JOHN C. WEIDMAN
ATTORNEY AT LAW

325 MAIN STREET
PLACERVILLE, CALIFORNIA 95667
TELEPHONE 622-5260

March 24, 1989

Mr. Harry Seraydarian
Director
Water Management Division
Environmental Protection Agency
215 Fremont Street
San Francisco, CA 94105

Mr. Harry Schueller
Chief
Division of Loans and Grants
State Water Resources Control Board
P. O. Box 944212
Sacramento, CA 94244-2120

Re: Assistance ID No. C-06-1414-110
EPA Assistance Agreement/Amendment
South Tahoe Public Utility District
Part III - Award Conditions
September 26, 1984

Dear Messrs. Seraydarian and Schueller:

STPUD REQUEST OF EPA

South Tahoe Public Utility District (STPUD) requests the Environmental Protection Agency (EPA) find the South Shore Lake Tahoe Basin Mitigation Program is being adequately carried out for a 0.2 MGD waste- water treatment facility expansion to 7.7 MGD in compliance with the provisions of Grant Condition No. 27 and No. 28 of the EPA Assistance ID No. C-06-1414-110 Grant Award dated September 26, 1984. The Grant Conditions were based upon the "Final Environmental Impact Statement (EIS) Wastewater Treatment Facilities, South Shore Lake Tahoe Basin", South Tahoe Public Utility District, California, May, 1981.[1] The Final EIS evaluated an 8.7 MGD wastewater treatment facility.

The District requests that the total number of sewer connections allowed under Grant Condition No. 27 be increased from 73,777 sewer units to 76,086 sewer units.

FINAL EIS SCENARIO 3

EPA EIS Growth Scenario 3 provided for an 8.7 MGD plant for service to 92,706 sewer units.[2]

---

1. Final May, 1981 Environmental Impact Statement, Wastewater Treatment Facilities, South Shore Lake Tahoe Basin, South Tahoe Public Utility District, California (Final EIS)

2. Draft Environmental Impact Statement, Proposed Wastewater

The Final EIS recommended project was the following:

"The facility will be upgraded to insure that the facility can adequately handle the flows permitted by the Bi-State Compact." (See Table 4).[3]

"The project recommended by EPA does not call for an expansion beyond existing capacity and a maximum daily flow of 7.5 mgd."[4]

The EPA Final EIS provided: "The selected growth alternative does establish the framework for STPUD to expand if agreed upon in the future by the various regulatory and local agencies, and if performance in the Mitigation Program is deemed satisfactory. Future proposals by STPUD to expand the facility consistent with the recommended Scenario 3 is not likely to require an additional or supplementary EIS by EPA again if adequate implementation of the Mitigation Program occurs."[5]

GRANT CONDITIONS NO. 27 AND NO. 28

EPA Part III - Award Conditions, September 26, 1984, contained a number of Grant Conditions.[6] Conditions No. 27 and 28 are applicable to expansion and sewer units. These Grant Conditions read as follows:

"27. Unless future proposals by the District expand the facility beyond the capacity for which this Grant was awarded, as set forth on Page 17 of the Final EIS, the total number of sewer connections and sewer connection permits issued or allocated in the District shall not exceed 73,777 sewer units. Of these 73,777 sewer units, 1,267 sewer units shall be used for changes in use, and not be issued to new development placing structures on previously vacant lots or parcels.

Treatment Facilities, South Shore Lake Tahoe Basin, South Tahoe Public Utility District, California - Douglas County Sewer Improvement District No. 1, Nevada (Draft EIS), Page 200 (Attachment A)

3. Final EIS, Pages 17 and 18 (Attachment B)

4. Final EIS, Page 17 (Attachment B)

5. Final EIS, Page 17 (Attachment B)

6. Assistance ID No. C-06-1414-110, EPA Assistance Agreement/Amendment, South Tahoe Public Utility District, Part III - Award Conditions, September 26, 1984 (Grant Conditions) (Attachment C)

28. The District shall make a good faith effort to achieve implementation of the Mitigation Program as described in Appendix B of the Final Environmental Impact Statement, which effort shall include the following:

a. The District shall submit annual reports, documenting the progress of implementation of the Mitigation Program, on or before October 1, of each year, through the period of construction, and before initiation of any facility expansion.

b. The District shall not expand the facility beyond the capacity of 73,777 sewer units, unless the Mitigation Program is being adequately carried out:

(1) Except as set forth in paragraphs (2) and (3), the Mitigation Program is being adequately carried out only if there is substantial compliance with each of the measures identified in Appendix B as required mitigation measures.

(2) The mitigation measures identified for water resources and water quality in the Lake Tahoe Hydrographic Region May be carried out through:
- Compliance with each required mitigation measure; or
- Implementation of a water quality management plan (208 Plan) certified by the California State Water Resources Control Board and approved by EPA, including compliance with any conditions of certification or approval.

(3) The mitigation measures identified for meteorology and air quality may be carried out through:
- Compliance with each required mitigation measure; or
- Implementation of the measures in a nonattainment area plan for the Lake Tahoe Basin adopted by the Tahoe Regional Planning Agency, as submitted by the Air Resources Board as a revision to the California State Implementation Plan and approved by EPA."

TAHOE REGIONAL PLANNING AGENCY

The Tahoe Regional Planning Agency (TRPA) has adopted Goals and Policies, Codes of Ordinances, and Rules and Regulations pursuant to the Bi-State Compact referred to in the Final EIS. These documents provide for 409 single family units (SFU's) allocated for construction in the STPUD area during the years 1989, 1990, and 1991.[7]

The allocations are 97 SFU's in 1989, 151 SFU's in 1990, and 151 SFU's in 1991.[8]

The SFU allocations require 310 additional sewer units for 1989, 483 additional sewer units for 1990, and 483 additional sewer units for 1991.

The Goals and Policies and Codes of Ordinances also provide for commercial development within the STPUD area through the year 1996. Public facilities, public recreational facilities, and affordable housing units are permissible outside these allocations when approved by TRPA.[9]

GRANT BACKGROUND

South Tahoe Public Utility District (STPUD), pursuant to the above Grant, has completed its Treatment Plant Rehabilitation Project bringing the plant capacity to its original design capacity of 7.5 MGD. The advanced filtered secondary treatment process is now in operation.

STPUD, pursuant to the above Grant, has completed the Alpine County Harvey Place Effluent Storage Reservoir and Land Application Facilities for effluent disposal. These facilities are now in operation. The effluent storage and disposal facilities will permit 8.7 MGD treatment plant capacity.

The project recommended by EPA for the above Grant was a treatment plant maximum daily flow of 7.5 MGD treatment facility.[10] 7.433 MGD treatment plant capacity was allocated to provide service for connection of 73,777 sewer units plus a gallonage reserve for then connected and future connections in Fallen Leaf Lake, State Parks and Recreation, and U. S. Forest Service areas.[11]

---

7. Regional Plan for Lake Tahoe Basin, Goals and Policies, September 17, 1986, Chapter 7-10, Figure 6, and TRPA Regional Plan for the Lake Tahoe Basin, Codes of Ordinances, May 27, 1987, Chapter 33-3, 4, Allocation Table (Attachment D)

8. See Footnote No. 7

9. See Footnote No. 7

10. Final EIS, Page 17

11. Final EIS, Page 17, and Table 4, Page 18.

SEWER UNITS COMMITTED

STPUD has 73,777 sewer units connected or approved for connection through 1988, less 759 remaining sewer units of the 1,267 sewer units reserved for future changes in use. Pursuant to the Final EIS, 181 sewer units per year are assumed to be connected under the changes in use category.[12]

Connections beyond 73,777 sewer units are precluded by the EPA Final EIS and the above Grant Assistance EPA Conditions unless proposals by STPUD expand its treatment plant beyond the 7.5 MGD capacity for which the above Grant was awarded.

0.2 MGD TREATMENT PLANT EXPANSION PROPOSAL

STPUD proposes to increase its treatment plant capacity by 0.2 MGD to 7.7 MGD treatment plant capacity.[13]

The expansion is the smallest incremental treatment capacity expansion feasible from an engineering standpoint. Appendix I, EIR/EIS

STPUD MITIGATION PROGRAM

"The Final EIS provided: STPUD is being required to mitigate the adverse primary and secondary impacts associated with the level of development anticipated under Scenario 3, the recommended growth alternative (8.7 mgd). EPA's decision to finalize the EIS on the proposed wastewater project is contingent upon obtaining sufficient agency commitment of dollars and manpower to implement the identified mitigation measures which are designed to minimize and offset the environmental impact of the proposed action."[14]

STPUD adopted and submitted to EPA a Mitigation Program, Wastewater Treatment Facilities, South Tahoe Public Utility District, in November 1980 for the proposed wastewater treatment facilities of STPUD. (Refer to Volume II Appendices Section B to Mitigation Status Report No. 5, March, 1989, delivered to EPA and the State Water Resources Control Board (SWRCB) staff members on March 21, 1989 and March 22, 1989.)

---

12. Final EIS, Page 18, Table 4

13. South Tahoe Public Utility District Phase I Immediate Expansion Project, December, 1988, John Carollo Engineers (Attachment E)

14. Final EIS, Page 20 (Attachment B)

STPUD adopted and submitted to EPA a Mitigation Program and Agency Implementation Statements in January, 1981 for the proposed wastewater treatment facilities of STPUD.[15]

MITIGATION PROGRAM STATUS REPORTS

STPUD adopted and submitted to EPA Status Report #1 of the Mitigation Program in November, 1981 for the proposed wastewater treatment facilities of STPUD.[16]

STPUD adopted and submitted to EPA Status Report #2 of the Mitigation Program in May, 1982 for the proposed waste-water treatment facilities of STPUD.[17]

STPUD adopted and submitted to EPA a Status Report #3 of the Mitigation Program in October, 1982 for the proposed wastewater treatment facilities of STPUD.[18]

A Step II Design Grant for the Final EIS recommended project provided that a construction Step III Grant may not be awarded unless satisfactory progress is achieved towards implementation of the mitigation measures identified in the Final EIS. Satisfactory progress of the implementation of the mitigation progress was acknowledged by the reviewing agencies, Tahoe Regional Planning Agency, State of California - State Water Resources Control Board, State of California - Air Resources Board, and EPA in March and April, 1983.[19]

STPUD adopted and submitted to EPA a Status Report 4 of the Mitigation Program in February, 1983 for the proposed wastewater treatment facilities of STPUD.[20]

STPUD Status Report 4 contained an implementation summary of each of the three previous Status Reports and updated the implementation of the Mitigation Program since Status Report 3.

---

15. See Footnote No. 14

16. Refer to Volume II Appendices Section C to Mitigation Status Report #5 delivered to EPA and SWRCB staff on March 21, 1989

17. See Footnote No. 16

18. See Footnote No. 17

19. Status Report 4, Mitigation Program, Wastewater Treatment Facilities, South Tahoe Public Utility District, Figure 2-1, Figure 2-2, Figure 2-3. (Attachment F)

20. See Footnote No. 16

STPUD has submitted to EPA a Status Report #5 of the Mitigation Program, South Tahoe Public Utility District, February, 1989. This Status Report updates the implementation of the Mitigation Program since Status Report 4. (Refer to Mitigation Status Report No. 5.)

STPUD has submitted annual Status Report letters on implementation of the program.[21]

ADEQUATE MITIGATION PROGRAM PROGRESS

STPUD is not requesting EPA to determine adequate progress for expansion of its treatment facilities for the Scenario 3 expansion of its treatment facilities from 7.5 MGD to 8.7 MGD. It is requesting a determination of adequate progress for a 0.2 MGD treatment plant expansion from 7.5 MGD to 7.7 MGD.

A Summary Mitigation Program Progress Report, March, 1989, describes the progress in implementing the Mitigation Program since its adoption.[22] This Summary and all Mitigation Status Reports to date support the request that EPA find adequate progress has been made on the Mitigation Program for a 0.2 MGD expansion of the STPUD treatment plant.

The 0.2 MGD expansion will provide an additional 2,681 sewer units from those set forth on Table 4 on Page 18 of the Final EIS. The additional sewer units include 2,081 for the 0.2 MGD expansion and 593 for use of 0.57 MGD which EPA approved to restore the treatment plant to its original design capacity of 7.5 MGD, but not needed for the allowed 73,777 sewer unit connections.[23]

TRPA has allowed residential building of 409 single family units through 1991 for STPUD. This requires 1,309 sewer units.[24]

TRPA has allowed commercial, recreational, and public use development through 1996. This projected commercial development through 1996 is presently estimated to require 750 new sewer unit connections.[25]

---

21. Mitigation Status Report No. 5 delivered to EPA and SWRCB staff on March 21, 1989

22. EPA's South Lake Tahoe Mitigation Program, Summary Mitigation Program Progress Report, March, 1989 (Attachment G)

23. Final EIS, Table 4, Page 18 (Attachment B)

24. See Footnote No. 7

25. The 20 year projection of TRPA for commercial use in the

The District estimates that recreational and public use which are outside the TRPA allocation, but must be approved by TRPA for construction, will require approximately 250 sewer units for the eight year period from 1989 through 1996.[26]

TRPA has adopted in January, 1989 a 5 year public facilities list. This list includes recreational and public use within the STPUD area.

STPUD estimates that a substantial portion of the 250 sewer units will be required to service projects on this public facilities list from 1989 through 1993. The remainder of the 250 sewer units would be required for future public facilities from 1994 through 1996 approved by TRPA.

REQUEST OF EPA

STPUD, therefore, requests that EPA find that the South Shore Lake Tahoe Basin Mitigation Program is being adequately carried out for a 0.2 wastewater treatment facility expansion in compliance with the provisions of Grant Conditions No. 27 and No. 28.

If EPA determines adequate progress for a 0.2 MGD capacity expansion, STPUD requests that 593 additional sewer units be allowed for connection for TRPA allocations during 1989 and 1990 pending expansion completion. These sewer units result from .057 MGD capacity which EPA approved to restore the treatment plant to its original design capacity of 7.5 MGD, but not needed for the allowed 73,777 sewer unit connections.

If EPA determines adequate progress, and the State of California Parks and Recreation, or the U. S. Forest Service determine that the reserve capacity for one or both is excessive and either or both remit to STPUD any excess capacity, STPUD fur-

---

STPUD service area will require 1,859 sewer units - John Carollo Engineers Analysis of Treatment System Capacity, August, 1988, Table 1, Appendix A (Attachment H). STPUD estimates that 40% of these units will be needed for the eight year period from 1989 through 1996, or approximately 750 sewer units.

26. The U. S. Forest Service, State of California Parks and Recreation, and Fallen Leaf Lake present and future use are included in the reserve gallonage capacity and not included in sewer unit connections, regardless of the STPUD sewer unit billing procedure for determining flow and charge. Future new uses in specified Forest Service, Parks and Recreation, and Fallen Leaf Lake area requiring use of any of the remaining reserve capacity must be approved by TRPA.

ther requests that additional sewer unit connections for TRPA allocations be allowed for connection during 1989 and 1990 pending expansion completion, one sewer unit for each 96 gallons of remitted capacity.

If EPA determines adequate progress, STPUD finally requests that when the 0.2 MGD expansion is completed, a total additional 1,309 sewer units for single family residential units presently allowed by TRPA through the year 1991, and 1,000 sewer units for commercial, recreational, and public use as approved by TRPA through the year 1996, be allowed for connection.[27]

The total requested increase in sewer unit connections is 2,309.

REQUEST LIMITATIONS

A copy of the Sewer Connection Inventory Program as of January 1, 1989 is set forth in Attachment I. A chart of the Treatment Plant Capacity and Sewer Connection Inventory proposed for the 0.2 MGD expansion is set forth in Attachment J. This chart does not include remitted capacity, if any.

The 0.2 MGD expansion will serve connection of 2,681 additional sewer units.

STPUD is not requesting the use of the remaining 372 sewer units and the additional sewer units, if any, from remitted reserve capacity for connection at this time. No additional sewer units for residential connection will be requested for the period through 1996 unless and until TRPA allocates residential connections for the period of 1992-96 and STPUD demonstrates adequate progress of its EPA Mitigation Program to EPA for allowance of and use of the additional residential sewer unit connections.[28]

---

27. This total of 2,309 sewer units includes 593 sewer units from 0.57 MGD EPA approved capacity to restore the treatment plant to its original design capacity of 7.5 MGD and sewer units, if any, resulting from remitted capacity.

28. TRPA approved affordable housing is outside the TRPA residential allocations. If TRPA approves any affordable housing requiring new sewer unit connections, sewer units from the remaining 372 units are requested to be used for this purpose. There are no affordable housing units proposed during the 1989-1991 period that will require new sewer unit connections. There are affordable housing units proposed as a part of the City of South Lake Tahoe Redevelopment Plan after 1991.

The 7.7 MGD Mitigation Program in the South Tahoe Public Utility District 0.2 MGD Wastewater Treatment Facility Expansion, Draft Environmental Impact Report/Environmental Impact Statement for CEQA and TRPA EIS Compliance is attached for your information.[29]

Finally, the Draft November, 1988, Compliance Measures List and Related Information and Analysis Prepared Pursuant to the Requirements of Chapter 32, TRPA Code of Ordinances, Tahoe Regional Planning Agency, November, 1988, is attached for your information.

The contact persons for South Tahoe Public Utility regarding this request are:

Anders J. Hauge
Vice-President
Quad Consultants
2530 J Street, Suite 302
Sacramento, CA 95816
(916) 447-1700

James R. Cofer
General Manager
South Tahoe Public Utility District
P. O. Box 70542
South Lake Tahoe, CA 95705
(916) 544-6474

John C. Weidman
Attorney for South Tahoe Public Utility District
325 Main Street
Placerville, CA 95667
(916) 622-5260

Yours very truly,

JCW:jb

JOHN C. WEIDMAN
Attorney for South Tahoe
Public Utility District

---

29. Chapter 2.0, 7.7 MGD Mitigation Program, Pages 2-1 through 2-39 (Attachment K)

cc: Susan Johnson
Environmental Engineer
Environmental Protection Agency

Allan Patton
Chief, Environmental Services Unit
State Water Resources Control Board

Anders J. Hauge
Quad Consultants

James R. Cofer
General Manager
South Tahoe Public Utility District

Contents

A	Draft 1981 EIS, selected pages
B	Final 1981 EIS, selected pages
C	EPA Grant Conditions
D	TRPA Documents, selected pages
E	Phase I Expansion Description
F	Status Report 4, selected pages
G	Mitigation Program Summary, 1989
H	Treatment Capacity Analysis, selected pages
I	Sewer Connection Inventory
J	Treatment Plant Capacity Chart
K	7.7 Mitigation Program (Draft)
L	TRPA Compliance Measures

ATTACHMENT A

Draft Environmental Impact Statement, Proposed Wastewater Treatment Facilities, South Shore Lake Tahoe Basin, South Tahoe Public Utility District, California - Douglas County Sewer Improvement District No. 1, Nevada (Draft EIS), Page 200

Question: What will be the required treatment plant capacities at various levels of growth?

Measurements

	1978	Growth Scenarios 1	2	3	4	5
Number of Sewer Units						
Housing						
STPUD	49,749	59,696	85,065	72,380	59,696	85,065
DCSID	9,552	14,886	14,886	25,392	35,897	35,897
Hotel/Motel						
STPUD	8,195	9,295	10,527	11,363	9,295	12,375
DCSID	2,431	3,531	3,531	5,599	11,176	8,096
Commercial						
STPUD	5,439	6,468	8,379	7,497	6,027	8,526
DCSID	1,029	1,911	1,617	2,793	4,851	3,969
Campsites						
STPUD	11,102	1,284	1,465	1,465	1,465	1,465
DCSID	360	619	690	690	690	690
Casinos						
DCSID	12,250	13,300	13,300	16,800	21,000	21,000
Total						
STPUD	64,485	76,743	105,436	92,706	76,483	107,431
DCSID	25,622	34,247	34,024	51,274	73,614	69,652
Plant capacity required in mgd (max. day)						
STPUD	5.80	6.91	9.49	8.34	6.88	9.67
Reserve capacity	.36	.36	.36	.36	.36	.36
Total	6.16	7.27	9.85	8.70	7.24	10.03
DCSID	2.3	3.08	3.06	4.61	6.63	6.27

Measurements are based on the following assumptions:

- one sewer unit = 90 gallons/day = .00009 mgd (maximum daily flow)
- 3.2 sewer units per housing unit
- 1.1 sewer units per motel room
- 1.47 sewer units per 1000 square feet of commercial floor space
- .9 sewer unit per campsite
- .07 sewer unit per 1000 square feet of casino floor space

ATTACHMENT B

Final May , 1981 Environmental Impact Statement, Wastewater Treatment Facilities, South Shore Lake Tahoe Basin, South Tahoe Public Utility District, California (Final EIS) Pages 15-21

issued Water Discharge Permit Compliance Schedule. If the project proposed implies significantly different growth patterns than those described by the project alternatives or scenarios in the DEIS, the district may have to supplement the content and assessment presented in the DEIS. Furthermore, prior to funding any portion of a proposed DCSID project, an Addendum to this FEIS must be prepared that documents DCSID's chosen project alternative(s) and includes a mitigation program to offset adverse primary and secondary environmental effects.

RECOMMENDED GROWTH SCENARIO AND IMPLICATIONS FOR THE PROPOSED WASTEWATER PROJECT

EVALUATION OF ALTERNATIVE GROWTH SCENARIOS

In the Lake Tahoe Basin, further urbanization would have adverse impacts on water qualty, high erosion hazard lands, stream environment zones fish and wildlife habitats, air quality, visual quality, traffic circulation, quality of outdoor recreation experience and reliability of energy supply. The growth levels projected under Scenarios 2, 4 and 5, in particular, would impose severe constraints toward protecting this outstanding natural resource. Scenarios 2 and 5 project full buildout of vacant, subdivided land in the STPUD service area, and Scenarios 4 and 5 project full buildout of vacant, subdivided land in the DCSID service area. The highly and extremely adverse impacts associated with these three growth alternatives contravene state and federal mandates to insure that no degradation occurs in Lake Tahoe waters.

They also project further increases in traffic volumes in an area that cannot accommodate them. Road conditions will, consequently, continue to be overcrowded and the basin's air quality standard for carbon monoxide exceeded. Scenarios 2 and 5 project population and economic development that would impose water demands in excess of allocations assumed by the California State Water Resources Control Board in its water rights study. Scenarios 4 and 5 have similar implications for the Nevada portion of the basin. Moreover, Scenarios 4 and 5 project substantial spillover populations which would significantly increase the population, land consumption, and service demand in the Carson Valley and Alpine County portion of the Upper Carson River Basin.

The individual and cumulative effects of Scenarios 2, 4, and 5 are compelling reasons to eliminate these alternatives as realistic futures for the Lake Tahoe Basin. The remaining growth alternatives, Scenarios 1 and 3, allow some development to occur without the far-reaching environmental and public service consequences.

RECOMMENDED GROWTH SCENARIO AND IMPLICATIONS FOR THE STPUD PROPOSED PROJECT

The impact assessment performed in the DEIS clearly demonstrated that the impacts associated with Scenarios 2, 4, and 5 would result in severe environmental consequences for the Lake Tahoe Basin and adjacent Upper Carson River Basin. The remaining growth alternatives, Scenarios 1 and 3, would allow for some growth in the basin but not nearly to the degree suggested by the other scenarios.

Very few adverse impacts were identified for Scenario 1 which is based on low population and economic development. The only areas where highly or extremely adverse impacts were expected relate to property owners' and developers' expectations of developing vacant land and traffic conditions. In contrast, Scenario 3, which is based on moderate population and economic development, could have more serious implications for the natural and social environments of both the Lake Tahoe and Upper Carson River basins. The following areas were identified as having the potential for highly or extremely adverse impacts: development of high erosion hazard lands, development of stream environment zones, increase in persons affected by traffic noise from major roadways, carbon monoxide concentrations, disruption of view corridors, traffic conditions, energy consumption, cultural resources.

The recommended water facility program and growth scenarios must be consistent with the proposed water quality plan for the Lake Tahoe Basin, as well as the air quality nonattainment plan. Both of these plans are recommending strict measures to reduce water quality problems by prohibiting development on high erosion hazard lands and in stream environment zones, and to attain the national ambient air quality standards by implementing a variety of land use and traffic control measures. Consequently, the need to comply with these programs, as well as the mitigation program identified in Appendix B of this FEIS, indicates that the adverse environmental consequences of Scenario 3 can be effectively offset. Given these assurances and weighing the benefits and cost-effectiveness of treatment plant capacity expansion, EPA believes that the level of population growth and economic development associated with Scenario 3 can be accommodated without incurring environmental degradation.

Thus, EPA's preferred growth alternative is Scenario 3 which could allow STPUD to ultimately expand its plant capacity to accommodate a maximum daily flow of 8.7 mgd, if all agency approvals are obtained. However, the Bistate Compact has imposed a temporary development restriction while a new regional plan is prepared. Because the new plan, which will identify the amount of development that can occur in the basin given its natural environmental carrying capacity, will not be completed until 1983, there is uncertainty over the future development potential of the Lake Tahoe Basin. Consequently, EPA will only fund a plant capacity that will accommodate existing flows, plus that generated by the limited development permitted by the Bistate Compact.

The plant capacity is based on the following items:

- current connections,
- reserve capacity by contract,
- connections permitted by the Bistate Compact,
- public projects, and
- changes in use and connections.

Importantly, the plant capacity is based on a sewer unit concept rather than on gallons of wastewater flow. A sewer unit is an alternative means of defining plant capacity and refers to a flow quantity based on the district's experience.

The concept of sewer units is used because:

1. The schedule of sewer units is identified and administered under the provisions of Article IX, Ordinance No. 300, Sewer and Street Lighting Ordinances of the South Tahoe Public Utility District.

2. An empirical formula has been developed that established the relationship between sewer units connected and plant inflow (85 gallons per sewer unit - maximum 7-day average dry weather flow).

3. An empirical formula has been developed for the relationship between sewer units connected and annual discharge of the Alpine County Land Application System (60 to 70 acre-feet/year per 1000 sewer units).

4. NPDES Permit CA 01012709 requires the district to submit at quarterly intervals a report on current connections and remaining capacity. These capacity reports have been developed on the basis of sewer units and provide a record of remaining capacity.

Based on historical records maintained by STPUD, a maximum 7-day average flow of 85 gallons per sewer unit is required to reliably treat present flows. (Over the period 1971 to 1979, the 7-day average flow was less than or equal to 85 gallons per sewer units over 99 percent of the time.) Converted into a maximum daily basis, this corresponds to 93 gallons per sewer unit.*

However, a large portion of the population in the basin is not permanent residents but visitors. The lack of sewage capacity does not prevent visitors from coming to the basin or people from sharing accommodations. In fact, overnight and day use of the south Lake Tahoe area has continued to escalate despite the limitation on new sewer hookups. With no effective controls on day and overnight use of the basin, flows to the plant may continue to grow. Moreover, even permanent populations can increase under a development ban by increasing the number of persons living in each unit. This phenomenon of increasing occupancy rates is occurring as affordable housing becomes increasingly difficult to secure. As a result of this phenomenon, a sewer unit equivalent to maximum daily flows of 96 gallons, rather than 93 gallons, would appear to be a reasonable assumption in determining future capacity requirements.

The project recommended by EPA does not call for an expansion beyond existing capabilities, a maximum daily flow of 7.5 mgd. The facility will be upgraded to insure that the facility can adequately handle the flows permitted by the Bistate Compact (see Table 4). The selected growth alternative does establish the framework for STPUD to expand if agreed upon in the future by the various regulatory and local agencies, and if performance in the mitigation program is deemed satisfactory. Future proposals by STPUD to expand the facility consistent with the recommended Scenario 3 is not likely to require an additional or supplementary EIS by EPA, again, if adequate implementation of the mitigation program occurs.

EPA's recommended wastewater program for STPUD calls for:

- abandonment of the advanced wastewater facilities and modifications to produce secondary treated and filtered effluent;

- a maximum daily plant capacity of 7.5 mgd;

---

*Assuming a conversion factor of 1.09 based on the STPUD's historical records.

TABLE 4

ESTIMATED SEWAGE TREATMENT PLANT CAPACITY FOR STPUD

Item	Unit Value	Sewer Units	Estimated Flow (mgd) Max. 7-day Avg. 85 GAL/SU	Max. Day 96 GAL/SU
1. Development Allowed 1981 through April 1983 by the Bistate Compact				
A. Residential (588 Units)	3.2 SU/Unit	1882	0.160	0.181
B. Commercial (150,085 Sq. Ft.)	1.47 SU/1000 SF	221	0.019	0.021
2. Public Projects	LS	500	0.043	0.048
3. Changes in Use and Connections* to Sewer Billings 1981-1987	181 SU/YR	1267	0.108	0.122
4. Present Connections (1/6/81)	—	69,907	5.942	6.711
5. Reserve Capacity by Contract	—	—	0.360	0.360
6. Reserve Capacity Retreat Return Flows Emergency Pond	—	—	0.500	—
		73,777	7.132	7.443**

*Over the past three years, the district has undertaken an aggressive program to correct its billing records. During the inspection, it was learned that the number of sewer units upon which existing uses are billed is often understated. This results because of changes in the type of use that require additional sewer units. As a result of the program, the district has added 1,826 more sewer units to its billing records. The conversion of existing structures to more intensive wastewater generators is expected to continue. The district has assumed a figure of 181 sewer units per year. While this amount is less than has been detected during the inspection program, it is not so low that it will severely understate future conversions, nor is it so high that it will require additional treatment plant capacity. The estimate has been reviewed by the Lahontan Regional Water Quality Control Board and is not considered to be unreasonable.

**While it would appear a capacity of only 7.44 mgd is required, the facility was originally designed to handle maximum daily flows up to 7.5 mgd. The proposed project calls for modifying the already existing facilities to function reliably at its original design. Accordingly, the proposed project capacity is for a 7.5 mgd facility.

- an export system of pumping stations and pipelines with the ability to reliably convey filtered secondary effluent to Alpine County;
- an effluent storage reservoir, transport canals, and irrigation systems in Alpine County; and
- future expansion, assuming approval by various regulatory and local agencies and adequate implementation of the mitigation program.

MITIGATION PROGRAM

INTERRELATIONSHIPS AMONG NONATTAINMENT PLAN, WATER QUALITY PLAN, BISTATE COMPACT, AND PROPOSED PROJECT

The Clean Air Act Amendments of 1970 required each state to prepare a State Implementation Plan for the attainment of ambient air standards. The preparation of the plan was the responsibility of the California Air Resources Board (ARB) for California and TRPA for Nevada.

The 1977 amendments to the Clean Air Act required the states to prepare plans which included specific measures for achieving attainment of the standards. Both states designated the basin as a "non-attainment area" for carbon monoxide and oxidants. The designation requires the preparation of a plan to achieve compliance with the air quality standards. In 1979 the ARB Board adopted the Lake Tahoe Basin Nonattainment Plan (for the California side) as a chapter of the State Implementation Plan. Similarly, Nevada adopted its Lake Tahoe Basin NAP (for the Nevada side) in the same year as part of its State Implementation Plan. Both plans are currently pending EPA approval. The NAP is pertinent in terms of suggesting mitigation measures for secondary, indirect growth which may worsen air quality in the basin. Accordingly, the California ARB, which has higher standards than the federal act, is proposing that more stringent mitigation measures be applied for purposes of improving air quality. In August 1980, EPA issued a notice of proposed rulemaking which proposed conditioned approval of the plan and a redesignation of the basin from nonattainment to attainment for oxidants.

The California-Nevada Bistate Compact, approved by both state and later ratified by Congress, includes requirements for various studies which have significant implications for mitigation of identified impacts. The Compact requires establishment of environmental threshold standards and a carrying capacity for the basin based on the most restrictive state or federal standards by June 1982 and for the preparation of the general plan by TRPA by June 1983, based in part on the results of the threshold study.

While the plan is being prepared, a building restriction has been imposed which limits the level of development until 1983. The provisions of the Compact, are obvious for the wastewater agencies: the requested plant modification must be consistent with the development restrictions imposed by the Compact and comply with existing water quality requirements.

The Federal Water Pollution Control Act, in its Section 208, calls for the designation of areas with substantial water quality control problems and the selection for

each area of an organization to conduct a continuing areawide waste treatment management planning process, with plans to be prepared under this process submitted to EPA for approval. The California State Water Resources Control Board has prepared a plan for California, and the Tahoe Regional Planning Agency has prepared a plan for Nevada. California indicated that if improvements were made it would agree to submit the TRPA plan as the regional plan for the basin. The new TRPA governing board created under the Bistate Compact is considering amendments to its Lake Tahoe Basin Water Quality Management Plan and ordinances to satisfy the requirements of both the California State Water Quality Resources Control Board and the Nevada Division of Environmental Protection.

Proposed amendments include restrictions on new subdivisions and development in stream environment zones and high erosion hazard lands and require adherence to land capability coverage controls. Other improvements include enhanced best management practices, offset policies, and other remedial erosion and control practices. The EIS on the 208 plan also proposed a series of mitigation measures which overlapped to some degree with the NAP and with the mitigation measures suggested in the DEIS on this project. Importantly, in order for EPA to approve the proposed project, it must be consistent with the adopted Water Quality Plan. As a consequence, the mitigation program presented in the EIS has been fashioned to comply with water quality measures called for in the California Water Quality Plan, since at present it is more restrictive than the 208 plan.

STPUD MITIGATION PROGRAM

STPUD is being required to mitigate the adverse primary and secondary impacts associated with the level of development anticipated under Scenario 3, the recommended growth alternative. EPA's decision to finalize the EIS on the proposed wastewater project is contingent upon obtaining sufficient agency commitments of dollars and manpower to implement the identified mitigation measures which are designed to minimize and offset the environmental impacts of the proposed action. As noted in the previous section, the mitigation program is largely shaped by other plans and policies that have been formulated since the DEIS was issued. The priorities for mitigation are to protect water quality from the effects of urbanization consistent with the provisions of the Water Quality Management (208) Plan and to attain the national ambient air quality standards for the Lake Tahoe Basin established by the Nonattainment Plan. Major emphasis is placed on protecting stream environment zones, protecting high erosion hazard lands, and strictly adhering to the land capability system as approaches towards preserving the integrity of the lake. Traffic control measures with an emphasis on increased public transit opportunities are a cornerstone in the plans to meet national ambient air quality standards.

A key force in coordinating these various demands for the DEIS, the Bistate Compact, the Lake Tahoe Basin Water Quality Plan, and the Nonattainment Plan has been the Mitigation Task Force, a committee convened to assist in securing commitments to mitigation measures. The Mitigation Task Force committed the majority of 1980 to the review and revision of the mitigation measures suggested in the DEIS.

The role of the Mitigation Task Force is directed towards obtaining the necessary implementation statements from the twenty-eight identified responsible agencies.

The implementation statements must show a firm commitment to execute the mitigation measures. A commitment involves:

- a commitment of financial resources,
- a commitment of staff,
- a commitment of a time schedule for completion, and
- a commitement of achieving certain objectives or milestones.

The revised Mitigation Program along with the agency implementation statements are found in Appendix B of this FEIS.

ATTACHMENT C

Assistance ID No. C-06-1414-110, EPA Assistance Agreement/ Amendment, South Tahoe Public Utility District, Part III - Award Conditions, September 26, 1984 (Grant Conditions)

United States
Environmental Protection
Agency

Regional Administrator
215 Fremont Street
San Francisco CA 94105

Region 9
Arizona, California
Hawaii, Nevada
Pacific Islands

EPA

In Reply Refer to: W-2
Re: C-06-1414-110

26 SEP 1984

Mr. James R. Cofer
Manager/District Engineer
South Tahoe Public Utility District
1275 Meadow Crest Drive
South Lake Tahoe, CA 95705

Dear Mr. Cofer:

We are pleased to offer the South Tahoe Public Utility Distrct a Step 3 award in the amount of $17,310,214, as an amendment to your basic grant to assist you in construction of wastewater reclamation facilities and modification to secondary treatment plant. This award is based upon your application as certified to this office by the California State Water Resources Control Board.

If you wish to accept this award, the original and one (1) copy of the enclosed Grant Agreement should be signed, dated and returned within three (3) weeks after receipt. Please return the signed Grant Agreements to: Don Perrin, Chief, Grants and Contracts Unit, State Water Resources Control Board, Division of Water Quality, P. O. Box 100, Sacramento, CA 95801. Part III of the Grant Agreement contains general/special conditions which should be particularly noted prior to your acceptance.

Sincerely,

for Judith E. Ayres
Regional Administrator

RECEIVED
'84 SEP 28 A10:43
STPUD

Enclosure
3c Grant Agreement/Amendment
Rehabilitation Act of 1973, Veterans Sheet
MBE/WBE Utilization Form

United States
Environmental Protection
Agency

Regional Administrator
215 Fremont Street
San Francisco CA 94105

Region 9
Arizona, California
Hawaii, Nevada
Pacific Islands

EPA

December 21, 1983

Dear Grant Recipient:

You are a recipient of federal financial assistance from the Environmental Protection Agency.

In the case of Paralyzed Veterans of America, et al., Plaintiffs, v. Benjamin R. Civiletti, et al., Defendants, United States District Court, Central District of California, No. 79-1979 WPG, the Honorable William P. Gray ordered the Environmental Protection Agency to notify you that you are required to comply with the provisions of Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), even though the Environmental Protection Agency has not yet issued final regulations implementing Section 504 of the Rehabilitation Act.

Section 504 of the Rehabilitation Act is designed to assure that those who receive federal financial assistance will not discriminate against handicapped persons. It provides in relevant part as follows:

> "No otherwise qualified handicapped individual in the United States...shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."

Effective June 3, 1977, the Department of Health, Education and Welfare issued final regulations implementing Section 504 as it applies to recipients of federal financial assistance from that agency (45 C.F.R. Part 84). You may look to the HEW regulation for guidance as to your obligation under Section 504 of the Rehabilitation Act.

Sincerely,

Judith E. Ayres

Judith E. Ayres
Regional Administrator

U.S. ENVIRONMENTAL PROTECTION AGENCY
EPA ASSISTANCE AGREEMENT/AMENDMENT
PART I - ASSISTANCE NOTIFICATION INFORMATION

1. ASSISTANCE ID NO. C-06-1414-110
2. LOG NUMBER C-9-219
3. DATE OF AWARD 28 SEP 1984
4. MAILING DATE SEP 26 1984

5. AGREEMENT TYPE
- Cooperative Agreement
- Grant Agreement X
- Assistance Amendment

6. PAYMENT METHOD
☐ Advance ☒ Reimbursement ☐ Letter of Credit
Send Payment Request To: SWRCB DIVISION OF WATER QUALITY

7. TYPE OF ACTION
CONTINUATION

RECIPIENT ORGANIZATION

8. RECIPIENT
SOUTH TAHOE PUBLIC UTILITY DISTRICT
1275 MEADOW CREST DRIVE
SOUTH LAKE TAHOE, CA 95705

9. PAYEE
SOUTH TAHOE PUBLIC UTILITY DISTRICT
1275 MEADOW CREST DRIVE
SOUTH LAKE TAHOE, CA 95705

EIN NO.
CONGRESSIONAL DISTRICT 14TH

10. RECIPIENT TYPE
SPECIAL UNIT

11. PROJECT MANAGER AND TELEPHONE NO.
Name JAMES R. COFER
Title MANAGER/DISTRICT ENGINEER
Telephone (916) 544-6474

12. CONSULTANT (WWT Construction Grants Only)
Name CULP/WESNER/CULP
Address CAMERON PARK, CA 95682
Telephone (916) 933-0787

EPA CONTACT

13. ISSUING OFFICE (City/State)
Environmental Protection Agency
Region IX
Water Division
215 Fremont Street
San Francisco, CA 94105

14. EPA PROJECT/STATE OFFICER AND TELEPHONE NO.
GORDON INNES, (916) 322-6655
State Water Resources Control Board
Division of Water Quality
P. O. Box 100
Sacramento, CA 95801

15. EPA CONGRESSIONAL LIAISON & TEL. NO.
Jean Croft - (202) 755-0488

16. STATE APPL ID (Clearinghouse)
78051530/83020702

17. FIELD OF SCIENCE
N/A

18. PROJECT STEP (WWT CG Only)
3

19. STATUTORY AUTHORITY
PL 92-500, TITLE II, SECTION 201
PL 95-217,
PL 97-117,

20. REGULATORY AUTHORITY
40 CFR CHAPTER 1,
SUBCHAPTER B

21. STEP 2 + 3 & STEP 3 (WWT Construction Only)
- a. Treatment Level
- b. Project Type
- c. Treatment Process
- d. Sludge Design

22. PROJECT TITLE AND DESCRIPTION
CONSTRUCTION OF WASTEWATER RECLAMATION FACILITIES AND MODIFICATION TO SECONDARY TREATMENT PLANT.

23. PROJECT LOCATION (Areas Impacted by Project)

City/Place	County	State	Congressional District
SOUTH LAKE TAHOE	EL DORADO	CA	14TH

24. ASSISTANCE PROGRAM (CFDA Program No. & Title)
CFDA 66.418 - CONSTRUCTION GRANTS

25. PROJECT PERIOD
AWARD TO 1-31-88

26. BUDGET PERIOD
N/A

27. COMMUNITY POPULATION (WWT CG Only)
23,000

28. TOTAL BUDGET PERIOD COST
N/A

29. TOTAL PROJECT PERIOD COST
N/A

FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
30. EPA Amount This Action	--	$17,310,214	---
31. EPA In-Kind Amount			
32. Unexpended Prior Year Balance			
33. Other Federal Funds			
34. Recipient Contribution	--	2,885,036	---
35. State Contribution		2,885,036	
36. Local Contribution			
37. Other Contribution			
38. Allowable Project Cost	--	$23,080,286	---

39. FISCAL

Program Element	FY	Appropriation	Doc. Control No.	Account Number	Object Class	Obligation/Deoblig. Amount
GKAW80	83	68X0103.F	C00024	MGKA092002	41.11	$17,310,214

EPA Form 5700-20A (Rev. 5-82) Replaces previous editions and EPA Forms 5700-1A, B, C, and D, all of which are obsolete.

IDENTIFICATION NO. C-06-1414-110

PART II – APPROVED BUDGET

TABLE A – OBJECT CLASS CATEGORY (Non-construction)	TOTAL APPROVED ALLOWABLE BUDGET PERIOD COST
1. PERSONNEL	
2. FRINGE BENEFITS	
3. TRAVEL	
4. EQUIPMENT	
5. SUPPLIES	
6. CONTRACTUAL	
7. CONSTRUCTION	
8. OTHER	
9. TOTAL DIRECT CHARGES	
10. INDIRECT COSTS: RATE % BASE	
11. TOTAL (Share: Grantee ____ % Federal ____ %)	
12. TOTAL APPROVED GRANT AMOUNT	$
TABLE B – PROGRAM ELEMENT CLASSIFICATION (Non-construction)	
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10. TOTAL (Share: Grantee ____ % Federal ____ %)	
11. TOTAL APPROVED GRANT AMOUNT	$
TABLE C – PROGRAM ELEMENT CLASSIFICATION (Construction)	
1. CONSTRUCTION AND PROJECT COSTS	$ 20,150,000
2. ADMINISTRATIVE EXPENSES	181,350
3. LAND, STRUCTURES, RIGHT-OF-WAY	450,000
4. CONSULTANT ARCH./ENGR. FEES	1,699,999
5. GRANTEE ARCH./ENGR. FEES (FORCE ACCOUNT)	176,937
6. EQUIPMENT	422,000
7. CONTINGENCIES	
8. RELOCATION PAYMENTS	-0-
9. INDIRECT COSTS	-0-
10. SUBTOTAL	
11. GRANT PROCESSING FEE	
12. TOTAL (Share: Grantee 12.5 % Federal 75 % State 12.5 %)	$ 23,080,286
13. TOTAL APPROVED GRANT AMOUNT	$ 17,310,214

PART III–AWARD CONDITIONS

a. GENERAL CONDITIONS

The recipient covenants and agrees that it will expeditiously initiate and timely complete the project work for which assistance has been awarded under this agreement, in accordance with all applicable provisions of 40 CFR Chapter I, Subpart B. The recipient warrants, represents, and agrees that it, and its contractors, subcontractors, employees and representatives, will comply with: (1) all applicable provisions of 40 CFR Chapter I, Subchapter B, INCLUDING BUT NOT LIMITED TO the provisions of Appendix A to 40 CFP Part 30, and (2) any special conditions set forth in this assistance agreement or any assistance amendment pursuant to 40 CFR 30.425.

b. SPECIAL CONDITIONS

(For cooperative agreements include identification or summarization of EPA responsibilities that reflect or contribute to substantial involvement.)

1. All consultant subagreements and amendments must be submitted for review and receive approval before grant payments can be made. Subagreements exceeding $100,000 must have approval prior to their award when the grantee's procurement system is not certified. Procurement actions must comply with 40 CFR Part 33 as published in the Federal Register on March 28, 1983, and as further explained in State Water Resources Control Board Clean Water Grant Bulletins. The regulations on procurement will not apply to work for which an allowance for planning (Step 1) and design (Step 2) is awarded under 40 CFR 35.2025.

   Grantees utilizing their own employees (Force Account) for engineering, construction, or construction-related activities must receive prior approval in accordance with 40 CFR 30.520 dated September 30, 1983. Indirect costs associated with the direct costs of Force Account must have the Indirect Cost Rate specifically approved and costs must be separately identified in the grant before reimbursement can be made.

   Grantees utilizing the staff of other public agencies must also receive prior approval in accordance with the State Water Resources Control Board Clean Water Grant Bulletins.

   The amounts listed on page 2 of the grant offer for fees are estimates only and do not indicate approval of the professional subagreements or force account requests.

2. The grantee shall demonstrate to the satisfaction of the Regional Administrator that he has or will have a fee simple or other such estate or interest in the site of the project and rights of access, as the Regional Administrator finds sufficient to assure undisturbed use and possession for the purpose of construction and operation for estimated life of the project, and in the case of projects serving more than one municipality, that the participating communities have such interests or rights as the Regional Administrator finds sufficient to assure their undisturbed utilization of the project for the estimated life of the project.

3. The Grantee will enact in each jurisdiction serviced by the treatment works project before 90 percent completion of construction, an acceptable sewer use ordinance and rate ordinance/resolution. These ordinances/resolutions will be enforced upon completion of the project.

4. Grantee shall acquire and maintain any flood insurance made available to it under the National Flood Insurance Act of 1968, as amended. The insurance shall be in an amount at least equal to the total eligible project costs, excluding cost of land and uninsurable improvements, or to the maximum limit of coverage made available under the National Flood Insurance Act of 1968, as amended, whichever is less, for the entire useful life of the project.

PART III - GRANT CONDITIONS

This condition shall not be applicable if, on the date of execution of the grant agreement by both parties, flood insurance was not available pursuant to the Flood Insurance Act of 1968, as amended, for property in the project location. This condition shall not be applicable if the project location is outside the boundaries of a special flood hazard area delineated on a Flood Hazard Boundary Map or Flood Insurance Rate Map which has been issued by the Department of Housing and Urban Development, Federal Insurance Administration. This condition shall not be applicable if the total value of improvements insurable under the National Flood Insurance Act is less than $10,000.

5. The Grantee shall operate its treatment works as a coordinated regional facility providing service on a fair and equitable basis and in accordance with guidelines and regulations of the State Board, specifically including the service area designated in the Grantee's Project Report.

6. The Grantee agrees to make payment to its contractor promptly for any sums due under this grant and to retain only such amounts as may be justified by specific circumstances and provisions of this grant or the construction contract. The retained amounts shall be in conformance with state law.

   The Grantee agrees to report to the Project Officer and promptly credit to the federal share due under this grant the full amount of any interest earned, or if no such interest is earned, an imputed amount of interest at the prevailing rate, upon federal sums paid to the Grantee which are not paid over to the contractor or are not necessary to reimburse the grantee for contractor payments already made.

   The Grantee agrees to include an appropriate provision in each Step 3 construction contract to implement this prompt payment requirement.

   The foregoing condition will not apply to the extent that it may be prohibited by any specific requirement of state or local laws or ordinances.

7. Should the discovery of a potential archeological or historical resource occur during construction, all work in the area of the find will stop and a qualified archeologist will be called in to evaluate the situation and make recommendations to the Cultural Resources Officer of the State Water Resources Control Board. Said Cultural Resources Officer will then determine what will be necessary for construction to proceed.

8. The Grantee is required to implement water conservation actions. Within 90 days of the date of grant award, proposed actions shall be submitted to the Division of Water Quality for approval. Examples of effective actions are as follows:

   a. Support of a local school board(s) in a water conservation education program.
   b. Distribution of water saving devices.
   c. Implementing water supply leak detection programs.
   d. Establishing low water use landscape programs.
   e. Distribution of water conservation information.
   f. Adoption of local water conservation policies and ordinances.
   g. Support of a water conservation plan and actions being undertaken by an agency in the service area.
   h. Development of a comprehensive water conservation plan.

9. No portion of this award may be used for lobbying or propaganda purposes as prohibited by 18 U.S.C. Section 1913 or Section 607(a) of Public Law 96-74.

10. This grant may be terminated if any portion of the schedule for the project indicated below is not met, unless prior written waiver of the schedule has been obtained from the Division of Water Quality of the State Water Resources Control Board. This schedule in no way relieves the Grantee of the obligation to comply with the requirements of its waste discharge permit or NPDES permit.

Building and First Year Operation

Advertise for Bids	11/84
Open Bids	01/85
Award Construction Contract	02/85
Submit final plan of operation	02/86
Submit final operation and maintenance manual	07/86
Complete construction	02/88
Initiate Facility Operation	03/88
Complete project	02/89
Performance Certification	02/89

11. Once the bid prices of the successful contractors are determined and the Approval to Award (ATA) the building contract is issued, the grant amount will be adjusted (increased or decreased) as appropriate to reflect eligible bid costs plus five percent of the eligible bid costs as a contingency to fund unforeseen eligible cost overruns, and a reasonable amount for engineering, construction management, administration, etc.

The adjustment of the grant is subject to the availability of funds remaining in the State allocation.

The grant amount determined following the ATA will be a limit on grant participation and no further grant increases will be made except as provided in the State Water Resources Control Board's Clean Water Grant Program Bulletin No. 118.

The grantee shall submit all consultant subagreement and force account requests in sufficient time to allow for their review prior to the anticipated date for the ATA.

12. The grantee agrees to submit to the Division of Water Quality a completed EPA Form 6005-1 within 30 days after the date the grantee begins building the project (see 40 CFR 35.2202). This 6005-1 will contain the information on subagreement awards to minority and women's businesses used during facilities planning and design of the project.

    The grantee further agrees to submit to the Division of Water Quality a completed Form 6005-1 within 15 days after the end of each Federal fiscal quarter during which the grantee or its contractors award any subagreements for building and building-related services and supplies.

13. The grantee shall not issue any construction contracts for this project until such issuance is expressly approved in writing by the Division of Water Quality. The Division of Water Quality will not issue this approval until Alpine County's initiative ordinance prohibiting discharge of secondary effluent is judicially declared invalid at the superior court level or higher.

14. The grantee shall expeditiously pursue judicial resolution of the validity of the Alpine County Initiative Ordinance prohibiting discharge of secondary effluent.

15. The District shall not issue sewer connection permits serving any new subdivision or any development within any new subdivision. As used in this condition, new subdivision means any new development involving the division of any lot or parcel into two or more lots or condominiums which:

    * results in impervious surface or other soil disturbance in excess of that which would be allowed under the Lake Tahoe Basin Water Quality Plan (State Water Resources Control Board, 1980) or any applicable land use ordinance if the lot or parcel were not divided, or

    * divides the lot or parcel into five or more lots or condominiums; provided that "new subdivision" does not include the division of any lot or parcel which does not involve or result in any additional land coverage or land disturbance.

16. The District shall not issue sewer permits serving any new development, including any new structure or expansion or any existing structure resulting in additional land coverage or land disturbance, in a steam environment zone. As used in this condition, stream environment zone means any area which can be identified as a stream environment zone and related hydrologic zone using the procedure set forth in the Handbook of Best Management Practices (TRPA 1977), and does not include any areas which historically have been subject to stream flows, but have been reclassified in accordance with the Lake Tahoe Basin Water Quality Plan.

17. The District shall not issue sewer permits serving any new development, including any new structure or expansion of any existing structure resulting in additional land coverage or land disturbance, which is not in accordance with land capability. As used in this condition, new development which is not in accordance with land capability means any new development which results in land coverage or other land disturbance in excess of the allowable percentage of impervious cover set by the land capability system developed by the United States Forest Service in cooperation with the TRPA (Bailey, Land Capability of the Lake Tahoe Basin; 1974), as applied on a parcel by parcel basis.

18. After an offset policy is adopted pursuant to the Lake Tahoe Basin Water Quality Plan, the District shall not issue sewer permits serving and new development, including any new structure or expansion of any existing structure resulting in additional land coverage or land disturbance, which is not offset by implementation of remedial erosion control measures means any new development which is not in accordance with the offset policy adopted pursuant to the Lake Tahoe Basin Water Quality Plan.

19. Except as provided in condition 21, or where the Regional Board waives waste discharge requirements on the basis of a determination made by another agency, the California Regional Water Quality Control Board, Lahontan Region, shall make any determination necessary to apply conditions 15-18 above.

20. Conditions 15 through 18 are intended to implement the Lake Tahoe Basin Water Quality Plan, as well as the requirements of the California Environmental Quality Act and the National Environmental Policy Act. Except as set forth in conditions 21 and 22, these conditions shall not be interpreted to prevent connections to development which is allowed under the plan, or to allow connections to development which does not conform to the Plan.

21. The State Board or the California Regional Water Quality Control Board, Lahontan Region, shall prepare environmental documentation before the State Board approves or adopts any amendment to the Lake Tahoe Basin Water Quality Plan. The environmental documentation shall address amendment of this contract to conform to the amendments to the Plan, and this contract shall be amended accordingly.

22. If for any reason the Lake Tahoe Basin Water Quality Plan is amended or its application restricted or otherwise altered without preparation of environmental documentation, the District shall be the lead agency and shall cause to be prepared an environmental impact report which evaluates the impact of issuing sewer permits serving new development in the South Tahoe Public Utility District service area shall be considered a project within the meaning of the California Environmental Quality Act, and the District shall not issue such permits prior to compliance with Sections 21081 and 21151 of the California Public Resources Code. Nothing in this condition shall preclude the District from issuing sewer permits pending completion of the necessary environmental documentation if the District provides the State Board satisfactory assurances that during such period no sewer permit will be issued except in conformance with conditions 15 through 18.

23. The District shall comply with a transfer of development credit system or similar mechanism, so as to ensure that lots affected by conditions 15 through 18 are not deprived of substantially all value. A transfer of development credit system is now in effect. If at any point in the future that system is no longer in effect, the District shall encourage other public agencies to adopt such a system.

24. The District shall develop sewage overflow preventative maintenance and spill response programs, as prescribed in waste discharge requirements.

25. The District shall participate in the study of suspected sewerline exfiltration to determine the extent of the problem, as prescribed in waste discharge requirements.

26. The District shall continue to require the connection to the sewer system of any building from which waste is discharged, in accordance with Section 13950 of the California Water Code, and submit programs to determine which structures are not connected to the sewer system, as prescribed in waste discharge requirements.

27. Unless future proposals by the District expand the facility beyond the capacity for which this grant is awarded, as set forth on page 17 of the Final EIS, the total number of sewer connections and sewer connection permits issued or allocated in the District shall not exceed 73,777 sewer units. Of these 73,777 sewer units, 1,267 sewer units shall be used for changes in use, and not be issued to new development placing structures on previously vacant lots or parcels.

28. The District shall make a good faith effort to achieve implementation of the Mitigation Program as described in Appendix B of the Final Environmental Impact Statement, which effort shall include the following:

    a. The District shall submit annual reports, documenting the progress of implementation of the Mitigation Program, on or before October 1, of each year, through the period of construction, and before initiation of any facility expansion.

    b. The District shall encourage other public agencies to carry out the mitigation measures for which they are responsible.

    c. The District shall not expand the facility beyond the capacity of 73,777 sewer units, unless the Mitigation Program is being adequately carried out:

        (1) Except as set forth in paragraphs (2) and (3), the Mitigation Program is being adequately carried out only if there is substantial compliance with each of the measures identified in Appendix B as required mitigation measures.

(2) The mitigation measures identified for water resources and water quality in the Lake Tahoe Hydrographic Region may be carried out through:

* Compliance with each required mitigation measure; or

* Implementation of a water quality management plan (208 Plan) certified by the California State Water Resources Control Board and approved by EPA, including compliance with any conditions of certification or approval.

(3) The mitigation measures identified for meteorology and air quality may be carried through:

* Compliance with each required mitigation measure; or

* Implementation of the measures in a nonattainment area plan for the Lake Tahoe Basin adopted by the Tahoe Regional Planning Agency, as submitted by the Air Resources Board as a revision to the California State Implementation Plan and approved by EPA.

ASSISTANCE IDENTIFICATION NO. C-06-1414-110

D. SPECIAL CONDITIONS *(Continued)*

PART IV

NOTE: The Agreement must be completed in duplicate and the Original returned to the Grants Administration Division for Headquarters awards and to the appropriate Grants Administrations Office for State and local awards within 3 calendar weeks after receipt or within any extension of time as may be granted by EPA.

Receipt of a written refusal or failure to return the properly executed document within the prescribed time, may result in the withdrawal of the offer by the Agency. Any change to the Agreement by the recipient subsequent to the document being signed by the EPA Award Official which the Award Official determines to materially alter the Agreement shall void the Agreement.

OFFER AND ACCEPTANCE

The United States of America, acting by and through the U.S. Environmental Protection Agency (EPA), hereby offers assistance/amendment to the SOUTH TAHOE PUBLIC UTILITY DISTRICT (RECIPIENT ORGANIZATION) for 75 % of all approved costs incurred up to and not exceeding $ 17,310,214 (ASSISTANCE AMOUNT) for the support of approved budget period effort described in application *(including all application modifications)* Application for Federal Assistance (DATE AND TITLE) included herein by reference.

ISSUING OFFICE *(Grants Administration Office)*	AWARD APPROVAL OFFICE
ORGANIZATION/ADDRESS EPA, Water Management Division 215 Fremont Street San Francisco, CA 94105	ORGANIZATION/ADDRESS EPA, Office of Regional Administrator 215 Fremont Street San Francisco, CA 94105

THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY

SIGNATURE OF AWARD OFFICIAL	TYPED NAME AND TITLE	DATE
[signature]	Judith E. Ayres, Regional Administrator	19 SEP 1984

This Agreement is subject to applicable U.S. Environmental Protection Agency statutory provisions and assistance regulations. In accepting this award or amendment and any payments made pursuant thereto, (1) the undersigned represents that he is duly authorized to act on behalf of the recipient organization, and (2, the recipient agrees (a) that the award is subject to the applicable provisions of 40 CFR Chapter I, Subchapter B and of the provisions of this agreement (Parts I thru IV), and (b) that acceptance of any payments constitutes an agreement by the payee that the amounts, if any found by EPA to have been overpaid will be refunded or credited in full to EPA.

BY AND ON BEHALF OF THE DESIGNATED RECIPIENT ORGANIZATION

SIGNATURE	TYPED NAME AND TITLE	DATE
[signature]	President, Board of Directors	10/1/84

EPA Form 5700-20A (Rev. 8-79)

UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

MINORITY AND WOMEN'S BUSINESS UTILIZATION REPORT

REPORTING REQUIREMENTS ON MINORITY AND WOMEN'S BUSINESS ENTERPRISE UTILIZATION

These instructions apply to reporting on the utilization of minority and women's business enterprises (MBEs/WBEs) under assistance agreements awarded by the Environmental Protection Agency (EPA). They are intended to provide guidance to EPA financial assistance recipients in filling out the MBE/WBE utilization form. Reporting on MBEs and WBEs is based on Executive Orders 11625, 12138, and 12432, and a Memorandum of Understanding between EPA and the Department of Commerce. The reporting requirement applies to all EPA assistance agreements awarded after April 1, 1984.

Each assistance agreement recipient must submit quarterly an EPA Form 6005-1 on MBE/WBE utilization for each grant or cooperative agreement for which the recipient or its contractor(s) awards a subagreement. Recipients must submit the forms to the EPA award official within 15 days following the close of each fiscal year quarter (i.e., January 15, April 15, July 15, and October 15) during which the recipient or its contractor(s) awards a subagreement(s). Additionally, applicants for a Step 2+3 wastewater treatment construction grant which includes an allowance for facilities planning must submit an EPA Form 6005-1 to the award official prior to grant award, indicating the level of MBE/WBE participation during facilities planning. Applicants for a Step 3 wastewater treatment construction grant that includes an allowance for facilities planning and/or design must submit an EPA Form 6005-1 to the award official prior to grant award, indicating the level of MBE/WBE participation during the allowance period.

Recipients are advised to contact the regional office if there are any questions concerning these instructions.

INSTRUCTIONS FOR FILLING OUT BUSINESS UTILIZATION REPORT

1. The name and address of recipient organization to which EPA made the award (sewer or water authority, state or state agency, etc.).

2. Name of the official representing the recipient.

3. (a) Self-explanatory, and (b) grant activity (e.g., air, public water supply, wastewater construction, etc.).

4. Assistance agreement identification number assigned by EPA.

5. Self-explanatory.

6. Total amount of EPA award.

7. Indicate EPA region in which work is being performed.

8. Date that the assistance agreement was made.

9. Indicate MBE and WBE goals or standards, including, where applicable, a fair share estimate.

Wastewater Construction Grant Awards. The Regional Administrator will negotiate an overall fair share with delegated States. The delegated State and not EPA may determine whether and to what extent a fair share should be established for each project. A fair share for each project is not required.

All Other Applicable Assistance Agreements. When the assistance agreement includes procurement, the Assistant Administrator or Regional Administrator, or other designated EPA official, as appropriate, will conduct fair share negotiations directly with assistance recipients.

10. Recipients of wastewater construction grant awards who received an allowance for planning and design activities (Steps 1 and 2) must indicate the level of MBE and WBE participation during the allowance period by (a) A/E award(s), and (b) other award(s).

11. Recipients of assistance awards, including Step 2+3 and Step 3 wastewater construction grant recipients awarding subagreements for building, must indicate the levels of MBE and WBE participation in all subagreements by (a) A/E award(s), and (b) other award(s).

12. Person signing must be the authorized representative of the recipient organization.

13. Additional comments or explanations. Refer to the specific item number on the form, if applicable.

EPA

US ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF SMALL AND DISADVANTAGED BUSINESS UTILIZATION
WASHINGTON, DC 20460

RECIPIENT'S REPORT

Form Approved
OMB No. 2090-0006
Expires 10-31-86

NOTE: Please Read Instructions Before Completing Form.

1. RECIPIENT NAME AND ADDRESS	2. AUTHORIZED REPRESENTATIVE
3. TYPE OF ASSISTANCE AGREEMENT a. Check one: ☐ Grant ☐ Cooperative Agreement b. Grant Activity	4. ASSISTANCE AGREEMENT ID NUMBER 5. PROJECT TITLE

6. ASSISTANCE AMOUNT	7. REGION	8. DATE OF ASSISTANCE AWARD
$		

9. RECIPIENT'S GOAL, STATE GOAL, OR OTHER STANDARDS *(if any)*

	Dollar Amount	Percentage of Assistance Amount
MBE	$	%
WBE	$	%

10(a). A/E SUBAGREEMENT AWARDS MADE DURING THE ALLOWANCE PHASE *(Planning and Design)* OF A WASTEWATER TREATMENT CONSTRUCTION GRANT PROJECT

Name, Address, and Telephone Number	MBE	WBE	Type of Services Procured	
(1)			Subagreement Number	
			Subagreement Amount $	Date of Award
Name, Address, and Telephone Number	MBE	WBE	Type of Services Procured	
(2)			Subagreement Number	
			Subagreement Amount $	Date of Award
Name, Address, and Telephone Number	MBE	WBE	Type of Services Procured	
(3)			Subagreement Number	
			Subagreement Amount $	Date of Award

10(b). OTHER SUBAGREEMENT AWARDS MADE DURING THE ALLOWANCE PHASE *(Planning and Design)* OF A WASTEWATER TREATMENT CONSTRUCTION GRANT PROJECT

Name, Address, and Telephone Number	MBE	WBE	Type of Services Procured	
(1)			Subagreement Number	
			Subagreement Amount $	Date of Award
Name, Address, and Telephone Number	MBE	WBE	Type of Services Procured	
(2)			Subagreement Number	
			Subagreement Amount $	Date of Award
Name, Address, and Telephone Number	MBE	WBE	Type of Services Procured	
(3)			Subagreement Number	
			Subagreement Amount $	Date of Award

11(a). A/E SUBAGREEMENT AWARDS MADE UNDER GRANTS/COOPERATIVE AGREEMENTS				
Name, Address, and Telephone Number (1)	MBE	WBE	Type of Services Procured	
			Subagreement Number	
			Subagreement Amount $	Date of Award
Name, Address, and Telephone Number (2)	MBE	WBE	Type of Services Procured	
			Subagreement Number	
			Subagreement Amount $	Date of Award
Name, Address, and Telephone Number (3)	MBE	WBE	Type of Services Procured	
			Subagreement Number	
			Subagreement Amount $	Date of Award

11(b). OTHER SUBAGREEMENT AWARDS MADE UNDER GRANTS/COOPERATIVE AGREEMENTS				
Name, Address, and Telephone Number (1)	MBE	WBE	Type of Services Procured	
			Subagreement Number	
			Subagreement Amount $	Date of Award
Name, Address, and Telephone Number (2)	MBE	WBE	Type of Services Procured	
			Subagreement Number	
			Subagreement Amount $	Date of Award
Name, Address, and Telephone Number (3)	MBE	WBE	Type of Services Procured	
			Subagreement Number	
			Subagreement Amount $	Date of Award

12(a). NAME & TITLE OF AUTHORIZED REPRESENTATIVE	(b) SIGNATURE	(c) DATE
TRPA Dist. - Doing - resing	St Bd -	

13. SPACE PROVIDED FOR ADDITIONAL COMMENTS, EXPLANATIONS, OR ADDITIONAL SUBAGREEMENT AWARDS

TRPA Mitigation Fee
Schedule 1981
Following - pro doc.
see St Bd agreement

ATTACHMENT D

Regional Plan for Lake Tahoe Basin, Goals and Policies, September 17, 1986, Chapter 7-10, and TRPA Regional Plan for the Lake Tahoe Basin, Codes of Ordinances, May 27, 1987, Chapter 33-3, 4, Allocation Table

FIGURE 6

ALLOCATION TABLE

ADDITIONAL RESIDENTIAL DWELLING UNIT ALLOCATION

CATEGORIES OF RES. UNITS	1986	1987	1988	1989	1990	1991
South Lake Tahoe						
Prior Approvals (4-7)	3					
New Allocations				42*	60*	60*
'83 Allocations	104	107	96			
El Dorado County						
'83 Allocations						
New Allocations				55*	96*	96*
TTSA Service Area			10	10	18	18
Placer County						
Prior Approvals (4-7)	6					
'83 Allocations / New /Reissued Alloc.	97	103	103	103[22]	63[40]	63[40]
Douglas County						
Prior Approvals (4-7)	6					
Case-by-case Approvals	0	16	16	15		
New/Reissued Alloc.	17	23	23	23	18[8]	18[8]
Washoe County						
Prior Approvals (4-7)	32					
Case-by-case Approvals	0	51	51	52		
New/Reissued Alloc.	35	67	67	67	45[32]	45[32]
Total	300	367	366	367	300	300

(33.2.A)

ALLOCATION TABLE

ADDITIONAL RESIDENTIAL DWELLING UNIT ALLOCATION

CATEGORIES OF RES. UNITS	1986	1987	1988	1989	1990	1991
South Lake Tahoe						
Prior Approvals (4-7)	3					
New Allocations				42*	60*	60*
'83 Allocations	104	107	96			
El Dorado County						
'83 Allocations						
New Allocations				55*	96*	96*
TTSA Service Area			10	10	18	18
Placer County						
Prior Approvals (4-7)	6					
'83 Allocations						
New /Reissued Alloc.	97	103	103	103[22]	63[40]	63[40]
Douglas County						
Prior Approvals (4-7)	6					
Case-by-case Approvals	0	16	16	15		
New/Reissued Alloc.	17	23	23	23	18[8]	18[8]
Washoe County						
Prior Approvals (4-7)	32					
Case-by-case Approvals	0	51	51	52		
New/Reissued Alloc.	35	67	67	67	45[32]	45[32]
Total	300	367	366	367	300	300

See Subparagraph (a) for explanation of * and [].

(33.2.A)

(a) In the event South Tahoe Public Utility District (STPUD) has the ability to serve additional development in the years 1989, 1990 and 1991, the amounts to be allocated to the STPUD service area during those years are shown with asterisks on the table. In the event uncommitted disposal capacity is lacking, a portion of the amount available shall be allocated to other jurisdictions, as shown in the square brackets on the table. The remaining portion of the El Dorado County allocation may be allocated outside of the STPUD service area in the Tahoe-Truckee Sanitation Agency portion of El Dorado County. In addition, a program to recognize the imbalance in allocations to the STPUD service area shall be developed for the year 1992 and beyond, if sewage capacity becomes available.

(b) Local jurisdictions shall set their own priorities within the categories of residential units listed in the foregoing allocation table, except that in the category of "New/Reissued Allocations," the reissued allocations shall have priority over the new allocations.

(c) The categories in the residential allocation table are defined as follows:

(i) New Allocations are allocations which are to be assigned to properties that currently do not have allocations and do not fall into the categories below. TTSA Service Area is a subcategory of New Allocations which are in El Dorado County and have sewage disposal service provided by the Tahoe Truckee Sanitation Agency.

(ii) 1983 Allocations are allocations which shall be assigned to properties having received a 1983 single family building allocation from the City of South Lake Tahoe, El Dorado County, or Placer County.

(iii) Reissued Allocations are allocations which shall be assigned to properties which fall into either of the following special classes:

(A) Parcels with Placer County permits which were extended by ordinance to August 1, 1986, have expired CTRPA/TRPA permits and have not commenced construction; or

(B) Parcels with local county building permits which were issued prior to December 19, 1980, have been continuously renewed, and have not commenced construction.

ATTACHMENT E

South Tahoe Public Utility District Phase I Immediate Expansion Project, December, 1988, John Carollo Engineers

PRESENTATION

SOUTH TAHOE PUBLIC UTILITY DISTRICT

PHASE I
IMMEDIATE EXPANSION PROJECT

DECEMBER 1988

JOHN CAROLLO ENGINEERS
PHOENIX, AZ • WALNUT CREEK, CA
FOUNTAIN VALLEY, CA • VISALIA, CA
SAN BERNARDINO, CA • TUCSON, AZ
SAN DIEGO, CA • BAKERSFIELD, CA
SACRAMENTO, CA

EXPANSION PLAN

Immediate Expansion	
Phase I	**7.7 MGD**
Phase II	**8.2 MGD**
Long Term Expansion	**8.7 MGD**
Ultimate Expansion	**10.1 MGD**

PROJECT DEVELOPMENT

- Grit Chamber
- Bar Screens
- Aeration Basin
- Mixed Liquor Split
- RAS Pumps
- Chlorine Contact Piping
- Short Term Odor Control

GRIT CHAMBER RECOMMENDATIONS

- Do not Replace Mechanical Equipment
- Rake Modification
- Add Baffles
- Increase Water Depth

Cost Savings $146,000

ACTIVATED SLUDGE EXPANSION

- Use Equalization Basin No. 3 When Needed
- Modify Influent Channel
- Do Not Add Air Diffusers or Air Piping

MIXED LIQUOR DISTRIBUTION BOX

- ◯ Air Relief Valve Installed
- ◯ No Further Improvements Necessary

Cost Savings $128,000

RAS PUMP STATION

- Replace 20 hp Motors with 60 hp
- Add VFD Control Panels
- Pump Speed < 900 rpm Under Most Operating Conditions
- Purchase 4th Pump (Standby)

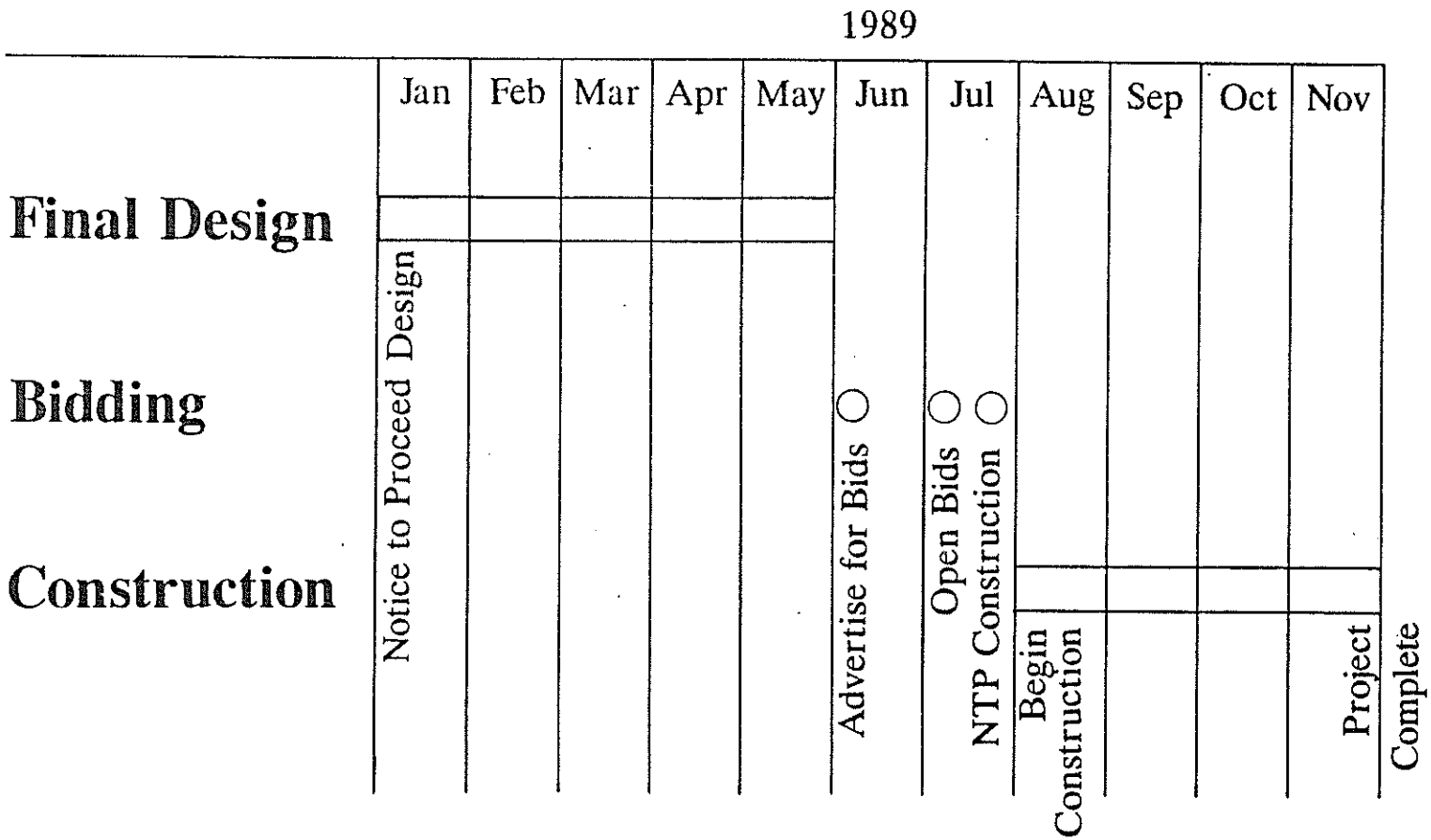
SHORT TERM ODOR CONTROL

Source	Improvement	Capital Cost	Annual O&M Cost
Incinerators	Afterburner to 1,500°F	$5,000	$38,000
Centrate Vents	Connect to Afterburner (or Wet Scrubber)	75,000	-0-
Raw Sewage	Prechlorinate	-0-	35,000
Primaries	Control Valves	26,200	-0-
Equalization	Influent Piping	16,700	-0-
Day Tank	Ducting	3,600	-0-
Sludge Storage	Add Chemical	45,000	10,000
Sludge Storage	Reduce Holding Time	10,000	-0-
All Carbon Scrubbers	Change to Virgin GAC	17,000	18,000
	TOTAL $121,000		

PHASE I - COST ESTIMATE

Grit Chamber	$37,000
Bar Screens	284,000
RAS Pumping	140,000
Cl_2 Contact	39,000
Odor Control	121,000
Misc.	12,000
Contingencies	190,000
Total Project Cost	$823,000

SCHEDULE


1989
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Final Design
Bidding
Construction
Notice to Proceed Design
Advertise for Bids
Open Bids
NTP Construction
Begin Construction
Project Complete

ATTACHMENT F

Status Report 4, Mitigation Program, Wastewater Treatment Facilities, South Tahoe Public Utility District, Figure 2-1, Figure 2-2, Figure 2-3

TAHOE REGIONAL PLANNING AGENCY
P.O. Box 8896
South Lake Tahoe, California 95731
2155 South Avenue
(916) 541 0246

March 22, 1983

Mr. James Cofer, District Manager
South Tahoe Public Utility District
P. O. Box AU
South Lake Tahoe, CA 95706

Dear Mr. Cofer:

TRPA staff has reviewed the February 1983 Draft Status Report of the mitigation program for the proposed wastewater treatment facilities. We concur task force members have made significant progress in carrying out the mitigation program.

Our major effort at the Tahoe Regional Planning Agency subsequent to the October, 1982 Status Report has been in the area of long range planning. We have worked with amending the Regional Plan to show attainment of adopted environmental thresholds with the initial results made available to the public in February, 1983. An environmental impact statement was completed and made available for a 60 day public review period beginning February 24. The Agency has also continued its role in developing erosion control projects, residential and commercial project review, restricting development on high hazard lands, and providing updates to the 1982 Air Quality Plan. In addition, we have worked closely with transportation agencies in planning for reduced vehicle miles of travel within the Basin.

The commitments made in the mitigation program are being carried out by the TRPA. Thank you for the opportunity to comment.

Sincerely,

Randall C. Sheffield, Chief
Long Range Planning Division

RCS:jf

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

MAR 10 1983

Mr. Andy Hauge
Quad Consultants
1415 18th Street, Suite 611
Bakersfield, CA 93301

Dear Mr. Hauge:

EPA has reviewed the Draft Status Report for the South Tahoe Public Utility District Mitigation Program. The agencies participating in this program have made significant progress towards implementing the mitigation measures. However, we must emphasize that the agencies must continue their timely implementation of the remaining mitigation measures. We look forward to working with the Mitigation Task Force in this effort.

Sincerely yours,

Pete Uribe, Chief
California Branch
Water Management Division

QUAD CONSULTANTS

TITLE

SOUTH TAHOE MITIGATION PROGRAM
REVIEWING AGENCY DETERMINATION OF PROGRESS

FIGURE 2-1

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, Governor
STATE WATER RESOURCES CONTROL BOARD
P.O. BOX 100, SACRAMENTO, CALIFORNIA 95801
(916) 322-4507

March 11, 1983

Mr. Anders Hauge
Quad Consultants
1415 18th Street, Suite 611
Bakersfield, CA 93301

Dear Andy:

FEBRUARY 1983 DRAFT MITIGATION TASK FORCE STATUS REPORT

Thank you for the opportunity to review the February, 1983 draft of the Mitigation Task Force Status Report.

The grant contracts for the design (Step II) grant for the South Tahoe Public Utility District treatment facilities provide that a construction (Step III) grant may not be awarded unless satisfactory progress is achieved toward implementation of the mitigation measures identified in the final environmental impact statement for the project. The status report documents satisfactory progress. The Mitigation Task Force, and the South Tahoe Public Utility District in particular, should be commended for their efforts.

From the standpoint of mitigation of water quality impacts, the State Water Resources Control Board (State Board) has been concerned about the lack of progress on remedial erosion control projects, despite the availability of matching State funds. The State Board has been particularly concerned about the lack of progress in El Dorado County. Even so, overall progress towards implementation of mitigation measures should be considered satisfactory, despite this shortcoming:

- El Dorado County has recently indicated a serious interest in expanding its erosion control efforts.
- Many of the erosion problems which are the responsibility of El Dorado County are outside the South Tahoe Public Utility District service area.
- Other agencies are making satisfactory progress. The City of South Lake Tahoe, in particular, has come through with a major commitment to erosion control.

It should be emphasized that the mitigation program set forth in the final environmental impact statement extends well into the future. Accordingly, the proposed construction grant contract conditions require continued reporting

on the progress of implementation of the mitigation program. It should also be noted that much of the mitigation program, including construction of erosion control projects, is part of the baseline included in all alternatives being considered for the Tahoe Regional Planning Agency's regional plan. The Mitigation Task Force has proven to be an effective vehicle for achieving implementation of the program. I look forward to continuing to work with the Task Force.

Sincerely,

Andrew H. Sawyer

Andrew H. Sawyer
Staff Counsel

QUAD CONSULTANTS
VISALIA BAKERSFIELD

TITLE
SOUTH TAHOE MITIGATION PROGRAM
REVIEWING AGENCY DETERMINATION OF PROGRESS

FIGURE
2-2

STATE OF CALIFORNIA
GEORGE DEUKMEJIAN, Governor

AIR RESOURCES BOARD
1102 Q STREET
P.O. BOX 2815
SACRAMENTO, CA 95812

April 12, 1983

Mr. Anders Hauge
Quad Consultants
1415 18th Street, Suite 611
Bakersfield, CA 93301

Dear Andy:

Subject: February 1983 Mitigation Status Report

We have reviewed the meteorology and air quality element of the February 1983 Mitigation Status Report. The Status Report shows that progress has been made in the commitment and implementation categories for some control measures. We believe that satisfactory progress has been made and that the Special Step 2 Grant Conditions have been met.

As you know, we have drafted the proposed Special Step 3 Grant Conditions to be applied to the Step 3 Grant.

If you have any questions on the Special Step 3 Grant Conditions or the progress with the Tahoe Regional Planning Agency, please call Dennis Goodenow or me at (916) 322-6076.

Sincerely,

Stan Randolph, Manager
State Implementation Plan Section
Regional Programs Division

QUAD

TITLE SOUTH TAHOE MITIGATION PROGRAM

REVIEWING AGENCY DETERMINATION OF PROGRESS

FIGURE 2-3

ATTACHMENT G

EPA's South Lake Tahoe Mitigation Program, Summary Mitigation Program Progress Report, March, 1989

EPA'S SOUTH LAKE TAHOE MITIGATION PROGRAM

SUMMARY
MITIGATION PROGRAM PROGRESS REPORT

MARCH 1989

Assistance ID No C-06-1414-110
EPA Assistance Agreement/Amendment
South Tahoe Public Utility District
Part III - Award Conditions
September 26, 1984

PURPOSE

The South Tahoe Public Utility District is requesting that the EPA find that the South Shore Lake Tahoe Basin Mitigation Program is being adequately carried out for a 0.2 MGD wastewater treatment facility expansion to 7.7 MGD in compliance with the provisions of Grant Condition #27 and #28 of the EPA Assistance ID No C-06-1414-110 Grant Award dated September 26, 1984. The Grant Conditions were based upon the "Final Environmental Impact Statement Wastewater Treatment Facilities South Shore Lake Tahoe Basin", South Tahoe Public Utility District, California, May 1981. The Final EIS evaluated an 8.7 MGD wastewater treatment facility.

ATTACHMENTS

Referenced throughout this document are the following documents which have been attached:

Correspondence from William A. Morgan dated March 23, 1988 stating TRPA's compliance with the Mitigation Program.

TRPA's "Compliance Measures List and Related Information and analysis: Prepared Pursuant to the Requirements of Chapter 32, TRPA Code of Ordinances" adopted November 1988.

Correspondence from William A. Morgan dated December 7, 1988 stating TRPA's responsibility to the Mitigation Program.

Draft 0.2 MGD Wastewater Treatment Facility EIR/EIS Mitigation Program, February 1989.

GRANT CONDITIONS

The relevant grant conditions are:

27. Unless future proposals by the District expand the facility beyond the capacity for which this grant is awarded, as set forth on page 17 of the Final EIS, the total number of sewer connections and sewer connection permits issued or allocated in the District shall not exceed 73,777 sewer units. Of these 73,777 sewer units, 1,267 sewer units shall be used for changes in use, and not be issued to new development placing structures on previously vacant lots or parcels.

28. The District shall make a good faith effort to achieve implementation of the Mitigation Program as described in Appendix B of the Final Environmental Impact Statement, which effort shall include the following:

    a. The District shall submit annual reports, documenting the progress of implementation of the Mitigation Program, on or before October 1, of each year, through the period of construction, and before initiation of any facility expansion.

b. The District shall not expand the facility beyond the capacity of 73,777 sewer units, unless the Mitigation Program is being adequately carried out:

(1) Except as set forth in paragraphs (2) and (3), the Mitigation Program is being adequately carried out only if there is substantial compliance with each of the measures identified in Appendix B as required mitigation measures.

(2) The mitigation measures identified for water resources and water quality in the Lake Tahoe Hydrographic Region may be carried out through:
- Compliance with each required mitigation measure; or
- Implementation of a water quality management plan (208 Plan) certified by the California State Water Resources Control Board and approved by EPA, including compliance with any conditions of certification or approval.

(3) The mitigation measures identified for meteorology and air quality may be carried out through:
- Compliance with each required mitigation measure; or
- Implementation of the measures in a nonattainment area plan for the Lake Tahoe Basin adopted by the Tahoe Regional Planning Agency, as submitted by the Air Resources Board as a revision to the California State Implementation Plan and approved by EPA.

MITIGATION PROGRAM STATUS

The South Tahoe Mitigation Program Status Report #5 provides a comprehensive update of the Mitigation Program since 1983. Appended to the Status Report #5 in four separate volumes are the EPA Draft and Final EIS, the Mitigation Program and Status Reports 1 through 4.

The South Tahoe Mitigation Status Report #4 summarized the status of the mitigation program from 1980 through 1984 and Status Report #5 summarizes the program from 1984 through 1988. The mitigation program and Status Reports 1 through 4 are appended to Status Report #5 for reference.

The following text in this document summarizes the progress of the mitigation program by area of concern. Pursuant to Grant Conditions 28 B (2) and 28 B (3), the mitigation measures within the Water Resources and Water Quality, Meteorology and Air Quality and Transportation areas of concern have been superceded by the EPA approved 208 Plan and the TRPA 1982 Air Quality Plan and the 1988 Regional Transportation Plan.

Following each heading stating the area of concern is first listed the required mitigation measures followed by a discussion of program compliance.

WATER RESOURCES AND WATER QUALITY

1. Revegetate bare areas.
2. Stabilize and vegetate unstable slopes.
3. Provide protective cover on dirt roads.
4. Build roadside drains.
5. Storm sewers.
6. Drainage facilities for areas of intensive vehicular use.
7. Protective cover on private roads and driveways.
8. Best management practices.
9. Restrictions on fertilizer.
10. No new subdivisions.
11. Construction prohibited on high erosion hazard lands, in stream environment.
12. Construction is prohibited unless offset by redeeming projects.
13. Close and vegetate unneeded dirt roads.
14. Restrict off-road vehicles to designated areas and trails.
15. Best management practices for campgrounds, ski areas, tree removal, and livestock grazing and confinement.
16. Restrictions on campground expansion.
17. Monitor water quality to document changes in physical, chemical and biological characteristics.

The water resources and water quality measures are in compliance with the provisions of Grant Condition 28.B.(2) through the certification and approval by the California State Water Resources Control Board and the EPA of the Lake Tahoe Basin Water Quality Management Plan (208 Plan) 1981. The following is a summary of the 208 Plan chronology:

May 28, 1981	TRPA adoption of Basin 208 Plan, incorporating portions of the Lake Tahoe Basin Water Quality Plan adopted by the State Board in October 1980. The State Board certified the Plan per resolution numbers 81-63 and 81-64. The EPA adopted the Plan.
January 20, 1983	State Board amended the Lake Tahoe Basin Water Quality Plan.
November 30, 1988	TRPA adopted the Water Quality Management Plan for the Lake Tahoe Region. The revised Handbook of Best Management Practices has been expanded to include additional shorezone protection, vegetation identification and soil protection. Nevada certified this Plan on January 25, 1989. The Lahontan Regional Water Quality Control Board recommended certification to the State Water Resources Control Board on January 13, 1989. This plan will be placed on the agenda of the State Board in April 1989 for a workshop and action. The State will submit the Plan to EPA after its certification.

In November 1988 the TRPA distributed the "Compliance Measures List and Related Information and Analysis: Prepared Pursuant to the Requirements of Chapter 32, TRPA Code of Ordinances". This document lists those water quality measures in place and quantifies compliance with environmental thresholds.

For a discussion of specific implementation programs, please refer to Mitigation Program Status reports #4 and #5.

GEOLOGY AND SOILS

18. Enforce pertinent building codes.
19. Implement land use controls to prevent development of known fault zones and unstable soils susceptible to major seismic disturbance.

Measure 18, building code enforcement, is a responsibility of the City of South Lake Tahoe and the County of El Dorado. Both agencies enforce the building code through an enforcement program that involves checking and approval of plans prior to construction, inspection during construction, enforcement of red tag code violations and nuisance abatements for code violations.

Measure 19 is in compliance through California seismic standards for all cities and counties, enforced at the time of building permit issuance.

The TRPA has adopted soil conservation environmental thresholds and the TRPA Code of Ordinances that mitigate the impacts upon geology and soils throughout the basin. Specifically the following chapters implement mitigation measure 19; 20 - Land Coverage Standards, 25 -Best Management Practices, 28 - Natural hazard Standards (to be completed), 61 - Special Information Reports and Plans, and 64 - Grading standards.

In November 1988 the TRPA distributed the "Compliance Measures List and Related Information and Analysis: Prepared Pursuant to the Requirements of Chapter 32, TRPA Code of Ordinances", this document lists those soil conservation measures in place and quantifies compliance with environmental thresholds.

BIOLOGY

20. Inventory, monitor, and if necessary, control recreation use of meadows, bogs, aspen groves, and other valuable moist habitats in accordance with guidelines and management plans of the U.S. Forest Service and state departments of fish and game to protect valuable and rare or endangered plants and wildlife.
21. Protect active osprey and peregrine falcon nests from disturbance.
22. Require surveys of rare and endangered plants for development proposals, and require measures to minimize impacts.
23. Require construction and maintenance projects to include measures to protect vegetation and habitats.

Habitat inventory and protection is being provided by the TRPA through vegetation preservation, fisheries, noise and wildlife thresholds and the

following Chapters of the TRPA Code of Ordinances; 23 - Noise limitations, 25 - Best management Practices, 34 - Transfer of Development, 50 - Review of Projects in the Shorezone and Lakezone, 53 - Shorezone Tolerance Districts and Development Standards, 54 - Development Standards Lakeward of High Water, 55 - Development Standards in the Backshore, 61 - Special Information Reports and Plans, 65 - Grading Protection During Construction, 71 - Tree Removal, 72 - Prescribed Burning, 73 - Livestock Grazing, 74 - Remedial Vegetation Management, 75 - Sensitive and Uncommon Plant Protection and fir Hazard Reduction, 77 - Revegetation, 78 - Wildlife Resources, and 79 - Fish Resources.

In November 1988 the TRPA distributed the "Compliance Measures List and Related Information and Analysis: Prepared Pursuant to the Requirements of Chapter 32, TRPA Code of Ordinances", this document lists those vegetation, fisheries and wildlife measures in place and quantifies compliance with environmental thresholds.

The U.S. Forest Service administers all lands in the national forest systems. In the Lake Tahoe Basin that includes a special management unit, the Lake Tahoe Basin Management Unit, which composed of portions of the El Dorado National Forest and Toiyabe National Forest. The Basin Unit is in the process of adopting a revised Basin Management Plan which continues to implement its commitments to the mitigation program. 1

The California Department of Fish and Game administers the wildlife and fisheries resources in the State of California. The staff implements the policy of the California Fish and Game Commission and enforces the California fish and game code. Further the Department of Fish and Game stated in correspondence to James Cofer dated December 23, 1987 "Our environmental concerns for your projects were resolved through our issuance of Streambed Alteration Agreements pursuant to Section 1601 of the fish and Game code".

The United States Fish and Wildlife Service, a unit of the Department of the Interior, is the prime enforcer of the Federal Endangered Species Act (FESA).

NOISE

24. Adopt and enforce a noise control ordinance.
25. Revise zoning ordinances to prevent incompatible land uses.
26. Establish special permit procedures to implement noise reduction measures.

The TRPA adopted noise thresholds, Chapter 23 - Noise Limitations, of the Code of Ordinances and 91 Plan Area Statements (equivalent of zoning) in the STPUD Service Area, 175 Plan Areas basin wide, which implement the above mitigation measures. Section 23.2 of the Code of Ordinances establishes the maximum allowable noise levels in the Lake Tahoe Basin. All projects and activities in the Lake Tahoe Basin must comply with the noise provisions pursuant to Chapters 3 through 8 of the Code of Ordinances.

[1] Correspondence dated July 15, 1988, to James Cofer from D. Wayne Shepherd, Forest supervisor Lake Tahoe Basin Management Unit.

In November 1988 the TRPA distributed the "Compliance Measures List and Related Information and Analysis: Prepared Pursuant to the Requirements of Chapter 32, TRPA Code of Ordinances", this document lists those noise measures in place and quantifies compliance with environmental thresholds.

METEOROLOGY AND AIR QUALITY

27. Inspection/Maintenance.
28. Reduce cold start conditions.
29. Traffic flow improvements.
30. Reversible bus lanes.
31. Driver advisors.
32. Loading regulations.
33. Staggered work and/or operations hours.
34. Snow removal procedure.
35. Traffic movement control.
36. Idling restrictions (drive-up windows).
37. Parking location control.
38. Parking supply management.
39. Parking operation.
40. Peripheral parking facilities.
41. Parking surcharges.
42. Road use or entry charges (user fee).
43. Priority treatment for carpools.
44. Bikeways.
45. Pedestrian facility.
46. Roadwork restrictions.
47. Mail delivery.
48. Rail.
49. Intensive bus service.
50. Free mass transit.
51. Express bus lanes.
52. Employee mass transit incentives.
53. Zoning approvals.
54. Purchase of fragile lands.
55. Subdivision prohibition.
56. Indirect source review.
57. Service stations.
58. Bulk storage plants (petroleum).
59. Architectural coating.
60. Degreasing operations.
61. Asphalt paving.
62. Gaseous fuel space heating.
63. Solar space heating.
64. New source review role.

The TRPA Bistate Compact prohibited the implementation of the California TRPA Transportation Plan upon which measures 27 through 64 are based. In place of these measures and in compliance with Grant Condition 28 b. (3) the TRPA adopted its Regional Transportation Plan in April 1988 and its Air Quality Management Plan on August 26, 1982. The TRPA is scheduled to update its Air Quality Management Plan by July 1989.

In November 1988 the TRPA distributed the "Compliance Measures List and Related Information and Analysis: Prepared Pursuant to the Requirements of Chapter 32, TRPA Code of Ordinances", this document lists those air quality and transportation measures in place and quantifies compliance with environmental thresholds. The compliance measures list has been enclosed for your reference.

For a discussion on implementation of the specific mitigation measures review Status Reports #4 and 5.

VISUAL RESOURCES

65. Adopt design plan with implementing ordinances and provisions for design review.

The TRPA adopted scenic resources thresholds, Chapters 20 through 30 - Site Development Provisions of the Code of Ordinances and 91 Plan Area Statements (equivalent of zoning) in the District Service Area, 175 basin wide, which implement the above mitigation measures.

In November 1988 the TRPA distributed the "Compliance Measures List and Related Information and Analysis: Prepared Pursuant to the Requirements of Chapter 32, TRPA Code of Ordinances", this document lists those scenic resource measures in place and quantifies compliance with environmental thresholds.

LAND USE AND HOUSING

66. Encourage housing rehabilitation loans and grants, and code enforcement.
67. Improve neighborhood facilities, services, and amenities to encourage private-sector investment.
68. Institute incentives for new development to include a share of moderately-priced housing.
69. Institute incentives for employers to expand housing stock when expanding activities.
70. Coordinate region-wide land use policies; coordinate local, regional, state, and federal land use planning efforts.

Measure 66, 68 and 69, housing, is being partially implemented by the South Lake Tahoe Redevelopment Plan, Plan Area No. 1 dated November 1, 1988 per section 15.10.0.7 which is further set forth in Exhibit 2.8 of the Plan. The Redevelopment Plan is the first opportunity to provide moderately priced housing, for due to limits on permitted development in effect in the Lake Tahoe Basin.

Measure 67 is being implemented by the City of South Lake Tahoe, the South Lake Tahoe Chamber of Commerce, El Dorado County and the South Tahoe Public Utility District through beautification programs, erosion control programs and annual maintenance programs. See Status Reports #4 and 5 for further details.

Measure 70 (coordinate land use policies among local, state and federal agencies) carried out by the TRPA. They are staffed to carry out the tasks within the responsibility. The track record of the TRPA since the Bi-State Compact was last amended shows consistent professional management of this essential task.

TRANSPORTATION

71. Add more buses.
72. Establish basin-wide transit agency.
73. Encourage car and van pooling to place of employment.

The TRPA Bistate Compact prohibited the implementation of the California TRPA Transportation Plan upon which measures 71, 72, and 73 are based. In place of these measures, the TRPA has adopted its Regional Transportation Plan in April 1988. The Final EIS stated that the Regional Transportation Plan will "---mitigate these impacts to acceptable levels"2.

Measure 71 has been implemented by the City of South Lake Tahoe through regular purchases of buses as identified in Status Reports #4 and 5. Measure 72 has been implemented by the creation of the Tahoe Transportation Agency. Measure 73 has been implemented by the TRPA through the placement of conditions of approval on commercial projects.

In November 1988 the TRPA distributed the "Compliance Measures List and Related Information and Analysis: Prepared Pursuant to the Requirements of Chapter 32, TRPA Code of Ordinances", this document lists those transportation-air quality measures in place and quantifies compliance with environmental thresholds.

For additional discussion on implementation refer to the Mitigation Status Reports # 4 and 5.

RECREATION

74. Acquire land for public recreation use.

The City of South Lake Tahoe has set aside money from its operating budget to purchase lands intended for open space dedication or park use. As the City has acquired such lands they have actively pursued state funding sources to protect access to the property, allow limited public uses and to repair environmental damage within the sites that were acquired.

The Tahoe Conservancy is also augmenting the existing bank of lands available for public use within the Tahoe Basin. In addition to the bond funds approved by California voters to purchase land prior to private development, the Conservancy has received legislative appropriations from litigation settlements permitting acquisition of major parkland areas. One of these acquisitions is in Tahoe Paradise and includes all of an existing public

2 Pg V-7, Final EIR/EIS Regional Transportation Plan: Lake Tahoe Basin, April 1988.

golf course and surrounding lands for a total of 260 acres. Another purchase completed during fiscal 1987-88 is known as Cove East and represents 66 acres of unimproved land contained within the Tahoe Keys subdivision and adjoining the outlet of the Truckee River to Lake Tahoe. Other smaller but no less significant purchases intended for future type uses are either completed or planned.

The U.S. Forest Service continues to purchase sensitive lands throughout the Basin using Burton-Santini funds.

The TRPA and California Water Quality Control Board requirements for project approval mandate removal of man-covered soil in exchange for proposed coverage being placed in the course of installing public projects. This exchange of covered for uncovered land is resulting in local governments proceeding to acquire open space lands and setting them aside in perpetuity.

In November 1988 the TRPA distributed the "Compliance Measures List and Related Information and Analysis: Prepared Pursuant to the Requirements of Chapter 32, TRPA Code of Ordinances", this document lists those recreation measures in place and quantifies compliance with environmental thresholds.

PUBLIC SERVICES-FISCAL CONCERNS

75. Construct primary/intermediate care clinic.
76. Expand county health services programs and encourage volunteer services.
77. Ensure that new development locates to take maximum advantage of existing service capacities.
78. Coordinate regional land use planning and capital facilities planning and budgeting.
79. Require developers to provide infrastructure and major service facilities and to contribute funds for such improvements.
80. Consolidate service districts.
81. Institute double sessions or year-round school operations to reduce need for additional school facilities.
82. Expand the transfer station in the City of South Lake Tahoe.
83. Encourage recycling and resource recovery efforts by the solid waste franchise operator.
84. Initiate public education and volunteer programs to reduce amount of solid waste generated. promote a clean, litter-free community, and achieve the state goal of 25 percent reduction in waste going to the landfill.

Measure 75 (primary/intermediate health care clinics) is a responsibility of the private sector in conjunction with the only full service hospital at the South Shore; Barton Memorial Hospital. Since the mitigation program was adopted a series of privately funded clinics have been installed and are operating at the South Shore on both the Nevada and California side of the state line.

Measure 76 (volunteer services) needs special description as so much has taken place. These developments are as follows:

- Chamber of Commerce - Following a successful landscaping, erosion control installation on public property in the center of town, the Chamber duplicated the product at the airport entrance, on Emerald Bay Road leading to the City and at several small sites within the City.

- Voluntary Action Inc. - This non-profit agency is organized to provide volunteers to assist in community projects. During the past five years they have provided supervision over persons given alternative sentencing by the courts. These persons have been assigned to litter removal, erosion control improvements and renovation of publicly owned and unused lands. The agency has also prepared a roster of persons able to assist shut-ins and elderly during emergency periods to lessen auto use.

- Service clubs in the area have volunteered time and materials to renovate unattended lands and install erosion control systems.

Measure 77 (manage location of new development to take advantage of existing service delivery capability) is an assigned function of the TRPA through the Bi-State Compact. TRPA is proceeding to implement this measure on a routine basis.

Measure 78 (coordination of capital facilities planning and budgeting) is a comprehensive measure being managed by the TRPA basin-wide. The Goals and Policies and the recently approved TRPA 208 Plan provide that a capital improvements program should be adopted after commitments were received by the responsible agencies and parties. This capital improvements program has been incorporated in the 1988 TRPA 208 Plan, Volume IV - Capital Improvements Program for Erosion and Runoff control adopted November 30, 1988. The TRPA Regional Transportation Plan, Chapter VII - Action Element/Financial Plan adopted April 1988 provides for transportation related capital improvements in the Lake Tahoe Basin.

Measure 79 (developer provided infra-structure) is not a measure that is implemented by TRPA. A federal court imposed a moratorium on all development during a substantial period of the five years covered in this report. Thus, the opportunity to apply this program, even though adopted, has been restricted.

While the TRPA does not directly implement Measure 79, in effect the TRPA requires infrastructure improvements through the conditions imposed during project review.

The City of South Lake Tahoe Redevelopment Plan is requiring the major developers to pay the cost of all STPUD sewer and water facilities required to service the redevelopment project. The Redevelopment Agency is also requiring the major developers to pay for some of the infra-structure facilities required for the Redevelopment Plan.

Measure 80 (special district consolidation) requires special comment. At the present time there is no public agency within the Tahoe Basin that can legally achieve this measure. Both Nevada and California have legislation in place governing the formation and reorganization of special service districts. These laws are extremely detailed and comprehensive. They mandate property owner initiation of special district boundary change and also mandate voter approval of any desired change in the manner of governance by special districts. Thus, no public agency can initiate a change in boundaries; only property owners or voters by petition can do this.

The STPUD has acquired two water providers, consolidating them in the District since the mitigation program was started.

The voters of the South Tahoe Public Utility District petitioned for an election to be held on the issues of forming a separate county of Lake Tahoe within the El Dorado County portion of the lake Tahoe Basin. One ultimate purpose of this separate county formation was to consolidate some special districts. The proposition was narrowly defeated in November 1984 by the entire county electorate, both lake Tahoe basin and out of basin voters were required to approve the county formation.

This major effort has laid the foundation for ultimate approval of a separate County probably after the 1990 reapportionment of County supervisors. The western slope will no longer need the financial support of the Lake Tahoe Basin and the Lake Tahoe Basin will have only one of the five County supervisors. The result should be the consolidation of some special districts through a vote approved by the County of Lake Tahoe within the El Dorado County.

Measure 81 (double session/year-round school). A limited application of year-round school was attempted, and abandoned, by the Lake Tahoe Unified School District. Recently, that district has initiated a new parent-professional staff analysis of the possibility to adopt a year-round educational program.

Measure 82 (expand refuse transfer station) has been completed. It is a responsibility of a private contractor under a franchise to the City of South Lake Tahoe.

This franchise also governs Number 83 (recycling and recovery). The franchise operator, pursuant to provisions mandated by the City, has achieved implementation of this provision. Additionally, the California state legislature mandated a state-wide recycling program that became operational October 1, 1987. This program is also fulfilling the requirements of this mitigation measure.

Measure 84 (public effort to reduce waste) is associated with Measure 76 in this group. The Chamber of Commerce with financial and contractual assistance from the City of South Lake Tahoe, the El Dorado County Probation Department, and the California Conservation Corps have combined to develop a year-round and aggressive program of public education and volunteer assistance to reduce litter and waste generation.

For additional discussion refer to the Mitigation Status Reports # 4 and # 5.

UTILITIES

85. Institute water conservation programs to reduce water consumption.
86. Install retrofit water conservation devices.
87. Enforce mandatory water conservation efforts.
88. Make maximum use of available grants to reduce local costs.
89. Retrofit existing structures with additional insulation.
90. Revise building codes to require additional insulation of walls, floors, ceilings, attics.
91. Encourage energy audits.
92. Encourage development of energy-efficient transportation systems.

Measures 85 and 86 have been implemented by the District which has been successful in applying the desired measures through a public information program.

Measure 87, no mandatory water conservation efforts have been required. However, the District is prepared to institute mandatory water conservation measures if a third drought year occurs in 1989. There is not a shortage of water in the District, but in certain areas during peak use times an interim shortage of pumping capacity for delivery is experienced. The water demand in these areas is greater in drought years.

Measure 88 has been actively pursued by the District and other responsible agencies within the Basin. Actions of the Federal and State governments have limited available sources of funding in the past eight years. The STPUD has received grants from the El Dorado County Water Agency and used these grants for water storage, water supply and planning purposes. The total amount of grants used by the STPUD between 1977 and 1989 is $1,254,678.

Since the Mitigation Program was adopted, the STPUD has completed an airport well at a cost $467,652, the College Well at a cost of $717,877, the Ski Run storage tank and distribution improvements-phase 1 at a cost of $718,327, and Cold Creek and Tata Lane improvements at a cost of $405,408. All grant contributions since the mitigation program was adopted have shared in the cost of these improvements.

STPUD is currently modifying its water master plan and has applied for loans under the Safe Water Drinking Act for modification of its filter plant and distribution improvements. Its priority has not yet reached an award level.

Measure 89 and 91 have been actively implemented by the Sierra Pacific Power Company through energy audits and retrofit programs as described in greater detail in the Status Reports # 4 and 5.

Measure 90 deals with revision to building codes to require improved insulation and other energy conservation techniques. The City of South Lake Tahoe and County of El Dorado have during the past five years consistently up-dated their adopted building codes to conform to the state uniform codes. These codes require all of the current technology for insulation, energy

conservation and related requirements. The city has exceeded the state standards for snow loading which further reduces energy requirements by increasing the structural composition of roof and walls. However, because of the building moratorium and the restricted number of sewer connections there has been relatively little new construction on which to apply the adopted higher standards of construction. Wherever remodeling has occurred such higher standards have been rigorously enforced.

Measure 92 deals with development of energy efficient transportation systems. The reader is referred to the discussion that preceded this point (discussion on measures 71-73) regarding attempts to establish a basin-wide transportation district and a variety of important elements of the transportation plan that has been approved.

CULTURAL-ARCHAEOLOGICAL-HISTORICAL RESOURCES

93. Require on-site cultural archaeological, and historic resource analyses as part of the development review process.
94. Nominate cultural, archaeological, and historical resources for inclusion in the National Register.
95. Purchase land or obtain restrictive easements to place cultural, archaeological, and historical resource sites in public possession.

The STPUD has expended significant time and dollars towards archaeological resource surveys and preservation in the construction of Harvey Place Reservoir.

There are a number of activities in progress at Lake Tahoe that go beyond the efforts of the responsible agencies listed in the report. The TRPA, as part of its permit review process, routinely applies on-site inspection to determine whether any cultural, archaeological or historical resources are involved and require special steps to assure preservation. Thus, the full intent of these measures is being enforced as part of the basin-wide adopted plan.

Other efforts are worth noting. During the past five years several groups have stepped up their involvement in these activities or have been newly formed to achieve progress in these realms. One of these is the Lake Tahoe Historical Society. A non-profit corporation, they have retained professional staff to assist in marking historical sites and reviewing planned development. The Historical Society has received some funding from the City of South Lake Tahoe to compile a visual history of Lake Tahoe and is undertaking a broad program of public awareness using various media techniques. The result of this effort has been a resurgence of popular interest in the historical values of Lake Tahoe and a better public acceptance for regulations that preserve and protect the historical and cultural values.

Another organization active in this field is the Washoe Tribal Council. They have announced a dynamic program to construct a museum, native American observation area and tribal custom heritage display on lands owned by the U.S. Forest Service. In seeking to construct this broad based cultural and historical exhibit, the Council has obtained wide support from

local government, state and federal agencies and Congress. Local funds have been donated and appropriated by the City Council to assist the Council in moving forward with the project. A site has been selected; a preliminary environmental impact report prepared, and initial exhibits collected for future display. This activity has aroused considerable support and resulted in public approval for regulations and actions that lead to protection of the rich cultural heritage of the area.

Finally it must be reported that the Lake Tahoe Cultural Arts Alliance has been re-organized and is playing an active role in the implementation of the measures set forth. The Alliance is a non-profit corporation that qualifies for limited state funds and some city appropriations to achieve its programs. Basic to the Alliance operation is the restoration of properties that formerly were private estates on the shore of Lake Tahoe. Now owned by the Forest Service, these properties are rich in tradition, culture and color. The Forest Service lacks the funds to restore the properties and has entered into agreements with the Alliance to allow them to use the property in exchange for improvements. Restoration is taking place. The Alliance has achieved notable success in this program which has created a public awareness of the heritage and at the same time expanded the cultural aspects of life at Lake Tahoe.

CARSON VALLEY

96. Monitor groundwater and irrigated runoff to ensure that land application of secondary effluent is not detrimental to surface and groundwater quality.
97. Maintain reliable treatment to ensure public health protection against potential hazards from using secondary effluent for irrigation.

These measures are strictly enforced by the STPUD and the Lahontan Water Quality Control Board. They impact lands outside the Tahoe Basin. The District must comply with state waste discharge and federal permits, which have extensive monitoring provisions, to operate its wastewater system. Both of these permit approvals impose strict conditions that are monitored and enforced regularly by the District and by the appropriate state and federal review agencies. Compliance with measures 96 and 97 will be taking place on a routine basis.

The STPUD wastewater treatment plant rehabilitation project funded by EPA and the State, is now complete and operational. The Alpine County wastewater reclamation facilities on lands where the effluent is used for irrigation are complete and operational. Redundancy in the treatment plant processes is a part of the rehabilitation project which will maintain reliable treatment. The irrigation facilities and plan for disposal of secondary effluent have been designed to prevent any direct discharge to interstate waters and used only for irrigation purposes.

THRESHOLDS

98. Environmental Threshold Carrying Capacities.

This measure is completed, the Tahoe Regional Planning Agency in adopting Resolution #82-11 on August 26, 1982 adopted the Tahoe Regional Planning Agency Environmental Threshold Carrying Capacities for the Lake Tahoe Region.

ATTACHMENT H

John Carollo Engineers Analysis of Treatment System Capacity, August, 1988, Table 1, Appendix A

TABLE 1

SUMMARY

Projected Wastewater Flows
South Tahoe Public Utility District

RESIDENTIAL	TRPA 20 YEAR PROJECTIONS Dwelling Units	Sewer Units	Flow MGD	BUILDOUT PROJECTIONS Dwelling Units	Sewer Units	Flow MGD
Existing June 1988	19,279	57,844	5.78	19,279	57,844	5.78
Projected	4,099	13,117	1.31	11,137	35,638	3.56
Subtotal	*23,378*	*70,961*	*7.09*	*30,416*	*93,482*	*9.34*

COMMERCIAL	TRPA 20 YEAR PROJECTIONS Allowable Coverage	Sewer Units	Flow MGD	BUILDOUT PROJECTIONS Allowable Coverage	Sewer Units	Flow MGD
Existing June 1988	454,000	15,846	1.58	2,391,435	15,846	1.58
Projected		1,859	0.19		4,577	0.46
Subtotal	*454,000*	*17,705*	*1.77*	*2,391,435*	*20,423*	*2.04*
TOTAL		88,666	8.86		113,905	11.38

ATTACHMENT I

Sewer Connections Inventory Program, January 1, 1989

Sewer Connections Inventory Program
JANUARY 1, 1989

Item	Existing (1/1/89) Sewer Units	Capacity 896 GPD/SU MGD	
Connected Units			
Single Family Units	42,504	4.080	
Multiple Units	13,080	1.256	
Motels	9,263	0.889	
Restaurants	686	0.066	
Service Stations	177	0.017	
Trailer Park	2,716	0.261	
Laundromat	350	0.034	
Service garage	60	0.006	
Other	5,417	0.520	
Alloc. Permits Not Connected	585	0.056	
Total Connected Units	74,838	7.184	
Reserved Change in Use	759	0.073	
Total	75,597	7.257	
Less FLL (A)	(626)	(0.060)	
Less U.S.F.S.	(1,060)	(0.102)	
Less USFS Permit (A)	(134)	(0.013)	
Sub Total Connected	73,777	7.083	7.083
Served by Contract			
U.S. Forest Service	---	0.240	
State Parks	--	0.060	
Fallen Leaf Lake	---	0.060	
	---	0.360	0.360
Grand Totals			7.443

. . ."EPA will only fund a plant capacity that will accommodate existing flows, plus that generated by the limited development permitted by the Bi-State Compact."[1]

"While it would appear a capacity of only 7.443 MGD is required, the facility was originally designed to handle maximum daily flows up to 7.5 MGD. The proposed project calls for capacity at already existing facilities to function reliably at its original design. Accordingly, the proposed project capacity is for a 7.5 MGD facility."[2]

1. Final EIS, Page 16 (Attachment B)

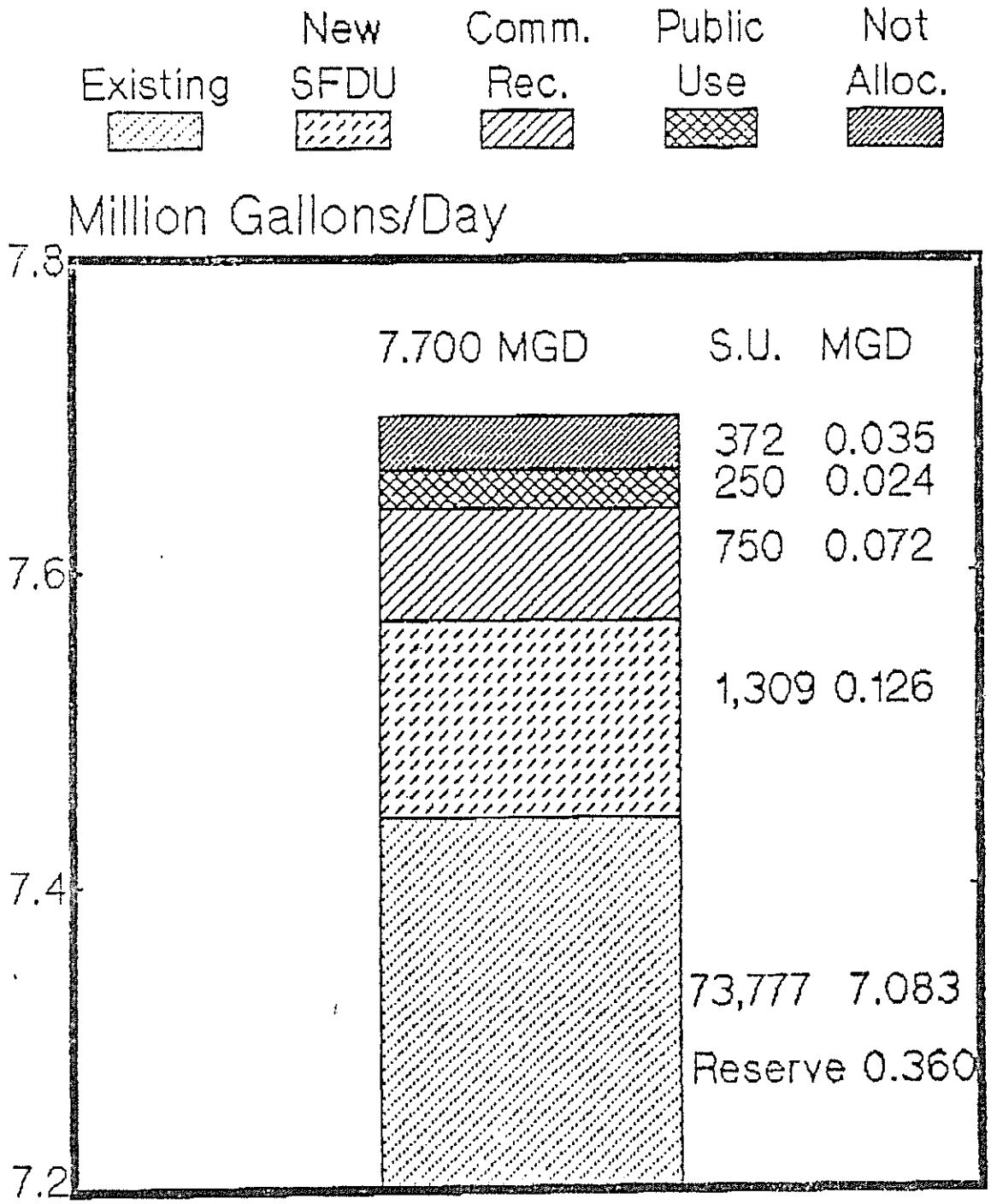
2. Final EIS, Table 4, Page 18 (Attachment B)

ATTACHMENT J

Treatment Plant Capacity, South Tahoe Public Utility District

TREATMENT PLANT CAPACITY

South Tahoe Public Utility District



Peak Day Flow = 96 Gal/Day/Sewer Unit

ATTACHMENT K

Chapter 2.0, 7.7 MGD Mitigation Program for South Tahoe Public Utility District 0.2 MGD Wastewater Treatment Facility Expansion, Draft Environmental Impact Report/ Environmental Impact Statement for CEQA and TRPA Compliance

CHAPTER 2.0

7.7 MGD MITIGATION PROGRAM

CONTENTS

2.0 7.7 MGD MITIGATION PROGRAM 1

2.1 INTRODUCTION 1

2.2 COMPLIANCE WITH EXISTING PROGRAMS 1
- 2.2.1 EPA Mitigation Program 1
- 2.2.2 Regulation Compliance 1
- 2.2.3 Mitigation Incorporated Into The Project 2

2.3 PLANNING MEASURES 10
- 2.3.1 TRPA Regional Plan Modification Coordination 10
- 2.3.2 Facilities Capacity Evaluation 11
- 2.3.3 TRPA Land Coverage Compliance 12

2.4 CONSTRUCTION MEASURES 14
- 2.4.1 Best Management Practices 14
- 2.4.2 Odor Monitoring Program 15
- 2.4.3 Construction Noise Mitigation 16
- 2.4.4 Cultural Resources Protection 17
- 2.4.5 Trip Reduction - Construction Project 18

2.5 OPERATIONS AND MAINTENANCE MEASURES 20
- 2.5.1 Inflow and Infiltration Program 20
- 2.5.2 Monitoring Program 21
- 2.5.3 Best Management Practices Retrofit 22
- 2.5.4 Water Conservation Education Program 23
- 2.5.5 Hazardous Waste Education Program 24
- 2.5.6 Wildlife Surveys 25
- 2.5.7 Agency Coordination Program 26
- 2.5.8 BMPs for Unneeded or Unpaved Roads 27
- 2.5.9 Compliance with 208 Plans 28
- 2.5.10 Compliance with TRPA IPES Line 29
- 2.5.11 Residential Unit Allocations 30
- 2.5.12 Commercial/Public Service/Recreation Allocations 31
- 2.5.13 No Net VMT Gain 32
- 2.5.14 Operations and Maintenance Manual 34
- 2.5.15 Groundwater Monitoring 35
- 2.5.16 Waste Discharge Requirements Compliance 36
- 2.5.17 Expansion of Wildlife Management Implementation Plan 37
- 2.5.18 Implementation of the Wildlife Habitat Management Implementation Plan 38
- 2.5.19 Economic Impact Mitigation 39

2.0 7.7 MGD MITIGATION PROGRAM

2.1 INTRODUCTION

The District is required to comply with a variety of existing mitigation measures and regulations. These measures and regulations are discussed in Section 2.2.

The mitigation program for the project is presented in three program categories as listed below:

Section 2.3	Planning Measures
Section 2.4	Construction Measures
Section 2.5	Inflow and Infiltration Program

Each mitigation measure is described using the following categories:

Description - This is the description of the mitigation measure.

Implementing Agency - The agency or individual which has the responsibility for implementing or performing the measure.

Lead Agency - The agency which has the principal responsibility for insuring that the implementation measure is carried out.

Monitoring Agency - The public agency which has the responsibility for monitoring the environment to insure that the mitigation measure is effective in mitigating the impact.

Timing - The appropriate point in time during the planning, development or life of the project at which the mitigation measure is to be initiated and completed.

2.2 COMPLIANCE WITH EXISTING PROGRAMS

2.2.1 EPA Mitigation Program

The Environmental Protection Agency (EPA) prepared an EIS for rehabilitation of the existing treatment facility up to its original designed capacity of 7.5 MGD and for its expansion to 8.7 MGD. A comprehensive mitigation program was adopted by the STPUD and approved by the EPA. Satisfactory progress of the mitigation program has previously been determined by the EPA for rehabilitation of the treatment plant to its original capacity of 7.5 MGD. Adequate progress of the mitigation program for expansion up to 8.7 MGD is required by the EPA. The EPA approved, as a part of determining satisfactory progress, effluent storage facilities up to a treatment capacity of 8.7 MGD.

The Tahoe Regional Planning Agency approved the wastewater treatment facility rehabilitation project to its original design capacity of 7.5 MGD and required the implementation of the EPA mitigation program. An Executive Summary of the EPA mitigation program is provided in Appendix P.

The District has been monitoring the mitigation program since 1981, as reported in five status reports, the most recent dated March 1989. The EPA mitigation program has been incorporated into the project where currently applicable to reduce the impacts of the project to a less than significant level.

In order for the District to expand the treatment facility to 7.7 MGD, the EPA must determine adequate progress of the EPA mitigation program. Further expansion of the treatment facility beyond 7.7 MGD will require an additional determination by the EPA that further adequate progress has been made on the EPA mitigation program.

2.2.2 REGULATION COMPLIANCE

All applicable City, County, State and Federal codes and regulations shall be complied with, including but not limited to:

Tahoe Regional Planning Agency
- Thresholds
- Regulations
- Code of Ordinances
- Rules and Regulations
- Best Management Practices
- Resource Management Practices
- Grading Ordinance

Lahontan RWQCB
- Waste Discharge Requirements

El Dorado County
- Air Pollution Control District
- Health Department Regulations

State of California
- State vehicle emission controls
- Worker Safety Rules and Regulations

2.2.3 MITIGATION INCORPORATED INTO THE PROJECT

The project will comply with the following mitigation measures which have been herein incorporated as a part of the project by the STPUD.

Regulation Compliance

- TRPA Regional Plan
- TRPA 208 Plan
- TRPA Thresholds
- TRPA Code of Ordinance
- Lahontan Regional Water Quality Control Board Waste Discharge Requirements
- El Dorado County Air Pollution Control District Regulations Health Department Regulations
- Other applicable regulatory agency regulations and ordinances

Final Construction Plans

Final construction plans will be submitted to and reviewed by TRPA to determine conformance with the approval. Said plans shall clearly depict the following:

a. Slope stabilization methods to stabilize all existing and proposed cut and fill slopes.
b. Areas to be revegetated, including complete specifications for such revegetation.
c. Fencing for vegetation protection.
d. Temporary and permanent erosion control devices.
e. Utility trenches.
f. Dust control measures.
g. All water quality improvements (BMPs) required in the conditional approval. Drainage facilities shall be designed to be capable of retaining runoff water for a two-year, six-hour storm or 20-year, one-hour storm, whichever is greater.
h. The final plans shall contain equipment specifications necessary to establish compliance with TRPA Standard Conditions 3, 4, and 5.

Securities

A security shall be posted with the TRPA to insure proper installation of all improvements required by the TRPA as conditions of project approval. The security shall include an amount equal to 110 percent of the cost of the BMPs and other erosion control and water quality improvements required.

Mitigation Fees

All required air quality, water quality, excess coverage and off-site coverage mitigation fees shall be paid to the TRPA.

Temporary BMPs

The following temporary BMPs shall be installed on-site prior to any grading activity occurring:

a. Temporary erosion controls.
b. Vegetation protection measures.
c. Construction site boundary fencing.

Required Inspection

An on-site inspection by TRPA staff shall occur prior to any construction or grading activity occurring. TRPA staff shall determine if the on-site improvements have been properly installed. No grading or construction shall be undertaken by the permittee until receipt of TRPA notification that the pre-grading/pre-activity conditions of approval have been satisfied.

Required Notices

The following notices to the TRPA shall be provided prior to any grading or construction occurring on the project site:

a. Notice for Pre-grading Inspection:
The District shall notify the TRPA when all on-site improvements required have been installed so that the required pre-grading inspection can be scheduled.

b. Notice of Commencement of Construction:
The District shall notify the TRPA at least 48 hours prior to commencement of construction or grading on the project site. Said notice shall include the date when construction will commence.

Construction/Grading Conditions

1. All construction shall be accomplished in strict compliance with the plans approved by the TRPA.

2. The TRPA permit and final construction drawings bearing the TRPA stamp of approval shall be present on the construction site from the time construction commences to final TRPA site inspection. The permit and plans shall be available for inspection upon request by any TRPA employee. Failure to present the TRPA permit and approved plans may result in the issuance of a Cease and Desist Order by the TRPA.

3. Whenever possible, utilities shall occupy common trenches to minimize site disturbance.

4. There shall be no grading or land disturbance performed with respect to the project between October 15 and May 1, unless proper approvals are obtained by the TRPA, as provided in the limited exemption described in Section 4.2.A of the TRPA Code of Ordinances.

5. Except as provided in Subsection 64.2.B of the Code of Ordinances, there shall be no grading at any time of the year during periods of precipitation and for the resulting period of time when the site is covered with snow or is in a saturated, muddy, or unstable condition.

6. All material obtained from any excavation work that is not contained within foundations, retaining walls, or by other methods approved by TRPA shall be removed from the subject parcel and disposed of at a site approved by the TRPA.

7. Replanting of all exposed surfaces, in accordance with the revegetation and slope stabilization plan, shall be accomplished within the first growing season following disturbance, unless an approved construction/inspection schedule established otherwise.

8. All trees and natural vegetation to remain on the site shall be fenced for protection. Scarring of trees shall be avoided and, if scarred, damaged areas shall be repaired with tree seal.

9. Soils and construction material shall not be trucked off the construction site. Grading operations shall cease in the event that a danger of violating this condition exists. The site shall be cleaned up and the road right-of-way swept clean when necessary.

10. During grading and construction, environmental protection devices such as erosion control devices, dust control, and vegetation protection barriers shall be maintained.

11. Loose soil mounds or surfaces shall be protected from wind or water erosion by being appropriately covered when construction is not in active progress or when required by TRPA.

12. Excavated material shall be stored upgrade from the excavated areas to the extent possible. No material shall be stored in any stream zone or wet areas.

13. Only equipment of a size and type that, under prevailing site conditions, and considering the nature of the work to be performed, will do the least amount of damage to the environment shall be used.

14. No washing of construction vehicles or equipment, including cement mixers, shall be permitted anywhere on the subject property unless authorized by TRPA in writing.

15. No vehicles or heavy equipment shall be allowed in any stream environment zone, or wet areas, except as authorized by the TRPA.

16. All construction sites shall be winterized by October 15 to reduce the water quality impacts associated with winter weather as follows:

    For site that will be inactive between October 15 and May 1:

    a. Temporary erosion controls shall be installed;
    b. Temporary vegetation protection fencing shall be installed;
    c. Disturbed areas shall be stabilized;
    d. On-site construction slash and debris shall be cleaned up and removed;
    e. Where feasible, mechanical stabilization and drainage improvements shall be installed;
    f. Spoil piles shall be removed from the site.

    For sites that will be active between October 15 and May 1, in addition to the above requirements:

    a. Permanent mechanical erosion control devices shall be installed, including paving of driveway and parking areas; and
    b. Parking of vehicles and storage of building materials shall be restricted to paved areas.

GENERAL CONDITIONS/DESIGN STANDARDS

1. Projects approved by the TRPA shall be subject to inspections by TRPA at any reasonable time. The permittee shall be responsible for making the project area accessible for inspection purposes. TRPA shall not be liable for any expense incurred by the permittee as a result of TRPA inspections.

2. Construction shall be completed in accordance with an approved construction schedule. An extension of a completion schedule for a project may be granted provided the request is made in writing prior to the expiration of the completion schedule, a security is posted to ensure completion or abatement of the project and TRPA makes either of the following findings:

    a. The project was diligently pursued, as defined in subparagraph 4.12.C (2) of the Code of Ordinances, during each building season (May 1- October 15) since commencement of construction.
    b. That events beyond the control of the permittee, which may include engineering problems, labor disputes, natural disasters or weather problems, have prevented diligent pursuit of the project.

3. Water conservation appliances and fixtures shall be installed in all new facilities or when replaced in existing facilities: low flow flush toilets; low flow showerheads (3 GPM rated maximum flow); faucet

aerators; and water efficient appliances (e.g., washing machines and dishwashers).

4. Water heaters shall not emit nitrogen oxides greater than 40 nanograms of nitrogen oxides (as NO_2) per joule of heat output.

5. Space heaters shall not emit greater than 40 nanograms of nitrogen oxide (as NO_2) per joule of useful heat delivered to the heated space.

6. Construction materials shall be secured to prevent them from rolling, washing, or blowing off of the project site. Rehabilitation and clean-up of the site following construction must include removal of all construction waste and debris.

7. Plant species on the TRPA Recommended Native and Adapted Plant List shall be used for lawns and landscaping.

8. The following sizes and spacing shall be required for woody plant materials at the time of planting:
   a. Trees shall be a minimum of six feet tall or 1 1/2 inch caliper six or diameter at breast height.
   b. Shrubs shall be a minimum three gallon pot size where upright shrubs have a minimum height of 18 inches and a minimum spread of 18 inches; and spreading shrubs have a minimum spread of 18 to 24 inches.
   c. Groundcovers shall be minimum for inch pot size or one gallon container and shall be a maximum 24 inches on center spacing.

9. Plant species not found on the TRPA Recommended Native and Adapted Plant List may be used for landscaping as accent plantings but shall be limited to borders, entryways, flower-beds, and other similar locations to provide accent to the overall native or adapted landscape design.

10. The following exterior lighting standards shall apply:
    a. Exterior lights shall not blink, flash or change intensity. String lights, buildings or roofline tube lighting, and reflective or luminescent wall surfaces are prohibited.
    b. Exterior lighting shall not be attached to trees except for Christmas season.
    c. Parking lot, walkway, and building lights shall be directed downward.
    d. Fixture mounting height shall be appropriate to the purpose. The height shall not exceed the limitations set forth in Chapter 22 of the Code of Ordinances.
    e. Outdoor lighting shall be used for purposes of illumination only, and shall not be designed for, or used as, advertising display. Illumination for aesthetic or dramatic purposes or any building or surrounding landscape utilizing exterior light fixtures projected above the horizontal is prohibited.

f. The commercial operation of searchlights for advertising or any other purposes is prohibited. Seasonal lighting displays and lighting for special events which conflict with other provisions of this section may be permitted on a temporary basis.

Geology/Seismicity

Construct all modifications to meet all local, State, Federal seismic safety codes.

Air Quality

Compliance with State vehicle emissions control standards shall be required for all diesel equipment. Machinery will be kept in best working condition.

Odorous gasses shall not be exhausted during the carbon media replacement operation.

The contractor shall cooperate with plant operations personnel during construction to avoid odor causing process upsets or plant conditions.

Water Quality

The wastewater treatment plant shall remain operable to the highest possible degree throughout construction. Temporary diversions to the emergency storage basin if necessary will be controlled using the District's best operational practices.

Flora, Fauna and Fisheries

All construction and on-site improvements shall be conducted in accord with adopted Best Management Practices.

Noise

Powered equipment and vehicles used during construction shall be equipped with adequate mufflers and/or enclosures at all times.

Construction activities causing the applicable noise standards to be exceeded, will be limited to the hours of 8 a.m. to 6:30 p.m. unless the TRPA allows these construction activities to occur between 7 a.m. and 9 p.m.

Risk of Upset and Safety

Strict adherence to the operation and maintenance manual provided by the design engineer shall be performed.

Frequent inspections and proper maintenance of facilities shall be practiced.

Compliance with conditions of the waste discharge requirements shall be maintained.

Cultural Resources

In the event that any cultural or historic resources should be uncovered during construction, all work shall cease and an evaluation of the resource shall be conducted by a qualified professional in compliance with State and TRPA regulations.

2.3 PLANNING MEASURES

2.3.1 Coordination Regional Plan Modification

Description	The STPUD shall work in cooperation with the Tahoe Regional Planning Agency in updating the TRPA Regional Plan. The District provides water and wastewater treatment within the District boundaries. The quantity of water to be distributed, the quantity of wastewater to be collected and treated is determined by the allocation of land uses by the Tahoe Regional Planning Agency. The District will plan its facility improvements in concert with the TRPA adopted plan, rules and regulations.	
Impacts Mitigated	Utilities, sewerage collection and treatment, water distribution.	
Mitigation Level	If this measure is implemented it provides coordination between the TRPA and District which may allow the District to plan and construct adequate facilities in order to provide adequate sewerage and water services.	
Lead Agency	TRPA	
Implementing Agency	TRPA	
Monitoring Agency	TRPA	
Timing	Start:	Undetermined, evaluation to begin in 1989
	Complete:	Undetermined

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.3.2 Facilities Capacity Evaluation

Description	The STPUD shall evaluate the wastewater treatment facility, the wastewater collection system, the domestic water supply and distribution system to determine their ability to serve the level of development approved by the Tahoe Regional Planning Agency in any modifications to the TRPA Regional Plan beyond uses allowed in the plan adopted in 1986. The District shall plan its facility improvements in concert with the TRPA adopted plan, rules and regulations.	
Impacts Mitigated	Utilities, sewerage collection and treatment, water distribution.	
Mitigation Level	If this measure is implemented it provides the basis upon which the District will plan for adequate sewerage and water systems.	
Lead Agency	STPUD	
Implementing Agency	STPUD	
Monitoring Agency	STPUD	
Timing	Start:	Evaluation to begin in 1989
	Complete:	After TRPA adoption of each modification to the Regional Plan

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.3.3 TRPA Land Coverage Compliance

Description	The STPUD shall prepare a current table presenting the existing acreage and land coverage of the wastewater treatment facility site. The table will identify excess coverage or remaining available coverage. If excess coverage is identified, the STPUD shall pay the TRPA appropriate mitigation fees for excess land coverage. If coverage is available, no mitigation is required.
Impacts Mitigated	Soils - Assures that the project does not exceed TRPA Land Coverage limits.
Mitigation Level	If available coverage is identified, there is no impact. If excess coverage is identified, the TRPA mitigation fees provide for mitigation off the project site, but within the hydrologically-related area.
Lead Agency	STPUD
Implementing Agency	STPUD
Monitoring Agency	STPUD
Timing	Start: January 1989 Complete: Prior to issuance of a TRPA permit.

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.4 CONSTRUCTION MEASURES

2.4.1 Best Management Practices

Description	The South Tahoe Public Utility District shall require the contractor and his subcontractors to comply with the TRPA's handbook of Best Management Practices.	
Impacts Mitigated	Water Quality - On-site erosion control, storm water run-off, and revegetation of the disturbed areas.	
Mitigation Level	Through compliance with the Best Management Practices handbook the potential for erosion and siltation of water off the site will be mitigated.	
Lead Agency	STPUD	
Implementing Agency	STPUD (selected Contractor)	
Monitoring Agency	STPUD/TRPA	
Timing	Start:	Upon District Board Approval of the contract for construction.
	Complete:	Upon completion of construction of the project.

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.4.2 Odor Monitoring Program

Description

The South Tahoe Public Utility District shall monitor for odors emanating from the treatment facility site during the construction of the project. The monitoring program shall consist of, but not be limited to, the following:

- A STPUD staff member dedicated to receive and respond to all complaints of odor.
- The staff will complete a standard questionnaire on each complaint and will identify the source of the odor on the questionnaire. The questionnaire will be maintained on file by STPUD through the construction period.
- The staff will contact the person who filed the complaint as soon as possible, but no longer than one hour from receipt of the complaint.
- STPUD will mitigate the cause of the reported odor.
- Staff will file a report on findings and actions within two weeks. The report shall be available to the public.
- STPUD shall continue to monitor the perimeter of the treatment plant for odors due to the release of H_2S.

Impacts Mitigated

Air Quality - Odors which may occur during shutdown or modification of components of the wastewater treatment system during construction.

Mitigation Level

This measure is a response, should odors waft off the site during construction. There may be temporary delays in eliminating the odor problem, dependent on the cause and solution to the problem.

Lead Agency STPUD

Implementing Agency STPUD

Monitoring Agency STPUD

Timing Start: Upon project construction.
Complete: Upon completion of construction.

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.4.3 Construction Noise Mitigation

Description	Powered equipment and vehicles used during construction phases of the project shall be equipped with adequate mufflers and/or enclosures at all times. Construction activities or equipment with noise levels in excess of 50 CNEL or threshold single event levels shall be limited to the hours of 7 a.m. to 9 p.m. provided the TRPA finds that completion of the project in the shortest time period reduces the potential for damage to property in the Region. The district shall encourage the contractor to schedule construction activities which generate high levels of noise between 8 a.m. and 6:30 p.m. To reduce construction noise to a less-than-significant level, construction should be limited to daytime hours, and all heavy equipment and compressors should be fitted with adequate muffler and enclosures. Project-related construction traffic should be required to comply with applicable provisions of TRPA criteria and state laws relating to speed control and noise emissions. A District staff member will be designated to receive and respond to all complaints of noise. Such response is to be made by phone within 24 hours of the receipt of the complaint. A report is to be made available within two weeks of receipt of the complaint.
Impacts Mitigated	Noise - impacts from operation of construction vehicles and power tools.
Mitigation Level	Given the isolated location of the project site from residential or sensitive uses, substantial mitigation should be achieved. During the construction phase and between the hours of 7 a.m. to 8 a.m. and 6:30 p.m. to 9 p.m., equipment and vehicles may exceed TRPA noise thresholds in the residential areas.
Lead Agency	STPUD
Implementing Agency	Contractor
Monitoring Agency	STPUD
Timing	Start: Upon start of construction Complete: Upon completion of construction

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.4.4 Cultural Resources Protection

Description	In the event that any cultural or historic resources should be uncovered during construction, the District shall require the contractor to stop all work and an evaluation of the resource shall be conducted by a qualified professional in compliance with state and TRPA regulations.
Impacts Mitigated	Cultural Resources/Archeology - protection of historic or culturally significant resources.
Mitigation Level	If this measure is implemented it will assure historic preservation and there will be no adverse impacts.
Lead Agency	STPUD
Implementing Agency	Contractor
Monitoring Agency	STPUD
Timing	Start: Upon start of construction Complete: Upon completion of construction

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.4.5 Trip Reduction - Construction Project

Description	Project related trips in excess of 25 trips per hour shall not be scheduled during peak traffic periods between 8 a.m. and 8:30 a.m. and between 5 p.m. and 7 p.m. Strict adherence to this time schedule will be required as part of the scope of work for facility construction.	
Impacts Mitigated	Traffic Congestion - The reduction of trips during peak congestion periods.	
Mitigation Level	This measure, if implemented should mitigate the traffic congestion impacts in excess of 25 trips per hour as identified in the EIR/EIS.	
Lead Agency	STPUD	
Implementing Agency	Contractor	
Monitoring Agency	STPUD	
Timing	Start:	Upon start of construction
	Complete:	Upon completion of construction

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5 OPERATIONS AND MAINTENANCE MEASURES

2.5.1 Inflow and Infiltration Program

Description	The South Tahoe Public Utility District shall complete its 5 year inflow and infiltration program which rehabilitates or replaces, where necessary, manhole covers to reduce inflow of stormwater.
Impacts Mitigated	Risk of Upset, Emergency Retention Basin use because of expansion.
Mitigation Level	Reduces the potential for inflow and infiltration by at least 200,000 gallons per day.
Lead Agency	STPUD
Implementing Agency	STPUD
Monitoring Agency	STPUD
Timing	Start: July 1989 Complete: 1991

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.2 7.7 MGD Mitigation Monitoring Program

Description	The South Tahoe Public Utility District shall monitor, in compliance with California Code, the status of the mitigation program to assure adequate progress towards implementation. A monitoring report shall be prepared and presented annually in October to the STPUD Board of Directors and the Tahoe Regional Planning Agency staff.	
Impacts Mitigated	All Impacts	
Mitigation Level	This measure provides a basis upon which the public and regulating agencies can determine compliance with the mitigation program.	
Lead Agency	STPUD	
Implementing Agency	STPUD	
Monitoring Agency	STPUD	
Timing	Start:	July 1989
	Complete:	On-going until this mitigation program is superceded.

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.3 Best Management Practices Retrofit

Description	The South Tahoe Public Utility District shall require, prior to connection of sewer units for projects requiring a TRPA permit, that the applicant present a TRPA approved site plan depicting BMP improvements. The TRPA shall monitor compliance with the BMP plan.
Impacts Mitigated	Water Quality - The reduction of soil erosion, soil deposition in water courses, and improved water quality entering the Lake.
Mitigation Level	In that this measure addresses new and retrofitting existing uses with BMPs, it has a net benefit to the water quality in the Lake Tahoe Basin.
Lead Agency	STPUD
Implementing Agency	STPUD - Through permit stage. TRPA - Through permit approval of individual projects.
Monitoring Agency	STPUD and TRPA
Timing	Start: Upon completion of project construction Complete: Upon issuance of TRPA allowed projects

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.5 Hazardous Waste Education Program

Description	The South Tahoe Public Utility District shall prepare a hazardous waste education program. The program shall inform users within the STPUD District of the hazardous wastes found within homes and businesses and shall encourage the proper disposal of such wastes. A hazardous waste brochure shall be distributed on a regular basis with the District's mailing and shall be distributed with each new sewer unit permit and each new water connection permit.
Impacts Mitigated	Accidental contamination and improper disposal of hazardous waste.
Mitigation Level	If this measure is implemented, it will provide a basis to educate the general public on the identification and safe disposal of hazardous wastes commonly found in homes and businesses, thus reducing contamination from improper hazardous waste disposal and safeguarding against accidental contamination.
Lead Agency	STPUD
Implementing Agency	STPUD
Monitoring Agency	STPUD
Timing	Start: July 1989 Complete: On-Going

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.6 Wildlife Surveys

Description	Biological field surveys shall be conducted by qualified biologist familiar with the flora and fauna of the Harvey Place site environs. These surveys should emphasize a determination of the presence or absence of sensitive wildlife species which are listed by the California State Department of Fish and Game as species of special concern. The biologist shall make recommendations for incorporation into the Final South Tahoe Public Utility District Wildlife management Implementation Plan, if warranted.
Mitigation Level	Review and incorporate new data into the STPUD Wildlife Implementation Plan and reassess the various plan programs with the California Department of Fish and Game. Appropriate revisions, if warranted, when implemented will reduce potentially significant impacts to less than significant levels.
Lead Agency	STPUD
Implementing Agency	STPUD
Monitoring Agency	California Division of Fish and Game
Timing	Start: July 1989 Complete: October 1990

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.7 Agency Coordination Program

Description	The South Tahoe Public Utility District shall request to be maintained on the mailing lists of the regional and local agencies in order to receive the agendas and notices. The District shall, as appropriate, encourage implementation of programs at the regional and local level which further the implementation of this mitigation program.
Impacts Mitigated	Assures STPUD is kept informed of regional and local agencies' programs in order to act in a proactive rather than reactive manner.
Mitigation Level	Provides the basis for communication and coordination on issues and projects crossing jurisdiction.
Lead Agency	STPUD
Implementing Agency	STPUD
Monitoring Agency	STPUD
Timing	Start: July 1989 Complete: On-Going

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.8 BMPs for Unneeded or Unpaved Roads

Description	The South Tahoe Public Utility District shall not issue a new sewer connection permit to an applicant who has unneeded or unpaved roads within the STPUD boundary unless the applicant presents an approved TRPA BMP Plan or a statement from the TRPA that the applicant has no such roads. The TRPA shall monitor compliance with the BMP plan. The BMP plan may include but not be limited to; the restriction of access to the road, the revegetation of the road, and the paving of a needed road.
Impacts Mitigated	Soil conservation and erosion control.
Mitigation Level	Implementation will reduce the overcovering of sensitive habitat.
Lead Agency	STPUD
Implementing Agency	STPUD - Through permit stage. TRPA - Through completion of BMPs.
Monitoring Agency	STPUD and TRPA
Timing	Start: Upon completion of project construction Complete: Upon issuance of TRPA allowed projects

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.9 Compliance with 208 Plans

Description	The South Tahoe Public Utility District shall not issue a new sewer connection permit for a new connection to an applicant who has a parcel(s) that does not comply with TRPA allocation requirements set forth in Chapter 33 of the TRPA Code of Ordinances.
Impacts Mitigated	Utilities, sewage collection and treatment, and water distribution.
Mitigation Level	Will provide basis for the District to plan and enforce organized growth plan.
Lead Agency	STPUD
Implementing Agency	STPUD
Monitoring Agency	STPUD
Timing	Start: July 1989 Complete: On-going

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.10 Compliance with TRPA IPES Line

Description	The South Tahoe Public Utility District shall not issue a new sewer connection permit for a new connection permitted by this expansion project to an applicant who has a parcel(s) with a TRPA Individual Parcel Evaluation System (IPES) score, as established by the TRPA, below the adopted IPES line after the IPES system becomes effective, nor prior therefore to any parcel not in compliance with the applicable TRPA 208 Plan.	
Impacts Mitigated	Utilities, sewage collection and treatment, and water distribution.	
Mitigation Level	If implemented will assist in the planning and enforcement of organized growth.	
Lead Agency	STPUD	
Implementing Agency	STPUD	
Monitoring Agency	STPUD	
Timing	Start:	Upon effective date of IPES system or applicable 208 Plan
	Complete:	On-going

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.11 Residential Unit Allocations

Description	The South Tahoe Public Utility District shall not connect more than the additional TRPA residential dwelling unit allocations on presently undeveloped parcels for the years 1989, 1990 and 1991 as set forth in Figure 6, Allocation Table, Additional Residential Dwelling Unit Allocation, Chapter VII - 10, Regional Plan for the Lake Tahoe Basin Goals and Policies TRPA, September 17, 1986, except affordable housing units, until the TRPA releases additional allocations for the year 1992 and beyond. STPUD shall not connect any residential units until EPA finds adequate progress on its Mitigation Program to permit such connections.	
Impacts Mitigated	Utilities, sewage collection and treatment, and water distribution.	
Mitigation Level	Will provide basis for orderly growth in the region without environmental damage.	
Lead Agency	STPUD	
Implementing Agency	STPUD	
Monitoring Agency	STPUD	
Timing	Start:	Upon effective date of additional TRPA allocations and IPES system, and EPA finding of adequate progress
	Complete:	On-going

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.12 Commercial/Public Service/Recreation Allocations

Description	The South Tahoe Public Utility District (STPUD) shall not connect commercial, public service or recreation projects, unless such projects are approved by TRPA and do not exceed the allocation limits for these uses as set forth in the TRPA Regional Plan. STPUD shall not connect any new commercial, public service or recreation projects until EPA finds adequate progress on its Mitigation Program to permit such connections.	
Impacts Mitigated	Utilities, sewage collection and treatment, and water distribution.	
Mitigation Level	Will provide basis for orderly growth in the region without environmental damage.	
Lead Agency	STPUD	
Implementing Agency	STPUD	
Monitoring Agency	STPUD	
Timing	Start:	Upon TRPA project approval and EPA funding of adequate progress
	Complete:	On-going

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.13 No Net VMT Gain

Description

Non-Residential VMT - The South Tahoe Public Utility District shall not issue a sewer connection permit for a new connection permitted by this expansion project to commercial, tourist accommodation units, recreation or public projects which have a net gain of vehicle miles traveled (VMT) unless the TRPA has certified that a transportation project, completed or under contract, has mitigated the identified VMT impacts.

Residential Units VMT - The South Tahoe Public Utility District shall not issue sewer connections to residential units, after 1991 unless the TRPA has certified that there is no net gain of VMT or that a transportation project, completed or under contract, has mitigated the identified VMT impacts.

The District shall monitor implementation of the following programs and capital improvements, which are included in the TRPA Regional Transportation Plan[1], to assure satisfactory progress. The reduction in VMT associated with these measures, as projected by the TRPA, will more than offset the long-term increases in VMT resulting from the projection.

1. Short Range Increases in Ridership

   The Short Range Transit Plan assumes a level of service in the first five year period which will carry 3400 people per day. TRPA estimates that this level of ridership equates to a 10,000 VMT/day savings basin-wide. As ridership builds, TRPA estimates that VMT savings could reach a projected level of 30,000 VMT maximum.

2. Short Range Transit Improvements

   a. Beach Bus Service - TRPA estimates that as ridership increases the VMT savings could range between 1,000 and 1,500 VMT/day.
   b. Extension of Bus Service into Tahoe Keys - TRPA estimates that extension of service into the Tahoe Keys could provide a savings of 1,500 to 2,000 VMT/day by the year 2005.
   c. Extension of Bus Service into the Roundhill Neighborhood and to Nevada Beach - TRPA estimates that such an extension service could provide a savings of 1,000 to 2,000 VMT/day.

3. Employer Based Employee Van Pools

   TRPA estimates that a reduction of 20,000 to 25,000 VMT/day could be achieved by the year 2005.

4. Ridership Incentives

   Based upon existing ridership incentives distributed by the casinos, TRPA estimates that increases in the incentives could result in a deduction of 5,00 to 10,000 VMT/day.

---

[1] Regional Transportation Plan, Lake Tahoe Basin, TRPA, April 1988.

5. **Neighborhood Delivery Centers**
Based upon the U.S. Postal Service Action plan, the neighborhood delivery centers (NDCs) are anticipated to reduce between 45,000 and 55,000 VMT/day upon full implementation basin-wide. Several of the proposed NDCs are located within the STPUD service area.

Impacts Mitigated	Reducing vehicle traffic in the Tahoe Basin and thereby reducing associated air pollution and noise levels.	
Mitigation Level	Project impacts can be reduced to a less than significant level by implementing this measure.	
Lead Agency	STPUD	
Implementing Agency	STPUD	
Monitoring Agency	STPUD	
Timing	Start:	July 1989
	Complete:	Upon issuance of last sewer unit connection served by 7.7 MGD facility.

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.14 Operations and Maintenance Manual

Description	The design Engineer shall prepare an operations and maintenance manual for the operators of the treatment facility to limit odors, spills and other environmental impacts. Strict adherence to the operation and maintenance manual shall be required.	
Impacts Mitigated	Objectionable odors and spills	
Mitigation Level	Given the isolated location of the facility, implementation of this measure will be reduced to a less than significant level.	
Lead Agency	STPUD	
Implementing Agency	STPUD	
Monitoring Agency	STPUD	
Timing	Start:	Upon completion of facility improvements
	Complete:	On going

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.15 Groundwater Monitoring

Description	The District shall continue to monitor ground water and report the results to the Lahontan Regional Water Quality Control Board staff.
Impacts Mitigated	Groundwater contamination.
Mitigation Level	Detection of contamination at its earliest stages allows immediate response and treatment prior to wide spread contamination and possible life threatening or health hazardous or pollution conditions.
Lead Agency	STPUD
Implementing Agency	STPUD
Monitoring Agency	STPUD
Timing	Start: Upon completion of facility improvements Complete: On going

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.16 Waste Discharge Requirements Compliance

Description	The District shall operate and maintain the treatment facility in compliance with Waste Discharge Requirements.	
Impacts Mitigated	Water quality	
Mitigation Level	Through compliance with waste discharge requirements, impacts will be reduced to less than significant levels.	
Lead Agency	Lahontan	
Implementing Agency	STPUD	
Monitoring Agency	Lahontan	
Timing	Start:	Upon completion of facility improvements
	Complete:	On going

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.17 Expansion/Wildlife Management Implementation Plan

Description	The STPUD, as mitigation for the loss of 166 acres of natural vegetation at the Harvey Place Reservoir site, has prepared and implemented a Final South Tahoe Public Utility District Wildlife Management Implementation Plan for Harvey Place Reservoir. In accord with the measures contained in said plan, the STPUD will prepare a five year management evaluation for review and comment by the California State Department of Fish and Game. The management plan evaluation should consider further mitigation for the cumulative loss of Great Basin sagebrush scrub vegetation at the present and any potential future, irrigation sites. Biological field surveys should be conducted on and around the reservoir and irrigation sites to determine the presence or absence of sensitive plant species.
Impacts Mitigated	Loss of plant species and winter deer herd habitat.
Mitigation Level	Review and incorporate new data into the STPUD Wildlife Implementation Plan and reassess the various plan programs with the California Department of Fish and Game. Appropriate revisions, if warranted for further mitigation of the cumulative loss of Great Basin Sagebrush Scrub vegetation and to mitigate any loss of sensitive plant species, will be implemented to reduce potentially significant impacts to less than significant levels.
Lead Agency	STPUD
Implementing Agency	STPUD
Monitoring Agency	California Division of Fish and Game
Timing	Start: July 1989 Complete: On going

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.18 Implementation of the Wildlife Habitat Management Implementation Plan

Description	Fully implement the Final South Tahoe Public Utilities District Wildlife Management Implementation Plan and provide for annual monitoring and review of the program by a qualified wildlife biologist. Prepare and submit annual Implementation Plan Progress Reports to California State Department of Fish and Game and the Bureau of Land Management for their review and comment.
Mitigation Level	Review and incorporate new data into the STPUD Wildlife Implementation Plan and reassess the various plan programs with the California Department of Fish and Game. Appropriate revisions, if warranted, will reduce potentially significant impacts on wildlife to less than significant levels.
Lead Agency	STPUD
Implementing Agency	STPUD
Monitoring Agency	California Division of Fish and Game
Timing	Start: Immediate Complete: On going

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

2.5.19 Economic Impact Mitigation

Description	Although availability of new sewer connections in and of itself was not found to be a contributor to escalated prices of vacant residential lots, there are at least two possible mitigating measures that can be adopted to further reduce the likelihood of price escalation. One deals with the transfer of sewer connections between lots and the other deals with the manner in which sewer connections are issued.
Impacts Mitigated	Transfer of sewer connections has been permitted in the past. A continued policy of transfer has the long-term effect of escalating construction activity in the residential areas that the market place deems to be preferred geographic locations. Historically, there have been two such locations at the south shore within the service area of STPUD. These are Montgomery Estates and Tahoe Keys. The number of potential buy-out eligible lots that meet Forest Service standards for acquisition are much less in these two areas than elsewhere. This suggests that if transfers of connections are possible between lots, there will continue to be a demand for new residential construction in the preferred locations and thus leave the less desirable lots unserved. In turn, this would limit the market value of the unsewered lots which would also be dispersed throughout the basin.
Mitigation Level	Regulations governing issuance of sewer permits are not known at this time. Historically, the District did not adopt a policy regulating issuance but did participate with the issuing agencies in attempting to work out a coordinated and uniform policy. The two issuing agencies are El Dorado County and the City of South Lake Tahoe. Previously these entities jointly adopted permit issuance rules that were built around a random selection system to assure equal opportunity for connections to all eligible lots. A window period for submitting an application was broadly announced and following that all eligible lots competed equally in a random selection drawing until available connections were exhausted. It is surmised that a similar system will be employed againin Colorado County. A first come first serve system may be adopted in the City of South Lake Tahoe. This resulted in part from 6 allocations unused and not transferred in 1988. The STPUD will mitigate severe economic impacts from new connection availability by co-ordinating the issue of new connection permits with local governments. The result would be to avoid skewing construction within a short time period and instead, assuring a more uniform number of new starts within each construction season over the expected life of the new connection availability.
Lead Agency	City of South Lake Tahoe/El Dorado County
Implementing Agency	City of South Lake Tahoe/El Dorado County
Monitoring Agency	STPUD
Timing	Start: July 1989 Complete: On going

MONITORING

DATE	INITIALS OF MONITOR	STATUS	COMMENTS

ATTACHMENT L

Compliance Measures List and Related Information and Analysis Prepared Pursuant to the Requirements of Chapter 32, TRPA Code of Ordinances, Tahoe Regional Planning Agency, November, 1988

Send to Quad

DRAFT
November 1988

COMPLIANCE MEASURES LIST
AND RELATED INFORMATION AND ANALYSIS:

PREPARED PURSUANT TO THE REQUIREMENTS OF CHAPTER 32, TRPA CODE OF ORDINANCES

Tahoe Regional Planning Agency

November, 1988

TAHOE REGIONAL PLANNING AGENCY

RESOLUTION ADOPTING TARGETS, INDICATORS, FACTORS, COMPLIANCE MEASURES, ATTAINMENT SCHEDULES AND RELATED ITEMS PURSUANT TO CHAPTER 32 OF THE TRPA CODE

RESOLUTION NO. 88-25

WHEREAS, Chapter 32 of the TRPA Code sets forth the methods by which the means and time schedules for implementation of the thresholds and federal, state and local air and water quality standards will be identified; and

WHEREAS, Chapter 32 was enacted in conjunction with Chapter 6 of the TRPA Code in order to codify and implement the findings required by Article V(g) of the Tahoe Regional Planning Compact (Compact); and

WHEREAS, Chapter 32 is designed to implement and coordinate the monitoring provisions of the Regional Plan Package and provide guidance to the Governing Board during the ongoing planning process; and

WHEREAS, Chapter 32 called for completion and action on indicators, targets, factors, compliance measures, attainment schedules and related items (hereafter "threshold attainment program") within 120 days of the effective date of the Regional Plan; and

WHEREAS, development of the threshold attainment program has proven to be more difficult and time-consuming than originally anticipated; and

WHEREAS, TRPA has utilized a checklist in lieu of the final threshold attainment program in the interim to assist in making the required Chapter 6 findings for projects and other matters; and

WHEREAS, in conjunction with the development of the Water Quality Management Plan for the Lake Tahoe Region, TRPA has completed its work on the portion of the threshold attainment program related to water quality thresholds and standards and desires to adopt the completed portion of the program; and

WHEREAS, TRPA shall continue to refine the remainder of the threshold attainment program and shall submit it for Board action at the earliest feasible date; and

WHEREAS, the threshold attainment program has been the subject of several duly-noticed public hearings before the Advisory Planning Commission (APC) and the Governing Board and has been modified and improved as a result of said hearings.

NOW, THEREFORE, BE IT RESOLVED THAT the Governing Board of the Tahoe Regional Planning Agency hereby adopts Compliance Measures List and Related Information and Analysis: Prepared Pursuant to the Requirements of Chapter 32, TRPA Code of Ordinances (November, 1988), attached hereto and incorporated herein by reference, in partial satisfaction of, and pursuant to, Chapter 32 of the TRPA Code.

BE IT FURTHER RESOLVED THAT the Governing Board shall adopt the remainder of the threshold attainment program as soon as feasible in order to fully implement Chapter 32.

BE IT FURTHER RESOLVED THAT the Governing Board shall maintain and update the threshold attainment program as necessary and appropriate and shall utilize the information generated by the program to prepare the periodic reports required by Section 32.8 of the TRPA Code.

PASSED and ADOPTED by the Governing Body of the Tahoe Regional Planning Agency at its regular meeting held on November 30, 1988, by the following vote:

Ayes: Ms. Del Papa, Mr. Henrikson, Mr. Cronk, Mr. Westergard, Mr. Houghteling, Mr. Deaner, Mr. Reed, Dr. Scrivner, Mr. Cefalu, Mr. Renz, Mr. Klein, Mr. Gibbs

Nays: None

Abstain: None

Absent: Ms. Cornwall, Nevada At-Large Member (position vacant)

Chester A. Gibbs, Chairman
Tahoe Regional Planning Agency

TABLE OF CONTENTS

I. INTRODUCTION

II. INDEX OF ENVIRONMENTAL THRESHOLD COMPLIANCE FORMS

III. COMPLIANCE MEASURES IN PLACE (TABLE 1)

- A. SHORT TITLES
- B. DESCRIPTIONS

IV. SUPPLEMENTAL COMPLIANCE MEASURES (TABLE 2)

- A. SHORT TITLES
- B. DESCRIPTIONS

V. ENVIRONMENTAL COMPLIANCE FORMS

- (AQ) AIR QUALITY
- (WQ) WATER QUALITY
- (SC) SOIL CONSERVATION

COMPLIANCE MEASURES LIST
AND RELATED INFORMATION AND ANALYSIS:

PREPARED PURSUANT TO THE REQUIREMENTS OF CHAPTER 32,
TRPA CODE OF ORDINANCES

I. INTRODUCTION

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.

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

32.3.A <u>Indicators</u>. 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 <u>List</u>. TRPA shall maintain a list of the indicators.

32.3.C <u>Current Status</u>. TRPA shall list the status of each indicator and, where reliable data are lacking, shall identify a program and timetable to provide reliable data.

32.3.E <u>Additional Factors</u>. 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.

TRPA has prepared an index of thresholds and applicable state, federal, and local air and water quality standards to which the Chapter 32 requirements will apply. Development of this index has been coordinated with the TRPA Monitoring Committee and the Monitoring Work Program, so that the Chapter 32 materials and the Monitoring Work Program share a common index. The index indicates whether a particular threshold or standard is in attainment, or not.

The staff has also developed an Environmental Threshold Compliance Form to display the information Chapter 32 requires for each threshold and standard. Compliance Forms are being prepared for each threshold and standard in the index.

At least every five years, TRPA will evaluate the results of its monitoring programs. TRPA will also public 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.

INDEX:
ENVIRONMENTAL THRESHOLD COMPLIANCE FORMS

I. AIR QUALITY

AQ-1	CO (non-attainment)*
AQ-2	O_3 (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)

II. WATER QUALITY/SOIL CONSERVATION

WQ-1	turbidity (shallow) (not known)
WQ-2	clarity, winter (non-attainment)
WQ-3	phytoplankton PPR (non-attainment)
WQ-4	tributary water quality (non-attainment)
WQ-5	runoff water quality (non-attainment)
WQ-6	groundwater (non-attainment)
WQ-7	other lakes (not known)
SC-1	impervious coverage (attainment)
SC-2	naturally - functioning SEZ (non-attainment)

III. VEGETATION

V-1	relative abundance and pattern (attainment)
V-2	uncommon plant communities (attainment)
V-3	sensitive vegetation (attainment)

IV. FISHERIES

F-1	lake habitat (non-attainment)
F-2	stream habitat (non-attainment)
F-3	in-stream flows (attainment)

V. WILDLIFE

W-1	special interest species (attainment)

---

* items in parentheses denote current attainment status

VI. SCENIC RESOURCES

SR-1	travel route ratings (non-attainment)
SR-2	scenic quality ratings (attainment)

VII. NOISE

N-1	single event (aircraft) (non-attainment)
N-2	single event (other) (not known)
N-3	community noise (not known)

VIII. RECREATION

R-1	high quality recreational experience (non-attainment)
R-2	fair share (attainment)

Note: As of November, 1988, the lists of in-place and supplemental compliance measures cover only the following categories from the index: air quality and water quality/soil conservation. On November 30, 1988, the TRPA Governing Board will consider for adoption only those portions of this document relating to two air quality thresholds (VMT and atmospheric nutrient loading) and the nine water quality and soil conservation thresholds. The Board will take action on compliance measures and compliance forms for the remaining thresholds and standards later in FY 1988-89.

November, 1988

TABLE 1A

COMPLIANCE MEASURES IN PLACE
(SHORT TITLES)

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

Table 1A, cont.

II. WATER QUALITY/SOIL CONSERVATION

A. URBAN RUNOFF AND EROSION

(01) BMP requirements, new development
(02) BMP implementation program--existing streets and highways
(03) BMP implementation program--existing urban development
(04) BMP implementation program--existing urban drainage systems
(05) capital improvements program for erosion and runoff control
(06) excess coverage mitigation program
(07) effluent limitations
(08) limitations on new subdivisions
(09) land use planning and controls
(10) residential development priorities (IPES)
(11) limits on land coverage, new development
(12) transfer of development
(13) restrictions on SEZ encroachment and vegetation alteration
(14) SEZ restoration program
(15) SEZ setbacks
(16) fertilizer reporting requirements

B. AIRBORNE NUTRIENTS

(17) improved mass transportation
(18) redevelopment and redirection of land use
(19) combustion heater rules, stationary source controls, related rules
(20) transfer of development

C. WASTE MANAGEMENT

(21) elimination of accidental sewage releases
(22) reduction of sewer line exfiltration
(23) effluent limitations
(24) regulation of wastewater disposal at sites not connected to sewers
(25) prohibition on solid waste disposal
(26) mandatory garbage pick-up
(27) hazardous material/wastes program
(28) BMP implementation program--snow and ice control practices
(29) reporting requirements, highway abrasives and deicers

Table 1, cont.

D. NATURAL AREA MANAGEMENT

(30) BMP implementation program--roads, trails, skidding, logging practices
(31) BMP implementation program--outdoor recreation
(32) BMP implementation program--livestock confinement and grazing
(33) BMP implementation program--pesticides
(34) land use planning and controls--timber harvesting
(35) land use planning and controls--outdoor recreation
(36) land use planning and controls--OHV use
(37) land use planning and controls--livestock confinement and grazing
(38) control of encroachment and coverage in sensitive areas
(39) pesticide substance and operator certification

E. LAKE TAHOE AND THE SHOREZONE

(40) control on shorezone encroachment and vegetation alteration
(41) BMP implementation program--shorezone areas
(42) BMP implementation program--dredging and construction in Lake Tahoe
(43) restrictions and conditions on filling and dredging
(44) protection of stream deltas
(45) marina master plans
(46) additional pump-out facilities
(47) controls on anti-fouling coatings

Table 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 445,000 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 88,000 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 236,900 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.

Table 1B (continued)

(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).

Table 1B (continued)

(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.

Table 1B (continued)

(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.

II. WATER QUALITY/SOIL CONSERVATION

A. URBAN RUNOFF AND EROSION

(01) BMP Requirements, new development: For all additional development in the Tahoe Region, application of temporary and permanent BMPs is required as a condition of approval. Requirements are set forth in Chapter 25 of the TRPA Code. BMPs are described in the Handbook of Best Management Practices.

(02) BMP implementation program--existing streets and highways: Under Chapter 25 of the TRPA Code, the implementation program includes voluntary, regulatory, and remedial aspects. BMPs are described in the Handbook of Best Management Practices.

(03) BMP implementation program--existing urban development: Under Chapter 25 of the TRPA Code, the implementation program includes voluntary, regulatory, and remedial aspects. BMPs are described in the Handbook of Best Management Practices.

(04) BMP implementation program--existing urban drainage systems: Under Chapter 25 of the TRPA Code, the implementation program includes voluntary, regulatory, and remedial aspects. BMPs are described in the Handbook of Best Management Practices.

(05) Capital Improvements Program for Erosion and Runoff Control: The CIP for erosion and runoff control is set forth in Volume IV of the 208 plan. It is part of the TRPA Regional Plan package. The CIP applies primarily to erosion and runoff problems from public rights-of-way. It is implemented by units of local government, Caltrans, and NDOT, with oversight and assistance from TRPA and other agencies.

(06) Excess coverage mitigation program: Where projects are approved for modification or rehabilitation of facilities on parcels with existing coverage in excess of the Bailey coefficients, a land coverage mitigation program provides for a reduction of coverage in an amount proportional to the cost of the project and the extent of excess coverage. The program is set forth in Chapter 25 of the TRPA Code of Ordinances.

(07) Effluent limitations: California (SWRCB, Lahontan Board) and Nevada (NDEP) issue effluent limitations under their statewide authorities to help control water quality problems resulting from discharges of urban drainage, including fertilizers, and discharges from sewage collection and treatment entities. TRPA may also set effluent limitations under the provisions of Chapter 9 of the TRPA Code of Ordinances.

(08) Limitations on new subdivisions: No new divisions of land are permitted within the Tahoe Region which would create development potential inconsistent with the Goals and Policies. (See the Goals and Policies, p. 113.) TRPA's intent is to avoid the impacts of new lot and block subdivisions while allowing mechanisms such as resubdivision to lessen the potential impacts of existing approved but unbuilt subdivisions.

(09) Land use planning and controls: TRPA's land use plan, set forth in the Goals and Policies and the Plan Area Statements and Maps, directs development to already-urbanized areas of consistent land use. Specific land use policies are implemented through the use of Plan Area Statements, specific community plans, and in some instances master plans. See the Goals and Policies (pp. II-2 through 5) and Chapters 13, 14, 15, 16 and 18 of the Code of Ordinances.

(10) Residential development priorities (IPES): The Individual Parcel Evaluation System (IPES) evaluates parcels eligible for additional single-family development with respect to their relative suitability for development, and directs additional development first to the most suitable parcels. IPES is set forth in the Goals and Policies (pp. VII-3 through 7) and Chapter 37 of the Code.

(11) Limits on land coverage for new development: All new development must conform to the coefficients of allowable land coverage set forth in the Bailey Report. In some instances, provisions are made to allow additional coverage on a given parcel by transfer programs. See the Goals and Policies (pp. II-12 through 15) and Chapter 20 of the Code.

(12) Transfer of development: To provide more flexibility for planning new development and mitigating existing problems, four types of transfer programs are provided in the Regional Plan: transfers of residential development rights, transfers of existing development, transfers of land coverage, and transfer of residential allocations. See the Goals and Policies, pp. II-14 and VII-14.

(13) Restrictions on SEZ encroachment and vegetation alteration: No new land coverage or other permanent disturbance is permitted in SEZs except for certain public outdoor recreation facilities, public service facilities, projects which require access across SEZs, new development in man-modified SEZs, and SEZ restoration and erosion control projects, provided the TRPA makes required findings and offsetting restoration is provided. See Chapter 20 of the Code.

(14) SEZ restoration program: The SEZ restoration program is set forth in Volume III of the 208 plan.

(15) SEZ setbacks: All new development must be set back from the edge of SEZs to preserve the integrity of the SEZ and the important values of the edge zone created by the SEZ and surrounding vegetation types. Required setbacks are identified in Chapter 37 of the Code.

(16) Fertilizer reporting requirements: TRPA may request uses that require regular fertilizer maintenance (e.g., golf courses, parks, cemeteries, ball fields, and residential yards) to submit fertilizer management plans for review and approval. Large users of fertilizer shall initiate a tracking program for lands under their control and present annual reports to TRPA. See Chapter 81 of the Code.

B. AIRBORNE NUTRIENTS

(17) Improved mass transportation: See in-place compliance measures for air quality 01, 02, 03, 04, 05, 06, 07, 08, 09.

(18) Redevelopment and redirection of land use: Certain plan area statements are designated for redirection of development to improve environmental quality, community character, and efficiency of transportation systems. See the Goals and Policies, pp. II-2, II-4 and II-12, and Chapter 15 of the Code of Ordinances.

(19) Combustion heater rules, stationary source controls, and related rules: Rules regarding emissions from combustion heaters and stationary sources are set forth in Chapter 91 of the TRPA Code.

(20) Transfer of development: See in-place water quality compliance measure (12).

C. WASTE MANAGEMENT

(21) Eliminate of accidental sewage releases: The discharge of wastewater to the surface or groundwaters of the Tahoe Region is prohibited, except for existing development operating under approved plans for wastewater disposal. Sewage collection, conveyance, and treatment districts shall have approved spill contingency, prevention, and detection plans. (See the Goals and Policies, pp. II-41, 43.)

(22) Reduction of sewer line exfiltration: All agencies which collect or transport sewage should have plans for detecting and correcting exfiltration problems, and shall be required to implement such plans as a condition of TRPA project approvals. (See Goals and Policies, p. II-44.)

(23) Effluent limitations: State agencies issue effluent limitations under their existing authorities to entities collecting and treating wastewaters. All the existing sewage collection and treatment entities in the Tahoe Region are covered by NPDES permits or California waste discharge requirements (WDRs).

(24) Regulation of wastewater disposal at sites not connected to sewers: Wastewater discharge prohibitions apply equally to discharges in rural or remote areas. TRPA may approve holding tanks or other no-discharge systems in some situations where would would not create adverse impacts. See Chapter 81 of the Code.

(25) Prohibition on solid waste disposal: The disposal of solid wastes in or on the land within the Tahoe Region is prohibited. See p. II-45 of the Goals and Policies.

(26) Mandatory garbage pick-up: Garbage pick-up is mandatory in the Tahoe Region and should be structured to encourage clean-ups and recycling. See p. VI-3 of the Goals and Policies.

(27) Hazardous materials/wastes programs: Underground storage tanks for sewage, fuel, or other potentially harmful substances shall meet TRPA standards and shall be installed, maintained, and monitored in accordance with the BMP Handbook. TRPA will cooperate with other agencies on preparation, evaluation, and implementation of toxic and hazardous spill control plans. All persons handling, transporting, using, or storing toxic or hazardous substances shall comply with applicable state and federal laws. See pp. II-44 and 45 of the Goals and Policies and Chapter 81 of the Code.

(28) BMP implementation program--snow and ice control practices: The BMP Handbook addresses snow disposal practices. The implementation program is set forth in Chapter 25 of the Code and involves voluntary, regulatory, and remedial aspects. Snow removal is limited to structures, paved areas, an areas necessary for parking or safe pedestrian access. Snow removal from dirt roads is subject to TRPA regulation. See Chapter 81 of the Code.

(29) Reporting requirements, highway abrasives and deicers: Institutional users of road salt shall keep records on salt application. Major users of salt and abrasives shall initiate a tracking program and present annual reports to TRPA. (See Goals and Policies, p. II-44 and Chapter 81 of the Code.)

(30) BMP implementation program--roads, trails, skidding, logging practices: The BMP Handbook and Chapter 71 of the TRPA Code identify the required BMPs for roads, trails, skidding, and logging. The program of implementation is set forth in Chapter 25 of the Code.

(31) BMP implementation program--outdoor recreation: Outdoor recreation uses are subject to the BMP requirements of Chapter 25 of the Code. The required practices are described in the BMP Handbook.

(32) BMP implementation program--livestock confinement and grazing: Application of BMPs is required of owners and operators of livestock confinement (corrals) and grazing uses. The implementation program is set forth in Chapter 25 of the Code. The required practices are described in the BMP Handbook.

(33) BMP implementation program--pesticides: The use and storage of insecticides, fungicides, and herbicides must be consistent with the BMP Handbook. See also in-place water quality compliance measure (47).

(34) Land use planning and controls--timber harvesting: Reforestation, regeneration harvest, sanitation salvage cut, selection cut, special cut, thinning, timber stand improvement, tree farms, early successional stage management, fire detection and suppression, fuels treatment and management, insect and disease suppression, and prescribed fire management are primary resource management uses and are permissible as set forth in the TRPA Plan Area Statements (Code of Ordinances, Chapter 18).

(35) Land use planning and controls--outdoor recreation: Beach recreation, boat launching facilities, cross-country skiing courses, developed campgrounds, golf courses, group facilities, off-road vehicle courses, outdoor recreation concessions, marinas, RV parks, riding and hiking trails, rural sports, skiing facilities, snow mobile courses, undeveloped campgrounds, and visitor information centers are primary recreational uses and are permissible uses as set forth in the Plan Area Statements (Code, Chapter 18). Expansion of existing ski facilities must be based on an approved master plan.

(36) Land use planning and controls--OHV use: Off-road vehicle use is prohibited in the Region except on specified trails, roads, or designated areas where impacts can be mitigated. (See Goals and Policies, p. V-3.)

(37) Land use planning and controls--livestock confinement and grazing: Farm and ranch structures, grazing, range pasture management, and range improvement are primary resource management uses and are permissible as set forth in the Plan Area Statements (Code, Chapter 18). TRPA approval is required for an new grazing or confinement project. (See Code, Chapter 73.)

(38) Control of encroachment and coverage in sensitive areas: Public outdoor recreation facilities may encroach into sensitive lands provided TRPA makes required findings designed to protect water quality and ensure mitigation of impacts. Projects that, by their nature, need not be sited in sensitive lands are identified in the 208 plan, Table 16.

(39) Pesticide substance and operator certification: Only chemicals registered with EPA and the appropriate state agency may be used for pest control, and only for their registered application. No detectable concentration of any pesticide shall be allowed to enter any SEZ unless TRPA finds application is necessary to attain and maintain thresholds. (See Chapter 81 of the Code.)

E. LAKE TAHOE AND THE SHOREZONE

(40) Control on shorezone encroachment and vegetation alteration: All vegetation at the interface between the backshore and foreshore shall be undisturbed. The use of lawns or ornamental vegetation in the shorezone is discouraged. (Goals and Policies, p. IV-16.) There are eight shorezone tolerance districts along the shoreline of Lake Tahoe, Fallen Leaf Lake, and Cascade Lake; specific rules apply to each district. (Code Chapter 53.)

(41) BMP implementation program--shorezone areas: The BMP Handbook includes special BMPs for the shorezone. The program of implementation is set forth in Chapter 25 of the Code.

(42) BMP implementation program--dredging and construction in Lake Tahoe: The BMP Handbook includes BMPs for construction and dredging in Lake Tahoe. The program of implementation is set forth in Chapter 25 of the Code.

(43) Restrictions and conditions on filling and dredging: Filling and dredging are subject to TRPA ordinance provisions to protect water quality and the natural function and dynamics of the shorelines and lakebeds. See Chapter 54 of the Code.

(44) Protection of stream deltas: Stream deltas shall be protected from encroachment and disturbance as described under SEZ protection provisions, in-place water quality compliance measure (13).

(45) Marina master plans: Expansion of marinas is limited until TRPA adopts a master plan for the marina (Code, Section 16.1).

(46) Additional pump-out facilities: Liquid and solid wastes from boats shall be discharged at approved pump-out facilities. Pump-out facilities shall be provided by marinas and launching facilities as required by Chapter 25 of the Code and the BMP Handbook.

(47) Controls on anti-fouling coatings: The BMP Handbook incorporates California and federal restrictions on the use of paints containing tributyl tin (TBT). The program of implementation is set forth in Chapter 25 of the Code. The Lahontan Board also enforces the California restrictions.

November, 1988

TABLE 2A

SUPPLEMENTAL COMPLIANCE MEASURES
(SHORT TITLES)

I. AIR QUALITY

A. MASS TRANSPORTATION

(01) Short Range Transit Plan--South Shore fixed routes
(02) Short Range Transit Plan--South Shore demand-responsive zones
(03) Short Range Transit Plan--North Shore fixed routes
(04) Short Range Transit Plan--North Shore demand-responsive zones
(05) improved ski shuttle coordination
(06) Tahoe City intrazonal shuttle
(07) Kings Beach/Tahoe Vista intrazonal shuttle
(08) improved beach bus headways (summer)
(09) 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

(21) right turn lane, U.S. 50 west to Tahoe Keys Blvd.
(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

Table 2A, cont.

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 NDCs--south shore
(58) additional NDCs--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

Table 2A, cont.

II. WATER QUALITY/SOIL CONSERVATION

A. URBAN RUNOFF AND EROSION

(01) restrictions on rate and/or amount of additional development
(02) improved BMP implementation/enforcement program
(03) additional restrictions on fertilizer use
(04) more stringent coverage transfer requirements
(05) more stringent SEZ encroachment rules
(06) controls on outdoor water use
(07) increased funding for CIP for erosion and runoff control
(08) artificial wetlands/runoff treatment program
(09) transfer of development from SEZs
(10) improved excess coverage mitigation program
(11) modifications to list of exempt activities
(12) modifications to IPES

B. AIRBORNE NUTRIENTS

(13) increased idling restrictions
(14) control of upwind pollutants
(15) additional controls on combustion heaters

C. WASTE MANAGEMENT

(16) improved exfiltration control program
(17) improved infiltration control program
(18) water conservation/flow reduction program

D. NATURAL AREA MANAGEMENT

(19) additional land use controls
(20) improved BMP implementation/enforcement program
(21) restrictions on rate and/or amount of additional development

E. LAKE TAHOE AND THE SHOREZONE

(22) improved BMP implementation/enforcement program

Table 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.

Table 2B (Continued)

(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 1990.

Table 2B (Continued)

(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 Tahce 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.

Table 2B (Continued)

(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 will 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. Construction is partially dependent on a transient occupancy tax scheduled for November 8, 1988.

(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.

Table 2B (Continued)

(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.

Table 2B (Continued)

(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-Caesar's 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.

Table 2B (Continued)

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.

Table 2B (Continued)

(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.

Table 2B (Continued)

(66) improved BMP implementation/enforcement program: This program would step up implementation of BMPs, and may reduce airborne dust. (Also see Water Quality/Soil Conservation Supplemental Compliance Measures 02 & 20).

(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. (Also see Water Quality/Soil Conservation Supplemental Compliance Measure 15).

II. WATER QUALITY/SOIL CONSERVATION

A. URBAN RUNOFF AND EROSION

(01) Restrictions on rate and/or amount of additional development: This is a contingency measures, not presently enacted by the TRPA. Such restrictions could include restrictions on additional development in all categories or certain categories, including residential, commercial, recreational, and public service. Restrictions could be applied Region-wide, by jurisdiction, by watershed, or by other appropriate sub-unit. Restrictions could be placed on public service uses not currently covered by allocations by establishing allocation limits, setting priorities, or prohibiting certain uses in the Region.

(02) Improved BMP implementation/enforcement program: This is a contingency measure not presently enacted by the TRPA. An improved program could include subsidized BMP applications from grants, annual budgets, or fees; or mandatory compliance with BMPs upon sale of property.

(03) Additional restrictions on fertilizer use: This is a contingency measure not presently enacted by TRPA. Additional restrictions on fertilizer use could include bans on fertilizer applications in some situations, such as golf courses in SEZs, or requirements to use only certain types of fertilizers, such as slow-release fertilizers in some applications.

(04) More stringent coverage transfer requirements: This is a contingency measure not presently enacted by TRPA. More stringent requirements could include: elimination of transfers of potential coverage; elimination of transfers of soft coverage; increased coverage transfer ratios; or restriction on TRPA's ability to substitute transfers of soft or potential coverage for hard coverage in commercial transfers.

(05) More stringent SEZ encroachment rules: This is a contingency measure not presently enacted by TRPA. More stringent SEZ encroachment rules could include reducing or eliminating the exceptions to the prohibitions on SEZ encroachment.

(06) Controls on outdoor water use: This is a contingency measure not presently enacted by TRPA. In conjunction with more stringent fertilizer controls, this compliance measure would help reduce nutrient loading to ground and surface waters via fertilizer application.

(07) Increased funding for CIP for erosion and runoff control: Increased funding could come from grants, annual budgets, bonding, or fees. This measure is consistent with the CIP, Volume IV of the 208 plan.

Table 2B, cont.

(08) Artificial wetlands/runoff treatment program: This compliance measure would include a more active program to identify major points of discharge of surface runoff and provide treatment through the installation and maintenance of artificial wetlands. The program should involve pilot projects prior to full-scale implementation. The program is consistent with the 208 plan.

(09) Transfer of development from SEZs: This is a contingency measure not presently enacted by TRPA. Removal of existing structures from SEZs could be accomplished by establishment of a specific transfer program, with incentives.

(10) Improved excess coverage mitigation program: This is a contingency measure not presently enacted by TRPA. An improved program could include adjustment of fees--up or down--to optimize revenues from excess coverage mitigation.

(11) Modifications to list of exempt activities: This is a contingency measure not presently enacted by TRPA. Activities presently exempt from requirements for TRPA permits but which are found to have adverse impacts may be removed from the list of exempt or qualified exempt activities.

(12) Modifications to IPES: This is a contingency measure not presently enacted by TRPA. The Goals and Policies contemplate adjustments in IPES based on results of a special component of the TRPA monitoring program to evaluate IPES. Modifications to IPES could include further restrictions or safeguards on movement of the IPES line.

B. AIRBORNE NUTRIENTS

(13) Increased idling restrictions: This is a contingency measure not presently enacted by TRPA. Increased restrictions could include restrictions on diesel engines or all engines, in certain locations or in all locations within the Region.

(14) Control of upwind pollutants: Future compliance measures implemented by upwind jurisdictions will have a beneficial effect on transport of nitrogen compounds to the Tahoe Region. The 208 plan contains a strategy for encouraging controls on upwind NOx emissions.

(15) Additional controls on combustion heaters: This is a contingency measure not presently enacted by TRPA. This compliance measure could include requirements to install certified combustion heaters upon sale of a home, or sooner.

Table 2B, cont.

C. WASTE MANAGEMENT

(16) Improved exfiltration control program: This is a contingency measure not presently enacted by TRPA. An improved program could include monitoring and reporting requirements and compliance schedules for correction of problems.

(17) Improved infiltration control program: This is a contingency measure not presently enacted by TRPA. An improved program could include monitoring and reporting requirements and compliance schedules for correction of problems.

(18) Water conservation/flow reduction program: This is a contingency measure not presently enacted by TRPA. Such a program could include a problem assessment, strategy development, improvement program, and implementation program.

D. NATURAL AREA MANAGEMENT

(19) Additional land use controls: This is a contingency measure not presently enacted by TRPA. It could include amendments to the Plan Area Statements to restrict areas in which certain uses are allowed or special uses.

(20) Improved BMP implementation/enforcement program: See supplemental compliance measure (02), above.

(21) Restrictions on rate and/or amount of additional development: See supplemental compliance measure (01), above.

E. LAKE TAHOE AND THE SHOREZONE

(22) Improved BMP implementation/enforcement program: See supplemental compliance measure (02), above.

Index No.: AQ-7

ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

Category: air quality
Parameter: VMT (vehicle miles travelled)
Standard: TRPA: reduce VMT 10% from 1981 value

2. INDICATOR (UNITS): VMT calculated by TRPA staff for peak summer day using QRS (Quick Response System) transportation model or equivalent model.

3. MONITORING SUMMARY: VMT is a calculated value based on the QRS travel demand forecasting model, which uses actual and estimated values for population, land use patterns, and travel characteristics to evaluate changes in VMT, traffic volumes, and travel patterns. Caltrans, NDOT, and TRPA operate a traffic monitoring network throughout the Tahoe Region used to calibrate the QRS model.

4. ATTAINMENT STATUS: Non-attainment. TRPA's VMT estimate for 1985 (1.65 million) was about 3 percent lower than the 1981 estimate (1.70 million). A 10 percent reduction from the 1981 estimate results in a target VMT of 1.53 million.

5. TARGET DATE: 2005

6. EVALUATION INTERVAL: Two years, corresponding to updates of the Regional Transportation Plan.

7. INTERIM TARGETS: See forecast by year, attached. Indicator shall not exceed RFP line.

8. COMPLIANCE MEASURES

a. MEASURES IN PLACE (see Table 1)

Mass Transportation: 01 through 09, inclusive
Non-Motorized Transportation: 10, 11
Transportation Systems Management: 12, 13, 14

b. EFFECTIVENESS OF MEASURES IN PLACE: The decrease in estimated VMT between 1981 and 1985 was probably the result of economic conditions and other conditions not related to the compliance measures in place. The TART expansion, neighborhood mail delivery centers, and home mail delivery contribute to lower VMT, but monitoring will be required to determine the extent of their contribution over time. Neighborhood delivery centers (NDCs) opened in 1986 and 1987, and limited home mail delivery began in Incline Village in 1988. The TART expansion took place in 1986. See Table AQ-7a for information on the effectiveness and costs of the in-place compliance measures.

AQ-7, cont.

c. SUPPLEMENTAL MEASURES (see Table 2)

Mass Transportation: 01 through 20, inclusive, except 05
Non-Motorized Transportation: 33 through 50, inclusive, except 47
Transportation Systems Management: 51, 52, 53, 54, 57, 58, 59, 60

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES: The effectiveness of the individual and collective supplemental measures is set forth in the Final EIR/EIS, Regional Transportation Plan, Lake Tahoe Basin (TRPA, 1988). See Table AQ-7b for information on the effectiveness and costs of the supplemental compliance measures.

9. ADEQUACY OF COMPLIANCE MEASURES: The Regional Plan will result in intensified land use and increased population in the Region. The additional travel demand generated by the Regional Plan will increase peak summer day VMT, prior to mitigation, from the 1985 level of 1.65 million to approximately 1.88 million. Considering the long-term VMT reductions of 237,000 to 375,000 due to mass transit improvements, community planning, and other improvements, the resultant ultimate VMT for a peak summer day would be 1.64 to 1.50 million, compared to the threshold target of 1.53 million. Long-term traffic monitoring and modeling will be necessary to determine progress toward threshold attainment and maintenance.

AQ-7, cont.
Vehicle Miles Traveled

Table AQ-7a
Compliance Measures in Place

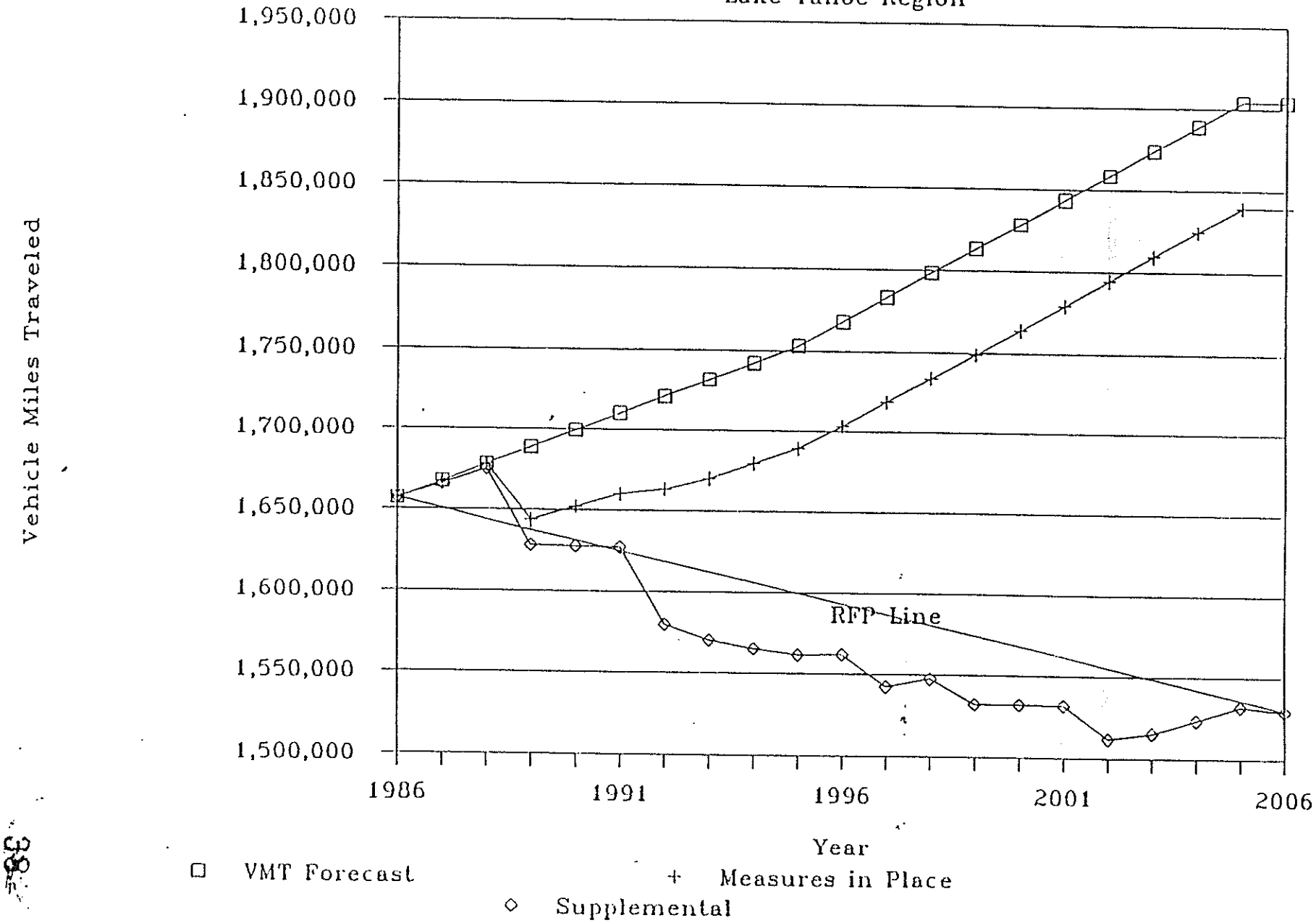
		Effectiveness: High	Medium	Low
Cost:	Low		05,06,07	12
	Medium		04	03,08,09
	High	01,02,13,14	11	10

Table AQ-7b
Supplemental Compliance Measures

		Effectiveness: High	Medium	Low
Cost:	Low		33,35	17,36,38,39, 44,45,48,49, 50,54
	Medium	51	06,07,08,09, 10,11,14,15, 16,34,37,40, 41,43	
	High	01,03,12,13, 18,20,52,53, 57,58,59,60	42	02,04,19,46

VMT Forecast Line

Lake Tahoe Region



Index No.: AQ-8

ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

   Category: air quality
   Parameter: atmospheric nutrient loading
   Standard: reduction in direct DIN load on Lake Tahoe from atmospheric sources by approximately 20 percent of the 1973-1981 annual average

2. INDICATOR (UNITS): annual average concentration of particulate NO_3 at the Lake Tahoe Boulevard air quality monitoring station (ug/m^3)

3. MONITORING SUMMARY: The IMPROVE aerosol sampler will be used to determine annual average concentrations of particulate nitrate (NO_3) at the Lake Tahoe Boulevard station. TRPA will install the IMPROVE sampler in August, 1988. Data will be analyzed bi-weekly and reported annually.

4. ATTAINMENT STATUS: Non-attainment. Appel and Tokiwa (1984) estimated average nitrate concentrations in the South Shore. These data will be used as a surrogate for the 1973-1981 annual average, which is not known. Although there are no more-recent data, there is no evidence on which to base a conclusion that the concentrations have declined by approximately 20 percent. VMT in the Region has decreased about 3 percent since 1981, indicating that nitrate concentrations may have decreased slightly.

5. TARGET DATE: 2005

6. EVALUATION INTERVAL: Annual.

7. INTERIM TARGETS: See Figure AQ-8, forecast line. Indicator shall not exceed the forecast line.

8. COMPLIANCE MEASURES

   a. MEASURES IN PLACE (see Table 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

   b. EFFECTIVENESS OF MEASURES IN PLACE: Although the compliance measures in place may have had a small positive impact on atmospheric deposition of DIN on Lake Tahoe, they will not attain and maintain the threshold without supplemental compliance measures. See Table AQ-8a for information on the effectiveness and costs of in-place compliance measures.

c. SUPPLEMENTAL MEASURES (see Table 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, 61
Transportation-Related Measures: 62, 63, 68
Non-Transportation-Related Measures: 64, 65, 66

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES: The combined in-place and supplemental compliance measures will reduce peak summer day VMT in the Tahoe Region by about 10 percent. Motor vehicles are the dominant in-Region sources of atmospheric DIN. In-Region NOx emissions will be decreased, over time, by more than 10 percent, due to VMT reductions, the cleaner vehicle fleet, and other programs such as improvements in home heating. Controls within the Region are estimated to reduce direct deposition of DIN by about 2 to 4 percent. Control of pollutants from upwind areas (65) will be necessary to attain and maintain the threshold standard. See Table AQ-8b for information on the effectiveness and costs of the supplemental compliance measures.

9. ADEQUACY OF COMPLIANCE MEASURES: With cooperation from upwind areas to reduce the transport of nitrate-nitrogen into the Tahoe Region, the Regional Plan will attain and maintain the TRPA threshold. The CARB should provide TRPA with periodic progress reports on programs to reduce NOx emissions in areas upwind of the Tahoe Region.

AQ-8, cont.
Atmospheric Nutrient Loading

Table AQ-8a
Compliance Measures in Place

		Effectiveness: High	Medium	Low
Cost:	Low		05,06,07	12,16
	Medium	17,20,21	04,15	03,08,09
	High	01,02,14	13	10,11

Table AQ-8b
Supplemental Compliance Measures

		Effectiveness: High	Medium	Low
Cost:	Low	62	33,35,63	17,36,38,39, 44,45,48,49, 50,54,64,68
	Medium	51	06,07,08,09, 10,11,14,15 16,34,37,40, 41,43,67	05,61,65
	High	01,03,12,13, 18,20,52,53, 57,58,59,60, 66	42	02,04,19,46

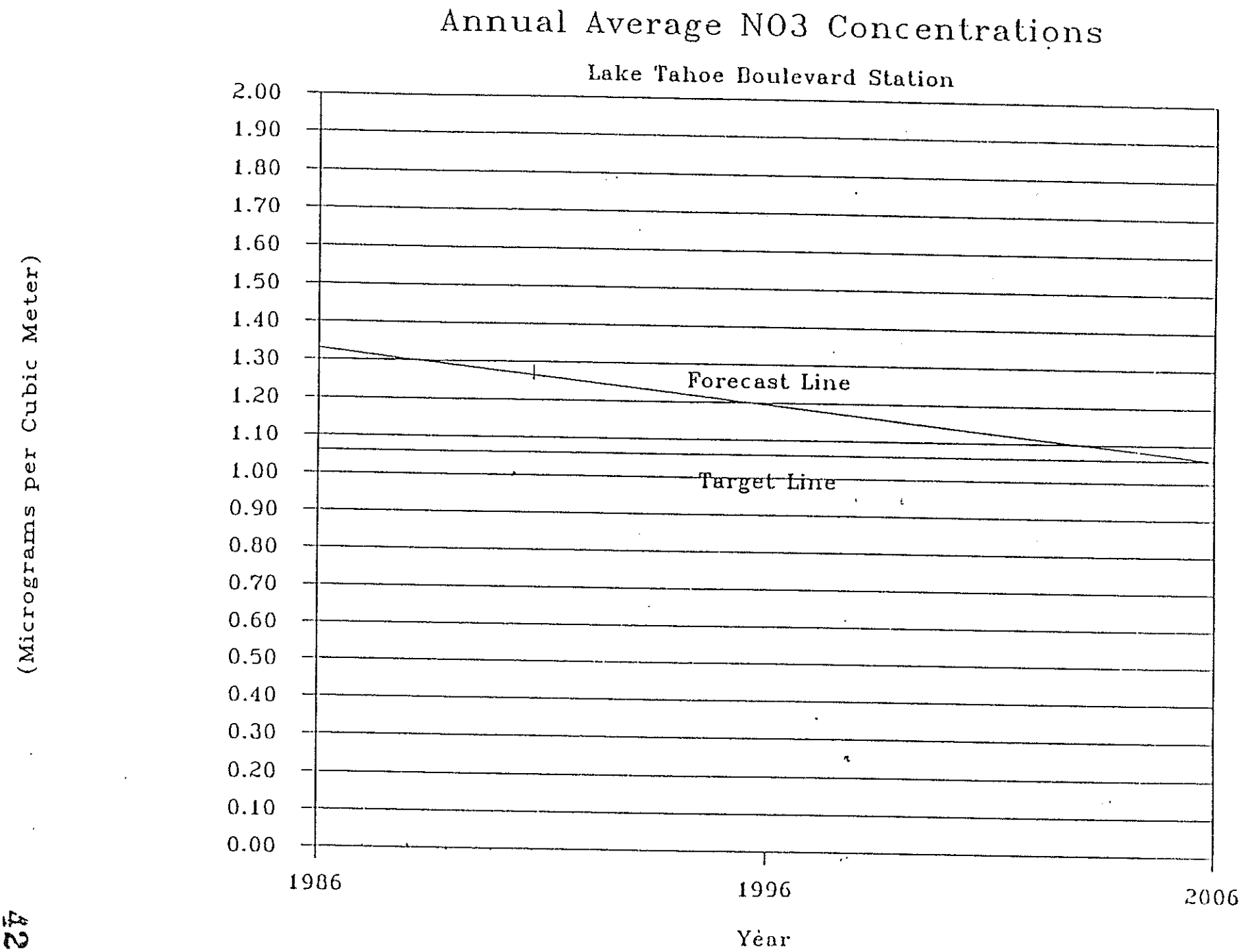

Annual Average NO3 Concentrations
Lake Tahoe Boulevard Station
(Micrograms per Cubic Meter)
2.00
1.90
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Forecast Line
Target Line
1986
1996
2006
Year

Figure AQ-8

Index No.: WQ-1

ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

Category: water quality
Parameter: turbidity, shallow waters of Lake Tahoe
Standard: TRPA: Decrease sediment load as required to attain turbidity values not to exceed 3 JTU in littoral Lake Tahoe. In addition, turbidity shall not exceed 1 JTU in shallow waters of Lake Tahoe not directly influenced by stream discharges.

2. INDICATOR (UNITS): turbidity offshore at the 25-meter depth contour at the following locations in littoral Lake Tahoe (JTU): (1) mouth of Upper Truckee River and Trout Creek, (2) El Dorado Beach, (3) mouth of Edgewood Creek, (4) Nevada Beach, (5) mouth of Incline Creek, (6) Burnt Cedar Beach, (7) mouth of Ward Creek, (8) Tahoe State Recreation area

3. MONITORING SUMMARY: According to the Thresholds Study Report (TRPA, 1982), the Joint Studies Group measured turbidity in JTU at 14 locations in the shallow waters of Lake Tahoe between 1965 and 1975. Turbidity ranged from 0.10 to 1.60 JTU. There are no recent data on turbidity. TRPA initiated monitoring of turbidity at selected locations in the littoral zone on a survey basis starting in October, 1988, in conjunction with compliance reviews of the shorezone. (See Monitoring Work Program.)

4. ATTAINMENT STATUS: Not known.

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

6. EVALUATION INTERVAL: Annual.

7. INTERIM TARGETS: Due to the lack of recent monitoring data on littoral zone turbidity, no numerical target is set. By July 1989, TRPA shall establish criteria for measuring and evaluating turbidity of the littoral zone of Lake Tahoe. By September 1991, TRPA shall determine the status of this indicator with respect to attaining and maintaining the TRPA threshold, based on historical data and data gathered from 1988 through 1991, and shall identify interim targets and compliance measures necessary and sufficient to attain and maintain the threshold.

8. COMPLIANCE MEASURES

a. MEASURES IN PLACE (see Table 1)

Urban Runoff and Erosion: 01 through 15, inclusive
Waste Management: 28, 29
Natural Area Management: 30, 31, 32, 34, 35, 36, 37, 38
Lake Tahoe and the Shorezone: 40, 41, 42, 43, 44, 45

b. EFFECTIVENESS OF MEASURES IN PLACE: The compliance measures in-place include the main water quality compliance measures of the Regional Plan. BMP requirements, capital improvement projects, and SEZ restoration projects are the most effective compliance measures. See Table WQ-1a for information on the effectiveness and costs of in-place compliance measures.

c. SUPPLEMENTAL MEASURES (see Table 2)

Urban Runoff and Erosion: 01, 02, 04, 05, 08, 09, 10, 11, 12
Natural Area Management: 19, 20, 21
Lake Tahoe and the Shorezone: 22

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES: The supplemental compliance measures will augment the effectiveness of the measures already in place, but will not contribute as much to the attainment and maintenance of the threshold as the measures already in place. See Table WQ-1b for information on the effectiveness and costs of supplemental compliance measures.

9. ADEQUACY OF COMPLIANCE MEASURES: Based on: (1) reported efficiencies of approximately 90 percent for BMPs for control of sediment, (2) an anticipated reduction of approximately 80 percent in disturbed areas or "soft coverage," and (3) application of full BMPs to all additional development in the Region, future sediment loading to the littoral zone of Lake Tahoe should be substantially lower than current loading. Although additional monitoring is necessary to determine the status of compliance with the thresholds, the trend in littoral zone turbidity should be positive. If future monitoring reveals threshold exceedences and stable or declining water quality, supplemental compliance measures will be implemented.

TABLE WQ-1a
Compliance Measures In Place

		Effectiveness		
		High	Medium	Low
Cost:	Low	07,08,09,11, 13,38,40,42, 43,44	15,29,32,34, 35,36,37	
	Medium	30,41	06,10,28,45	
	High	01,02,03,04, 05,14,31		12

TABLE WQ-1b
Supplemental Compliance Measures

		Effectiveness		
		High	Medium	Low
Cost:	Low			01,04,05,10, 11,12,19,21
	Medium		20,22	
	High	02,08,09		

Index No.: WQ-2

ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

Category: water quality
Parameter: clarity, winter, pelagic Lake Tahoe
Standard: TRPA: average Secchi depth, December-March, shall not be less than 33.4 meters. California: Secchi disk transparency shall not be decreased below levels recorded in 1967-71 based on a comparison of seasonal and annual mean values.

2. INDICATOR (UNITS): Secchi depth, December - March average; TRG index station (meters)

3. MONITORING SUMMARY: The Tahoe Research Group conducts regular monitoring of Secchi depth at the TRG index station, approximately once every 10 days.

4. ATTAINMENT STATUS: Non-attainment. Secchi depths have shown a gradually decreasing trend over the period of record, although clarity has improved from a low value in 1983 in 1984, 1985 and 1986.

5. TARGET DATE: Not set, pending completion of a dynamic water quality model for Lake Tahoe.

6. EVALUATION INTERVAL: Annual

7. INTERIM TARGETS: Pending completion of a dynamic water quality model for Lake Tahoe, currently the subject of research and development, a realistic, measurable interim goal is a reduction in the rate of decline in pelagic zone clarity, based on diminishing nutrient loads from tributary streams, groundwater, and atmospheric sources. See Figure WQ-2, short-term forecast line. Annual average Secchi depth at the TRG index station shall not be less than 21.9 meters in 1991.

8. COMPLIANCE MEASURES

a. MEASURES IN PLACE (see Table 1)

Urban Runoff and Erosion: 01 through 16, inclusive
Airborne Nutrients: 17, 18, 19, 20
Waste Management: 21, 22, 23, 24, 25, 26, 28
Natural Area Management: 30, 31, 32, 34, 35, 36, 37, 38
Lake Tahoe and the Shorezone: 42, 43, 44, 46

b. EFFECTIVENESS OF MEASURES IN PLACE: The compliance measures in-place include the main water quality compliance measures of the Regional Plan. BMP requirements, capital improvement projects, SEZ restoration projects, and fertilizer management programs are the most effective compliance measures. See Table WQ-2a for information on the effectiveness and costs of in-place compliance measures.

c. SUPPLEMENTAL MEASURES (see Table 2)

Urban Runoff and Erosion: 01 through 12, inclusive
Airborne Nutrients: 13, 14, 15
Waste Management: 16, 17, 18
Natural Area Management: 19, 20, 21
Lake Tahoe and the Shorezone: 22

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES: The supplemental compliance measures will augment the effectiveness of the measures already in place, primarily in the area of reducing airborne nutrients. See Table WQ-2b for information on the effectiveness and costs of supplemental compliance measures.

9. ADEQUACY OF COMPLIANCE MEASURES: The Study Report for the Establishment of Environmental Threshold Carrying Capacities (TRPA, 1982) discusses a range of possible thresholds for nutrient loading reductions designed to achieve the desired clarity of pelagic Lake Tahoe and conform to state nondegradation standards. Although it acknowledges a large degree of uncertainty in predicting future water quality conditions, the Study Report recommends a threshold standard of a 25 percent reduction in annual loads of dissolved inorganic nitrogen (DIN) to Lake Tahoe. The draft Water Quality Management Plan for the Lake Tahoe Region (TRPA, 1988) concludes that the in-place compliance measures will bring about the desired reductions in nutrient loads from tributary streams and from groundwater, but that supplemental measure 12, control of upwind pollutants, will be necessary to achieve the desired reductions in nutrient loads and subsequent improvements in pelagic zone clarity. Implementation of reductions in upwind pollutants will require action from the California Air Resources Board and other entities. If monitoring reveals that water quality trends do not achieve the short-term goals (see Interim Targets), TRPA will implement additional supplemental measures or make other adjustments in the Regional Plan package.

TABLE WQ-2a
Compliance Measures In Place

		Effectiveness		
		High	Medium	Low
Cost:	Low	07,08,09,11, 13,23,25,38, 42,43,44	15,16,32,34, 35,36,37	24,26
	Medium	30	06,10,28,46	19
	High	01,02,03,04, 05,14,21,22, 31		12,17,18,20

TABLE WQ-2b
Supplemental Compliance Measures

		Effectiveness		
		High	Medium	Low
Cost:	Low		03,06	01,04,05,10,11 12,13,15,19,21
	Medium		20,22	18
	High	02,07,08,09, 14	16,17	

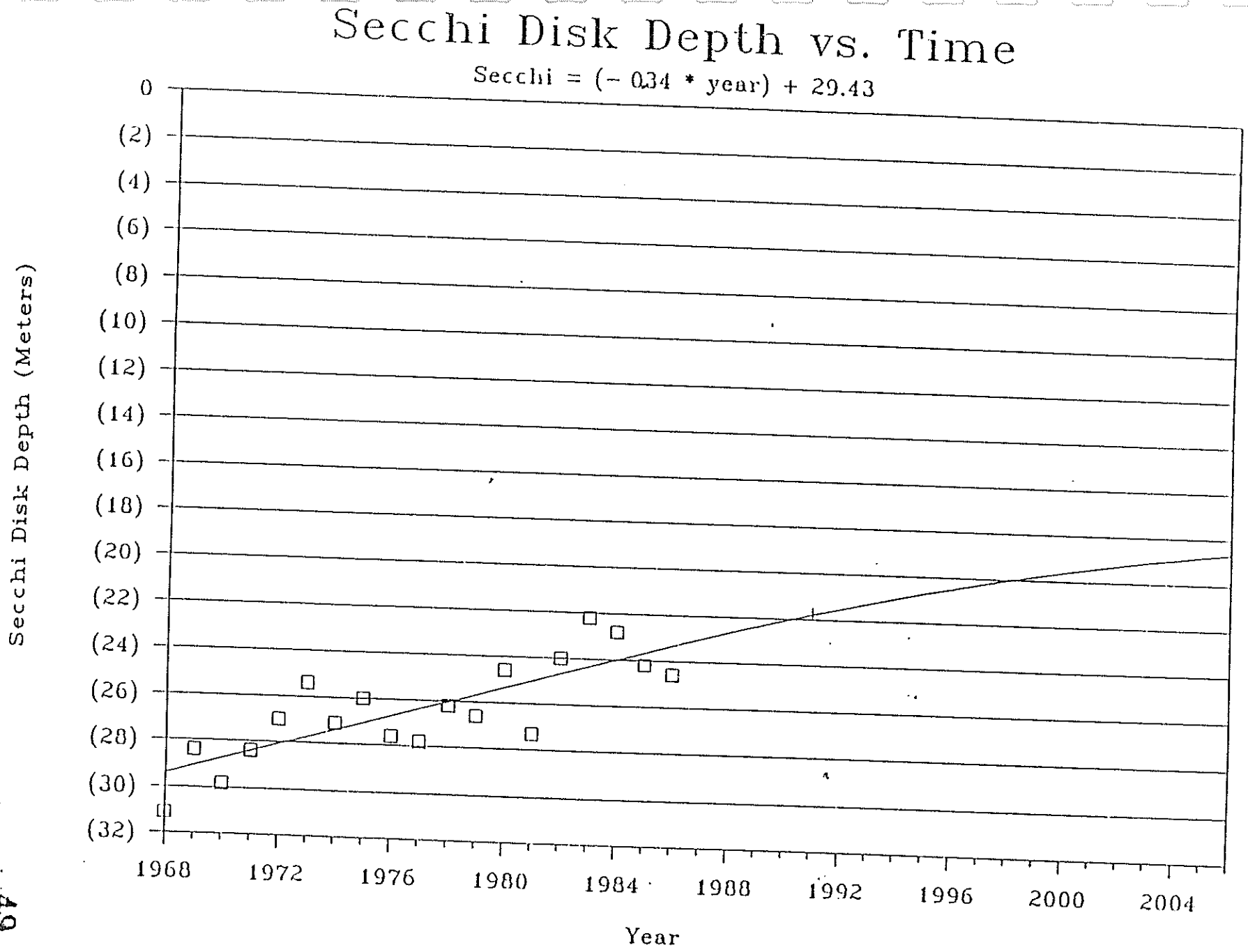

Secchi Disk Depth vs. Time
Secchi = (- 0.34 * year) + 29.43
Secchi Disk Depth (Meters)
0
(2)
(4)
(6)
(8)
(10)
(12)
(14)
(16)
(18)
(20)
(22)
(24)
(26)
(28)
(30)
(32)
1968
1972
1976
1980
1984
1988
1992
1996
2000
2004
Year

Figure WQ-2

Index No.: WQ-3

ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

   Category: water quality
   Parameter: phytoplankton primary productivity (PPR), pelagic Lake Tahoe
   Standard: TRPA: annual mean phytoplankton primary productivity shall not exceed 52 $gC/m^2/yr$. California: algal productivity shall not be increased beyond levels recorded in 1967-1971, based on a statistical comparison of seasonal and annual mean values.

2. INDICATOR (UNITS): phytoplankton primary productivity, annual average, measured at the TRG index station ($gC/m^2/yr$)

3. MONITORING SUMMARY: The Tahoe Research Group conducts regular monitoring of PPR at the index station approximately every 10 days.

4. ATTAINMENT STATUS: Non-attainment. PPR at the index station has been steadily increasing over the period of record. From 1983-1986, PPR has been over 100 $gC/m^2/yr$, roughly twice the target rate.

5. TARGET DATE: Not set, pending completion of a dynamic water quality model for Lake Tahoe.

6. EVALUATION INTERVAL: Annual

7. INTERIM TARGETS: Pending completion of a dynamic water quality model for Lake Tahoe, currently the subject of research and development, a realistic, measurable interim goal is a reduction in the rate of increase in pelagic zone primary productivity, based on diminishing nutrient loads from tributary streams, groundwater, and atmospheric sources. See Figure WQ-3, short-term forecast line. For water year 1991, annual average PPR at the TRG index station shall not exceed 133 $gmC/m^2/yr$.

8. COMPLIANCE MEASURES

   a. MEASURES IN PLACE (see Table 1)

      Urban Runoff and Erosion: 01 through 16, inclusive
      Airborne Nutrients: 17, 18, 19, 20
      Waste Management: 21, 22, 23, 24, 25, 26, 28
      Natural Area Management: 30, 31, 32, 34, 35, 36, 37, 38
      Lake Tahoe and the Shorezone: 42, 43, 44, 46

   b. EFFECTIVENESS OF MEASURES IN PLACE: The compliance measures in-place include the main water quality compliance measures of the Regional Plan. BMP requirements, capital improvement projects, SEZ restoration projects, and fertilizer management are the most effective compliance measures. See Table WQ-3a for information on the effectiveness and costs of the in-place compliance measures.

c. SUPPLEMENTAL MEASURES (see Table 2)

Urban Runoff and Erosion: 01 through 12, inclusive
Airborne Nutrients: 13, 14
Waste Management: 16, 17, 18
Natural Area Management: 19, 20, 21
Lake Tahoe and the Shorezone: 22

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES: The supplemental compliance measures will augment the effectiveness of the measures already in place, primarily in the area of reducing airborne nutrients. See Table WQ-3b for information on the effectiveness and costs of the supplemental compliance measures.

9. ADEQUACY OF COMPLIANCE MEASURES: The Study Report for the Establishment of Environmental Threshold Carrying Capacities (TRPA, 1982) discusses a range of possible thresholds for nutrient loading reductions designed to achieve the desired primary productivity of pelagic Lake Tahoe and conform to state nondegradation standards. Although it acknowledges a large degree of uncertainty in predicting future water quality conditions, the Study Report recommends a threshold standard of a 25 percent reduction in annual loads of dissolved inorganic nitrogen (DIN) to Lake Tahoe. The draft Water Quality Management Plan for the Lake Tahoe Region (TRPA, 1988) concludes that the in-place compliance measures will bring about the desired reductions in nutrient loads from tributary streams and from groundwater, but that supplemental measure 12, control of upwind pollutants, will be necessary to achieve the desired reductions in nutrient loads and subsequent improvements in pelagic-zone algal productivity. Implementation of reductions in upwind pollutants will require action from the California Air Resources Board and other entities. If monitoring reveals that water quality trends do not achieve the short-term goals (see Interim Targets), TRPA will implement additional supplemental measures or make other adjustments in the Regional Plan package.

TABLE WQ-3a
Compliance Measures In Place

		Effectiveness		
		High	Medium	Low
Cost:	Low	07,08,09,11, 13,23,25,38, 42,43,44	15,16,32,34, 35,36,37	24,26
	Medium	30	06,10,28,46	19
	High	01,02,03,04, 05,14,21,22, 31		12,17,18,20

TABLE WQ-3b
Supplemental Compliance Measures

		Effectiveness		
		High	Medium	Low
Cost:	Low		03,06	01,04,05,10,11 12,13,15,19,21
	Medium		20,22	18
	High	02,07,08,09 14	16,17	

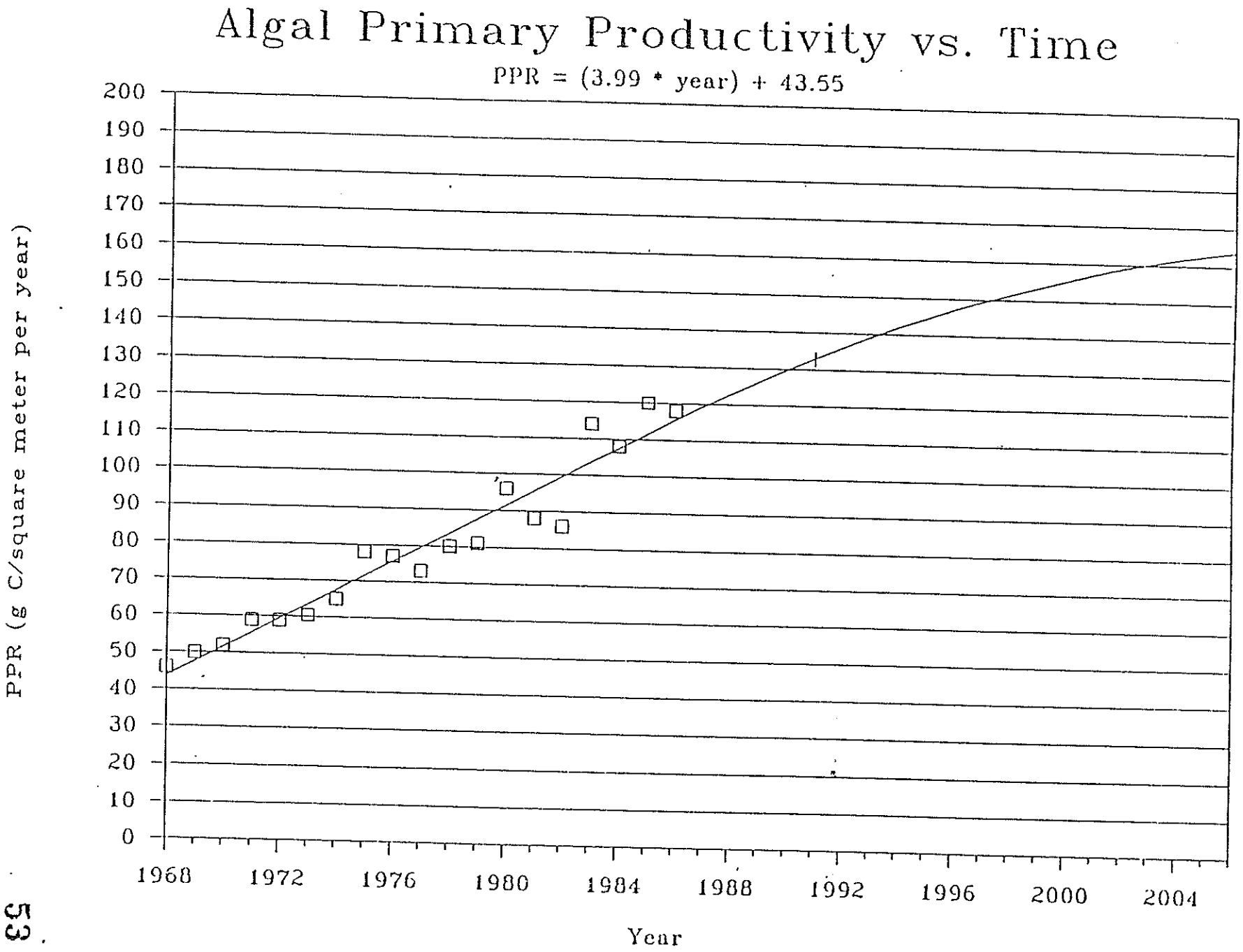

Algal Primary Productivity vs. Time
PPR = (3.99 * year) + 43.55
PPR (g C/square meter per year)
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
1968
1972
1976
1980
1984
1988
1992
1996
2000
2004
Year

Figure WQ-3

Index No.: WQ-4

ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

Category: water quality
Parameter: tributary water quality
Standard: California: total nitrogen, total phosphorus, and total iron, (ann. avg.) (See Table WQ-4a.)
Nevada: soluble phosphorus not to exceed 0.007 mg/l (ann. avg.); soluble inorganic nitrogen not to exceed 0.25 mg/l (ann. avg.)
TRPA: attain a 90th percentile value for suspended sediment of 60 mg/l.

2. INDICATOR (UNITS): annual average concentrations of appropriate constituents in any tributary stream for which states have established standards (mg/l); 90th percentile suspended sediment concentrations for any tributary stream (mg/l)

3. MONITORING SUMMARY: The USGS and the Tahoe Research Group currently monitor nine tributary streams: Trout Creek, Upper Truckee River, General Creek, Edgewood Creek, Ward Creek, Third Creek, Incline Creek, Glenbrook Creek, and Logan House Creek. Blackwood Creek and Snow Creek have been monitored in recent years, but are not being monitored at the present time. The period of record varies from stream to stream.

4. ATTAINMENT STATUS:

a. California Tributary Standards

Total Nitrogen: Not known. Data for total nitrogen have not been reported for California streams in the TRG/USGS monitoring program.

Total Phosphorus: For streams in the TRG/USGS monitoring program, non-attainment. For all other streams in California, not known. Total phosphorus concentrations from monitored streams draining developed areas generally exceed the standard by a factor of about 2.

Total Iron: For streams in the TRG/USGS monitoring program, non-attainment. For all other streams in California, not known. Total iron concentrations for monitored streams in California generally exceed the standard by an order of magnitude.

b. Nevada Tributary Standards

Soluble Phosphorus: Streams in the TRG/USGS monitoring program appear to be at or near attainment, based on a very short period of record. Additional monitoring will be necessary to confirm this. For all other streams in Nevada, attainment status is not known.

Total Soluble Inorganic Nitrogen: Streams in the TRG/USGS monitoring program appear to be in attainment, based on a very short period of record. Additional monitoring will be necessary to confirm this. For all other streams in Nevada, attainment status is not known.

c. TRPA Suspended Sediment Threshold

Annual average concentrations of suspended sediment for streams in the TRG/USGS monitoring program are generally less than 60 mg/l. However, 90th percentile data have not been reported. Attainment status is not known.

5. TARGET DATE:

a. California Tributary Standards

Total Nitrogen: To be completed, pending determination of attainment status.

Total Phosphorus: 2006

Total Iron: To be completed, pending review of the California total iron standard.

b. Nevada Tributary Standards

Pending additional monitoring, Nevada streams generally appear to be in attainment of the Nevada tributary standards.

c. TRPA Suspended Sediment Threshold

To be completed, pending additional analysis of suspended sediment data.

6. EVALUATION INTERVAL: Annual

7. INTERIM TARGETS: Due to the lack of recent monitoring data on the following constituents, no numerical target is set: California total nitrogen standards, California total iron standards, and TRPA suspended sediment threshold. By September 1991, TRPA shall determine the status with respect to attaining and maintaining these standards on streams covered by TRPA's monitoring program; establish interim targets as appropriate for nitrogen, phosphorus, and suspended sediments for those streams; and identify compliance measures necessary and sufficient to attain and maintain the standards on those streams. For the California total phosphorus standard, annual average concentrations shall not exceed the forecast lines in Figures WQ-4a through 4d.

8. COMPLIANCE MEASURES

a. MEASURES IN PLACE (see Table 1)

Urban Runoff and Erosion: 01 through 16, inclusive
Waste Management: 21, 22, 23, 24, 25, 26, 28, 29
Natural Area Management: 30, 31, 32, 34, 35, 36, 37, 38

b. EFFECTIVENESS OF MEASURES IN PLACE: The compliance measures in-place include BMP requirements, capital improvement projects, SEZ restoration projects, and fertilizer management programs, which will have beneficial impacts on tributary water quality. See Table WQ-4b for information on the effectiveness and costs of in-place compliance measures.

c. SUPPLEMENTAL MEASURES (see Table 2)

Urban Runoff and Erosion: 01 through 12, inclusive
Waste Management: 16, 17, 18
Natural Area Management: 19, 20, 21

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES: The supplemental compliance measures will augment the effectiveness of the measures already in place, but will not contribute as much to the attainment and maintenance of the threshold as the measures already in place. See Table WQ-4c for information on the effectiveness and costs of supplemental compliance measures.

9. ADEQUACY OF COMPLIANCE MEASURES: The adequacy of compliance measures for tributary water quality is discussed in the draft Water Quality Management Plan for the Lake Tahoe Region, Volume I (TRPA, 1988). Application of BMPs and the Capital Improvements Program for erosion and runoff control will improve tributary water quality throughout the Tahoe Region. The TRPA suspended sediment threshold and the California standard for total phosphorus appear to be attainable in the long term. The California total iron standard should be reviewed.

Objectives for Waters in California , mg/l

	Total Nitrogen		Total Phosphorus		Total Iron	
	Annual[a]	90th[a]	Annual[a]	90th[a]	Annual[a]	90th[a]
Lake Tahoe	0.15	-	0.008	-	-	-
Heavenly Valley Creek	-	-	-	-	-	-
Cold Creek	-	-	-	-	-	-
Trout Creek	0.19	-	0.015	-	0.03	-
Saxon Creek	-	-	-	-	-	-
Upper Truckee River	0.19	-	0.015	-	0.03	-
Echo Lakes	-	-	-	-	-	-
Fallen Leaf Lake	0.20	-	0.005	0.010	-	-
Eagle Creek	0.20	-	0.010	-	0.03	-
Taylor Creek	0.17	-	0.010	-	0.02	-
Cascade Creek	0.21	-	0.005	-	0.01	-
Tallac Creek	0.19	-	0.015	-	0.03	-
Cascade Lake	-	-	-	-	-	-
Lonely Gulch Creek	0.19	-	0.015	-	0.03	-
Meeks Creek	0.23	-	0.010	-	0.07	-
General Creek	0.15	-	0.015	-	0.03	-
McKinney Creek	0.19	-	0.015	-	0.03	-
Madden Creek	0.18	-	0.015	-	0.015	-
Blackwood Crk.	0.19	-	0.015	-	0.03	-
Ward Creek	0.15	-	0.015	-	0.03	-
Burton Creek	0.16	-	0.015	-	0.03	-
Griff Creek	0.19	-	0.010	-	0.03	-
Dollar Creek	0.16	-	0.030	-	0.03	-
Watson Creek	0.22	-	0.015	-	0.04	-
Carnelain Crk.	0.19	-	0.015	-	0.03	-

a Nevada has established uniform criteria for all waters in terms of soluble phosphorus and total soluble inorganic nitrogen, not to exceed an annual average mean of 0.007 and 0.25 mg/l, respectively.

b These objectives have been extracted from Table II-9 of the Lake Tahoe Basin Water Quality Plan, State Water Resources Control Board, October, 1980. This footnote is a part of that table and is presented here for completeness. "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.

Table WQ-4a

TABLE WQ-4b
Compliance Measures In Place

		Effectiveness		
		High	Medium	Low
Cost:	Low	07,08,09,11, 13,15,23,38	16,25,29,34, 35,36	24,26,32,37
	Medium	28,30	06,10	
	High	01,02,03,04, 05,14,31	21,22	12

TABLE WQ-4c
Supplemental Compliance Measures

		Effectiveness		
		High	Medium	Low
Cost:	Low		03,06	01,04,05,10,11 12,19,21
	Medium		20	18
	High	02,07,08,09	16,17	

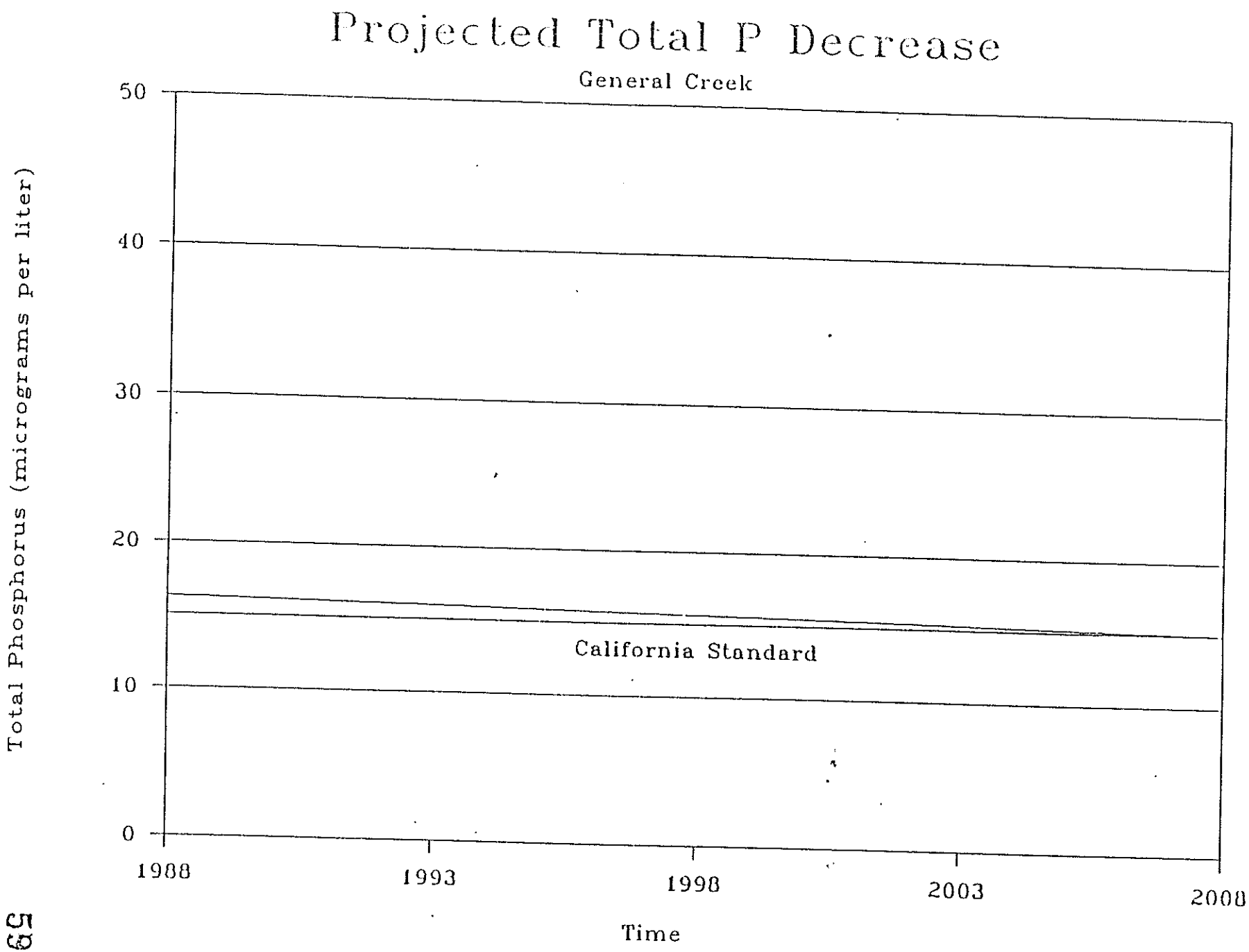

Projected Total P Decrease
General Creek
California Standard
Total Phosphorus (micrograms per liter)
50
40
30
20
10
0
1988
1993
1998
2003
2008
Time

Figure WQ-4a

Projected Total P Decrease

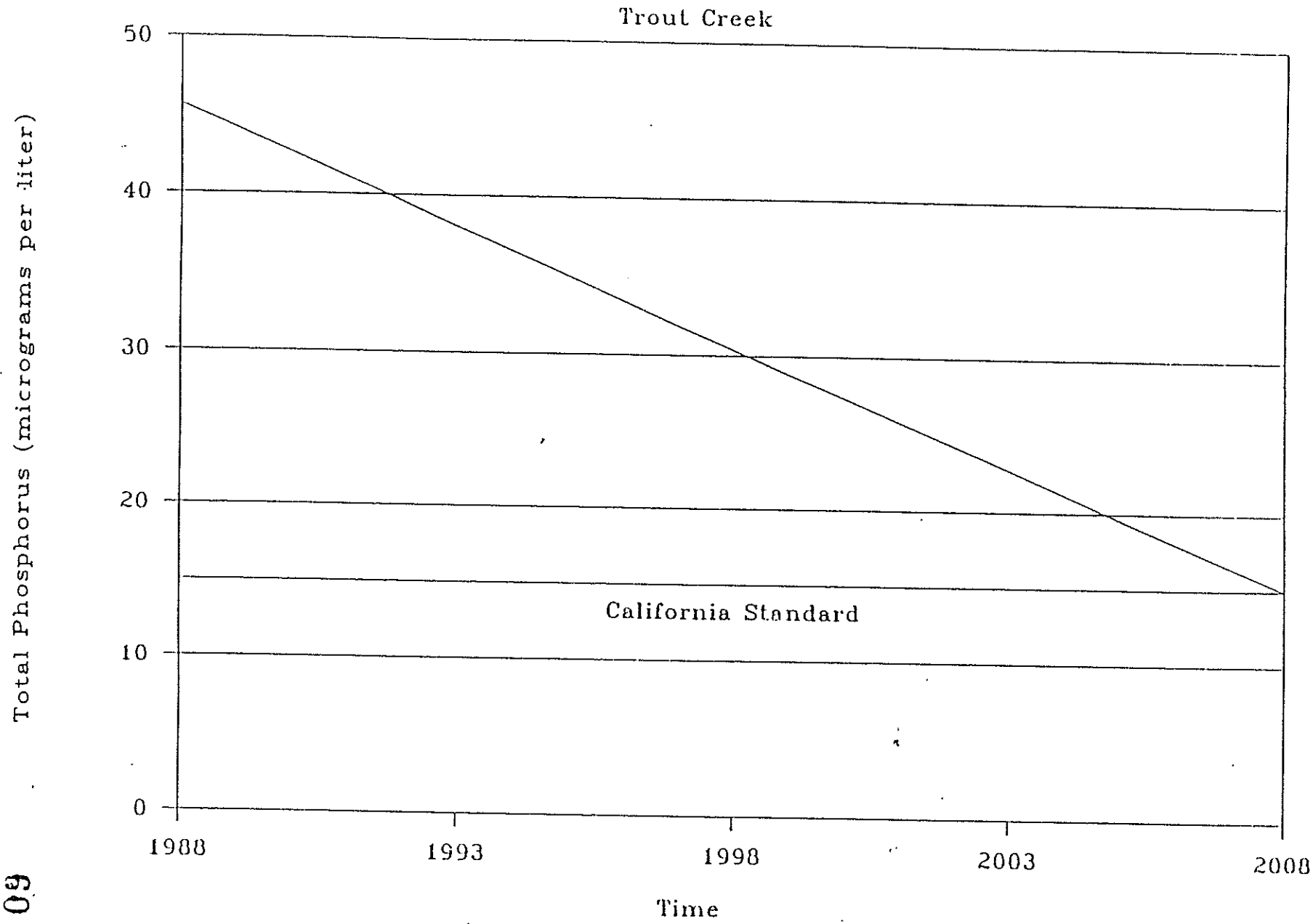


Figure WQ-4b

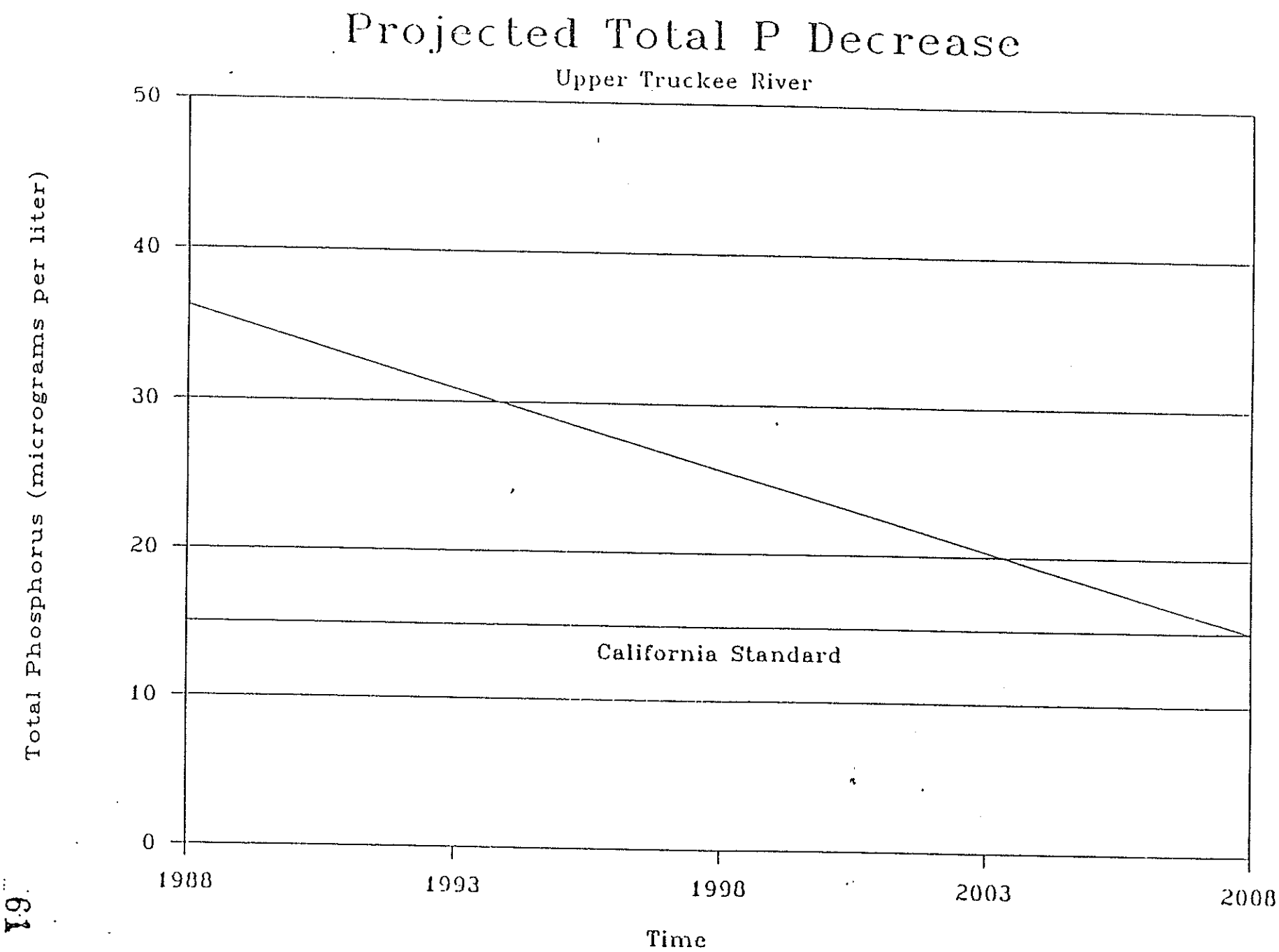

Projected Total P Decrease
Upper Truckee River
Total Phosphorus (micrograms per liter)
50
40
30
20
10
0
California Standard
1988
1993
1998
2003
2008
Time

Figure WQ-4c

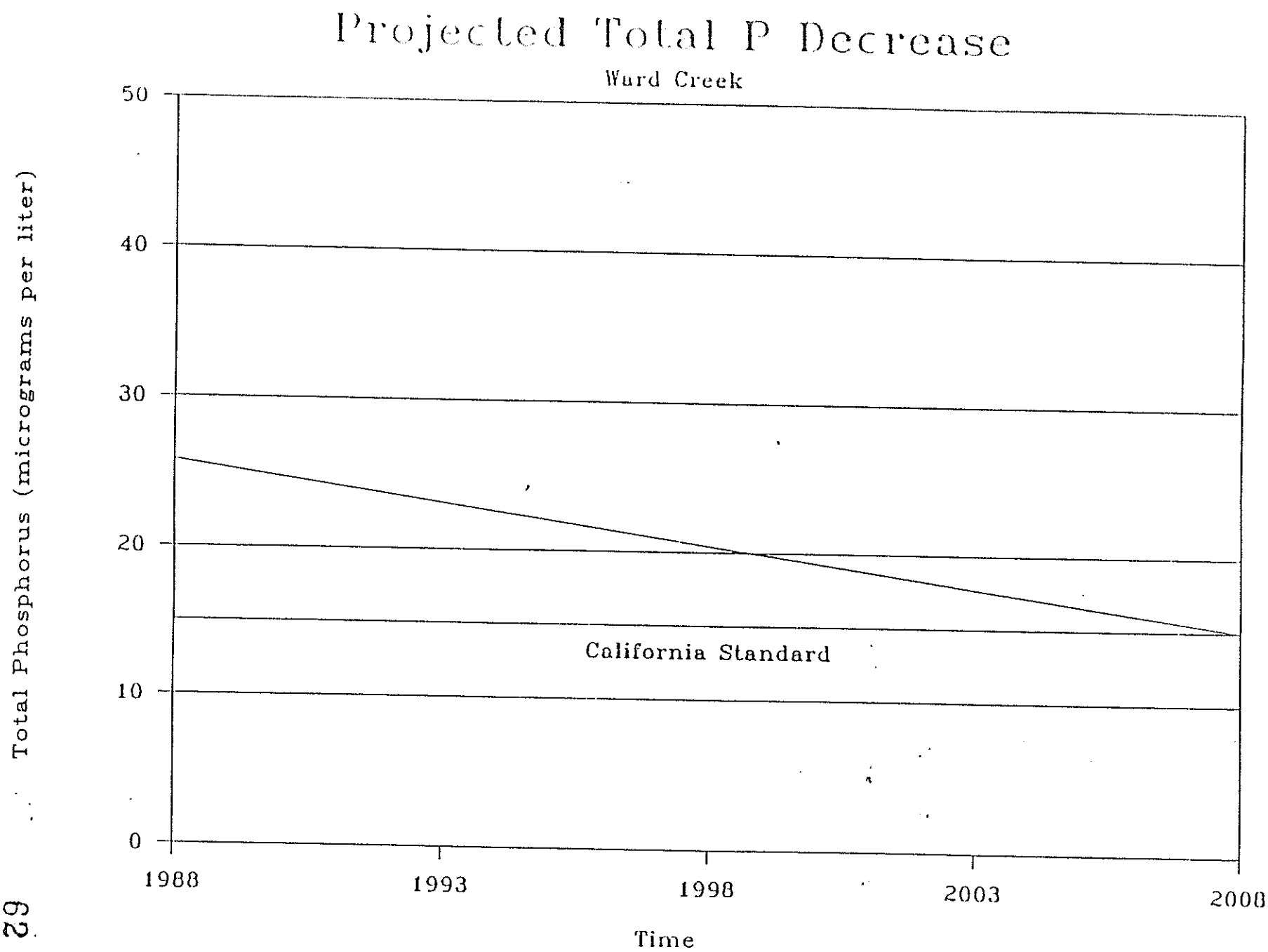

Projected Total P Decrease
Ward Creek
Total Phosphorus (micrograms per liter)
50
40
30
20
10
0
California Standard
1988
1993
1998
2003
2008
Time

Figure WQ-4d

Index No.: WQ-5

ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

Category: water quality
Parameter: runoff water quality
Standard: TRPA threshold--discharges to surface water (90th percentile):
Dissolved inorganic nitrogen: 0.5 mg/l
Dissolved phosphorus: 0.1 mg.l
Dissolved iron: 0.5 mg/l
Suspended sediment: 250 mg/l
1981 208 plan/SWRCB Water Quality Control Plan--discharges to surface water:
Total nitrogen as N: 0.5 mg/l
Total phosphate as P: 0.1 mg/l
Total iron: 0.5 mg/l
Turbidity: 20 JTU
Grease and oil: 2.0 mg/l
Note: for discharges to groundwater, see WQ-6

2. INDICATOR (UNITS): concentration of applicable constituent in samples of surface runoff (localized surface flow from rainfall and snowmelt draining small sub-watersheds) at point of discharge to surface waters (mg/l or JTU); as related factors, progress on implementation of the capital improvements program for erosion and runoff control and implementation of BMPs, as set forth in the 208 plan, Volume I (November 1988), pp. 183, 184.

3. MONITORING SUMMARY: Surface runoff is monitored in response to research, evaluation, or compliance needs by the TRPA, LRWQCB, the California Tahoe Conservancy, and other agencies.

4. ATTAINMENT STATUS: Non-attainment. See draft Water Quality Management Plan for the Lake Tahoe Region, Volume I (TRPA, 1988). Observed 90th percentile concentrations of nitrate, dissolved phosphorus, and dissolved iron in four studies from 1969 to 1982 equalled or exceeded the TRPA and state guidelines for discharges of runoff to surface waters. Urban runoff exceeded the TRPA and state guidelines for discharges to surface waters in greater than 90 percent of the samples taken. The 90th percentile concentrations for dissolved phosphorus exceeded the guidelines for discharge to surface waters by a factor greater than 10.

5. TARGET DATE: 2005

6. EVALUATION INTERVAL: Annual

7. INTERIM TARGETS: Given the large number of points of discharge of runoff waters to the surface waters of the Region, it is not practical at this time to set numerical performance targets. By September 1991, TRPA shall map the significant points of discharge of surface runoff to the surface waters of the Tahoe Region, shall evaluate the status of compliance with the above standards for a representative sample of the points of discharge, and shall establish interim targets and identify compliance measures necessary and sufficient to attain and maintain the threshold.

8. COMPLIANCE MEASURES

   a. MEASURES IN PLACE (see Table 1)

      Urban Runoff and Erosion: 01, 02, 03, 04, 05, 06, 07, 11, 16
      Waste Management: 26, 28, 29
      Natural Area Management: 30, 31, 32, 38
      Lake Tahoe and the Shorezone: 40, 41, 45

   b. EFFECTIVENESS OF MEASURES IN PLACE: The compliance measures in-place include the main water quality compliance measures of the Regional Plan. BMP requirements, capital improvement projects, SEZ restoration projects, and fertilizer management are the most effective compliance measures. See Table WQ-5a for information on the effectiveness and costs of in-place compliance measures.

   c. SUPPLEMENTAL MEASURES (see Table 2)

      Urban Runoff and Erosion: 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12
      Natural Area Management: 20
      Lake Tahoe and the Shorezone: 22

   d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES: The supplemental compliance measures will augment the effectiveness of the measures already in place, but will not contribute as much to the attainment and maintenance of the threshold as the measures already in place. See Table WQ-5b for information on the effectiveness and costs of supplemental compliance measures.

9. ADEQUACY OF COMPLIANCE MEASURES: According to the draft Water Quality Management Plan for the Lake Tahoe Region, Volume I (TRPA, 1988) untreated surface runoff will generally not meet the TRPA and state guidelines for discharge to surface waters. Discharges to surface waters should either be eliminated or treated prior to discharge.

TABLE WQ-5a
Compliance Measures In Place

		Effectiveness		
		High	Medium	Low
Cost:	Low	07,11,38,40	16,26,29,32	
	Medium	30,41	06,28,45	
	High	01,02,03,04, 05,31		

TABLE WQ-5b
Supplemental Compliance Measures

		Effectiveness		
		High	Medium	Low
Cost:	Low		03,05,06	04,10,11,12
	Medium	20,22		
	High	02,07,08,09		

Index No.: WQ-6

ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

Category: water quality
Parameter: groundwater
Standard: TRPA: Surface water infiltration into the groundwater shall comply with the Uniform Regional Runoff Guidelines, below. Where there is a direct and immediate hydraulic connection between ground and surface waters, discharges to groundwater shall meet the guidelines for surface discharges--see WQ-5. Uniform Regional Runoff Guidelines for discharges to groundwater:

total nitrogen as N: 5 mg/l
total phosphate at P: 1 mg/l
total iron: 4 mg/l
turbidity: 200 JTU
grease/oil: 40 mg/l

2. INDICATOR (UNITS): concentration of applicable constituent in samples of surface runoff (localized surface flow from rainfall and snowmelt draining small sub-watersheds) at point of discharge to groundwater (mg/l or JTU); as related factors, progress on implementation of the capital improvements program for erosion and runoff control and implementation of BMPs, as set forth in the 208 plan, Volume I (Nov. 1988), pp. 183 and 184.

3. MONITORING SUMMARY: Surface runoff is monitored in response to research, evaluation, or compliance needs by the TRPA, LRWQCB, the California Tahoe Conservancy, and other agencies.

4. ATTAINMENT STATUS: Non-attainment. According to the Threshold Study Report (TRPA, 1982) 90th percentile concentrations met the TRPA and and state guidelines for discharges of runoff to groundwater, with the exception of runoff from urbanized areas, which exceeded the dissolved phosphorus guideline by a factor of about 2.

5. TARGET DATE: 2005

6. EVALUATION INTERVAL: Annual

7. INTERIM TARGETS: Given the large number of points of discharge of runoff waters to the groundwaters of the Region, it is not practical at this time to set numerical performance targets. By September 1991, TRPA shall map the significant points of discharge of surface runoff to the groundwaters of the Tahoe Region, shall evaluate the status of compliance with the above standards for a representative sample of the points of discharge, and shall establish interim targets and identify compliance measures necessary and sufficient to attain and maintain the threshold.

8. COMPLIANCE MEASURES

a. MEASURES IN PLACE (see Table 1)

Urban Runoff and Erosion: 01, 02, 03, 04, 05, 06, 07, 11, 16
Waste Management: 26, 28, 29
Natural Area Management: 30, 31, 32, 38
Lake Tahoe and the Shorezone: 40, 41, 45

b. EFFECTIVENESS OF MEASURES IN PLACE: The compliance measures in-place include the main water quality compliance measures of the Regional Plan. BMP requirements, capital improvement projects, SEZ restoration projects, and fertilizer management are the most effective compliance measures. See Table WQ-6a for information on the effectiveness and costs of in-place compliance measures.

c. SUPPLEMENTAL MEASURES (see Table 2)

Urban Runoff and Erosion: 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12
Natural Area Management: 20
Lake Tahoe and the Shorezone: 22

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES: The supplemental compliance measures will augment the effectiveness of the measures already in place, but will not contribute as much to the attainment and maintenance of the threshold as the measures already in place. See Table WQ-6b for information on the effectiveness and costs of supplemental compliance measures.

9. ADEQUACY OF COMPLIANCE MEASURES: According to the draft Water Quality Management Plan for the Lake Tahoe Region, Volume I (TRPA, 1988) discharges of surface runoff to groundwater, with application of BMPs and limits on impervious coverage, will generally meet the TRPA and state guidelines for discharges to groundwater, although runoff from heavily urbanized areas of the Region should be pretreated prior to infiltration.

TABLE WQ-6a
Compliance Measures In Place

		Effectiveness		
		High	Medium	Low
Cost:	Low	07,11,38,40	16,26,29,32	
	Medium	30,41	06,28,45	
	High	01,02,03,04, 05,31		

TABLE WQ-6b
Supplemental Compliance Measures

		Effectiveness		
		High	Medium	Low
Cost:	Low		03,05,06	04,10,11,12
	Medium	20,22		
	High	02,07,08,09		

Index No.: WQ-7

ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

Category: water quality
Parameter: other lakes
Standard: TRPA and Nevada: for other lakes in Nevada, the standards are as for tributary streams (see WQ-4). TRPA and California: The Water Quality Control Plan Report for the North Lahontan Basin (SWRCB/LRWQCB, 1975) and the Water Quality Control Plan for the Lake Tahoe Basin (SWRCB, 1980) set general objectives for all surface waters for color, taste and odor, floating material, suspended material, settleable material, oil and grease, biostimulatory substances, sediment, turbidity, pH, dissolved oxygen, bacteria, temperature, toxicity, pesticides, chemical constituents, and radioactivity. They also set numerical standards for certain water bodies for total filterable residue (total dissolved solids), chloride, sulfates, sodium, boron, total nitrogen, total phosphorus, and fecal coliform. Numerical standards are set for Fallen Leaf Lake, including total nitrogen (0.20 mg/l ann. avg.) and total phosphorus (0.005 mg/l ann. avg.; 0.010 mg/l 90th percentile). No other lake in California, other than Lake Tahoe, is assigned numerical standards.

2. INDICATOR (UNITS): Annual average or 90th percentile concentrations of applicable constituents from samples of the other lakes in the Tahoe Region for which the states have established numerical standards (normally mg/l); as related factors, progress on implementation of the capital improvements program for erosion and runoff control and implementation of BMPs, as set forth in the 208 plan, Volume I (Nov. 1988), pp. 183 and 184.

3. MONITORING SUMMARY: From 1974 to 1976, EPA and USGS conducted limited monitoring of Fallen Leaf, Lilly, and Gilmore Lakes. Fallen Leaf Lake easily met the total nitrogen standard. Little or no monitoring has been conducted since 1976. TRPA will monitor selected lakes on a survey basis in FY 88-89.

4. ATTAINMENT STATUS: Not known, pending additional data collection.

5. TARGET DATE: To be determined, pending additional data collection.

6. EVALUATION INTERVAL: Annual

7. INTERIM TARGETS: Due to the lack of recent monitoring data on other lakes, no numerical targets are set. By September 1991, TRPA shall determine the status of this indicator with respect to attaining and maintaining the state standards, particularly for Cascade, Upper and Lower Echo, Marlette, and Fallen Leaf Lakes, shall establish interim targets, and shall identify compliance measures necessary and sufficient to attain and maintain the standards.

8. COMPLIANCE MEASURES

a. MEASURES IN PLACE (see Table 1)

Urban Runoff and Erosion: 01, 02, 03, 04, 05, 08, 09, 11, 13
Waste Management: 21, 22, 24, 28, 29
Natural Area Management: 30, 31, 32, 34, 35, 36, 37, 38
Lake Tahoe and the Shorezone: 40, 41, 43, 44, 45, 47

b. EFFECTIVENESS OF MEASURES IN PLACE: The compliance measures in-place are the main water quality compliance measures of the Regional Plan. See Table WQ-7a for information on effectiveness and costs of in-place compliance measures.

c. SUPPLEMENTAL MEASURES (see Table 2)

Urban Runoff and Erosion: 02, 08, 11
Waste Management: 16, 17
Natural Area Management: 19, 20
Lake Tahoe and the Shorezone: 22

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES: The supplemental compliance measures will augment the effectiveness of the measures already in place, but will not contribute as much to the attainment and maintenance of the threshold as the measures already in place. See Table WQ-7b for information on the effectiveness and costs of supplemental compliance measures.

9. ADEQUACY OF COMPLIANCE MEASURES: Without additional data collection, the adequacy of the in-place and supplemental measures is not known. Unless water quality monitoring programs reveal specific problems in the future, the quality of the other lakes should equal or exceed the applicable state standards.

TABLE WQ-7a
Compliance Measures In Place

		Effectiveness		
		High	Medium	Low
Cost:	Low	08,09,11,13, 24,32,38,40, 43,44	34,35,36,37	47
	Medium	28,30,41	29,45	
	High	01,02,03,04, 05,21,22,31		

TABLE WQ-7b
Supplemental Compliance Measures

		Effectiveness		
		High	Medium	Low
Cost:	Low			19
	Medium	20,22		
	High	02,08	16,17	

Index No.: SC-2

ENVIRONMENTAL THRESHOLD COMPLIANCE FORM

1. STANDARD

Category: water quality/soil conservation
Parameter: naturally-functioning SEZ
Standard: TRPA: Preserve naturally-functioning SEZs in their natural condition; restore all disturbed SEZ lands in undeveloped, unsubdivided lands; restore 25 percent of SEZ lands identified as disturbed, developed, or subdivided, to obtain a 5 percent total increase in the area of naturally-functioning SEZ lands.

2. INDICATOR (UNITS): Area of naturally-functioning SEZs (acres).

3. MONITORING SUMMARY: Disturbance in SEZs is monitored by TRPA as part of the project review process, and recorded in the Tahoe Environmental Geographic Information System (TEGIS) on a parcel-by-parcel basis, in accordance with Chapter 38 of the Code of Ordinances.

4. ATTAINMENT STATUS: Non-attainment. TRPA Goals and Policies and the Code of Ordinance implement prohibitions on SEZ disturbance in accordance with the threshold standard. However, it will take several years to reach the target of 25 percent restoration in developed, disturbed, and subdivided (i.e., urbanized) portions of the Region.

5. TARGET DATE: 2005

6. EVALUATION INTERVAL: Annual

7. INTERIM TARGETS: See Figure SC-2a, forecast line. By December 1991, increase the area of naturally-functioning SEZ by about 400 acres.

8. COMPLIANCE MEASURES

a. MEASURES IN PLACE (see Table 1)

Urban Runoff and Erosion: 13, 14

b. EFFECTIVENESS OF MEASURES IN PLACE: The restoration threshold was based on the feasibility of restoring SEZs in the urbanized portions of the Tahoe Region. Disturbance in the urbanized areas includes filling, grading, draining, encroaching, displacing vegetation, altering drainage, blocking channels, and channelizing. TRPA (1977) and Morris (1981) showed that SEZs are effective for removing sediment and nutrients from surface runoff. Natural treatment capability is reduced where development causes channelized flows. Channelized SEZs may actually increase sediment and nutrient loads through concentration of surface runoff. Artifical and restored SEZs will provide many of the same benefits as natural SEZs, but may be less

effective at treating surface runoff, especially during the first few years of operation. For additional discussion, see the draft Water Quality Management Plan for the Lake Tahoe Region, Volume III (TRPA, 1988).

c. SUPPLEMENTAL MEASURES (see Table 2): 05, 09

d. EFFECTIVENESS OF SUPPLEMENTAL MEASURES: More stringent SEZ encroachment rules could increase the net effectiveness of the SEZ restoration program. Transfer of development from SEZs would add to restoration acreage. The most cost-effective choice would be to add more stringent SEZ encroachment rules.

9. ADEQUACY OF COMPLIANCE MEASURES: There are approximately 17,700 acres of SEZ in the Lake Tahoe Region. There are approximately 200 acres of SEZ needing restoration work on National Forest land. There are about 4,400 acres of SEZ lands that have been disturbed, developed, or subdivided, representing about 50 percent of the SEZ lands in private ownership. The threshold calls for restoration of 25 percent of the 4,400 acres, or about 1,100 acres of disturbed, developed, and subdivided SEZs. TRPA estimates that over 1,100 acres will be restored by a combination of (1) completed projects, (2) restoration projects on the TRPA list, (3) large projects, and (4) small projects of the California Tahoe Conservancy, Forest Service, and Nevada Division of State Lands. For additional detail, see the draft or final Water Quality Management Plan for the Lake Tahoe Region, Volume III (TRPA, 1988).

Increase in Naturally Functioning SEZs

(For The Next 20 Years)

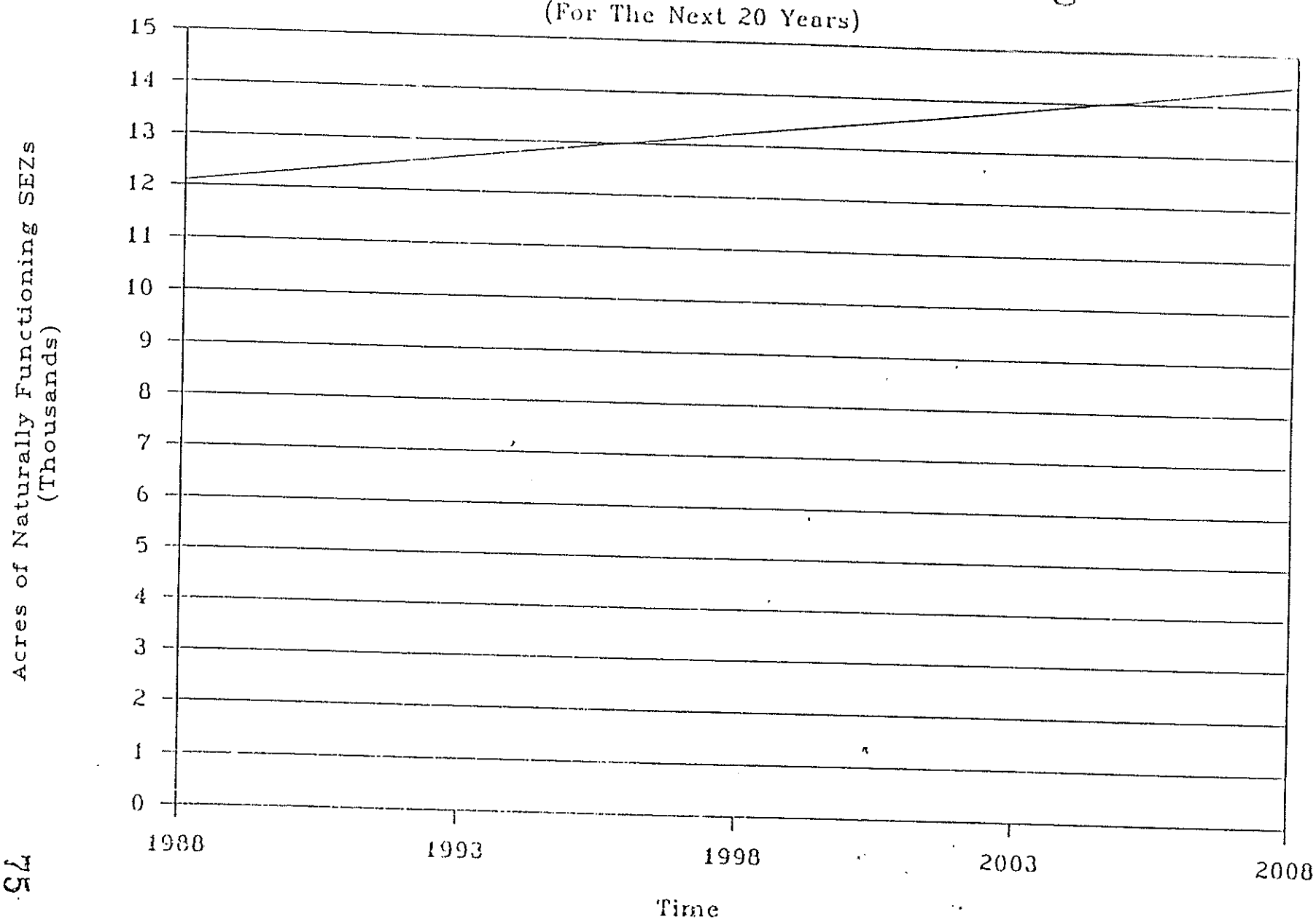


Figure SC-2