildlife Service, the California Attorney General, the California State Lands Commission, the California Regional Water Quality Control Board - Lahontan Region, the California Department of Fish and Game, the California Department of Boating and Waterways, the Nevada Department of Wildlife, and the Nevada Division of State Lands. Representatives of the Marina Owners Association, the League to Save Lake Tahoe, the Tahoe Sierra Preservation Council, and a number of marina owners also participated actively in the development of the guidelines.
CHAPTER II. THE MASTER PLANNING PROCESS

The process for preparing, processing and adopting a master plan is described in Section 16.7 of the TRPA Code of Ordinances. The process consists of four major steps: 1) initiation of the master plan, 2) development and approval of a work program, 3) preparation of the plan itself, and finally, 4) approval of the master plan by the Governing Board.

If TRPA finds that alternatives to steps 1 and 2 above would facilitate the planning process while still meeting its objectives, a modified process may be approved. The modification of the process would not change the requirements of the plan specified in other applicable sections of the Code.

Initiation of the Master Plan Process (16.7.A):

The master plan process is to be initiated by the project proponent. The proponent may be the TRPA, other agencies of jurisdiction, or the land owner. In certain cases, where part of the land is administered by a public agency and part is privately owned, there could be joint proponents.

The proponent would select a steering committee to represent the interests of the owner and the community. The steering committee would include a designee of the TRPA Executive Director and representatives of marina owner and the local government having jurisdiction over the proposed master plan area. In California, the State Lands Commission will also be represented on the committee. If the area includes public land, the administrative agency would appoint a representative to the steering committee.

The steering committee will be responsible for establishing a planning team to prepare the master plan. The planning team would consist of the day-to-day contacts and specialists for each agency involved, and the planning group or consultants.

If TRPA determines that the proposed master plan or modification to an existing master plan would not be a significant expansion of use and does not require an EIS, the TRPA may delete the steering committee from the process.

Development and Approval of the Master Plan Work Program (16.7.B):

The planning team will develop a work program that will result in a master plan which addresses all of the elements listed in Subsection 16.7.C (Specific or Master Plan Preparation) and Section 16.8 (Content of Specific and Master Plans). Upon completion of work program, the steering committee will recommend the work program to the TRPA Executive Director for approval. The Director will consider the steering committee’s recommendations and exercise one of the following options: approve the work program as proposed; deny the work program; or modify the work program.
An alternative to the processes set forth in Subsections 16.7.A and 16.7.B may be substituted if TRPA finds that the substitute process would facilitate the planning process while still meeting the same objectives. An alternate process would not relieve the plan's proponent from meeting other requirements of the Code applicable to master plans.

Preparation of the Master Plan (16.7.C):

Once the TRPA Executive Director has approved the work program, the planning team will prepare the master plan in accordance with Subsection 16.7.C of the TRPA Code of Ordinances. The requirements of the Subsection are discussed in detail in Chapter III of these guidelines. The steering committee will oversee the preparation of the master plan by the planning team.

During the preparation of the plan, the planning team will need to consult with other jurisdictions such as the county, environmental agencies, and the Forest Service so as to eliminate, to the extent possible, preparation of additional documents and duplication of effort.

Preparation of the environmental documentation should proceed along with the master plan. Environmental documentation is discussed in Chapter V of this document.

Adoption of the Master Plan (16.7.D):

The steering committee will review the preliminary draft of the master plan. When the committee is satisfied that it is complete, the committee will present the recommended final plan to the Advisory Planning Commission. The Advisory Planning Commission, in turn, will review the proposed master plan and make recommendations to the Governing Board regarding approval of the plan. The reviews will be pursuant to the applicable portions of these guidelines, the Water Quality Management Plan, and the Regional Plan package. The Governing Board will consider the proposed master plan as a regional plan amendment and may approve, deny, or modify the proposed plan.

The Required Findings (16.9):

Before a master plan can be approved, the Governing Board must find that the plan is consistent with the Goals and Policies, the TRPA Code of Ordinances, and the applicable PAS or CP for the area. The Board must also find that the plan proposed will not exceed the commercial floor area, recreational PACTs, or other allocations or limits set forth for the plan area.

Finally, the Board must find that the plan is consistent with the attainment and maintenance of the environmental threshold carrying capacities.

Amending an Adopted Master Plan:

An amendment of an approved master plan, like the initial approval of the master
plan is an amendment to the Regional Plan. It requires a process similar to the above, including environmental documentation, though the process may be scaled down depending on the scope of the amendment. The Governing Board must make the same findings for master plan amendments as for approval of the original master plan.

Interagency Coordination During Master Plan Preparation

Due to the nature and location of marinas, several government agencies will typically have jurisdiction over some or all of the marina. It is strongly recommended that master plan proponents identify and contact all agencies having jurisdiction over the plan or project area as early in the process as possible. Upon request, TRPA will assist proponents in identifying other agencies having jurisdiction. The master plan steering committee will also be able to assist in identifying other agencies having jurisdiction.

Experience has shown that there are generally two levels of other agencies which must be involved in the planning process. The first level, identified below as Group A, is almost always involved. Individual agencies within this group may also be required through their own rules and regulations to review, approve, or permit the master plan or a plan component as noted below. The second group, Group B, will generally be involved in a specific issue or the impacts of the master plan or a specific resource. Example: California or Nevada State Office of Historic Preservation may be involved in the planning process to determine whether historic or archeologic resources have been found or are thought to exist within the area of the plan.

Group A Agencies (Normally Involved)

Federal Agencies:

US Army Corp of Engineers (permitting authority)
US Fish and Wildlife Service (review and comment)
US Coast Guard (responsible for boating safety)

State Agencies:

In California:
Department of Fish and Game (Lakebed Alteration Agreement with conditions)
State Lands Commission (leasing authority)
Regional Water Quality Control Board, Lahontan Region (waste discharge requirements)

In Nevada:
Department of Wildlife (boating safety and review and comment)
Division of Environmental Protection (review and comment)
Division of State Lands (leasing authority)
Local Jurisdictions: (local regulations and building permits)

City of South Lake Tahoe
El Dorado County
Placer County
Douglas County
Washoe County
Carson City County

Group B Agencies (Sometimes Involved)

State Agencies:

Nevada Department of Conservation and Natural Resources
California or Nevada State Office of Historic Preservation
California or Nevada State Department of Transportation:

Local Agencies:

Local utility/general improvement districts
(Examples: South Tahoe PUD, Incline Village GID, Kingsbury GID); Local air
pollution control district (California side only).

Other Interested Parties

In addition to public agencies, a number of public interest groups would
normally have an interest in the development of a master plan, and affected
property owners. Public notice must be given 14 days in advance, and owners of
property within 300 feet of the proposed project must be notified of all
prospective Regional Plan amendments.

Master Plan Document Graphic Standards

As an element of TRPA's Regional Plan, the master plan document which TRPA
adopts becomes part of the set of documents which are used on a day to day
basis. The layout and format of individual marina master plan documents,
therefore, must be compatible with the other plan documents (i.e., Code of
Ordinances, Plan Area Statements, Water Quality Management Plan, adopted
community plans). The information below is provided to answer questions about
what format to use for the plan.

An adequate number of copies of the proposed master plans are to be submitted to
TRPA for review by staff, the Advisory Planning Commission, the Governing Board
and the public. The master plans shall be prepared using the following graphic
standards:

Original Master: One single-sided original master copy of master plan and
the environmental document for future reproduction.

Document Cover: Layout and minimum information as shown in Figure 1, page
11, using cover stock weight paper (60 lb. or greater).
Title Sheet: Layout and minimum information as shown in Figure 2, page II-7.

Document Text: Printed double-sided on 8-1/2" x 11" 20 lb. weight (minimum) white paper; typewritten text spaced one or one and one-half space width between lines; pages consecutively numbered; three-hole drilled for use in a three ring binder;

Document Plans: Include at least one vicinity/context map and Maps and Photos (minimum 8-1/2" x 11" sheet) identifying jurisdictional boundaries, existing plan areas and boundaries, major roads or intersections, and other significant landmarks;

Master Plan maps and site plans shall be shown in two sheet sizes: 24" x 36" sheets drawn to scale which show existing conditions and master plan elements (may be on separate sheets in a sleeve inside the back cover); and

The same information shall be shown on photographic or photostat reductions no larger than 11" x 17" sheet size, printed single side only. Reductions shall be legible and shall include a graphic scale. Reductions and other sheets which are larger than 8-1/2" x 11" shall be folded into the document preferably with an accordion fold.

The use of photographs along with explanatory captions in the master plan is encouraged. Black and white photographs shall be prepared from half-tone negatives; Color photographs shall be color xeroxes.
Regional Plan For The Lake Tahoe Basin

(Fill In Name Of Marina) Master Plan
(Fill in Name of Marina) Master Plan

Prepared and Adopted Pursuant to TRPA Code of Ordinances
Chapter 16

Adopted By TRPA Governing Board
(Date of Adoption)
(TRPA Adopting Ordinance Number)

This Master Plan has been amended on the following dates:

(Amendment #) (Date of Amendment) (TRPA Adopting Ordinance #)

Figure 2. Sample Master Plan Title Sheet
CHAPTER III CONTENTS OF THE MASTER PLAN

In accordance with Chapter 16, the elements set forth in Sections A through E of this chapter will constitute the master plan. Appendices A, B, and C to the master plan, as described in this chapter, will be reports providing the background information for the preparation of the plan. Additional appendices may be used to provide information such as parking and noise analyses not included elsewhere. Before the master plan can be approved, the Governing Board must certify the EIS (if required) prior to adopting the master plan.

MASTER PLAN CONTENTS:

Basic Information

Project proponent - Name, mailing address, and phone number of the project proponent and for the contact person, if any. Provide the same information for the property owner if different from the project proponent.

Project location - Address, vicinity map, APN(s) and APN map(s), and the applicable PAS or CP and Shorezone Tolerance District (STD).

Section A. Physical Plan:

The master plan shall include a physical plan containing, at a minimum, the following elements:

1. Description of the Proposed Facilities

The proposed physical plan should include facilities for all reasonably foreseeable uses to reduce the need for future master plan amendments, although amendment is an option. Describe, including their location, size, and capacity, all facilities, buildings, parking areas, temporary or permanent disturbance, utilities connections, accessory uses, the water treatment system, services, and their capacities, which will be a part of the proposed plan. Include each existing facility which will be retained and describe the extent to which it will be remodeled, modified, enlarged, to accommodate existing or new uses. Include provisions for emergency contingencies such as spill containment and fire fighting. Describe any special provisions intended to eliminate, minimize, or facilitate dredging.

Required Support Facilities (54.12.03): Commercial marinas and harbors must provide public restrooms, fueling facilities, a chemical fire retardant distribution system, trash receptacles, and pump-out facilities for boat sewage. Boat washing facilities, if any, must be connected to a sewer system or an acceptable substitute. (Sewer connections for boat washing facilities will likely require special arrangements with the local public service provider.) Fueling facilities must have emergency and standard shut-off systems. Adequate parking must be provided to accommodate all uses and activities associated with the marina. A water treatment system must be provided for waters within the marina.
The description of the proposed physical plan shall include the size, capacity, and location of other TRPA units of use, including but not limited to commercial floor area, residential units, tourist accommodation units, and any PAOTs including those not related to boating capacity.

If the master plan will be implemented in phases, explain how the phasing will be carried out and provide a tentative schedule.

2. The Site Plan

Provide a schematic site plan according to the standards on page II-5 showing the projected size and location of each of the components in the proposed physical plant description (including facilities to be retained). Show the land capability classification boundaries, the high water line, and proposed bathymetry of the water area. Indicate vegetated and/or revegetation areas.

If the proposed plan will be implemented in phases, illustrate how the phasing will be carried out. Intermediate site plans may be necessary if facilities will be constructed, moved, demolished, or changed in intermediate steps.

An important feature of the site plan will be the provision of space to conduct any necessary dredging activities. Indicate the areas likely to need dredging, where or how spoils will be disposed of, e.g., whether and where they will be deposited on-site to drain, how trucks, barges, or cranes will access the site.

The site plan should be conceptual. Architectural or engineering drawings are not necessary for the master plan. The site plan must be sufficiently detailed to indicate clearly the nature, size, and location of all components of the plan to support subsequent project applications. Associated project applications will be reviewed for conformance with the master plan and applicable regulations at the time of the applications.

Section B. Operations Plan:

The master plan should include an operations plan which contains, at a minimum, the following elements:

1. A general operations and maintenance program including regular and periodically scheduled activities. This would include but not be limited to appropriate hours and months of operation, security, inspection of facilities, winterizing, snow management, periodic major landscape evaluation and maintenance. The operations plan should describe provisions for public access, transient mooring facilities, public water borne transit, tour boats, and off-site parking for slip users and boat trailers as applicable. Include all foreseeable prospective operations.
2. A water quality program including, but not limited to the following:
   (1) operation of the appropriate water treatment system based on the
       applicable water quality standards (refer to Appendix A of these
       Guidelines) and the monitoring program; (2) prevention of pollutants
       from reaching the water by inspection for sealed heads, tank testing,
       emptying and inspecting pump-out and boat washing facilities, fueling
       facilities inspection and maintenance, BMP maintenance, fertilizer
       management, surface water control, drainage control, spill prevention,
       and controlling toxic or not easily biodegradable chemicals used in
       boat washing and repair work; (3) spill containment equipment,
       procedures including the list of agencies to be contacted in case of a
       spill, with phone numbers, addresses, and contact persons, to be
       updated regularly, and a practice schedule; and (4) public information
       and education.

3. A dredging program (if dredging will be necessary) including a
   description of the maintenance, bypass, regular, or periodic dredging
   necessary, the probable frequency, quantity, and extent of the
   dredging needed, and the disposal of spoils. Describe how
   turbidity will be avoided or contained. Explain how the marina design
   will minimize and facilitate dredging and how dredging impacts will be
   managed.

4. An air quality program including, but not limited to, a parking
   management and traffic operations plan, and vehicle and boat idling
   controls in PAR 0898, 090, and 091 pursuant to subsection 91.7.A. and
   wherever local regulations apply.

5. A noise control program for achieving applicable CMEL and single event
   standards, including noise from boats, cars, and other marina
   activities.

Section C. Mitigation Plan:

1. Describe briefly each impact identified in the environmental
   documentation and the recommended mitigation to reduce it to a less
   than significant level. Potential mitigation could include erosion
   and runoff control, revegetation and restoration, traffic mitigation,
   scenic and shorezone impacts mitigation, and fish and wildlife habitat
   protection or enhancement.

2. Describe mitigation standards e.g., effluent limitations and/or
   ambient water quality standards, and a program or plan and schedule to
   attain and maintain the standard for each impact. Describe how the
   mitigation will be carried out, the schedule for any necessary
   construction and maintenance, and who will be responsible for each
   component of the mitigation program.

3. Mitigation for construction activities may require a specific
   construction methods plan and schedule. If so, describe them.
Section D. **Monitoring Plan**:

1. Describe procedures for monitoring the mitigation program, including the methodologies to be used, the parameters to be monitored, and the monitoring or sampling schedule. Include a program for monitoring vegetated long term trailer parking, if applicable.

2. Identify the party who will be responsible for implementing the monitoring schedule, the cost, and the source of funds for the monitoring program and any remedial measures, if required.

*Required Post-Construction Monitoring (54.12.D)*: "Monitoring of water quality, current patterns and intensities, wind patterns, shore alterations, and any other conditions which may be altered by the construction of the marina may be required by TRPA for a reasonable period after completion of the construction. Remedial measures will be required to mitigate adverse impacts, when necessary."
Chapter IV  APPENDICES TO THE MASTER PLAN

Subsection 16.7.C of the Code directs the planning team to prepare a complete assessment of the environmental opportunities and limitations of the site and to refine the inventory and needs assessment. These reports should be appended to the master plan. The appendices would document how the various elements of the plan were arrived at. For instance, they provide the opportunity to explain what environmental opportunities the site offered, what technical or environmental problems were encountered and how they were solved, or how the decision on what services are appropriate to offer was made. The project proponent is encouraged to add other appendices to document additional pertinent information.

Appendix A: ENVIRONMENTAL OPPORTUNITIES AND LIMITATIONS

Appendix A is a report on the environmental opportunities and limitations of the marina site. The site analysis should include planning as well as environmental considerations since both influence development potential. Planning and environmental limitations are, in many cases, not readily separable. For instance, allowable coverage and permissible uses may be both regulatory and environmental issues.

The site analysis should discuss the existing situation, the physical, environmental, and regulatory limits imposed on the site and its surroundings, and an evaluation of the opportunities that the site offers. A qualified marina designer/engineer should participate in the site analysis as part of the planning team or as an advisor to the team.

The topics below are examples of issues to be addressed and may or may not apply to a given site. Other pertinent topics should be identified and discussed.

The Existing Situation

If the site, or any part of the site, is not currently in marina or marina associated uses, describe the existing uses and development and relate non-marina conditions to the proposed marina use. For example, does any existing urban drainage enter the proposed marina area?

Describe the present facilities, their condition and level of use, hours and months of operation, capacity (e.g., slips, buoys, storage for boats and trailers, parking, satellite facilities, and floor space), accessory uses and other primary uses. Describe the existing ingress and egress and any associated problems. What is the status of existing permits, plans, and approvals? Were permits for any existing facilities issued since January, 1987? What elements of the facility are required by the existing permits? Is the marina or other present use in compliance with the existing permits? Explain any exceptions.

Describe the existing water quality at the site. Provide the results of water quality monitoring within the marina and the monitoring results of past dredging projects. Is there urban drainage into the marina area? If so, describe the quality and volume during spring runoff, during storm events, and the pretreatment, if any. Describe any observed flushing of the marina by storm...
events. Some of this information may not be readily available, so may require data collection over a period of time. A water quality monitoring program should be initiated as early in the planning process as feasible.

**Opportunities Offered by the Site**

Assess the site potential in relation to the thresholds and the Goals and Policies. For example, assess the opportunities to upgrade the marina and mitigate existing site problems. Is there the potential for improving water quality in the marina, and could the need for dredging be eliminated or reduced and spoil disposal facilitated? Could the visual quality of the marina be improved? How can public access to Lake Tahoe be increased?

Is there space to expand on-shore support facilities? Can the water area be reorganized to accommodate more boats without the expense and environmental impacts of enlarging the water area? Can the water area be expanded without creating a navigation hazard?

Are there other recreational facilities in the area (e.g., beaches, picnic areas, viewpoints, bike paths, or campgrounds) which could interact favorably with the marina? Could they increase public access to Lake Tahoe and the market for accessory marina services, e.g., tour boats, rentals, and instruction? Is the site served by public transit, or could it be? Evaluate the potential for participating in a water borne transit service.

Survey the community for complementary facilities nearby such as marine hardware and equipment stores, markets, food service, ice machines, laundromats, sail makers, upholstery shops, or bait and tackle shops. Evaluate the potential for shared parking at peak times, for instance with business offices which are closed on weekends and holidays, on a long term basis. What compatible off-season uses might be appropriate?

**Limitations of the Site**

Give the size of the land area, the land capability classifications, the shorezone tolerance districts, and the existing and allowable coverage. Has the land capability classification been field verified? How large is the water area of the facility?

What PAS or CP applies? What marina, water oriented, or complementary uses are permissible? Is the site in a recommended CP, redevelopment, or other special plan area? What zoning restrictions from other jurisdictions apply?

Describe the environment surrounding the site including whether urban or rural and existing air and water quality. Is the site within an SEZ or flood plain? What erosion or sedimentation problems does the site present? Do sediments contain toxic materials or excess nutrients? Does the site require maintenance and/or bypass dredging? How often? How will the spoils be disposed of?

Is the site in fish spawning or feed and cover habitat? How close is the mouth of any spawning stream to the facility? Describe habitats for sensitive plants or land animal species on the site or nearby which could be affected.
Are the surroundings compatible with marina development? Could they have a negative impact on the quality of recreation offered by the marina, or could the marina affect negatively the surrounding homes, businesses, the environment, or other recreational facilities? Might the situation be conducive to conflicts over parking, traffic, water or air quality, drainage, or noise?

Are the backshore and shoreline stable? Analyze the littoral processes. What is the predominant littoral drift direction? Describe any erosion or deposition along the adjacent shoreline. What are the predominant wind directions and fetch? What design restrictions do prevailing winds, weather conditions (wind velocity and fetch, icing), or littoral drift impose? What wave conditions would the site design need to address?

Is the geology of the lakebed in the area stable? Is it compatible with marina development? Will dredging efforts be hampered by the underlying substrate?

What is the air quality status of the area? Describe the existing motor vehicle traffic access and level of service at nearby intersections.

Are public services such as water, sewers, and paved roads adequate to support marina expansion? Are emergency services such as fire, security, rescue, or medical adequate, and what is their typical response time?

What are the applicable scenic quality ratings? Describe any applicable scenic resources ratings which would influence the development potential on the site. What CWEL and single event noise standards apply, and are they currently being met?

Is navigation congested in the area? Evaluate existing boat and other water borne traffic in the vicinity and the potential for congestion on the water. Describe any navigation hazards nearby, natural or man-made.

Appendix B: NEEDS ASSESSMENT

It goes without saying that no marina expansion would take place if there were no perceived market for the facilities. Waiting lists for similar facilities are an indication of need. But need for what? The planning team is to refine the marina inventory and needs assessment [16.7.C(2)]. The inventory should include a complete description of the existing facilities. The needs assessment should include an analysis of the type of facilities and services the marina should offer to serve the needs of the public.

Inventory

Describe all existing facilities, commercial and accessory uses and services, and their capacities. To determine boating PAOT capacity, see the Project Design section in this document. Include docks, piers, slips, boat hoists, launching ramps, fueling facilities, pump-out stations, restrooms, parking spaces, chandlery, food services, health and safety facilities, access and egress, buoys, tour boats, charters, repair areas or shops, sailing schools, yacht clubs, and other such facilities.
The description of the existing facilities should include the size and location of other TRPA units of use including accessory uses, and including but not limited to commercial floor area, residential units, tourist accommodation units, and any PAOT capacity.

Include in the inventory an existing facilities site plan showing the location of all the above described facilities or use areas and the existing coverage. The descriptions and plan should be clear to facilitate verification at the site visit.

Any existing off-site uses such as parking should be included in the inventory and site plan with a description of the control of the site, e.g., outright ownership, lease, etc.

**Needs Assessment**

The assessment should include at minimum:

- How many and what size and type of boat should be accommodated?
- What services and amenities are in demand?
- What necessary or desirable services are not conveniently available?
- What mix of facilities, permanently occupied slips (seasonal or long term leases), tourist occupied slips (short term use), launching facilities, and commercially oriented (charters, fishing guide boats, tour boats, rentals) would provide the best public access to Lake Tahoe?
- What is the projected use in terms of hours, days, and months of operation?
- How to respond to projections for population growth, and demographic and economic changes?

The needs assessment should explain the source of the data, how they were collected and analyzed for this assessment, and the conclusions reached.

In the process of the needs assessment, if it is determined that there will be a gradual growth rather than an immediate need for facilities, or that the type of facilities in demand will shift (always a possibility), a phased approach may be prudent. If so, the projected phases should be incorporated, to the degree possible, into the four major sections of the master plan to minimize the need for amending the plan.

**Appendix C: RELATIONSHIP TO TRPA STANDARDS:**

Appendix C should contain documentation that the master plan complies with the TRPA regulations. TRPA standards applicable to marina development are found in the Goals and Policies, throughout the Code of Ordinances, and in the applicable PAS or CP. A completed compliance checklist should be included in Appendix C.

The Compliance Checklist is intended to bring the attention of the steering committee and the planning team to the standards most likely to apply to developing a master plan. The checklist is not to be considered as inclusive as each master plan will have unique features to which other standards may apply.
The master plan should be developed with the required findings and other standards and guidelines in mind.

1. The Code of Ordinances

Consistency with the Code of Ordinances must be considered and documented in the development of each master plan. In reviewing the Code, keep in mind that it is often amended, and new chapters are added on occasion. While master plans must comply with the entire Code, some chapters are more directly applicable than others.

Chapter 16 and Chapters 50 through 56 set forth the provisions directed at master plans and development in the shorezone and the backshore. Section 50.3 lists the required findings for approval of all projects within the shorezone and lakezone. These and the numerous other parts of the Code which apply to the plan should be cited. Permit applications will be reviewed for compliance with the Code at the time of review. The chapters of the Code most likely to apply to marinas are listed in the compliance checklist at the end of this chapter of the guidelines.

2. The Plan Area Statements or Community Plans

Marinas must be permissible in the plan area and the shorezone tolerance district where the facility is, or will be, located in order to construct, expand, or intensify existing marina uses. Where a CP or any other type of special plan (a specific plan or redevelopment plan) is applicable, the marina master plan must conform to the CP or special plan. In some instances, a CP may substitute equal or superior standards for those in the Code. A master plan may specify permissible uses.

Subsection 16.5.B provides that no master plans are to be adopted in areas within a CP boundary until the CP is adopted, unless the CP is not expected to be adopted in three years. If the CP is not expected to be adopted within three years, a master plan may be approved if it meets the applicable provisions of subparagraphs 14.6.C(1) through (5). These subparagraphs pertain to the following: (1) the goals of the community plan; (2) assessment of environmental opportunities and limitations; (3) the inventory and needs assessment; (4) applicable ordinance standards and constraints and direction from other all applicable jurisdictions; and (5) analysis of draft alternative plans.

The Water Quality Management Plan for the Lake Tahoe Region (208 Plan)

Volume I examines water quality control needs and programs, and assesses development impacts. It cites state standards and TRPA thresholds for surface waters and littoral waters which are applicable to marinas.

Volume II, the Handbook of Best Management Practices provides guidance for erosion control, surface water management, dredging, underground tanks, shorezone structures, beach replenishment, pump-out facilities, boat and marina maintenance, and other shorezone practices.
Volume III establishes standards for development in SEZs. Some marinas are in SEZ areas.

5. Other Design Standards and Guidelines

Certain standards, such as those relating to parking, scenic resources protection, and revegetation allow for some creativity in planning. Guidelines for meeting many of these standards are found in the TRPA Design Review Guidelines, and the Scenic Quality Implementation Program. The design methods discussed in the Design Review Guidelines will meet or exceed the adopted TRPA standards in the Code.

6. Compliance Checklist

Complete the Compliance Checklist on the following pages by checking off the referenced material as it is consulted, and submit the checklist as part of Appendix C.
COMPLIANCE CHECKLIST

The Ordinances: The following chapters of the TRPA Code of Ordinances are the most likely to contain provisions applicable to marina master plans. Because each plan will be unique, additional chapters may apply to the proposed project. If so, add them to the checklist.

____ Chapter 2, Definitions
____ Chapter 5, Environmental Documentation
____ Chapter 13, Plan Area Statements and Maps
____ Chapter 14, Community Plans
____ Chapter 16, Specific and Master Plans
____ Chapter 18, Permissible Uses
____ Chapter 20, Land Coverage Standards
____ Chapter 23, Noise Limitations
____ Chapter 24, Driveway and Parking Standards
____ Chapter 25, Best Management Standards
____ Chapter 27, Basic Service Requirements
____ Chapter 28, Natural Hazard Standards
____ Chapter 29, Historic Resource Protection
____ Chapter 30, Design Standards
____ Chapter 33, Allocation of Development
____ Chapter 50, Review of Projects in the Shorezone and Lakezone
____ Chapter 51, Permissible Uses and Accessory Structures in the Shorezone and Lakezone
____ Chapter 52, Existing Structures
____ Chapter 53, Shorezone Tolerance Districts and Development Standards
____ Chapter 54, Development Standards Lakeward of High Water
____ Chapter 55, Development Standards in the Backshore
____ Chapter 56, Mitigation Fee Requirements
____ Chapter 64, Grading Standards
____ Chapter 75, Sensitive and Uncommon Plant Protection and Fire Hazard Reduction
____ Chapter 77, Revegetation
____ Chapter 79, Fish Resources
____ Chapter 81, Water Quality Control
____ Chapter 82, Water Quality Mitigation
____ Chapter 91, Air Quality Control
____ Chapter 93, Traffic and Air Quality Mitigation Program

Add any additional applicable chapters below.
The Plan Area Statement: Review the master plan for compliance with the applicable PAS for the following:

PAS No. _______ Shorezone Tolerance District _______

- Planning Considerations
- Special Policies
- Permissible Uses in the plan area
- Permissible Uses in the Shorezone Tolerance District
- Special Programs

The Community Plan: If the project is in a Community Plan Area, review the master plan for compliance with the Community Plan.

Community Plan Name _______________________

The Shorezone BMPs: Review master plan for compliance with the BMP Manual, with particular reference to the Shorezone Practices as listed below.

- BMP65, Protection of Shorezone Vegetation
- BMP66, Revetments
- BMP67, Bulkheads
- BMP68, Jetties
- BMP69, Breakwaters
- BMP70, Beach Replenishment
- BMP71, Dredging
- BMP72, Turbidity Curtain
- BMP73, Pump-out Facilities
- BMP74, Boat and Marina Maintenance

The TRPA Design Review Guidelines: Review the master plan for compliance with the Design Review Guidelines, particularly the chapter listed below.

- Chapter 11, Shorezone
Chapter V.  PROJECT DESIGN

A.  Planning Considerations

A marina may affect the surrounding community in a number of ways, and in turn the community needs will influence the design of a marina.  Given the level of economic and environmental interaction between a marina and the community, particularly in communities of limited size, the marina owner or developer needs to assess this interaction prior to making decisions on future plans.  This chapter highlights a number of factors to be considered in marina design.

Site Limitations

The available land base and water quality impacts are likely to be the factors controlling marina capacity.  Among the first decisions to be made are:  how many boats can the off-shore space support, what is the market (how many and what size and type of boats), and how can water quality impacts be controlled?  These questions would be addressed in the reports on the needs assessment and the environmental opportunities and limitations of the site.

Land coverage limitations and mitigation standards for the backshore in Section 55.4 are applicable to marinas.  For other sensitive lands, refer to Chapter 20.

Marina design capacity should be aimed at providing safe, high quality service at periods of average peak use as may be expected on an August weekend, but not necessarily for peak demand such as usually occurs over Labor Day weekend.  Average peak use should be established on a case by case basis for each marina.  The size and character of the land base will determine what amenities and services can be offered.  Part of the land base will have to be dedicated to water quality protection.

Visual Impact

Marina facilities should be designed to conform to the recommendations of the TRPA Design Review Guidelines for projects in the shorezone.  Many marinas are situated so that they can be seen from the highways as well as from Lake Tahoe.  These marinas will need to consider their visual impact when viewed from the scenic highway corridors and from offshore.

Public Access

Marinas are encouraged to operate boat launching facilities to provide public access to Lake Tahoe.  Plans should include access for the handicapped, with convenient parking, to allow them safe passage to a point where they can embark on a vessel.  Subsection 54.12.3 of the TRPA Code requires all commercial and tour boat facilities to be located within a marina facility.

PAOT Capacity

Marina recreation capacity is described in summer day use PAOTs (see Definitions in Section C).  A minimum of 2,000 summer day use PAOTs have been reserved for
marina expansion. One boat, ready to go, i.e. in a slip, at a mooring buoy, or in stacked storage, represents one PAOT. Although a boat can serve more than one person at a time, marinas are not designed to have all the boats at the facility in use at one time. A survey conducted on a high use weekend afternoon indicated that at such times an average of one out of three boats may be in use, though the ratio varied among the marinas. An average of three persons per boat should be assumed.

Accessory uses do not require PAOTS because they normally cater to persons already using a facility, thus do not represent additional service capacity. Certain uses, however, would tend to draw in and serve more people, so they would not be accessory uses and would require PAOT or other allocation. Jet ski rentals would be one example of a use which would be likely to draw additional users to a public recreation facility (not necessarily a marina). They would require summer day use PAOTs if the facility were subject to PAOT allocation. However, the PAOTs would not be drawn from the marina reserve PAOT pool. Jet ski rentals would have to be considered in calculating the necessary parking capacity.

Chapter 51 does not list residential or tourist accommodation units as permissible uses in the shorezone. Boats must not be used as residential or tourist accommodation units, however, a moored privately owned boat may be used occasionally for overnight stays.

Basic Services

Water, electricity, sewage, fire protection, and security services must be available to accommodate the expanded marina use. For safety, electrical services should be underground. It is absolutely necessary to assure that no power lines are located where they could be contacted by masts, boat hooks, or any other conductive equipment.

Marina Support Facilities

Certain standards applicable to new marinas and expansions are set forth in Subsection 54.12.C of the Code. At commercial marinas and harbors, public restrooms, fueling facilities, chemical fire retardant distribution systems, trash receptacles, and pump-out facilities for boat sewage are required. Disposal facilities for portable type sewage containers should be provided also. The more accessible the waste disposal facilities are, the more likely they are to be used. Prevention of boat sewage waste pollution will be in accordance with an enforcement program developed by the Marina Owners Association and approved by TRPA.

Boat washing facilities, if any, must be connected to a sewer system or an acceptable alternative such as a debris trap and sump which will be emptied regularly as provided in the operations plan. Connections to sewer systems may require special arrangements with the service district such as permits, pretreatment of discharges, and fees for service. Gas pumping facilities are required to have emergency and standard shut-off systems. Adequate parking must be provided to accommodate all uses and activities associated with the marina. A water treatment system for waters contained within the marina must be provided.
Fueling, sewage pump-out, and portable sanitation flushing facilities need to be carefully placed. They should be located in a place which is convenient to encourage use by all boaters (e.g., boaters from private piers and non-commercial moorings) but where they won't block traffic in and out of the marina entrance. Emergency spill containment equipment must be right at hand, not stored somewhere ashore.

Parking and Traffic Analysis

Parking space shall be provided for all marina users, including boat users, visitors, marina employees, tour boats, fishing guide-boats, rental boats, bars or restaurants, launching facilities, and other accessory or commercial uses.

Parking for the handicapped shall be provided and, at a minimum, must meet local jurisdiction standards. Handicapped parking should be close to building entrances. Wheelchair ramps should be provided at all curbs.

All parking should be provided onsite. Marinas in community plans may be able to participate in community parking areas provided by that community plan.

Offsite parking may be permitted pursuant to Subsection 4.20(3) of Ordinance 87-8 where parking demand can be met by alternative means and there is the means to ensure compliance. A convenient drop-off point should be provided if there is any offsite parking. Consideration should be given to the distance which marina patrons will be willing to walk, and transportation should be offered if necessary. The impacts of offsite parking must be discussed in the parking and traffic analyses discussed below.

Parking Analysis  A competent technical parking analysis shall be conducted for each master plan. The parking analysis shall include a parking demand estimate based on data collected from Memorial Day through Labor Day. If there are multiple uses on the site, a shared parking analysis using site specific or regional data may be prepared. This analysis should follow the methodology cited in the report, Shared Parking, (Urban Land Institute, 1983). The parking analysis shall also include a parking management program. The parking management program should:

1. Reduce the area devoted to parking;
2. Control illegal, haphazard, and spill-over parking;
3. Manage boat trailer parking; and
4. Reduce VMT.

Traffic Analysis  A competent technical traffic analysis shall be prepared for any proposed expansion. At minimum, the traffic analysis shall include the elements listed in Subsection 93.3.B of the TRPA Code.

In the parking and traffic analyses, limited credit may be taken for transit and pedestrian access, when available.

Long Term Boat Trailer Parking

Alternatives to long term boat trailer storage at marinas should be explored;
shoreline property is too valuable to be used for storage. Ideally, boat owners should keep their empty boat trailers at home, at a commercial storage lot, or on paved parking lots, onsite or offsite, which are screened from view.

TRPA may approve demonstration projects using vegetated areas on non-sensitive lands for long term boat trailer storage. These demonstration projects would be directed to sites with existing storage problems. Access to unpaved storage areas would be limited, and, if feasible, the area should be designed for multiple uses, e.g., to accommodate temporary storage of dredged materials for dewatering. Vegetation maintenance would be insured through various enforcement mechanisms including securities, periodic inspections, and stipulated fines for violations.

Accessory Uses

Examples of possible accessory uses, in addition to those listed in the definition of accessory uses, are marina general offices, charter boats, salvage operations, water-oriented instruction, trailer storage, boat sales, chanderies, tackle shops, boating provisions and snack shacks, restrooms, and convenience facilities for boaters.

Operation of accessory uses shall be in accordance with the standards and criteria set forth in the Code. The criteria in Chapter 33 for accessory uses designed to serve a non-commercial primary use are the following: there is no separate entrance for the accessory use; the accessory use is compatible with the size and patronage of the primary use; the accessory use does not rely on separate parking; the accessory use is not separately advertised; the use season of the accessory use corresponds to that of the primary use; the accessory use does not generate additional vehicle trips; and in applicable instances, the accessory use is principally for service or repair rather than sales.

Breakwaters and Jetties

The design of breakwaters and jetties should be performance oriented and take into consideration water quality standards. To be effective in protecting the marina, the structures must be designed to suit the individual site. In addition to water quality, the direction and force of storms, safety, the direction of littoral currents, the need for dredging, maintenance, and impacts on fish habitat and scenic resources need to be considered in planning marina enclosures.

Sloping rock revetments on the outside of marinas are more effective than vertical surfaces in absorbing wave force and provide better fish habitat. Vertical surfaces create more turbulence and may lead to undermining by wave action. Floating breakwaters may be effective in some areas. Enclosed facilities may offer opportunities for water quality treatment.

Mitigation for marina structures may be needed. These may include pollution source control, spill contingencies, management and monitoring for water quality, fish and wildlife habitat protection and enhancement, and others, depending upon the site analysis. The site analysis should include study of alternative types and configurations of structures.
Mitigation for marina structures may be needed. These may include pollution source control, spill contingencies, management and monitoring for water quality, fish and wildlife habitat protection and enhancement, and others, depending upon the site analysis. The site analysis should include study of alternative types and configurations of structures.

Structures built on any jetties, breakwaters, or piers to lakeward of high water must be consistent with the TRPA Code and the applicable state and local regulations. The visual impact of any structures contemplated must be considered, and any structures must be consistent with the Design Review Guidelines. Superstructures are not permitted.

Water Treatment Systems

"An ounce of prevention is worth a pound of cure" certainly applies to water quality protection. Marinas are often receptacles for onsite and offsite runoff and drainage. Thus, they mirror and sometimes accentuate the environmental conditions in the surrounding area. Any pollutants which can be prevented from entering the marina are pollutants which will not have to be dealt with by the water treatment system.

Water treatment systems should be considered in the broad sense, in that any treatment which is employed to improve and maintain water quality would be a component of the water treatment system. The type of water treatment necessary would depend entirely on the marina site. Artificial circulation or aeration may be required if low oxygen conditions occur in the water or the substrate.

To the extent that any runoff reaching the marina can be pretreated, the water treatment required within the marina will be simplified. Pretreatment may consist of directing the flow through vegetation which can capture nutrients and sediments before they can reach the marina. Infiltration will reduce runoff and siltation in the marina.

Driveways, launching ramps, and boat washing facilities should be kept clean, and any petroleum products, chemicals, and soil coming off them should be intercepted by slotted drains directed into sumps which can be pumped and possibly equipped with absorbent material.

The type of water treatment necessary will be dictated by the results of the water quality monitoring, both pre- and post-construction. There would be a three part approach: (1) establishing the existing water quality conditions; (2) planning how to meet water quality standards; and (3) development of the water treatment system or program. Water quality standards are subject to change and must be met even if they are changed. If tributyltin is found to be a problem, sediments containing the compound may have to be removed. Details on the water treatment system and water quality mitigation for each specific marina should be worked out with the appropriate agencies (TRPA and Lahontan Regional Water Quality Control Board in California or the Division of State Lands in Nevada) early in the planning process.

Slip facilities

Metal or concrete pilings may be used. Decks should be non-skid. Piers may be
fixed or floating. The water level fluctuations in Lake Tahoe, up to six feet, are at the upper limit for fixed piers. Fixed piers may be preferred where the water level fluctuates five feet or less. Fixed piers can last longer and require less upkeep than floating piers, and may be better suited to areas where they are exposed to storm waves.

Floating piers inside marinas, because they remain at water level, are safer for boarding, are easier to dock at, and may be less prone to damage boats. Floating piers can be constructed so they can be removed from the water in the winter. This entails some expense, but can avoid ice damage, provides the opportunity for inspection and maintenance, and would also facilitate dredging. A mix of fixed and floating piers could be a good approach.

Slips may be single or double wide. Double-wide slips cost less and require less space than single-wide slips. Dockside electricity and storage are optional but desirable. Other dockside utilities may encourage live-aboards, which are prohibited, and create enforcement problems.

Main walkway piers should be six or more feet wide to allow the use of carts to carry supplies and allow passing room. Floating finger piers should be a minimum of two feet wide. Finger piers at double wide slips should be wider for safety. Fixed finger piers should be wider also to make them safer to scramble on and off at low water.

**Lighting:** Marina lighting needs to be adequate for safety and security, but it should not be so bright as to create glare. Lights should be directed downward and shielded if necessary. Low level light fixtures should be used.

**Fire Protection**

Fire retardant chemicals should be available at intervals specified by local regulations or no more than 200 feet along the main walkways. The cabinets for the chemicals should be painted red for easy identification.

**Dredging and Disposal of Spoils**

Maintenance and bypass dredging are common sources of water quality problems. Marinas should be designed to reduce the need for dredging and to allow water circulation within the marina while providing shelter from rough water. The location and configuration of a marina and its entrance are highly technical problems to be worked out by a marina engineer.

Reduction of dredging in construction and maintenance will result in improved water quality, lower construction costs, long range economies, and more satisfactory service to customers. The marina plan should consider the need for dredging and how it will be done, the quantity and quality of spoils, and the method and location for their disposal. If trucks may be used to haul dredging equipment or spoils, the master plan should provide for access to the dredge site. Spoils must not be disposed of in a manner which is detrimental to fish habitat or any other threshold standard.
B. References


TRPA sources:

Exhibit A to Resolution 82-11, Resolution of the Governing Body of the Tahoe Regional Planning Agency Adopting Environmental Threshold Carrying Capacities for the Lake Tahoe Region (1982)


TRPA Code of Ordinances (1987, as amended)

TRPA Draft Parking Ordinance (1988)


TRPA Scenic Quality Implementation Program (1989)
C. Definitions

Accessory use: Section 18.2 of the Code defines an accessory use "as a use, building, or other facility customarily a part of any primary use; that is clearly incidental and secondary to the primary use; that does not change the character or the intensity of the primary use; and that does not operate independent of the primary use. Examples of accessory uses related to marinas are as follows: "...marine sales and repairs, parking lots, maintenance facilities, employee facilities other than housing, secondary residence, water-oriented outdoor recreation concessions, bars and restaurants, and other uses listed in the definition of a primary use as accessory." The latter, in accordance with the definition of marinas in Section 51.4, may include "water-oriented services, such as rowing clubs; boat rentals; storage and launching facilities; sport fishing activities; excursion boat and sightseeing facilities; and other marina-related activities, including but not limited to, fuel sales and boat and engine repair." In the same Section, examples of water-oriented outdoor recreation concessions suitable for marinas include water-oriented outdoor recreation uses, such as fishing guide services, parasailing, and recreation equipment rental, including boats and wind surfing.

Average peak use: The average of the peak usage over a period of time.

Backshore: The area from the high water elevation 6229.1 feet Lake Tahoe Datum (LTD) shoreward through the area of wave run-up plus ten feet, or through the area of instability plus ten feet (see subsection 55.1.8 of the Code for more detail).

Beach replenishment: Beach replenishment is the artificial placement of large quantities of sand in the shoreszone to restore beaches diminished by erosion.

Boat launching facility: Recreational establishments which provide boat launching, parking, and short term trailer storage for the general public. Long term storage, mooring and maintenance of boats is included under marinas.

Buoy: A float anchored to a lake bottom which serves as a boat mooring, navigation aid, hazard warning, or similar use.

Bypass dredging: Rearranging earthen material within the same body of water without removing the material from the body of water.

Commercial boating: Commercial use of pleasure craft or other vessel on a body of water.

Dredging: Removing or rearranging earthen materials which are lakeward of the high water line.

Expansion: An increase in size or extent of an existing structure or use that results in additional commercial floor area, additional residential units, additional tourist accommodation units, additional PAOTs, additional land coverage, vehicle trips, or other capacities regulated by the TRPA Code.
Foreshore: The zone of a lake level fluctuation which is between the high and low water level. (For Lake Tahoe, the elevations are 6229.1 feet and 6223.0 feet LTD respectively.)

Lakezone: The zone including that area of a lake located beyond the lakeward limits of the nearshore.

Land coverage: 1) A man-made structure, improvement or covering, either created before February 10, 1972 or created after February 10, 1972 pursuant to either TRPA Ordinance No. 4, as amended, or other TRPA approval, that prevents normal precipitation from directly reaching the surface of the land underlying the structure, improvement or covering. Such structures, improvements and coverings include but are not limited to roofs, decks, surfaces that are paved with asphalt, concrete or stone, roads, streets, driveways, parking lots, tennis courts, patios; and 2) lands so used before February 10, 1972, for such uses as for the parking of cars and repeated pedestrian traffic that the soil is compacted so as to prevent substantial infiltration. A structure, improvement or covering shall not be considered as land coverage if it permits at least 75 percent of normal precipitation directly to reach the ground and permits growth of vegetation on the approved species list. Common terms related to land coverage are:

1) Hard coverage—man-made structures as defined above.
2) Soft coverage—compacted areas without structures as defined above.

Maintenance dredging: The dredging of areas that previously have been dredged to maintain authorized lake bottom elevations.

Marinas: Establishments providing water-oriented services such as yachting and rowing clubs; boat rentals; storage and launching facilities; sport fishing activities, excursion boats and sight-seeing facilities; and other marina related activities, including but not limited to fuel sales and boat and engine repair. Marinas contain water oriented facilities and structures which are regulated and defined in Chapter 5. Condominiums, hotels, restaurants, and other such uses with accessory water oriented multiple use facilities are not considered marinas. Outside storage or display is included as part of the use.

Nearshore: The zone extending from the low water elevation of Lake Tahoe to a lake bottom elevation of 6193.0 feet LTD, but in any case, a minimum lateral distance of 350 feet measured from the shoreline.

Non-contiguous parcels: Parcels that are not adjacent parcels and whose boundaries do not touch.

PAOT: Stands for People at One Time, a unit used by TRPA to measure recreation capacity. A PAOT represents the number of persons that a recreation facility is designed to accommodate at one time. Another recreation term used similarly is instantaneous capacity.


Pump-out facilities: Pump-out facilities consist of the equipment needed to pump or otherwise receive and transfer contents of vessel holding tanks into a
sewage retention and/or disposal system approved by the permitting organizations.

Revetment: Revetments are sloping structures armored with stone or other material through which water may pass.

Shorezone: The area including the nearshore, foreshore, and backshore.

Stacked storage: Stacked storage refers to boats which are stored ashore, on racks or other structures either outdoors or inside a storage building, which can be retrieved for launching on demand or by reservation.

Stream environment zone: Generally an area which owes its biological and physical characteristics to the presence of surface or ground water. The precise definition is an area determined to be an SEZ by application of the criteria set forth in TRPA’s Water Quality Management Plan for the Lake Tahoe Region, Volume III, SEZ Protection and Restoration Program, dated November, 1988.

Superstructure: A structure within the foreshore or nearshore, other than a handrail, davit, or flagpole but including boathouses, which projects above high water or ground elevation more than five feet.

Tour boat operation: Commercial use of a vessel rated by the U.S. Coast Guard for more than 30 passengers, where such passengers board and unboard at a single site.

Water borne transit: Commercial use of a vessel rated by the U.S. Coast Guard for more than 30 passengers, where such passengers board and unboard at different sites.

Water-oriented outdoor recreation concessions: Water-oriented outdoor recreation uses, such as food and beverage facilities at public beaches; fishing guide services; parasailing; recreation equipment rental (e.g., boats, wind surfing and beach equipment); but not including boat slips, boat and engine repair or the sale of fuel.
CHAPTER VI. ENVIRONMENTAL DOCUMENTATION STANDARDS

Article VII(a) of the Compact and Chapter 5 of the Code require TRPA, when acting upon matters that may have a significant effect on the environment, to prepare and consider a detailed environmental impact statement (EIS) before deciding to approve or carry out any project. In such cases, the TRPA executive director will cause an EIS to be prepared. If an EIS is required for the master plan, which would generally be the case, the Governing Board must certify the EIS prior to the adoption of the master plan.

Except for planning matters (i.e., items on which TRPA is not taking an action), ordinary administrative and operational functions of TRPA, or exempt classes of projects (refer to Code subsection 5.5.A for exempt classes of projects), TRPA shall use either an initial environmental checklist (IEC), or environmental assessment (EA), to determine whether an environmental impact statement shall be prepared for the project.

Environmental documentation for marina master plans will require either an EA or EIS. The primary goal of either document is to disclose, in sufficient detail, the site-specific environmental effects (both positive and negative) of each master plan alternative being considered, together with measures necessary to mitigate the identified negative effects to a less than significant level. This disclosure will permit TRPA to make an informed decision whether to approve the project, and if appropriate, under what conditions. See Appendix B for TRPA environmental documentation procedures.

Environmental documentation standards for EA and EIS documents adopted by TRPA as Article VI of TRPA’s Rules of Procedure are included in the suggested scoping below. California has specific California Environmental Quality Act (CEQA) requirements to be met, and there are National Environmental Protection Act (NEPA) requirements for projects in areas subject to Federal Agencies. TRPA will assist master plan proponents in coordinating the TRPA environmental documentation with the state and federal agencies.

1. Suggested Scoping for the EIS

Subsection 54.12.A of the Code specifies that the EIS must assess potential impacts on beach erosion, prime fish habitat, water quality and clarity. These would be the minimum requirements. The EIS is also charged with determining the public need for additional marina facilities. To the extent feasible, the environmental documentation should fulfill applicable TRPA, CEQA, and NEPA requirements to avoid the need to prepare multiple documents.

The Alternatives

The alternatives examined should include, at a minimum, no project, increasing public access to Lake Tahoe without expanding the physical size of marinas, and at least two levels of expansion. Variants of the alternatives should be examined also to be sure that the best possible project emerges.
Specific Impact Analysis

The environmental documentation must address each of the adopted TRPA thresholds for the record. Environmental impacts will be site specific. The pre-project monitoring program should assess the existing conditions at the facility and help identify and quantify current and future potential impacts.

Environmental impacts most likely to be encountered include the following:

Water Quality Degradation due to dredging and spoils disposal, eutrophication, turbidity from dredging, prop wash, or other bottom disturbance, organic litter and waste, depletion of dissolved oxygen, toxic substances such as tributyltin, paint scrapings, and solvents, fuel and sewage spills, soil and water contamination from surface runoff, parking and service areas, bilge water, boat washing, maintenance and repair activities, and from off-site sources.

Air Quality Solvents, traffic (individual and cumulative impacts), fuel vapors, diesel fumes (boats, buses, etc.)

Shoreline Stability Erosion, sedimentation, interference with littoral drift, the effect of marina structures on the stability of neighboring shorelines.

Natural Resources Fish habitat, special interest animals (eagles, osprey?) and plant species (Horippa subumbellata), onshore wildlife including water fowl, and nearby spawning streams.

Scenic Quality Effects on shoreline and highway travel route rating maintenance or attainment, signage, parking area, storage, shape, color, and scale of buildings relative to surroundings; lights, for security and evening activities; effect of litter and waste on scenic quality.

Recreation Impact on fulfillment of the threshold for public outdoor recreation capacity.

Noise Noise resulting from boats, cars, and marina activities; CNEL and single noise events.

Historic and Cultural Resources Effect of the project on historic, cultural and archeological resources. The entire shorezone is sensitive in regard to such resources, and much of the earliest development occurred along the Lakefront.

Navigation Effects of intensified boat and other traffic on the water, and creation of hazards to navigation resulting from marina structures. Effects within and outside the marina confines including boat wakes need to be considered.

2. Site Analysis

For the purpose of site analysis, the marina should be analyzed as though it were itself a small enclosed lake. The inputs into the marina (lake), the ambient levels, and outputs need to be identified and described quantitatively and qualitatively. It should be remembered that inputs into the "lake" or marina may have three sources, off-site, on-site, and internal or within the marina, and the sources should be specified if possible.
Off-site sources could include such factors as ground water, storm runoff and sediment from adjacent properties or streets, highway noise, and visual clutter in the background. On-site sources could include runoff from parking and repair areas, seepage from fueling and sewage tanks, and the like. Internal sources could include bilge pumping, fuel spills, trash, and noisy boats.

Sedimentation from littoral transport may have an external source but be a problem only because of the presence of the the marina. Likewise, depletion of dissolved oxygen (DO) may result from externally derived organic material but be a problem only because of the marina. For this reason, they, and other similar factors, should be regarded as internal.

Discharge into the marina (lake) would be assumed to be into Lake Tahoe unless special programs or procedures, such as harvest of macrophytes, spill containment with disposal of sorbant materials, water treatment systems, or export of dredge spoils are employed. If such procedures will be used, they should be described as to method, season, predicted result, and the like.

Mitigation for off-site inputs may be addressed externally, e.g., through a community plan or public service facility, cooperatively as by joint efforts by neighboring property owners, or internally, but they must be considered.

A budget should be prepared characterizing each input, its source, and fate. A brief description and a table or matrix displaying the budgets and corresponding mitigations would be the basis for impact analysis. The net result in the budget for each input would be the contribution of the project to cumulative impacts. The net impact could be either a positive or a negative effect.

3. Cumulative Impacts

Cumulative impacts include impacts which taken as an individual project may be insignificant, but cumulatively, along with all other proposed marina projects could become significant. The environmental documentation should include a discussion of the proposed marina expansion in relation to existing facilities and other reasonably foreseeable projects. This could include the cumulative impacts of multiple marina projects or multiple local projects.

An example of possible cumulative impacts on the Lake as a whole is the sum of nutrient loading and toxic and petrochemical substances from each marina, added to the contributions of other marinas. Another example would be impact on air quality as it might be affected by VMTs generated by several marinas, or on the level of service as traffic might be affected by several new projects of various types nearby. Littoral transport and shoreline stability could be cumulatively affected by several marinas within a littoral transport cell.

Any of the impact categories identified in the section above on impact analysis could contribute to cumulative impacts. The goal would be for the cumulative impacts to result in a net cumulative benefit, that the Lake will be better off with the projects than at present.

TRPA will provide an analysis of cumulative impacts in cooperation with Marina Owners Association. The analysis would be a reference document which would
address cumulative impacts regionally or Lakewide and would be a reference document which the marina owners could refer to in their discussions of cumulative impacts for specific projects. A cooperative approach sharing information and resources could reduce the expense to individual marina proponents for cumulative effects analysis.

4. Mitigation

For each of the identified impacts, or potential impacts, mitigation measures must be identified and described which will reduce the impacts to less than significant levels, both singly and the project’s contribution cumulatively.

The environmental documentation should contain a summary of the necessary mitigation and how the success of the mitigation will be tracked.
Appendix A

CHAPTER 61

WATER QUALITY CONTROL

Chapter Contents

61.0 Purpose
61.1 Applicability
61.2 Discharge Limits
61.3 Snow Disposal
61.4 Salt and Abrasive Control
61.5 Spill Control
61.6 Pesticide Use
61.7 Fertilizer Management

61.0 Purpose: This chapter implements the Water Quality Subelement, Land Use Element of the Goals and Policies. This chapter also implements, in part, TRPA's programs to attain and maintain federal, state, and local water quality standards, under Article V(d) of the Compact.

61.1 Applicability: This chapter sets forth standards for the discharge of runoff water from parcels, and regulates the discharge of domestic, municipal, or industrial wastewaters. These standards and prohibitions apply to discharges to both surface waters and groundwaters.

61.2 Discharge Limits: Discharges shall not exceed the following standards:

61.2.1 Surface Runoff: Pollutant concentrations in surface runoff shall not exceed the following readings at the 90th percentile:

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Maximum Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissolved Inorganic Nitrogen as N</td>
<td>0.5 mg/l</td>
</tr>
<tr>
<td>Dissolved phosphorus as P</td>
<td>0.1 mg/l</td>
</tr>
<tr>
<td>Dissolved Iron as Fe</td>
<td>0.5 mg/l</td>
</tr>
<tr>
<td>Grease and Oil</td>
<td>2.0 mg/l</td>
</tr>
<tr>
<td>Suspended Sediment</td>
<td>750 mg/l</td>
</tr>
</tbody>
</table>

(1) If the constituent levels of water entering a site from upstream areas are of superior or equal quality to the above, those waters shall meet the quality level listed above prior to discharge from the site.

(2) If the constituent levels of waters entering a site do not meet the quality levels above, there shall be no increase in the concentrations of these constituents in water discharged from the site, based on a 24-hour average.
Discharges to Groundwaters: Waters infiltrated into soils shall not exceed the following maximum constituent levels:

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Maximum Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Nitrogen as N</td>
<td>5 mg/l</td>
</tr>
<tr>
<td>Total Phosphate as P</td>
<td>1 mg/l</td>
</tr>
<tr>
<td>Iron as Fe</td>
<td>4 mg/l</td>
</tr>
<tr>
<td>Turbidity</td>
<td>200 JTU</td>
</tr>
<tr>
<td>Grease and Oil</td>
<td>40 mg/l</td>
</tr>
</tbody>
</table>

Where there is a direct hydrologic connection between ground and surface waters, discharges to groundwater shall meet the standards for surface runoff. A direct hydrologic connection is presumed to exist wherever, by virtue of proximity to a surface water body, nature of soils, or slope or gradient, and the residence time of runoff water discharged into the ground is too short to remove pollutants from the runoff. Sediment traps, consistent with the Handbook of Best Management Practices, shall be used to protect infiltration devices from excessive levels of siltation.

Prohibition Of Wastewater Discharge: The discharge of domestic, municipal or industrial wastewater to Lake Tahoe, its tributaries, the groundwaters of the Tahoe region, or the Truckee River within the Tahoe region, is prohibited, except for existing discharges under alternative plans for wastewater disposal authorized by state law and approved by the state agency of appropriate jurisdiction. California and Nevada prohibit wastewater discharge through the enactment of the Porter-Cologne Act, and an Executive Order by the Governor of Nevada dated January 27, 1971.

1. Holding Tanks And Other No-Discharge Systems: To avoid a discharge of wastewater that is prohibited, holding tanks or other no-discharge systems may be approved in the following instances:

   (a) As a temporary measure associated with a temporary use, including but not limited to, sporting events, community events, and construction.

   (b) As a permanent measure associated with remote public or private recreation sites, including but not limited to, trailheads, undeveloped walk-in campgrounds, and summer home tracts where connection to a sewer system is not feasible or would create excessive adverse environmental impacts.
81.2.C

(2) To help prevent accidental releases of sewage, sewage collection and treatment districts including, but not limited to, the South Tahoe Public Utility District, the Tahoe City Public Utility District, the North Tahoe Public Utility District, the Incline Village General Improvement District, the Douglas County Sewer Improvement District, and the Tahoe Truckee Sanitation Agency, shall prepare and submit a report to TRPA within 120 days of a determination by the district that any unit treatment process, or major component of its collection system serving the Tahoe Region, has reached 85 percent of its design capacity. Such report shall identify what measures, if any, will be needed to accommodate projected population increases consistent with the Regional Plan, including capital improvements, operational changes, changes in discharge permits, and changes in financial programs.

(3) In conjunction with TRPA project approvals for agencies which collect or transport sewage, including but not limited to the South Tahoe Public Utility District, the Tahoe City Public Utility District, the North Tahoe Public Utility District, the Incline Village General Improvement District, the Douglas County Sewer Improvement District, and the Tahoe Truckee Sanitation Agency, TRPA shall require that such agencies shall have in place and shall vigorously implement plans for detecting and correcting sewage exfiltration problems in their collection and transport facilities.

81.3 Snow Disposal: All persons conducting public, commercial or private snow removal or disposal operations shall dispose of snow in accordance with site criteria and management standards in the Handbook of Best Management Practices, the Design Review Guidelines, and the criteria below:

81.3.A Requirements For Individual Parcels: Removal of snow from individual parcels shall be limited to structures, paved areas, and unpaved areas necessary to safely park or provide safe pedestrian access.
§ 81.3.B Requirements For Dirt Roads: Snow removal from dirt roads is subject to regulation pursuant to Chapter 9. When TRPA approves snow removal from a dirt road, pursuant to project approval or in accord with provisions of Chapter 9, it shall specify required winterization practices, BMPs, the specific means of snow removal, and a schedule for either paving the dirt road or ceasing snow removal.

§ 81.4 Salt And Abrasive Control: Salt and abrasives used to control ice on streets, highways, and parking areas shall be regulated in accordance with the following standards:

§ 81.4.A Storage Areas: Storage areas for deicing salt and abrasives shall be in conformance with the TRPA Handbook of Best Management Practices.

§ 81.4.B Reporting: The state highway departments, and other large users of salt and abrasives identified by TRPA, shall initiate a tracking program to monitor the use of deicing salt in their respective jurisdictions. Annual reports shall be presented to TRPA on June 1 of each year and shall include information on the rate, amount, and distribution of use. This information shall be presented in a format developed by TRPA and shall be verifiable. TRPA shall incorporate this information into its annual monitoring report in accordance with Chapter 32.

§ 81.4.C Restrictions: The use of deicing salt and abrasives may be restricted where damage to vegetation in specific areas may be linked to their use, or where their use would result in a violation of water quality standards. Mitigation for the use of road deicing salt or abrasives may be required and may include requirements to use alternative substances or change distribution patterns, frequency of application, and amount of application. Revegetation of parcels may be required where evidence indicates deicing salts or abrasives have caused vegetation mortality. Memorandums of understanding may be entered into with highway and street maintenance organizations to address use of salts or abrasives in relation to safety requirements.

§ 81.5 Spill Control: All persons handling, transporting, using, or storing toxic or hazardous substances shall comply with the applicable requirements of state and federal law regarding spill prevention, reporting, recovery, and clean-up. Sewage collection, conveyance, and treatment districts shall have sewage spill contingency, prevention, and detection plans approved by the state agency of appropriate jurisdiction and submitted to TRPA for review and approval, within three years of the effective date of the Regional Plan.
81.5.A Cooperative Sewage Spill Plans: Sewage collection, conveyance, and treatment districts may join together to develop cooperative plans, provided that the plans clearly identify those agencies covered by the plan, are agreed to by each agency, and are consistent with applicable state and federal laws.

81.5.B Sewage Spill Plan Criteria: Sewage spill contingency, prevention, and detection plans shall comply with the criteria set forth by the state agencies of appropriate jurisdiction and TRPA. Such plans shall include provisions for detecting and eliminating sewage exfiltration and stormwater infiltration from sewer lines and facilities.

81.6 Pesticide Use: The use of insecticides, fungicides and herbicides shall be consistent with the Handbook of Best Management Practices. TRPA shall discourage pesticide use for pest management. Prior to applying any pesticide, potential users of pesticides shall consider integrated pest management practices including alternatives to chemical applications, management of forest resources in a manner less conducive to pests, reduced reliance on potentially hazardous chemicals, and additional environmentally sound pest management tactics.

81.6.A Criteria For Use: The following criteria for use apply:

(1) Only chemicals registered with the Environmental Protection Agency and the state agency of appropriate jurisdiction shall be used and only for their registered application.

(2) Alternatives to chemical application shall be employed where practical.

(3) No detectable concentration of any pesticide shall be allowed to enter any stream environment zone unless TRPA finds that application of the pesticide is necessary to attain or maintain the environmental threshold standards.

81.7 Fertilizer Management: The following criteria apply to fertilizer management:

81.7.A Fertilizer management shall be consistent with the Handbook of Best Management Practices applicable to inorganic and organic applications. Fertilizer management programs involve the following considerations:

(1) The appropriate type of fertilizer to avoid release of excess nutrients;
(2) The rate of application to avoid excessive application;
(3) The frequency of application to minimize the use of fertilizer;
(4) Appropriate watering schedules to avoid excessive leaching and runoff of nutrients;
(5) Preferred plant materials to minimize the need of fertilizer;
(6) Landscape design that minimizes the use and impacts of fertilizer application;
(7) Critical areas (including areas in close proximity to Lake Tahoe or other bodies of water) where the use of fertilizer shall be avoided;
(8) Design and maintenance of drainage control systems including holding ponds where necessary; and
(9) Surface and groundwater monitoring programs, where appropriate.

81.7.B Fertilizer Management Programs: Projects that include landscaping or revegetation shall include, as a condition of approval, a fertilizer management program that addresses each of the considerations set forth in Subsection 81.7.A.

81.7.C Existing Uses: At the request of TRPA, existing uses that require regular fertilizer maintenance, including but not limited to, golf courses, parks, cemeteries, recreational ball fields, and residential yards, shall be required to submit fertilizer management programs for review and approval by TRPA. Review criteria shall include the considerations listed in Subsection 81.7.A. Failure to comply with the request, or to provide a program satisfactory to TRPA, may result in action under Chapter 9. Large users of fertilizers, as identified by TRPA, shall initiate a tracking program to monitor fertilizer use on lands under their control. Such users shall present annual reports to TRPA by June 1 of each year. The report shall include information on the rate, amount, and location of use. This information shall be presented in a format developed by TRPA, and shall be verifiable. TRPA shall include this information in its annual monitoring report under Chapter 32.
<table>
<thead>
<tr>
<th>Constituent</th>
<th>Surface Water</th>
<th>TP</th>
<th>Cl&lt;sup&gt;-&lt;/sup&gt;</th>
<th>EC&lt;sub&gt;4&lt;/sub&gt;</th>
<th>B</th>
<th>Total N</th>
<th>Total P</th>
<th>Total Fe</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lake Tahoe</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>60/65</td>
<td>3.0 / 3.0</td>
<td>1.0 / 1.0</td>
<td>0.01 / 0.01</td>
<td>0.15 / 0.15</td>
<td>0.005 / 0.005</td>
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<td></td>
</tr>
<tr>
<td>Fallen Leaf Lake</td>
<td>50 / -</td>
<td>0.30 / 0.30</td>
<td>1.0 / 1.0</td>
<td>0.02 / 0.02</td>
<td>0.20 / -</td>
<td>0.005 / 0.010</td>
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<td>Griff Creek</td>
<td>60 / -</td>
<td>0.40 / -</td>
<td>- / -</td>
<td>- / -</td>
<td>- / -</td>
<td>0.10 / -</td>
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<td></td>
</tr>
<tr>
<td>Carnelian Bay Creek</td>
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<td>- / -</td>
<td>- / -</td>
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<td></td>
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<td>- / -</td>
<td>- / -</td>
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<tr>
<td>Dollar Creek</td>
<td>60 / -</td>
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<td>- / -</td>
<td>- / -</td>
<td>0.10 / -</td>
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<td></td>
</tr>
<tr>
<td>Burton Creek</td>
<td>60 / -</td>
<td>0.30 / -</td>
<td>- / -</td>
<td>- / -</td>
<td>- / -</td>
<td>0.10 / -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verdi Creek</td>
<td>70 / 85</td>
<td>1.30 / 1.50</td>
<td>1.4 / 1.8</td>
<td>- / -</td>
<td>- / -</td>
<td>0.15 / -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackwood Creek</td>
<td>70 / 90</td>
<td>1.30 / -</td>
<td>- / -</td>
<td>- / -</td>
<td>- / -</td>
<td>0.15 / -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Creek</td>
<td>60 / -</td>
<td>0.10 / 0.20</td>
<td>- / -</td>
<td>- / -</td>
<td>- / -</td>
<td>0.15 / -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>McKinnon Creek</td>
<td>55 / -</td>
<td>0.40 / 0.50</td>
<td>- / -</td>
<td>- / -</td>
<td>- / -</td>
<td>0.15 / -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Creek</td>
<td>50 / 90</td>
<td>1.0 / 1.5</td>
<td>0.0 / 0.5</td>
<td>- / -</td>
<td>- / -</td>
<td>0.15 / -</td>
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<td></td>
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<tr>
<td>Washoe Creek</td>
<td>45 / -</td>
<td>0.40 / -</td>
<td>- / -</td>
<td>- / -</td>
<td>- / -</td>
<td>0.10 / -</td>
<td></td>
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<tr>
<td>Lone Pine Creek</td>
<td>45 / -</td>
<td>0.30 / -</td>
<td>- / -</td>
<td>- / -</td>
<td>- / -</td>
<td>0.10 / -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eagle Creek</td>
<td>35 / -</td>
<td>0.30 / -</td>
<td>- / -</td>
<td>- / -</td>
<td>- / -</td>
<td>0.10 / -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cascade Creek</td>
<td>30 / -</td>
<td>0.40 / -</td>
<td>- / -</td>
<td>- / -</td>
<td>- / -</td>
<td>0.10 / -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fallon Creek</td>
<td>60 / -</td>
<td>0.40 / -</td>
<td>- / -</td>
<td>- / -</td>
<td>- / -</td>
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<tr>
<td>Taylor Creek</td>
<td>35 / -</td>
<td>0.40 / 0.50</td>
<td>- / -</td>
<td>- / -</td>
<td>- / -</td>
<td>0.10 / -</td>
<td></td>
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<tr>
<td>Upper Truckee River</td>
<td>35 / 75</td>
<td>0.5 / 0.5</td>
<td>2.0 / 2.0</td>
<td>- / -</td>
<td>- / -</td>
<td>0.15 / -</td>
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<tr>
<td>Truckee River</td>
<td>50 / 80</td>
<td>0.15 / 0.20</td>
<td>- / -</td>
<td>- / -</td>
<td>- / -</td>
<td>0.10 / -</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Annual average Value 30th percentile value.
2. Total filtrable residue (total dissolved solids).
3. The water quality objectives presented here are derived from those contained in the Water Quality Control Plan for the North Lahontan Basin (State Water Resources Control Board and Lahontan Regional Water Quality Control Board, 1975) with the following modifications. Several of the narrative objectives applying to waters of Lake Tahoe proper, are clarified. In addition, water quality objectives limiting the nutrient content of tributary streams have been reviewed, and in some cases, revised. Revised stream standards are based on data contained in Table 5-2 of the Tahoe Regional Planning Agency draft 206 plan (1977), which classifies tributary streams as draining disturbed or undisturbed watersheds and provides a summary of measured water quality characteristics derived from a number of different monitoring programs. Data for total nitrogen, total phosphorus, and iron have been examined for the purpose of updating water quality objectives. A weighted mean concentration (weighting on a basis of the number of samples analyzed for the different monitoring programs) was first determined for each of the three nutrient constituents, for each tributary stream. For a stream draining an undisturbed watershed, the revised water quality objectives represent the weighted mean concentrations determined for that specific stream. For streams draining disturbed watersheds, revised water quality objectives are based on the overall mean nutrient concentration for all streams draining undisturbed watersheds.
4. In addition, the following standards for total coliforms shall apply to Lake Tahoe and its tributaries: the total coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 20 UFL, or not more than 10% of the total samples during any 30-day period exceed 40/100 ml.
5. In addition, the following water quality objectives apply specifically to Lake Tahoe:
   - Aflgal Growth Potential: Mean annual algal growth potential at any point in the Lake shall not be greater than twice the mean annual algal growth potential at the inanimate reference station.
   - Feeding Growth: Mean seasonal concentration of plankton organisms shall not be greater than 100 per ml and the maximum concentration shall not be greater than 500 per ml at any point in the Lake.
   - Clarity: The vertical extinction coefficient shall be less than 0.36E per meter when measured below the first meter. The turbidity shall not exceed 1 FTU at any location in the Lake, except that the Lake is allowed to determine a reliable extinction coefficient. In addition, turbidity shall not exceed 1 FTU in shallow waters of the Lake not directly influenced by stream discharges. Surface transparency shall not be decreased below levels recorded in 1967-71, based on a statistical comparison of seasonal and annual mean values.
   - Electrical Conductivity: The mean annual electrical conductivity shall not exceed 95 umhos cm at 50°C and the 90th percentile value shall not exceed 100 umhos cm at 50°C at any location in the Lake.
   - Additional Biological Indicators: Aflgal productivity and the biomass of phytoplankton, zooplankton, and periphyton shall not be increased beyond levels recorded in 1967-71, based on a statistical comparison of seasonal and annual mean values.


46
<table>
<thead>
<tr>
<th>Area</th>
<th>Hydrologic Unit, Subunit Drainage Feature</th>
<th>Description</th>
<th>Mun</th>
<th>Agr</th>
<th>Ind</th>
<th>Gwr</th>
<th>Rec 1</th>
<th>Rec 2</th>
<th>Warm</th>
<th>Cold</th>
<th>Wild</th>
<th>Sal</th>
<th>Pow</th>
<th>Rare</th>
<th>Frash</th>
<th>Receiving Water</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Perennial Stream</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td>Truckee River</td>
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<tr>
<td>BRONCO CREEK</td>
<td>Perennial Stream</td>
<td></td>
<td>X</td>
<td>X</td>
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<tr>
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ponds or reservoirs where botulism has caused problems. Recommendations have been made by NTAC for the water quality of wildlife habitats.

**Preservation of Rare and Endangered Species (Rare)**

Water quality criteria to be achieved to encourage development and protection of rare or endangered species should be the same as those for protection of fish and wildlife habitats generally. However, where rare or endangered species exist, special control requirements may be necessary to assure attainment and maintenance of particular quality criteria, which may vary slightly with the environmental needs of each particular species.

**Freshwater Replenishment (FRSH)**

Water quality levels are important here only as they pertain to replenishing freshwater for inland lakes and streams of varying salinities. For the most part, it applies to groundwater pumped for other beneficial uses which, when released from those uses, provides replenishment water. It also applies to reclaimed water used for makeup water in irrigation reservoirs.

**Existing Statewide Plans and Policies**

The State Water Resources Control Board has adopted a "Statement of Policy with Respect to Maintaining High Quality of Waters in California" and the "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California".

**Nondegradation Policy**

On October 28, 1968, the State Water Resources Control Board adopted Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California". A copy of this policy is included in the "Special Appendix Plans and Policies". While requiring the continued maintenance of existing high quality waters, the policy provides conditions under which a change in water quality is allowable. A change must:

- be consistent with maximum benefit to the people of the State,
- not unreasonably affect present and anticipated beneficial uses of water, and
- not result in water quality less than that prescribed in water quality control plans or policies.

**Thermal Plan**

The "Water Quality Control Plan for the control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California", adopted by the State Water Resources Control Board on May 16, 1972, specifies water quality objectives, effluent quality limits, and discharge prohibitions related to thermal characteristics of interstate waters and waste discharges.

**Water Quality Objectives**

The water quality objectives which follow supersede and replace those contained in the Interim Water Quality Control Plan (1972) and where necessary the water quality control policies for the Truckee River (1967), Lake Tahoe (1966) (the addendum to the Lake Tahoe Policy regarding Control of Siltation (1970)), East and West Forks of the Carson River (1967), Bryant Creek (1970), East Walker River (1967) and West Walker River and Topaz Lake (1967).

Controllable water quality factors shall conform to the water quality objectives contained herein. When other factors result in the degradation of water quality beyond the levels or limits established herein as water quality objectives, then controllable factors shall not cause any further degradation of water quality.
Controllable water quality factors are those actions, conditions, or circumstances resulting from human activities that may influence the quality of the waters of the State and that may be reasonably controlled.

These water quality objectives are considered to be necessary to protect those present and probable future beneficial uses enumerated in Chapter 2 of this plan and to protect existing high quality waters of the State. These objectives will be achieved primarily through the establishment of waste discharge requirements and through the implementation of this water quality control plan.

The Regional Board in setting waste discharge requirements will consider, among other things, the potential impact on beneficial uses within the area of influence of the discharge, the existing quality of receiving waters, and the appropriate water quality objectives. The Regional Board will make a finding as to the beneficial uses to be protected within the area of influence of the discharge and establish waste discharge requirements to protect those uses and to meet water quality objectives.

General Objectives

Wherever the existing quality of water is better than the quality of water established herein as objectives, such existing quality shall be maintained unless otherwise provided by the provisions of the State Water Resources Control Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California", including any revisions thereto. A copy of this policy is included verbatim in the Special Appendix, "Plans and Policies."

Objectives For Surface Waters

In addition to the objective of nondegradation, the following water quality objectives apply to all surface waters of the Basin. These objectives represent maximum acceptable levels of water quality that shall be maintained in the event that exceptions are made with respect to nondegradation in accordance with the provisions of the State's Non-degradation Policy.

Color

Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses. (This objective is believed to be equivalent to the State of Nevada standard of a maximum 10 Platinum Cobalt Unit Change).

Tastes and Odors

Waters shall not contain taste or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance or adversely affect beneficial uses.

Floating Material

Waters shall not contain floating material, including solids, liquids, foams and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

Suspended Material

Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.

Settleable Material

Waters shall not contain substances in concentrations that result in the deposition of material that cause nuisance or adversely affect beneficial uses.

Oil and Grease

Waters shall not contain oils, greases, waxes or other materials in concentrations that result in a
visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.

Biostimulatory Substances

Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses. Numerical objectives for nutrients are specified in Table 4-1.

Sediment

The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

Turbidity

Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in turbidity shall not exceed normal levels by more than 10 percent.

Additional turbidity objectives for specific surface waters are contained in Table 4-1.

pH

The pH shall not be depressed below 6.5 nor raised above 8.5, except in Eagle Lake where the pH shall not be depressed below 8.0 nor raised above 9.5 and in Lake Tahoe where the pH shall not be depressed below 7.0 nor raised above 8.4.

Changes in normal ambient pH levels shall not exceed 0.5 units in fresh waters with designated COLD or WARM beneficial uses.

Dissolved Oxygen

The dissolved oxygen concentration, in terms of percent saturation, shall not be depressed by more than 10 percent, nor shall the minimum, dissolved oxygen concentration at any time be less than 80 percent of saturation or less than the following limits, whichever is more restrictive:

Waters designated WARM.........5.0 mg/l
Waters designated COLD.........7.0 mg/l

Bacteria

Waters shall not contain concentrations of coliform organisms attributable to human wastes. Also, in waters designated for contact recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200/100 ml, nor shall more than 10 percent of total samples during any 30-day period exceed 400/100 ml, with the following exceptions:

Eagle Lake
Susan River
Lake Tahoe
Truckee River
East Fork Carson River
West Fork Carson River
East Walker River
West Walker River
Lake Topaz
Bryant Creek

The fecal coliform concentration for these waters and their tributaries, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200/100 ml, nor shall more than 10 percent of total samples during any 30-day period exceed 400/100 ml.

In waters designated for noncontact recreation (REC-2) and not designated for contact recreation (REC-1), the average fecal coliform concentration for any 30-day period, shall not exceed 2000/100 ml nor shall more than 10 percent of samples collected during any 30-day period exceed 4000/100 ml.
Temperature objectives for COLD interstate waters are as specified in the "Water Quality Control Plan for Control of Temperature in The Coastal and Interstate Waters and Enclosed Bays and Estuaries of California" including any revisions thereto. A copy of this plan is included verbatim in the "Special Appendix, Plans and Policies".

In addition, the following temperature objectives apply to surface waters:

The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not create a nuisance or adversely affect beneficial uses.

At no time or place shall the temperature of any WARM water be increased by more than 5°F above natural receiving water temperature. Temperature of COLD water shall not be raised above natural levels.

Toxicity

All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration or other appropriate methods as specified by the Regional Board.

The survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary, for other control water that is consistent with the requirements for "experimental water" as described in Standard Methods for the Examination of Water and Wastewater, latest edition. As a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour bioassay.

In addition, effluent limits based upon acute bioassays of effluents will be prescribed where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances will be encouraged.

The discharge of wastes shall not cause concentrations of un-ionized ammonia (NH₃) to exceed 0.025 mg/l (as N) in receiving waters.

Pesticides

The summation of concentrations of total identifiable chlorinated hydrocarbons, organophosphates, carbamates and all other pesticide and herbicide groups, in all waters of the basin, shall not exceed the lowest detectable levels, using the most recent detection procedures available. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of pesticides in excess of the limiting concentrations set forth in California Administrative Code, Title 17, Chapter 5, Subchapter 1, Group 1, Article 4, Section 7019, Table 4.

Chemical Constituents

Water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the limits specified in California Administrative Code Title 17, Chapter 5, Subchapter
Waters designated for use as agricultural supply (AGR) shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use.

Numerical objectives for individual waters are contained in Table 4-1.

Radioactivity

Radioactivity shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

Waters shall not contain concentrations of radionuclides in excess of the limits specified in California Administrative Code, Title 17, Chapter 5, Subchapter 1, Group 1, Article 4, Section 7019, Table 5.

Water Quality Objectives for Specific Surface Waters

Numerical water quality objectives for specific surface waters of the Basin are presented in Table 4-1.

As part of the State’s continuing planning process, data will be collected and numerical water quality objectives will be developed for those constituents in Table 4-1 where sufficient information is presently not available for the establishment of such objectives.

Objectives for Groundwater

In addition to the objective of non-degradation, the following water quality objectives apply to all groundwaters of the Basin. These objectives represent maximum acceptable levels of water quality that shall be maintained in the event that exceptions are made with respect to non-degradation in accordance with the provisions of the State’s Nondegradation Policy.

Tastes and Odors

Groundwaters shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

Bacteria

In groundwaters used for domestic or municipal supply (MUN) the median concentration of coliform organisms over any seven-day period shall be less than 2.2/100 ml.

Chemical Constituents

Groundwaters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the limits specified in California Administrative Code, Title 17, Chapter 5, Subchapter 1, Group 1, Article 4, Section 7019, Tables 2, 3, and 4.

Groundwaters designated for use as agricultural supply (AGR) shall not contain concentrations of chemical constituents in amounts that adversely affect such beneficial use.

Radioactivity

Groundwaters shall not contain concentrations of radionuclides in excess of the limits specified in California Administrative Code, Title 17, Chapter 5, Subchapter 1, Group 1, Article 4, Section 7019, Table 5.

Objectives For Specific Groundwaters

Specific mineral objectives for groundwater basins are not included at this time due to the wide range of values experienced in each basin. Considerable data is available for establishing existing quality levels in specific parts of a basin as a
result of concentrated usage of groundwater in these areas. However, data on vertical and horizontal variations in water quality within the basins are not presently developed, and it is not possible at this time to establish meaningful mineral objectives for these waters.

As part of the State's continuing planning process, appropriate data will be collected and numerical water quality objectives developed for mineral constituents in groundwaters where sufficient information is presently not available.
445.[147] Lake Tahoe.

WATER QUALITY STANDARDS
Lake Tahoe

Control Point: Existing sampling points.

pH Units
Single Value……………………..within range 7.0-8.4

Dissolved Oxygen - Percent of Saturation
Single Value…………………….....not less than 90.0

Chlorides - mg/l
Annual Average..........................not more than 3.0
Single Value..............................not more than 5.0

Soluble Phosphorus - ug/l
Annual Average..........................not more than 7.0

Total Soluble Inorganic Nitrogen - ug/l
Annual Average..........................not more than 25.0

Coliform Organisms - MPN/100 ml
A density not greater than the values shown in the following table:

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<th>Median</th>
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<td>Developed Lake Front Areas</td>
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<td>100 yards offshore.</td>
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<td>240.0</td>
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Temperature °C
Permissible temperature increase above natural receiving water temperature............ None

Algal Growth Potential - the mean annual algal growth potential at any point in the lake must not be greater than twice the mean annual algal growth potential at a limnetic reference station and using analytical methods determined jointly with the Environmental Protection Agency, Region IX.
Plankton Count - number per m³
Average (June through September) .... not to exceed 180.0
Single Value ...................... not to exceed 50.0

Specific Electrical Conductance < micromhos per cm at 25°C
Annual Average ................... not to exceed 95.0
Single Value ...................... not to exceed 105.0

Clarity - The vertical extinction coefficient of less than 0.08 per meter when measured at any depth below the first meter and a turbidity less than 3 Jackson Units at any point of the lake too shallow to determine a reliable extinction coefficient.

Turbidity - In order to minimize turbidity levels in Lake Tahoe and tributary streams and control erosion:

1. The discharge of solid or liquid waste materials including soil, silt, clay, sand and other organic and earthen materials to Lake Tahoe or any tributary thereto is prohibited.

2. The discharge of solid or liquid waste materials including soil, silt, clay, sand and other organic and earthen materials to lands below the high water rim of Lake Tahoe or along any tributary to Lake Tahoe in a manner which will cause the discharge of the waste materials to Lake Tahoe or any tributary thereto is prohibited.

3. The placement of man-made disturbance of material below the high water rim of Lake Tahoe or along any tributaries to Lake Tahoe in a manner which will cause the discharge of solid or liquid waste materials including soil, silt, clay, sand and other organic and earthen materials to Lake Tahoe or any tributary thereto is prohibited.

[Environmental Comm'n, Water Pollution Control Reg. part 9
4.2.5, Table 44, eff. 5-2-78; A 1-25-79; 8-26-79; 1-25-80; 12-3-80]
April 3, 1990

To: TRPA Advisory Planning Commission

From: Agency Staff

Subject: Adoption of Threshold Indicators and Targets for Air Quality, Chapter 32 (Regional Plan and Threshold Review)

Proposed Action: Recommendation for adoption of Threshold Indicators and Targets for Air Quality.

Background: In August, 1982, TRPA adopted a comprehensive list of environmental threshold carrying capacities ("thresholds") for the Tahoe Region. The adoption of the thresholds took place pursuant to the requirements of Article V(b) of the Tahoe Regional Planning Compact (P.L. 96-551, 94 Stat. 3239) and is set forth in TRPA resolution 82-11.

Under Article V(c) of the Compact, TRPA is required to amend its Regional Plan so that, as implemented through TRPA ordinances, rules, and regulations, it achieves and maintains the thresholds; each element of the plan must contain implementation provisions and time schedules for implementation.

According to Article V(d) of the Compact, the Regional Plan shall also provide for attaining and maintaining federal, state, or local air and water quality standards, whichever are strictest, in the respective portions of the Region for which they are applicable. Each element of the plan, where applicable, shall identify the means and time schedule by which air and water quality standards will be attained.

Chapter 32 of the TRPA Code of Ordinances establishes the process to identify the means and time schedules for attaining and maintaining the TRPA thresholds and other applicable local, state, and federal standards. For each threshold (or applicable local, state, and federal standard) TRPA must identify a corresponding indicator, target attainment dates, interim targets and evaluation intervals, and applicable compliance measures and document the effectiveness and adequacy of the compliance measures.

Agenda Item IV.8
Adoption of Threshold Indicators and Targets for Air Quality

April 3, 1990

Page 2

The following is a brief summary of the provisions of Chapter 32:

32.3.A **Indicators.** TRPA shall identify indicators for each threshold, with appropriate measurement standards (i.e., units of measurement). The indicators may be regional or sub-regional.

32.3.B **List.** TRPA shall maintain a list of the indicators.

32.3.C **Current Status.** TRPA shall list the status of each indicator and, where reliable data is lacking, shall identify a program and timetable to provide reliable data.

32.3.E **Additional Factors.** TRPA shall identify and report on the status of additional factors (i.e., factors in addition to the listed indicators) which may be useful in evaluating threshold attainment and maintenance.

32.4.A **Target Dates.** Within 120 days of the effective date of the Regional Plan, TRPA shall list each threshold or standard that is in attainment, and establish target dates for attainment of all other thresholds and standards.

32.4.B **Interim Targets.** At the same time it sets the target dates, TRPA shall identify major evaluation intervals correlated with interim targets, using the appropriate units of measurement.

32.5.A **Compliance Measures.** Within 120 days of the effective date of the Regional Plan, TRPA shall maintain a list for each threshold and standard of all the compliance measures actually being implemented to attain and maintain the standard.

32.5.B **Effectiveness.** The list developed in 32.5.A shall show how much, and at what rate, the compliance measure is contributing (and will contribute) to attainment or maintenance of the threshold or standard. This analysis must be consistent with the target dates in 32.4.A and 32.4.B.

32.5.D **Adequacy.** TRPA shall ensure the attainment and maintenance of thresholds and standards on the established target dates, taking growth into account, and considering the need for supplemental compliance measures where necessary.

32.6.A **Supplemental Compliance Measures.** In addition to the list in 32.5.A, TRPA shall maintain a list of additional compliance measures to implement as necessary to attain and maintain the thresholds and standards.

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Adoption of Threshold Indicators and Targets for Air Quality
April 3, 1990
Page 3

At least every five years, TRPA will evaluate the results of its monitoring programs. TRPA will also publish annual or semi-annual reports on implementation of the monitoring program covering progress on threshold attainment and maintenance, research, and overall monitoring results. (See the TRPA Goals and Policies, 1986, p. VII-26.) If the Regional Plan produces the expected benefits to the environment sooner than anticipated, or more slowly than anticipated, as determined by evaluation of the indicators identified in this document, TRPA will make adjustments to the Regional Plan. Based on results of scientific studies, TRPA may also adjust the targets to make them consistent with the best scientific information. (See the Goals and Policies, p. VII-23.)

In conjunction with the five year reviews, TRPA will issue a progress report covering: (1) the amount and rate of progress toward the targets established in accordance with subsections 32.4.A and B of the Code, (2) the cumulative impacts on each indicator of projects approved by TRPA from the effective date of the Regional Plan, (3) the extent to which the Region and applicable sub-regions are making progress toward the thresholds and applicable standards, and (4) recommendations for implementation of supplemental or contingency measures necessary to attain and maintain the targets, thresholds, and applicable standards, or modification or elimination of compliance measures in place to attain and maintain the targets, thresholds and applicable standards.

Summary of Indicators to be Adopted: Following is an index of the identified air quality standards:

| AQ-1 | CO (non-attainment) |
| AQ-2 | O<sub>3</sub> (non-attainment) |
| AQ-3 | particulate (non-attainment) |
| AQ-4 | visibility (not known) |
| AQ-5 | U.S. 50 traffic volume (non-attainment) |
| AQ-6 | wood smoke (not known) |
| AQ-7 | VMT (non-attainment) |
| AQ-8 | atmospheric nutrient loading (non-attainment) |

In November, 1988, the TRPA Governing Board adopted AQ-7 and AQ-8; AQ-1 through AQ-6 have not been adopted by TRPA.

Recommendation: TRPA staff is requesting that the Advisory Planning Commission recommend adoption of the threshold indicators and targets contained in Attachment A by the Governing Board.

If you have any questions on this agenda item, please contact Curtis Jordan at (702) 588-6782.

Agenda Item IV.B
ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

Category: air quality
Parameter: carbon monoxide (CO)
Standard:
- States and TRPA: 6 ppm (8-hr avg.)
- Federal: 9.3 ppm (8-hr avg.)
- California: 20 ppm (1-hr avg.)
- Federal and Nevada: 35 ppm (1-hr avg.)

2. INDICATOR (UNITS): Second-highest CO concentration at Stateline, California station (ppm).

3. MONITORING SUMMARY: There are three continuous CO monitoring stations on the South Shore, operated by CARB and NDEP. The four stations are:
   - Stateline California, and Lake Tahoe Boulevard, and High Sierra Casino-Hotel (NDEP). Continuous data is recorded automatically and compiled by CARB and NDEP, who issue periodic data reports.

4. ATTAINMENT STATUS: Non-attainment. Two one-hour or eight-hour periods in a given year with average concentrations over the applicable state, federal, or TRPA limit is considered a violation of the standard. Excessive levels are expressed in number of periods exceeding the standard, number of days in which periods exceeded the standard, and concentrations which exceeded the standard. The first and second highest concentrations observed during the year are normally reported for each station. In 1988, there were six exceedences of the 9.3 ppm 8-hour federal standard at the Stateline-California station, and no exceedences of the 20 ppm 1-hour California standard.

5. TARGET DATE:
   - Federal 8-hr standard, 1993
   - Federal and Nevada 1-hr standard, in attainment
   - State and TRPA 8-hr standard, 2003
   - California 1-hr standard, 2003

6. EVALUATION INTERVAL: annual

7. INTERIM TARGETS: See Figure AQ-1, forecast line; second-highest concentration shall not exceed RFP line.

8. COMPLIANCE MEASURES:
   a. MEASURES IN PLACE (see Exhibit 1)

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<th>Mass Transportation:</th>
<th>01, 04, 05, 07</th>
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<td>Transportation-Related Measures:</td>
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<tr>
<td>Non-Transportation-Related Measures:</td>
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ATTACHMENT A
b. EFFECTIVENESS OF MEASURES IN PLACE

Levels in excess of the applicable standards are most-commonly associated with cold temperatures, heavy traffic, traffic congestion, and stable meteorologic conditions (such as those seen during nighttime temperature inversions) in the vicinity of the Stateline-California station, located immediately east of the intersection of Park Avenue and U.S. 50 in the City of South Lake Tahoe. Control measures which reduce vehicular CO emissions, reduce traffic volumes at that location, or increase traffic speeds at that location on peak winter evenings are the most effective at reducing CO concentrations. With no other controls, and taking into account projected growth in the Tahoe Region, the cleaner vehicle fleet would be expected to bring about attainment of the federal standard by 2000. See Table AQ-1a for information on effectiveness and costs of in-place compliance measures. The measures in place will not attain the state standards in the foreseeable future.

c. SUPPLEMENTAL MEASURES (see Exhibit 2)

Mass Transportation: 01, 02, 05, 09, 10, 11, 13, 15, 18, 20
Streets and Highways: 22, 23, 24, 27
Non-Motorized Transportation: 46, 47, 48, 49
Transportation Systems Management: 51, 52, 53, 54, 55, 56, 57, 59
Transportation-Related Measures: 62, 63, 68
Non-Transportation-Related Measures: 64, 69

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES

Of the supplemental compliance measures, the most effective at reducing CO concentrations at the Stateline-California station will be the operational improvements which divert traffic away from the intersection of Park Avenue and U.S. 50, including the south shore redevelopment circulation improvements (23) and the right-turn lane, Pioneer Trail-to-Park Avenue (22). The right-turn lane will probably precede the redevelopment circulation improvements by several years. In a worst-case scenario, transit measures are less effective than operational improvements at reducing CO concentrations. See Table AQ-1b for information on effectiveness and costs of supplemental compliance measures. Implementation of the supplemental measures will proceed in accordance with the Regional Transportation Plan and the TRPA Air Quality Plan. The Air Quality Plan is being revised in 1990.
9. ADEQUACY OF COMPLIANCE MEASURES: TRPA modeling using the CALINE line source dispersion model of CARB to predict carbon monoxide concentrations is documented in the FFIS: Plan Area Statements and Implementing Ordinances of the Regional Plan (TRPA, 1987) and the Final EIR/EIS, Regional Transportation Plan, Lake Tahoe Basin (TRPA, 1988). In place control measures, consisting of federal and state emission limitation, coupled with limited growth, will allow the federal standard to be met by 1995. Currently quantified supplemental control measures, primarily circulation improvements associated with redevelopment, may attain the TRPA standard by 2005. Remaining supplemental control measures, including alternative fuels, will be quantified during preparation of the post-1987 air quality plan.
### Table AQ·1.a
Compliance Measures in Place

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### Table AQ·1.b
Supplemental Compliance Measures

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</table>
ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

STANDARD

Category: air quality
Parameter: ozone (O₃)
Standard: Federal: 0.12 ppm (1-hr avg.)
          California: 0.09 ppm (1-hr avg.)
          Nevada: 0.10 ppm (1-hr avg.)
          TRPA: 0.08 ppm (1-hr avg.)

INDICATOR (UNITS): Number of 1-hour periods which equal or exceed the federal, state, or TRPA standard at any of the permanent monitoring sites (unitless).

MONITORING SUMMARY: There are two continuous O₃ monitoring stations on the South Shore, operated by CARB and NDEP. The two stations are: Bijou School (CARB) and High Sierra Casino-Hotel (NDEP). Continuous data is recorded automatically and compiled by CARB and NDEP, who issue periodic data reports.

ATTAINMENT STATUS: The Tahoe Region is in attainment of the Nevada and federal standards, may be in attainment of the California standard, and is not in attainment of the TRPA standard. More than one day per year with one-hour concentrations greater than the Nevada or federal standards is considered to be a violation. One one-hour period which exceeds the California or TRPA standards is considered to be a violation. In 1985, the then-California standard (0.10 ppm) was met once; The TRPA standard has been violated every year since 1978 with the exception of 1984. However, first-highest one-hour concentrations are declining.

TARGET DATE: 1991

EVALUATION INTERVAL: annual

INTERIM TARGETS: none, since attainment is expected by 1991

COMPLIANCE MEASURES:

a. MEASURES IN PLACE (see Exhibit 1)

   Mass Transportation: 01 through 09, inclusive
   Non-Motorized Transportation: 10, 11
   Transportation Systems Management: 12, 13, 14
   Transportation-Related Measures: 15, 16, 17
   Non-Transportation-Related Measures: 20, 21, 22
b. EFFECTIVENESS OF MEASURES IN PLACE

Ozone is a secondary pollutant, formed from the combination of oxides of nitrogen, hydrocarbon gases, and sunlight, and is normally found in the summer, downwind of sources of NOx and hydrocarbons, such as major highways. Ozone concentrations in the Tahoe Region may also be influenced by long-range transport of precursor compounds, such as from forest fires upwind of the Region. Since emissions of both precursors, NOx and hydrocarbons, are strongly influenced by motor vehicle emissions, compliance measures which reduce vehicle-miles-travelled (VMT) and per-vehicle emissions are the most effective at controlling ozone concentrations. See Table AQ-2a for information on the effectiveness and costs of in-place compliance measures.

c. SUPPLEMENTAL MEASURES (see Exhibit 2)

Mass Transportation: 01 to 20, inclusive, except for 05
Non-Motorized Transportation: 33-50, inclusive
Transportation Systems Management: 51, 52, 53, 54, 57, 58, 59, 60
Transportation-Related Measures: 62, 63, 68
Non-Transportation-Related Measures: 65

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES

The supplemental measures which reduce VMT or emissions of NOx and hydrocarbons are effective in reducing ozone concentrations. See Table AQ-2b for information on the effectiveness and costs of the supplemental compliance measures. Implementation of the supplemental measures will proceed in accordance with the Regional Transportation Plan and the TRPA Air Quality Plan. The Air Quality Plan is being revised in 1990.

9. ADEQUACY OF COMPLIANCE MEASURES: The combined in-place and supplemental compliance measures will reduce VMT in the Tahoe Region by 10 percent over the next 20 years, taking anticipated growth into account. Thus, emissions of ozone precursors from mobile sources will be reduced by 10 percent or more (considering the cleaner fleet and other control measures). Since ozone standard exceedences occur mainly in the summer, anticipated increases in emissions from home heating are not a factor in attainment of the ozone threshold.
Table AQ-2a
Compliance Measures in Place

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Table AQ-2b
Supplemental Compliance Measures

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<td>02, 04, 19, 46, 47</td>
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ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

Category: air quality
Parameter: particulate matter (PM$\text{_{10}}$)
Standard: federal: 50 ug/m$^3$ (ann. avg., 3 yrs. running),
150 ug/m$^3$ (24-hr mean, 3 yrs. running)
California: 30 ug/m$^3$ (ann. avg.), 50 ug/m$^3$ (24-hr avg.)

2. INDICATOR (UNITS): number of 24-hour periods exceeding the applicable
federal or state standards at any permanent monitoring station (unitless);
annual average PM$\text{_{10}}$ concentrations at any permanent monitoring station
(ug/m$^3$)

3. MONITORING SUMMARY: There are three PM$\text{_{10}}$ samplers in the Tahoe Region; two
are located at the Lake Tahoe Boulevard Station (CARB colocated with TRPA)
and one is located at the High Sierra Hotel-Casino (NDEP). Continuous data
will be recorded automatically and compiled by TRPA, CARB, and NDEP, who
issue periodic data reports.

4. ATTAINMENT STATUS: The Tahoe Region appears to be in attainment of the
federal standard, based on existing data which lacks a sufficient number of
observations to meet established criteria for representativeness. The
Region appears not to be in attainment of the California standards. Two
24-hour periods which exceed the applicable standard in a given year is
considered a violation of the standard. The annual average standard is not
to be exceeded in any year.

5. TARGET DATE: federal standard: in attainment
California standard: 2005

6. EVALUATION INTERVAL: annual

7. INTERIM TARGETS: Forecast line to be completed pending gathering of
additional data showing exact status of attainment with respect to the
California standards. A reasonable progress line shall be established by

8. COMPLIANCE MEASURES

a. MEASURES IN PLACE (see Exhibit 1)

Mass Transportation: 01 through 09, inclusive
Non-Motorized Transportation: 10, 11
Transportation Systems Management: 12, 13, 14
Transportation-Related Measures: 15, 16, 17
Non-Transportation-Related Measures: 18 through 23, inclusive
b. EFFECTIVENESS OF MEASURES IN PLACE

Particulate matter in this size range (less than 10 microns) is associated with emissions from natural sources (e.g., aerosols from pine tree respiration), blowing dust, motor vehicles, forest fires, traffic, construction, oil combustion, and diesel engines from both local and transport sources. Compliance measures which reduce VMT and which bring about the revegetation or other stabilization of disturbed areas are the most effective. See Table AQ-3a for information on the effectiveness and costs of in-place compliance measures.

c. SUPPLEMENTAL MEASURES (see Exhibit 2)

Mass Transportation: 01 through 20, inclusive
Non-Motorized Transportation: 33 through 50, inclusive, except 47
Transportation Systems Management: 51, 52, 53, 54, 57, 58, 59, 60
Transportation-Related Measures: 62, 63
Non-Transportation-Related Measures: 64, 65, 66, 67, 69

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES

Supplemental compliance measures which reduce VMT, which reduce blowing dust, and which reduce diesel emissions will be the most effective of the supplemental measures. These combined measures will reduce existing VMT by 10 percent, will reduce the amount of disturbed areas in the Region by 80 percent, and significantly reduce diesel emissions. See Table AQ-3b for information on the effectiveness and costs of supplemental compliance measures. The supplemental measures will be implemented pursuant to the Regional Transportation Plan and the Air Quality Plan for the Tahoe Region. The Air Quality Plan is being revised in 1990.

9. ADEQUACY OF COMPLIANCE MEASURES: Despite the additional development anticipated under the Regional Plan, the in-place and supplemental compliance measures will contribute to decreases in PM$_{10}$ concentrations by reducing VMT, reducing diesel emissions, reducing blowing dust, and improving highway maintenance practices. The additional development will require additional energy for heating buildings, but combustion heater and stationary source rules will constrain increases in PM$_{10}$ from home heating. In-place control measures, primarily wood stove controls and BMPs, should assure continued attainment of the federal standard while allowing growth. Supplemental control measures may be necessary to attain the stricter California standard. Source apportionment will be identified during the visibility study, and specific supplemental controls will be identified.
AQ-3, cont.

**Particulate Matter - PM(10)**

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</table>
ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

Category: air quality
Parameter: visibility
Standard: TRPA regional: 171 km, 50% of the year
97 km, 90% of the year
TRPA sub-regional: 87 km, 50% of the year
26 km, 90% of the year
California/Nevada: 30 miles (48 km) when relative humidity LT 70%

2. INDICATORS (UNITS): For regional visibility, visual range is calculated from contrast measurements and measurements of light transmittance from the TRPA visibility monitoring program. For sub-regional visibility, visual range is calculated from nephelometer data collected at the Lake Tahoe Boulevard station (km). For state visibility standards, visual range is calculated from nephelometer data collected at Bliss State Park and Lake Tahoe Boulevard for periods in which relative humidity is less than 70 percent (miles).

3. MONITORING SUMMARY: TRPA has installed an Integrated visibility monitoring stations at Lake Tahoe Boulevard in August, 1988, and will install a similar station at Bliss State Park in June, 1990. Funds have been obtained from California and Nevada to purchase the necessary equipment and services. An expert consultant has been retained, and a technical advisory committee has been formed. The monitoring stations include equipment to monitor meteorological, aerosol, and perception data.

The Lake Tahoe Boulevard site is the primary monitoring location on the South Shore. The site will include a fine particle monitor; PM10 monitor, ambient nephelometer, photography, and meteorological equipment colocated with CARB's PM10, CO, and ozone monitoring equipment. The West Shore site will characterize the regional ambient air quality of the Tahoe Region, and will have all the above equipment except the photographic system and CO, ozone, and PM-10 monitoring.

Two camera-only locations will be used to measure long-path extinction and to allow visual monitoring of the Region. These sites will be located at the Coast Guard station at Lake Forest and at a proposed site at Echo Summit viewing north across the whole Tahoe Region.

4. ATTAINMENT STATUS: Not known. TRPA thresholds represent conditions observed by Pitchford and Allison (1984) in 1981-82. The limited data that have been collected since 1988 indicates that the Region may be in attainment; more data is needed. Any single reading which fails to meet the state standard is considered a standard violation. Violations of the TRPA threshold will be determined based on percentages of the year in which visibility fails to meet the standard.

5. TARGET DATE: Not applicable until attainment status is determined.
6. EVALUATION INTERVAL: annual.

7. INTERIM TARGETS: Not applicable until attainment status is determined. If feasible, attainment status shall be identified and target dates established by December 30, 1991.

8. COMPLIANCE MEASURES

a. MEASURES IN PLACE (see Exhibit 1)

   Mass Transportation: 01 through 09, inclusive
   Non-Motorized Transportation: 10, 11
   Transportation Systems Management: 12, 13, 14
   Transportation-Related Measures: 15, 16, 17
   Non-Transportation-Related Measures: 18 through 23, inclusive

b. EFFECTIVENESS OF MEASURES IN PLACE: Degradation of visibility (visual range) is a complex phenomena involving many sources of visibility-decreasing substances and atmospheric phenomena. In general, particles and gases in the atmosphere degrade visibility by scattering and absorbing light. The particles and gases originate from the clean atmosphere; industrial and agricultural emissions; atmospheric humidity; soil dust; soot; and combustion products. Compliance measures which reduce blowing dust, auto emissions, and emissions from stationary sources and combustion heaters contribute to improved visibility. The monitoring program established in 1988 will provide detailed information on the causes of visibility degradation in the Tahoe Region, and allow TRPA to analyze the effectiveness of the listed compliance measures.

c. SUPPLEMENTAL COMPLIANCE MEASURES (see Exhibit 2)

   Mass Transportation: 01 through 20, inclusive
   Non-Motorized Transportation: 33 through 50, inclusive
   Transportation Systems Management: 51, 52, 53, 54, 57, 58, 59, 60
   Transportation-Related Measures: 62, 63, 68
   Non-Transportation-Related Measures: 64, 65, 66, 67, 69

d. EFFECTIVENESS OF SUPPLEMENTAL COMPLIANCE MEASURES: The monitoring program established in 1988 will provide detailed information on the causes of visibility degradation in the Tahoe Region, and allow TRPA to analyze the effectiveness of the supplemental measures.

ADEQUACY OF COMPLIANCE MEASURES: Although the Regional Plan will allow additional development in the Tahoe Region, in-place and supplemental compliance measures will reduce contributions of substances that degrade visibility, and should be adequate to maintain visibility at levels observed in 1981-82. The monitoring program being established in 1988 will provide detailed information on the causes of visibility degradation in the Tahoe Region, and allow TRPA to further analyze the adequacy of the compliance measures.
### AQ-4, cont.

#### Visibility

**Table AQ-4a**
Compliance Measures in Place

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**Table AQ-4b**
Supplemental Compliance Measures

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<td>02,04,19,46</td>
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</table>
ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

Category: air quality
Parameter: U.S. 50 traffic volume
Standard: TRPA, 7% reduction in traffic volume on the U.S. 50 corridor from 1981 values, winter, 4 p.m. to 12 a.m.

2. INDICATOR (UNITS): Traffic volumes on U.S. 50 immediately west of the intersection of Park Avenue in the City of South Lake Tahoe, average peak winter day, 4 p.m. to 12 a.m., sum of both directions (number of vehicles).

3. MONITORING SUMMARY: Caltrans operates a permanent traffic counter just west of the intersection of U.S. 50 and Park Avenue. Data is gathered continuously and reported annually.

4. ATTAINMENT STATUS: Non-attainment. According to the Regional Transportation Plan (TRPA, 1988), daily traffic volumes at Park Avenue and U.S. 50 during peak winter periods were between approximately 36,000 and 38,700 vehicles per day in 1981. Corresponding 1987 volumes ranged from about 36,250 to 37,700 per day. The mid-point of these ranges decreased about 1 percent from 1981 to 1987.

5. TARGET DATE: 1995 (or date of implementation of redevelopment circulation improvements)

6. EVALUATION INTERVAL: Annual

7. INTERIM TARGETS: Mass transportation improvements scheduled for implementation during the first five year phase of TRPA’s Regional Transportation Plan’s Action Element shall be implemented on or before July 30, 1993.

8. COMPLIANCE MEASURES:

a. MEASURES IN PLACE (see Exhibit 1)

Mass Transportation: 01, 04, 05, 07, 08, 09
Non-Motorized Transportation: 11
Transportation Systems Management: 12, 13
Transportation-Related Measures: 15

b. EFFECTIVENESS OF MEASURES IN PLACE: In-place compliance measures are inadequate to attain and maintain the threshold. Without supplemental compliance measures, given the additional development allowed by the Regional Plan, peak period traffic volumes would be expected to increase 15 percent or more from existing values. See Table AQ-5a for information on the effectiveness and costs of in-place compliance measures.
c. SUPPLEMENTAL MEASURES (see Exhibit 2)

Mass Transportation: 01, 02, 05, 10, 11, 13, 15, 18, 19, 20
Streets and Highways: 23
Non-Motorized Transportation: 46, 49
Transportation Systems Management: 51, 52, 53, 54, 55, 57, 59

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES: The supplemental compliance measures, primarily the redevelopment circulation improvements, are predicted to reduce peak period traffic volumes at the intersection of U.S. 50 and Park Avenue by 30 percent, taking into account the population growth associated with the Regional Plan. Operational improvements are the most effective means of reducing traffic volumes at the indicator location. See Table AQ-5b for information on the effectiveness and costs of the supplemental compliance measures.

9. ADEQUACY OF COMPLIANCE MEASURES: As stated above, in-place compliance measures are inadequate to attain and maintain the threshold. Supplemental measures will exceed those necessary to attain and maintain the threshold. Circulation improvements associated with redevelopment are the most important supplemental measures.
U.S. 50 Traffic Volume

Table AQ-5a
Compliance Measures in Place

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Table AQ-5b
Supplemental Compliance Measures

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ENIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

Category: air quality
Parameter: wood smoke
Standard: TRPA: reduce annual emissions 15% from 1981 values

2. INDICATOR (UNITS): concentration of wood smoke signature element in air samples taken at Lake Tahoe Boulevard station, determined by the TRPA visibility monitoring program (see AQ-4).

3. MONITORING SUMMARY: Wood smoke signature element will be monitored by the IMPROVE aerosol sampler in conjunction with the TRPA visibility monitoring program.

4. ATTAINMENT STATUS: Not known, pending further analysis of 1981 and current filters from air quality samplers.

5. TARGET DATE: Not applicable, pending determination of attainment status.

6. EVALUATION INTERVAL: Annual.

7. INTERIM TARGETS: If feasible, attainment status shall be determined and target dates established no later than December 31, 1991.

8. COMPLIANCE MEASURES

a. MEASURES IN PLACE (see Exhibit 1)

   Non-Transportation-Related Measures: 19, 22

b. EFFECTIVENESS OF MEASURES IN PLACE: Controls on wood heaters and open burning, set forth in Chapter 91 of the TRPA Code of Ordinances, are the main compliance measures TRPA will rely upon to attain and maintain the air quality threshold calling for reductions in wood smoke emissions. See Table AQ-6a for information on the effectiveness and costs of the in-place compliance measures.

c. SUPPLEMENTAL MEASURES (see Exhibit 2)

   Non-Transportation Related Measures: 64, 69

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES: Home weatherization improvements, solar heating improvements, and home energy conservation will supplement the effectiveness of the compliance measures already in place, and are expected to further reduce wood smoke emissions. See Table AQ-6b for information on the costs and effectiveness of the supplemental compliance measure.
9. ADEQUACY OF COMPLIANCE MEASURES: Additional development in the Region permitted by the Regional Plan will increase the need for home heating by approximately 27 percent. Wood heaters certified under Oregon or federal standards emit 41 to 52 percent as much smoke, by volume of fuel, as non-certified wood heaters. Catalytic equipped wood heaters are even more efficient; however, catalytic equipped wood heaters require routine maintenance to avoid significant deterioration in emissions.

By 2005, assuming that one half of the existing units and all of the new units are certified, wood smoke emissions should not be greater than 82 percent of the level observed in 1985.
Table AQ-6a
Compliance Measures in Place

Effectiveness:

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Table AQ-6b
Supplemental Compliance Measures

Effectiveness:

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</table>
I. AIR QUALITY

A. MASS TRANSPORTATION

(01) South Tahoe Area Ground Express (STAGE)
(02) Tahoe Area Regional Transit (TART)
(03) social service transportation providers
(04) ski shuttle services
(05) intercity bus service
(06) waterborne excursions
(07) waterborne point-to-point service
(08) commercial air carrier operations
(09) commuter/air taxi operations

B. NON-MOTORIZED TRANSPORTATION

(10) bikeways
(11) pedestrian facilities

C. TRANSPORTATION SYSTEMS MANAGEMENT

(12) employer programs
(13) neighborhood mail delivery centers (NDCs)
(14) home mail delivery

D. TRANSPORTATION-RELATED MEASURES

(15) indirect source review/air quality mitigation
(16) idling restrictions
(17) vehicle emission limitations (state/federal)

E. NON-TRANSPORTATION-RELATED MEASURES

(18) OHV controls
(19) wood heater controls
(20) gas heater controls
(21) stationary source controls
(22) open burning controls
(23) BMP and revegetation requirements
Exhibit 1B

COMPLIANCE MEASURES IN PLACE

(DESCRIPTIONS)

I. AIR QUALITY

A. MASS TRANSPORTATION

(01) South Tahoe Area Ground Express (STAGE): STAGE provides fixed route, scheduled, service within the City of South Lake Tahoe. Ridership is presently at approximately 450,000 annual passengers. STAGE is operated by Area Transit Management under contract to the City of South Lake Tahoe.

(02) Tahoe Area Regional Transit (TART): TART provides fixed route, scheduled service from Tahoma to Incline Village (Winter) with seasonal extensions to Meeks Bay and Sand Harbor (Summer). Ridership is presently at approximately 100,000 annual passengers. TART is operated by Placer County.

(03) social service transportation providers: Transportation services for the elderly and handicapped residing within the Region are provided by a variety of public and private agencies.

(04) ski shuttle services: Ski shuttles are buses or vans transporting skiers from lodging to ski areas. Almost all ski areas in and around the Region provide ski shuttles. Ridership is presently at approximately 250,000 seasonal passengers. The services are provided by public and private providers on a contract basis or with vehicles purchased by the ski areas.

(05) intercity bus services: Intercity bus services include charters, "Gambler's specials", and airporters. A number of private carriers serve the Region with charter or scheduled service. Approximately 1,350,000 visitors per year arrive by bus.

(06) waterborne excursions: Waterborne excursions are one to four hour boat trips, usually to Emerald Bay. There are four vessels with a capacity of greater than 100 passengers, and a number of smaller vessels. All are privately operated.

(07) waterborne point-to-point service: There are only limited point-to-point services operating on Lake Tahoe. The primary service is a ski shuttle service provided by the Tahoe Queen from south shore to Tahoe City several days per week.
(08) Commercial air carrier operations: Lake Tahoe Airport is served by three American Airline flights per day (usually 737-300 aircraft) with approximately 135 passengers per flight.

(09) Commuter/air taxi operations: Lake Tahoe Airport is served by up to ten American Eagle flights per day (usually Metroliner III aircraft) with approximately 19 passengers per flight.

B. Non-Motorized Transportation

(10) Bikeways: Bikeways consist of separated right-of-ways, restricted right-of-ways, and shared right-of-ways. Bikeways can serve transportation and recreation purposes. All types of bikeways are found in the Region.

(11) Pedestrian Facilities: Pedestrian facilities (sidewalks, etc.) around Lake Tahoe are discontinuous and sporadic.

C. Transportation Systems Management

(12) Employer Programs: A number of employers in the Region offer subsidized transit fares to employees, or provide limited transit (shuttle) service. Car pooling is limited due to flexible work hours at major employers (casinos).

(13) Neighborhood Mail Delivery Centers (NDCs): NDCs are small (300 to 500 box), limited service, postal facilities offering decentralized mail delivery. Three NDCs have been built in the south shore.

(14) Home Mail Delivery: Home delivery is presently offered only in a limited portion of Incline Village.

D. Transportation-Related Measures

(15) Indirect Source Review/Air Quality Mitigation: All projects which may impact traffic or air quality are required to mitigate their impacts to a less than significant level. This program is described in Chapter 93 of the Code.

(16) Idling Restrictions: Idling restrictions limit idling in a portion of the south shore to no more than 30 minutes, with limited exceptions. This program is described in Chapter 91 of the Code.
(17) Vehicle emission limitations (state/federal): The federal government and the state of California both have ongoing programs to reduce the emissions from new automobiles.

E. NON-TRANSPORTATION RELATED MEASURES

(18) OHV controls: OHV controls are programs to limit OHVs to designated areas and trails. OHV controls can reduce airborne dust in the Region.

(19) Wood heater controls: Wood heater controls require new wood heaters, or replacements of existing wood heaters, to meet certain limitations for wood smoke. This program is described in Chapter 91 of the Code.

(20) Gas heater controls: Gas heater controls require new gas heaters, or replacements of existing gas heaters, to meet certain limitations for oxides of nitrogen. This program is described in Chapter 91 of the Code.

(21) Stationary source controls: Stationary source controls require new or modified stationary sources to meet certain limitations for a number of pollutants. This program is described in Chapter 91 of the Code.

(22) Open burning controls: Open burning controls limit the type of material that may be burned in the Region, and the circumstances which will allow open burning. This program is described in Chapters 72 and 91 of the Code.

(23) BMP and revegetation practices: Best management practices and revegetation practices reduce erosion from project areas and, therefore, can reduce airborne dust.
### TABLE 2A

**SUPPLEMENTAL COMPLIANCE MEASURES**

(Short Titles)

#### I. AIR QUALITY

##### A. MASS TRANSPORTATION

1. Short Range Transit Plan-South Shore fixed routes
2. Short Range Transit Plan-South Shore demand-responsive zones
3. Short Range Transit Plan-North Shore fixed routes
4. Short Range Transit Plan-North Shore demand-responsive zones
5. Improved ski shuttle coordination
6. Tahoe City intrazonal shuttle
7. Kings Beach/Tahoe Vista intrazonal shuttle
8. Improved beach bus headways (summer)
9. Kingsbury Grade fixed route service extension
10. Zephyr Cove fixed route service extension
11. Improved Tahoe Keys-to-casino core headways
12. North Star to Kings Beach service
13. Heavenly Valley to Stateline people mover or aerial tram
14. TART extension to Truckee
15. El Dorado County fixed route service extension
16. Improved Roundhill/Nevada Beach-to-casino core headways (summer)
17. Expanded waterborne excursion service
18. Point-to-point waterborne service linking Tahoe City, Kings Beach, Incline Village, and the south shore
19. Implementation, Lake Tahoe Airport master plan
20. South shore fixed guideway/light rail service

##### B. STREETS AND HIGHWAYS

22. Free right turn and signal timing, U.S. 50, Pioneer Trail to Park Ave., City of South Lake Tahoe
23. Circulation improvements, South lake Tahoe Redevelopment Plan
24. Realignment, intersection of Kingsbury Grade and U.S. 50
25. Right turn lane, California 89 south to Lake Tahoe Blvd.
26. Right turn lane, Lake Tahoe Blvd. north to U.S. 50
27. Corridor improvements, U.S. 50, Kingsbury Grade-to-Loop Road
28. Corridor improvements, California 28, Tahoe City
29. Intersection improvements, California 28 and Grove St., Tahoe City
30. Realignment, California 89 south of Fanny Bridge, Tahoe City
31. Intersection improvements, California 28 and 267, Kings Beach
32. Center turn lane, Nevada 28, Lakeshore-to-Lakeshore, Incline Village
C. NON-MOTORIZED TRANSPORTATION

(33) class I bikeway, Kingsbury Grade to Roundhill
(34) class I or II bikeway, Roundhill to Cave Rock
(35) class I and III bikeway, Park Avenue and the Loop Roads
(36) completion of class II bikeway, Pioneer Trail to Meyers
(37) class I bikeway, Meyers
(38) class II bikeway, Lake Tahoe Blvd. and Upper Truckee River Rd.
(39) class III bikeway, California 89, Meyers to Luther Pass
(40) class I bikeway, Meeks Bay recreation area
(41) class I bikeway, Tahoe City to Squaw Valley
(42) class I bikeway, Dollar Hill to Incline Village
(43) class I bikeway, Incline Village to Marlette Creek
(44) class I, II, III bikeways, Incline Village local streets
(45) separate pedestrian facility, California 28, Tahoe City
(46) separate pedestrian facility, redevelopment area, South Lake Tahoe
(47) pedestrian separation, High Sierra Casino-to-Caesar's Casino
(48) pedestrian facility, casino core to Kingsbury Grade
(49) pedestrian facility, Pioneer Trail, Needle Peak to U.S. 50
(50) separate pedestrian facilities, California 28, Kings Beach

D. TRANSPORTATION SYSTEMS MANAGEMENT

(51) education programs utilizing local media
(52) transit ridership incentives
(53) casino employee van pools
(54) transit shelter and turn-out improvements
(55) automobile metering from ski area parking lots
(56) traffic signal synchronization, U.S. 50 corridor
(57) additional NDGs--south shore
(58) additional NDGs--Tahoe City, Crystal Bay
(59) additional improvements in mail delivery
(60) community plan improvements--pedestrian movement, access control, parking, system integration
(61) additional improvements--social services transportation

E. TRANSPORTATION-RELATED MEASURES

(62) alternative fuels--fleet vehicles
(63) alternative fuels--private automobiles
(68) more stringent idling restrictions

F. NON-TRANSPORTATION-RELATED MEASURES

(64) home weatherization/energy conservation improvement program
(65) control of upwind pollutants
(66) improved BMP implementation/enforcement program
(67) improved highway maintenance practices/dust and aggregate control
(69) wood heater retrofit program
Exhibit 2B
SUPPLEMENTAL COMPLIANCE MEASURES
(DESCRIPTIONS)

I. AIR QUALITY

A. MASS TRANSPORTATION

(01) Short Range Transit Plan--South Shore Fixed Route: The SRTP consists of six fixed routes, four operating 24 hours, and 10 to 15 minutes headways on portions of U.S. 50. Programmed for the next one to five years; no startup date is forecast.

(02) Short Range Transit Plan--South Shore demand-responsive zones: The SRTP consists of demand-responsive zones outside of the fixed routes. Programmed for the next one to five years; no startup date is forecast. Gradual improvements in service are occurring.

(03) Short Range Transit Plan--North Shore Fixed Route: The SRTP consists of improvements to in headways from 60 to 30 minutes for most of the daylight hours. Programmed for the next one to five years; no startup date is forecast.

(04) Short Range Transit Plan--North Shore demand-responsive zones: The SRTP consists of demand-responsive zones outside of the fixed routes. Programmed for the next one to five years; no startup date is forecast. Gradual improvements in service are occurring.

(05) Improved ski shuttle coordination: Increased coordination between ski areas and additional public and private transportation providers should be developed in the area of scheduling to promote usage. Programmed for the next one to five years; no startup date is forecast.

(06) Tahoe City intrazonal shuttle: This is a short headway, minimal fare, summer time service. Although programmed for the next one to five years; no startup date is forecast.

(07) Kings Beach/Tahoe Vista intrazonal shuttle: This is a short headway, minimal fare, summer time service. Although programmed for the next one to five years; no startup date is forecast.

(08) Improved beach bus headways: Headways on existing services to USFS south shore beaches would be improved. Programmed for five to ten years.

(09) Kingsbury Grade fixed route service extension: This is an expansion of existing south shore fixed route service into Kingsbury Grade residential and commercial neighborhoods. Programmed for five to ten years.
(10) Zephyr Cove fixed route service extension: This is a summer only extension of existing south shore fixed route service to Zephyr cove. Programmed for five to ten years.

(11) improved Tahoe Keys-to-casino core headways: This improvement would be targeted to serve recreation and work trips. Programmed for five to ten years.

(12) North Star to Kings Beach service: This would be either a fixed route extension or a shuttle service, operating during peak seasons only. Programmed for five to ten years.

(13) Heavenly Valley to Stateline people mover or aerial tram: Programmed for five to ten years.

(14) TART extension to Truckee: This would be an extension of TART fixed route services to Truckee along S.R. 89, and it would service the Alpine Meadows and Squaw Valley accesses, as well as existing campgrounds. Programmed for five to ten years; service may start as early as 1991.

(15) El Dorado County fixed route service extension: This expansion of existing south shore fixed route service would primarily run along U.S. 50, Pioneer Trail, and Lake Tahoe Blvd. Programmed for five to ten years.

(16) improved Roundhill/Nevada Beach-to-casino core headways (summer): Programmed for five to ten years.

(17) expanded waterborne excursion service: Expansion of existing excursion services where continued improvements in VMT may be realized. Programmed for the next one to five years; no expansions have been formally proposed.

(18) point-to-point waterborne service linking Tahoe City, Kings Beach, Incline Village, and the south shore: Programmed for the next one to five years; no startup date is forecast.

(19) implementation, Lake Tahoe Airport master plan: The master plan has not been adopted. Programmed for the next one to five years; no startup date is forecast.

(20) south shore fixed guideway/light rail service: This service would, at a minimum, extend west from the stateline area an unknown distance using unknown technology. As a study item in the RTP, it is not presently programmed.
B. STREETS AND HIGHWAYS

(21) right turn lane, U.S. 50 west to Tahoe Keys Blvd.: Programmed for the next one to five years; no startup date is forecast. Utility relocation and right-of-way acquisition are presently being researched by the City of South Lake Tahoe and Caltrans.

(22) free right turn and signal timing, U.S. 50, Pioneer Trail to Park Ave., City of South Lake Tahoe: This project is a condition of approval for the construction of the California portion of the Loop Road. The condition was modified to postpone construction until October, 1988. It was not be constructed on time.

(23) circulation improvements, South Lake Tahoe Redevelopment Plan: At present, this involves the extension of Montreal to Pioneer Trail at Needle Peak, and completion of the northwest California Loop Road.

(24) realignment, intersection of Kingsbury Grade and U.S. 50: This project includes a free right turn lane from Kingsbury Grade onto U.S. 50 and two left turn lanes from Kingsbury Grade onto U.S. 50. Programmed for the next one to five years; some improvements were made in 1988.

(25) right turn lane, California 89 south to Lake Tahoe Blvd.: Programmed for the next one to five years; no startup date is forecast.

(26) right turn lane, Lake Tahoe Blvd. north to U.S. 50: Programmed for the next one to five years; no startup date is forecast.

(27) corridor improvements, U.S. 50, Kingsbury Grade-to-Loop Road: This project has not been defined. Programmed for ten to twenty years.

(28) corridor improvements, California 28, Tahoe City: This project includes parking reconfiguration and a parking lot connector. Programmed for the next one to five years; currently in design and funding phase.

(29) intersection improvements, California 28 and Grove St., Tahoe City: Programmed for the next one to five years; construction would coincide with implementation of the community plan.

(30) realignment, California 89 south of Fanny Bridge, Tahoe City: This project would move the intersection of S.R. 28 and S.R. 89 west to the Caltrans maintenance yard. Programmed for the next one to five years; construction would coincide with implementation of the community plan.
(31) intersection improvements, California 28 and 267, Kings Beach: This project includes free left and right turn lanes. Programmed for the next one to five years; may be constructed as early as 1989.

(32) center turn lane, Nevada 28, Lakeshore-to-Lakeshore, Incline Village: Programmed for the next one to five years; no startup date is forecast. NDOT has developed proposals for expansion in the near future.

C. NON-MOTORIZED TRANSPORTATION

(33) class I bikeway, Kingsbury Grade to Roundhill: Programmed for the next one to five years; no startup date is forecast.

(34) class I or II bikeway, Roundhill to Cave Rock: Programmed for the next one to five years; no startup date is forecast.

(35) class I or III bikeway, Park Avenue and the Loop Roads: Programmed for the next one to five years; construction would coincide with implementation of the redevelopment plan.

(36) completion of class II bikeway, Pioneer Trail to Meyers: Programmed for the next one to five years; no startup date is forecast.

(37) class I bikeway, Meyers: Programmed for the next one to five years; construction may begin in 1990.

(38) class II bikeway, Lake Tahoe Blvd. and Upper Truckee River Rd.: Programmed for five to ten years.

(39) class III bikeway, California 89, Meyers to Luther Pass: Programmed for five to ten years.

(40) class I bikeway, Meeks Bay recreation area: Programmed for five to ten years.

(41) class I bikeway, Tahoe City to Squaw Valley: Programmed for five to ten years.

(42) class I bikeway, Dollar Hill to Incline Village: Programmed for five to ten years.

(43) class I bikeway, Incline Village to Marlette Creek: Programmed for five to ten years.
(44) class I, II, III bikeways, Incline Village local streets: Programmed for five to ten years.

(45) separate pedestrian facility, California 28, Tahoe City: Programmed for one to five years; construction would coincide with implementation of the community plan.

(46) separate pedestrian facility, redevelopment area, South Lake Tahoe: Programmed for the next one to five years; construction would coincide with implementation of redevelopment.

(47) pedestrian separation, High Sierra Casino-to-Caesars Casino: This project, either above ground or below ground, would eliminate the present pedestrian signal. It is a condition of approval for two casino-hotels. Programmed for the next one to five years; no startup date is forecast.

(48) pedestrian facility, casino core to Kingsbury Grade: Programmed for the next one to five years; construction may start in 1989.

(49) pedestrian facility, Pioneer Trail, Needle Peak to U.S. 50: Programmed for the next five to ten years; construction may coincide with implementation of redevelopment.

(50) separate pedestrian facilities, California 28, Kings Beach: Programmed for five to ten years; although construction may coincide with implementation of the community plan.

D. TRANSPORTATION SYSTEMS MANAGEMENT

(51) education programs utilizing local media: Programmed for the next one to five years; no startup date is forecast.

(52) transit ridership incentives: This incentives include fare subsidies or free days. Programmed for the next one to five years; no startup date is forecast.

(53) casino employee van pools: Programmed for the next one to five years; no startup date is forecast.

(54) transit shelter and turn-out improvements: Programmed for the next one to five years; these improvements are regularly implemented.

(55) automobile metering from ski area parking lots: Metering involves releasing cars only at the rate that feeder routes can handle the capacity. Programmed for the next one to five years; no startup date is forecast.
(56) Traffic signal synchronization, U.S. 50 corridor: This project involves coordinating signals across the stateline. Programmed for the next one to five years; some degree of coordination may begin as early as 1989.

(57) Additional NDCs--south shore: This involves the study of an additional eight locations for NDCs. Programmed for the next one to five years; the existing NDCs are currently being evaluated prior to expansion of the program.

(58) Additional NDCs--north shore: This involves the study of an additional three locations for NDCs. Programmed for the next one to five years; the existing NDCs are currently being evaluated prior to expansion of the program.

(59) Additional improvements in mail delivery: This program is related to evaluation of the NDCs, and includes alternatives such as home mail delivery expansion. Programmed for five to ten years.

(60) Community plan improvements--pedestrian movement, access control, parking, system integration: Programmed for five to ten years.

(61) Additional improvements--social services transportation: This alternative involves the funding of a number of improvements, including new equipment and services. Programmed for the next one to five years; some improvements are ongoing.

E. TRANSPORTATION-RELATED MEASURES

(62) Alternative fuels--fleet vehicles: This involves the fueling of heavy duty fleet vehicles with fuels such as compressed natural gas and methanol, and the fueling of light duty vehicles with alcohol based fuels and propane. Implementation is ongoing.

(63) Alternative fuels--private automobiles: This involves the introduction of oxygen rich gasoline to local service stations. It is currently being researched by Washoe County and TRPA.

(68) More stringent idling restrictions: This involves reducing the limit from 30 minutes to 15 minutes and/or expanding the boundaries of the current limit. The City of South Lake Tahoe is currently adopting a 15 minute limit for buses in the City. TRPA research is ongoing.

F. NON-TRANSPORTATION RELATED MEASURES

(64) Home weatherization/energy conservation improvement program: No efforts beyond state and local requirements are presently programmed.
(65) control of upwind pollutants: TRPA is limited to continued support of efforts by upwind districts to attain applicable standards and reduce stationary source emissions. Significant benefits may come from a cleaner vehicle fleet upwind of the Region. This strategy is identified in the 1988 "208" plan.

(66) improved BMP implementation/enforcement program: This program would step up implementation of BMPs, and may reduce airborne dust.

(67) improved highway maintenance practices/dust and aggregate control: This program includes reviewing existing maintenance and snow removal/sanding practices, and may result in changes to the list of exempt activities (Section 4.2). Devices such as vacuum sweepers, which may reduce airborne dust, could be employed.

(69) wood heater retrofit program: This program would require existing wood heaters to be replaced with certified heaters on (eg) the sale of a home. Washoe County currently implements such a program.
MEMORANDUM

March 30, 1990

To: Advisory Planning Commission

From: Agency Staff

Subject: Adoption of MOUs Between TRPA and Caltrans and TRPA and the Nevada Department of Transportation

TRPA, the California Department of Transportation (Caltrans), and the Nevada Department of Transportation (NDOT) have been working to develop Memoranda of Understanding (MOU) to exempt certain transportation related activities from TRPA review. The MOUs, if approved, would require an amendment to Chapter 4 of the TRPA Code of Ordinances before they would become effective.

On November 8, 1989, TRPA staff presented the draft MOUs to the APC for review and comment. Following APC discussion, a number of recommended revisions to the draft MOUs were made. These revisions were incorporated into revised MOUs and then forwarded to Caltrans and NDOT for further consideration. Meetings with Caltrans and NDOT to discuss the revised draft MOUs were held in December, 1989. To date, however, TRPA, Caltrans, and NDOT have not been able to finalize the draft MOUs.

On June 24, 1981, the TRPA Governing Board approved a list of activities which could be undertaken by Caltrans and which would be exempt from TRPA review under Ordinance 81-1. On August 27, 1981, NDOT and TRPA reached a similar agreement with a specific list of activities to be undertaken by NDOT which would also be exempt from TRPA review under Ordinance 81-1. NDOT has indicated that this agreement is still valid. However, the adoption of the Regional Plan for the Lake Tahoe Basin in 1986, and the adoption of the Code of Ordinances on May 27, 1987, superseded Ordinance 81-1 with Chapter 4 of the Code, Project Review and Exempt Activities.

At this time, staff feels that action needs to be taken to resolve this issue. If no action is taken, TRPA will enforce Chapter 4 of the Code. Caltrans and NDOT will be required to obtain permits for all projects specified therein. Any actions undertaken without a proper permit will be subject to enforcement by TRPA's Compliance Division.
Staff will schedule another meeting in April with Caltrans and NDOT to discuss each agency's needs and interests in regard to the MOUs, and will attempt to draft the final MOUs for approval by TRPA, Caltrans, and NDOT by May, 1990.

Staff Recommendation

At this time, staff is seeking APC's concurrence in this matter, and would like to have additional input from the APC. A copy of the latest draft of the MOU is attached for your information. If you have questions, please contact Leif Anderson at (702) 588-4547.
MEMORANDUM OF UNDERSTANDING BETWEEN
TAHOE REGIONAL PLANNING AGENCY AND
CALIFORNIA DEPARTMENT OF TRANSPORTATION

This Memorandum of Understanding is entered into this ______ day of
_______, 1990, by and between the TAHOE REGIONAL PLANNING AGENCY (TRPA),
through its Executive Director as authorized by its Governing Board, and the
CALIFORNIA DEPARTMENT OF TRANSPORTATION (Caltrans) by and through its designated
representative.

All activities described in this Memorandum of Understanding (MOU) are in
accordance with the Regional Plan package of TRPA as adopted by Ordinance No.
87-9, as amended. It is understood that all activities undertaken by Caltrans
pursuant to this MOU shall comply with applicable Best Management Practices
(BMPs), the Design Review Guidelines, and all other provisions of the TRPA Code
of Ordinances, except for procedural provisions replaced by this MOU.

I. EXEMPT ACTIVITIES

The following Caltrans activities, in addition to those activities deemed
exempt pursuant to Section 4.2 of the TRPA Code, are not subject to review
and approval by TRPA. However, activities exempt under this MOU shall not
result in the creation of additional land coverage or relocation of land
coverage.

A. Streets, Roads, and Highways

1. Pavement restriping or remarking.

2. Slick pavement correction.

3. Paved shoulder grooving.

4. Replacement of existing safety or protective devices, including:
fencing, guardrails, barriers, energy attenuators, guide posts,
markers, safety cables, ladders, light standards, hoists, traffic
signals and controllers, provided replacement devices/materials
are similar in size, coloration, and design to the existing
protective devices.

5. Asphalt/concrete blankets and patches on existing paved surfaces.

B. Water Quality Control Facilities

1. Culvert cleaning utilizing a hydro-jet vacuum system with no direct discharge of materials to the atmosphere, and provided spoils are removed to disposal sites outside the Tahoe Basin.

2. Cleaning and repairing drainage facilities provided the toe of adjacent slopes or cutbanks are not disturbed.

3. Repair and maintenance of existing asphalt/concrete roadside gutters or drainage facilities.

4. Earthslide, avalanche debris, or embankment slipout removal and stabilization, provided spoil material is removed to disposal sites outside of the Tahoe Basin or to TRPA approved disposal sites.

C. Snow Removal Activities

1. Snow removal from roadway or highway surfaces either by use of a rotary plow, plowing snow to the edge of the paved surface, or plowing to the center of the roadway for removal to existing snow disposal sites.

D. Sidewalks, Pedestrian Facilities, and Bicycle Trails

1. Replacement of existing sidewalks, pedestrian facilities and bicycle trails.

2. Striping and marking of bicycle trails.

3. Handicapped accessibility improvement projects, including curb cuts and wheelchair ramps.

E. Signs

1. Installation of roadside warning/information signs related to construction/maintenance activities provided signs are removed within 10 working days following completion of the activities.

F. Miscellaneous Activities

1. Monitoring of highway or roadway traffic, including the placement of portable traffic counting equipment or weighing devices.

2. Placement of traffic detection devices in the pavement of a highway or roadway for the operation of traffic control signals or for traffic monitoring.
3. Lane or highway closures for exempt activities, provided lane or highway closures are limited to the minimum amount of time needed to complete the exempt activity and do not occur during holidays or holiday weekends.

II. QUALIFIED EXEMPT ACTIVITIES

The following Caltrans activities are not subject to TRPA review or approval provided Caltrans certifies, on a form provided by TRPA, that the activity does not result in the creation of additional coverage or relocation of coverage, or an increase in vehicle trips in excess of that otherwise exempt pursuant to Subsection 4.3.B of the Code, and is in conformance with the applicable provisions of the TRPA Code. The statement shall be filed with TRPA at least 5 working days before the activity commences.

The following activities are in addition to those activities deemed qualified exempt pursuant to Section 4.3 of the Code.

A. Streets, Roads, and Highways

1. Chip seals, sand seals, and flush seals of the existing pavement, provided that BMPs are in place that include dust control measures which will effectively reduce the amount of entrained dust to insignificant levels.

2. Reconstruction, resurfacing or overlaying of existing pavement.

3. Replacing existing bridge rails, provided there is no increase in height, and there is no deterioration of scenic views.

4. Maintenance or repair of existing bridge structures, provided there is no change in the width or length of the existing structure.

B. Water Quality Control Facilities

1. Shoulder grading, provided the toe of adjacent embankments, slopes, or cutbanks are not disturbed, and spoil material is removed to a disposal site outside the Tahoe Basin.

2. Embankment repair, provided the activity occurs during the grading season (May 1 to October 15), unless an emergency repair of a slide or slipout is required, and the repaired site is stabilized either during the repair activity or within 72 hours of the repair to prevent further erosion.
C. Signs

1. Replacement of existing signs provided there is no change in the number of signs or in the sign's height, size, or sign area.

2. Conversion of existing ground-mounted sign support structures to breakaway support structures, provided there is no increase in the height or size of the support structure and the height of the supported sign does not increase.

D. Lane Closures

Lane or highway closures for qualified exempt activities, provided lane or highway closures are limited to the minimum amount of time needed to complete the qualified exempt activity, do not occur during holidays or holiday weekends. A standard traffic control plan with the date, estimated time, and length of closure will be submitted with the Qualified Exempt form.

III. LOSS OF EXEMPTION

Any exempt or qualified exempt activity set forth herein shall be considered a project requiring TRPA review if the Executive Director of TRPA determines that, because of cumulative impacts or unusual circumstances, the activity may have a substantial effect on the land, air, water, space, or any other natural resource in the Region.

IV. AMENDMENT

This Memorandum of Understanding may be amended by agreement of both parties.

V. TERMINATION

This Memorandum of Understanding may be terminated by either party upon sixty (60) days written notice.
MEMORANDUM

March 28, 1990

To: TRPA Advisory Planning Commission

From: Agency Staff

Subject: Discussion of Draft EIS for Incline Village General Improvement District (IVGID) Community Center

The Draft Environmental Impact Statement (EIS) for the IVGID Community Center began circulation on March 13, 1990. Copies of the Draft EIS were mailed to all APC members on March 13, 1990.

At the April APC meeting, Agency staff and the EIS consultants, Resource Concepts, Inc., will make a presentation of the document for the APC’s review and comment.

The comment/circulation period for this EIS closes on May 11, 1990. If you have any comments or questions on this matter, please contact Jerry Wells, Chief, Project Review Division, at (702) 588-4547.
MEMORANDUM

April 4, 1990

To: Advisory Planning Commission

From: Agency Staff

Subject: Amendment of TRPA Regional Transportation Plan Regarding Unbuilt U. S. Highway 50 Freeway Right-of-Way Within the City of South Lake Tahoe and El Dorado County

At the March 28, 1990, meeting of the TRPA Governing Board, the Board action directed Agency staff to amend the TRPA Regional Transportation Plan (RTP). This proposed amendment deals with the unconstructed U. S. Highway 50 freeway right-of-way (ROW) which lies within portions of the City of South Lake Tahoe and El Dorado County. The Board instructed Agency staff to proceed with this amendment independent of the full update of the RTP which is currently underway.

Following the completion of the Highway 50 Corridor Study and Route Rescission Analysis by Agency staff, the TRPA Governing Board adopted TRPA Resolution 89-17 in which the Governing Board recommended to the California Transportation Commission (CTC) the rescission of the freeway designation of the unconstructed Route 50 right-of-way from Meyers to Stateline.

On July 26, 1989, The Governing Board adopted TRPA Resolution 89-28 which amended Resolution 89-17. This amendment included the unconditional recommendation that the CTC for rescind the freeway designation, that the State of California transfer the portion of the unconstructed Route 50 ROW between Needle Peak Road and the Stateline to the City of South Lake Tahoe for the construction of the Montreal Road extension, that the portion of the ROW between Needle Peak Road and Al Tahoe Boulevard be retained for future use as a transportation corridor, and that the portion of the unconstructed ROW between Al Tahoe Boulevard to Meyers be retained for mass transit facilities, pedestrian and bicycle trails and other public conveyances not involving the use of private automobiles. Resolution 89-28 also recommended that the State assist El Dorado County and the City of South Lake Tahoe with needed improvements to Highway 50 and Pioneer Trail as described in the Highway 50 Corridor Study and Route Rescission Analysis.

4/2/90
/la
Amendment of RTP

Page 2

The Highway 50 Corridor Study and Route Rescission Analysis recommended the following improvements to Highway 50 and Pioneer Trail:

- Transportation improvements contained in the TRPA RTP

- Additional intersection operational improvements at Highway 50 and Ski Run Boulevard, Al Tahoe Boulevard, Tahoe Keys Boulevard, and State Route 89 (Wye)

- Operational improvements to Pioneer Trail including widened travel lanes and shoulders, reduced side obstructions, reduced number of conflict points, center turn lanes, right turn pockets reduced or altered access points onto Pioneer Trail at several locations including the frontage road near Washoan and from the Bode Drive, Ralph Drive, and April Drive neighborhoods.

Staff Recommendation

Agency staff has summarized above the revisions needed to amend the TRPA Regional Transportation Plan as identified in TRPA Resolution 89-28. Staff will make a recommendation to the TRPA Governing Board for an amendment to the RTP at the April Governing Board meeting. At that time, staff will present specific recommendations for amending the RTP Action Element to incorporate the above improvements, and will delete related studies from the list of Proposed Study Items found on page 111 of the RTP.

This agenda item is brought before the Advisory Planning Commission for discussion at this time. If you have any questions, please contact Leif Anderson at (702) 588-6782.

4/2/90

AGENDA ITEM V.B.
April 4, 1990

To:       TRPA Advisory Planning Commission
From:     Agency Staff
Subject:  Update on Sierra Ski Ranch EIS/EIR Comments

At the March 13, 1990 meeting of the Advisory Planning Commission, the APC recommended that the Governing Board approve the attached comments for transmittal to the U.S. Forest Service and El Dorado County. The APC also added the following comments:

The DEIS needs to discuss the potential impact that added traffic outside the Basin may have on travel to and from the Basin.

The DEIS should note that Vehicle Miles Travelled generated by the project may use a portion of the capacity of the Region for VMT and make attainment of TRPA’s VMT standard more difficult under present growth scenarios.

Subsequent to the APC, the U.S. Forest Service and El Dorado County extended the comment period on the EIS. Due to this extension, the Governing Board did not act on the APC’s recommendation to allow staff to meet with the U.S. Forest Service to discuss TRPA’s comments. TRPA staff met with representatives of the U.S. Forest Service, Sierra Ski Ranch, and the consultant team on Monday, April 2, 1990. At that meeting TRPA staff agreed to reevaluate two of our comments.

Comment 1 on the attached memorandum (Additional Comments on Transportation and Traffic, Air Quality and Climate, Noise, and Socioeconomics) addresses a statement in the Draft Environmental Impact Statement relating to expansion of U.S. 50. TRPA staff was asked to consider the entire content of the cited paragraph; the paragraph in the DEIS states:

"Previous plans have called for gradual replacement of the two-lane section (in the vicinity of Sierra Ski Ranch) with a four-lane highway. However, the estimated cost of such a project, at $2 to $7 million per mile, realistically eliminates this level of improvement from all but the most optimistic long range plans. Caltrans indicates that this is not likely to take place in the next 20 to 30 years, and has requested that this project analysis incorporate the assumption that no major capacity improvements are planned."

Staff would still like to see the previous plans cited or the paragraph corrected to indicate that there are no such plans.

AGENDA ITEM V.C
Comment 2 on the attached memorandum (Additional Comments on Transportation and Traffic, Air Quality and Climate, Noise, and Socioeconomics) addresses a possibly erroneous statement on noise from snow making operations. However, snowmaking is not being proposed near the Basin and TRPA staff would like to delete this comment.

TRPA staff believes that all of our remaining comments are valid and should still be transmitted to the U.S. Forest Service and El Dorado County.

The U.S. Forest Service and Sierra Ski Ranch have indicated a willingness to incorporate language limiting the location of lift terminal structures to reduce their potential scenic impact. They also indicated that lift terminal structures near the Basin boundary would not contain motors; motors would be housed at the base of the lift. As a result, the noise impacts from lift terminal structures would be reduced.

TRPA staff will be asking the Governing Board to approve our revised comments at the April 25, 1990 meeting. If you have any questions regarding this agenda item, please contact Curtis Jordan at (702) 588-6782.
MEMORANDUM

March 13, 1990

To: TRPA Advisory Planning Commission

From: Agency Staff

Subject: Response to U.S. Forest Service Request for Comments on the Proposed Expansion of Sierra Ski Ranch: Additional Comments on Transportation and Traffic, Air Quality and Climate, Noise, and Socioeconomics

On March 6, 1990, TRPA staff provided the Advisory Planning Commission with a brief description of the proposed expansion of Sierra Ski Ranch. This memorandum, in conjunction with the accompanying comments on visual resources, provides further, more detailed, comments on the draft Environmental Impact Statement prepared for this project.

In general, the DEIS does not adequately discuss environmental impacts in the Lake Tahoe Region. While the DEIS addresses a number of applicable state and federal environmental standards, it does not address any TRPA Environmental Threshold Carrying Capacities that may be affected by the existing or expanded resort. As a disclosure document, the DEIS needs to expand its discussion of applicable TRPA standards and adverse impacts on these standards that may result from the project.

The DEIS addresses the impact of adding up to 7,000 skiers at one time (SAOT) to the existing 7,000 skiers at one time utilizing Sierra Ski Ranch. The basic presumption of the DEIS is that there are no adverse environmental impacts resulting from the existing facility. However, the DEIS does not provide evidence that the existing resort has no adverse environmental impacts, including impacts on applicable TRPA thresholds.

Following are more specific comments focusing on traffic, air quality, noise and socioeconomics.

1. The discussion on potential highway improvements (page 4-153) states that, "...previous plans have called for gradual replacement of the two-lane section with a four-lane highway." These plans should be cited more specifically.
2. There is no discussion of the impacts of the estimated 1,770 new peak day vehicle trips into the Lake Tahoe Region on intersections in the Region. There is no discussion on off-season (Summer) traffic generation. There is no discussion of impacts on applicable TRPA standards, including vehicle miles travelled.

3. The air quality discussion erroneously states that using propane for heating "...will therefore not generate emissions." Further, the air quality discussion does not discuss TRPA standards which are more stringent than applicable state or federal standards.

4. The most recent data cited in the DEIS is 1985; the California Air Resources Board has published data through 1988. The DEIS uses Tahoe City as the relevant station for carbon monoxide data in the area and uses Placerville as the relevant station for particulate matter. Both these pollutants are monitored in the South Lake Tahoe.

5. The discussion on ozone cites a 1978 CARB study which concludes that ozone concentrations decrease to near zero moving east from Folsom. More recent information suggests that ozone may, in fact, travel east to the Lake Tahoe Region (Cahill, Trial Testimony, 1990). Further, recent data shows continued vegetative damage from ozone in the Lake Tahoe Region (Pederson, 1989).

6. The discussion of air quality modeling results groups a receptor in the Lake Tahoe Region with receptors in the Desolation and Mokelumne wilderness areas; it is not possible to determine impacts in the Region.

7. The air quality analysis mentions a visibility impact analysis; this analysis is not contained in the DEIS.

8. The noise discussion does not address any TRPA thresholds that may be affected in the project area. Further, the noise impact discussion does not address additional traffic noise in the Lake Tahoe Region.

9. In the "Description of Project Alternatives" there is a statement that snow making guns will not be audible from 300 feet; there is no data to support this statement.

10. The discussion on "Purpose and Need" states that the project will, "relieve growth pressure in the Lake Tahoe Region for additional winter recreation and year-round resort facilities." However, the DEIS does not address negative economic impacts that may result in the Region.
11. The DEIS makes a number of conclusions on where employees reside based on statements made by the resort owners; survey data is needed.

12. The discussion in the DEIS on housing relies on the 1980 census and concludes that there are adequate housing facilities in the Region for additional employees. The DEIS should rely, in part, on information presented in the Renaissance 90 report prepared by the City of South Lake Tahoe. This report suggests that there is limited low-income housing availability in the City of South Lake Tahoe.

TRPA staff is requesting that the Advisory Planning Commission forward the above comments, the accompanying comments on visual resources, and other comments that may surface at the APC meeting, to the Governing Board for inclusion in a comment letter prepared for submission to the U.S. Forest Service.

/cj
MEMORANDUM

March 13, 1990

To: TRPA Advisory Planning Commission
From: Agency Staff
Subject: Response to U.S. Forest Service Request for Comment on the Proposed Expansion of Sierra Ski Ranch: Additional Comments on Visual Resources

Further review by TRPA staff indicates the following concerns with respect to visual/scenic resources within the Region as they may be affected by the proposed expansion project:

1. Incomplete analysis of the proposed expansion on applicable scenic resources thresholds. The following information should be provided as part of the Final EIS/EIR in order to ascertain the proposal’s impacts:
   
   a. Viewshed mapping (identification of seen areas) to indicate from where within the Region the proposed improvements will be visible. Initial field visits indicate that the upper portions of the mountain and the ridgeline may be visible from several points in the south shore, including Nevada Beach. As proposed, the expansion may also be visible in the foreground and middleground from several locations within TRPA Plan Area 139, Dardanelles, which is a Conservation designated area managed for Maximum Regulation. This is a visually sensitive area from the point of introducing manmade structures which are out of character with the natural landscape setting.

   b. Accurate, large-format color photographic simulations depicting at least Alternative #1 (proponents preferred) and Alternative #6 (Forest Service preferred). Both the aforementioned alternatives propose five ridgeline structures which appear to be located much higher up the ridgeline (and also on the Regional boundary), than existing improvements. The cumulative impacts analysis of the alternatives as they may affect TRPA roadway and shoreline travel route and scenic quality ratings is nearly nonexistent. Maintaining the visual integrity of ridgelines by not exceeding them with manmade structures is a fundamental element of TRPA’s Scenic Resources Management Plan, including maintenance of adopted scenic thresholds.
2. The selection of Viewpoint D, Figure 4-46, along Highway 89 in Christmas Valley appears to be well-screened by foreground vegetation, and does not appear to be a viewpoint which is useful identifying potential adverse significant impacts (see accompanying discussion which follows on pp.4-253/55). Photographic simulations of the type identified in 1b. above should be prepared from the vista point along Highway 89 looking at the portion of the ridgeline which will contain the development. Simulations should be prepared for Alternatives #1 and #6 in order to accurately analyze potential impacts to the Regional thresholds and to the recently adopted TRPA Scenic Highway Corridor in this location.

3. The discussion regarding Views From the Lake Tahoe Basin, pp.4-254/5, identifies that the following elements will be visible from within the Region: the eastern tramway tower, top of Promised Land lift, Big Pine lift, Hansen Canyon runs and lifts. The analysis should be revised to include more complete descriptions of the nature and scale of the visible elements, specifically from where they will be visible (mapping may be helpful), potential levels of significance, and appropriate mitigation measures which will reduce potential significant adverse impacts to a less than significant level.

4. In a matter which is related to the Need for the Project (p.2-4/6 and Appendix A, Market Analysis), the document has omitted from its analysis preparation of the Heavenly Valley and Alpine Meadows Master Plans and their potential increase in downhill skiing capacity by up to 5,400 and 4,000 Persons At One Time (PAOTs), respectively. When realized, the additional combined capacity of 9,400 PAOTs at Heavenly Valley and Alpine Meadows would capture a certain percentage of existing unmet demand, as well as a percentage of future demand. This information should be added and analyzed as part of the Final EIS/EIR.

AS: cj
NOTICE OF APPLICATION AND HEARING

Date of Notice: April 6, 1990

Description of Proposed Project: Amendment of Plan Area Statement 98,
Bijou/Al Tahoe, Special Area #1, to Realign the Boundary Between the South Stateline
Hydrologic Area and the Upper Truckee Hydrologic Area

Applicant: El Dorado County

Dear Affected Property Owner:

An application for the above-referenced project has been received by Tahoe Regional Planning Agency (TRPA) and is on file at the Agency's offices at 195 U.S. Highway 50, Roundhill, Nevada. The application may be reviewed during regular office hours (9:00 a.m. to 5:00 p.m.), Monday through Friday, except legal holidays. This item has been placed on the Advisory Planning Commission's agenda for:

Date: April 11, 1990

Time: The meeting commences at 9:30 a.m.; however, there is no designated time/date certain for the consideration of the subject application and this matter may be continued to another meeting without additional notice.

The staff summary for this project will be available for review at the TRPA office five (5) working days prior to the meeting.

Interested persons may submit comments by mail to TRPA, P. O. Box 1038, Zephyr Cove, NV 89448. Written comments which are not received prior to the date of the meeting, will not be considered by TRPA. In addition to, or in lieu of, written comments, interested persons may appear at the meeting to present oral comments to the Board.

By: Jerry Budy
Senior Planner
Long Range Planning Division
TAHOE REGIONAL PLANNING AGENCY
P.O. Box 1038
Zephyr Cove, Nevada 89448-1038
(702) 588-4547
Fax (702) 588-4527

NOTICE OF APPLICATION AND HEARING

Date of Notice: April 6, 1990

Description of Proposed Project: Amendment of Plan Area Statement 98, Bijou/Al Tahoe, Special Area #1, to Realign the Boundary Between the South Stateline Hydrologic Area and the Upper Truckee Hydrologic Area

Applicant: El Dorado County

Dear Affected Property Owner:

An application for the above-referenced project has been received by Tahoe Regional Planning Agency (TRPA) and is on file at the Agency's offices at 195 U.S. Highway 50, Roundhill, Nevada. The application may be reviewed during regular office hours (9:00 a.m. to 5:00 p.m.), Monday through Friday, except legal holidays. This item has been placed on the Governing Board's agenda for:

Date: April 25 and 26, 1990

Time: The meeting commences at 9:30 a.m.; however, there is no designated time/date certain for the consideration of the subject application and this matter may be continued to another meeting without additional notice.

The staff summary for this project will be available for review at the TRPA office five (5) working days prior to the meeting.

Interested persons may submit comments by mail to TRPA, P. O. Box 1038, Zephyr Cove, NV 89448. Written comments which are not received prior to the date of the meeting, will not be considered by TRPA. In addition to, or in lieu of, written comments, interested persons may appear at the meeting to present oral comments to the Board.

By: Jerry Budy
Senior Planner
Long Range Planning Division
MEMORANDUM

April 5, 1990

To: Advisory Planning Commission

From: TRPA Staff

Subject: Amendment of Plan Area Statement 98, Bijou/Al Tahoe, Special Area #1, to Realign the Boundary Between the South Stateline Hydrologic Area and the Upper Truckee Hydrologic Area

Proposed Action: El Dorado County has requested TRPA to amend its Plan Area Overlay Maps to realign a portion of the boundary between the South Stateline Hydrologic Area and the Upper Truckee Hydrologic Area (Attachment A).

Background: The hydrologic area boundaries are depicted upon the TRPA Plan Area Overlays and play a role in land coverage transfers. For all land coverage transfers, the receiving parcel and the sending parcel must be in the same hydrologic area. There are nine hydrologic transfer areas in the Lake Tahoe Basin (Attachment B). The transfer of land coverage across the boundaries is prohibited.

The hydrologically related areas (HRAs) were adopted in January of 1987 as a feature of the Plan Area Statement Overlay Maps. Staff indicated that the following criteria were considered in establishing the lines:

1) Watershed Associations - groups of watersheds that act together in terms of influencing the littoral zone; each portion represents a self-contained eco-system in which currents tend to circulate sediments and nutrients;

2) Effective Transfer Areas - the areas should be of sufficient size to make the transfer programs effective;

3) Minimum Environmental Impact - the transfers that would take place should cause little or no environmental damage; problem creeks identified by Dr. Skau include Third Creek, Incline Creek, Trout Creek, Upper Truckee River, Blackwood Creek, and Ward Creek;

4) Community Planning - the intent is to transfer coverage from surrounding outlying areas to the commercial zone to accomplish the goal of concentrating uses.

GWB:rdh
4/5/90

Agenda Item IV.D
Amendment of Plan Area Statement 98, Bijou/Al Tahoe, Special Area #1, to Realign the Boundary Between the South Stateline Hydrologic Area and the Upper Truckee Hydrologic Area -- Page 2

Discussion: The TRPA Code (20.1.C.(6)) allows the redefinition of the boundaries of the hydrologic area to increase the supply of land coverage when TRPA finds there is an inadequate supply of hard land coverage for commercial or tourist accommodation uses at a reasonable cost within a given hydrologic area. The Code does not address changing HRAs for public service uses, nor does it consider different hydrological boundaries for different types of uses.

El Dorado County has requested the realignment of the hydrologic boundary in order to place the County Government Center in the Upper Truckee HRA rather than the South Stateline HRA. The county desires to transfer land coverage from the Meyers area (the Upper Truckee HRA) to Al Tahoe Area (the South Stateline HRA) to permit additional coverage for the proposed El Dorado County Jail.

The rationale for moving the line is that the boundary between the area is improperly drawn. El Dorado County surveyed the area and found the watershed boundary to be somewhat north of the existing HRA boundary and has proposed an alignment intermediate between the two boundaries (Attachment A). This change is generally consistent with the criteria for establishing the line except that it splits the Al Tahoe Community Plan Area.

The following properties would be impacted by the proposed boundary line adjustment:

1. Lake Tahoe Unified School District
2. Lake Tahoe Community College
3. U.S. Postal Service

Findings: Chapter 6 and Ordinance 87-8 require certain findings to be made prior to amending the Code:

Chapter 6: Section 6.5 requires four findings to be made. The findings and their rationales are as follows:

1. The project is consistent with, and will not adversely affect implementation of the Regional Plan, including all applicable Goals and Policies, plan area statements and maps, the Code and other TRPA plans and programs.
Amendment of Plan Area Statement 96, Bijou/Al Tahoe, Special Area #1, to Realign the Boundary Between the South Stateline Hydrologic Area and the Upper Truckee Hydrologic Area -- Page 3

Rationale: [Reserved]

2. The project will not cause the environmental thresholds to be exceeded.

Rationale: The amendment does not affect any of the rules regarding transfer of land coverage, other than the HRA boundary, and will not cause any environmental thresholds to be exceeded.

3. Wherever federal, state and local air and water quality standards applicable for the Region, whichever are strictest, must be attained and maintained pursuant to Article V(d) of the Compact, the project meets or exceeds such standards.

Rationale: The amendment is a minor line adjustment and, therefore, will have no significant impacts.

4. The Regional Plan and all of its elements, as implemented through the Code, Rules and other TRPA plans and programs, as amended, achieves and maintains the thresholds.

Rationale: See rationale for (2), above.

Environmental Documentation: Because this amendment is a minor adjustment to land coverage transfer areas, staff cannot identify any significant environmental impacts.

Staff Recommendation: Staff recommends that the APC review the request from El Dorado County to realign the hydrologic boundary and conduct the public hearing. Provided evidence is presented to suggest the Chapter 6 finding number 1, above, staff recommends that the APC recommend Governing Board approval of this plan amendment.
Lake Tahoe Basin

Hydrologic Transfer Areas

SEE LAND CAPABILITY MAPS FOR DETAIL ON HYDROLOGIC TRANSFER AREA BOUNDARIES