Appendices

APPENDIX A

RESOURCE: IMPLEMENTATION PLANS, TECHNICAL PLANNING NEEDS *AND* RESEARCH

The data and information collection phase of forest planning was designed to meet the intent of NFMA and to help address local issues, concerns, and opportunities. A detailed data base was developed for national forest land. Considerable data was also used that has been assembled by the Tahoe Regional Planning Agency and other agencies for use in the Lake Tahoe Basin.

The information base must be continuously refined and enlarged to deal with the complexities of managing for the Lake Tahoe Basin. *The* following lists indicate those needs. Plans and studies marked with an asterisk (*) would be developed with other agencies.

As new information is gathered, it may be incorporated into the plan by amending or by revising as described in Chapter V. The same would apply for approved changes in management direction. In some cases, the information or direction would be incorporated by reference.

Resource Implementation Plans

1. Range allotment plans for Meiss, Baldwin Pasture, and Miller Lake.
2. Operation plans for dams (other than Fallen Leaf Lake).
3. Bald eagle recovery plan.
4. Revised Heavenly Valley Ski Area development plan.

*5. Plan for transfer of acquired urban land between the Forest Service and State and local governments.

*6. Bicycle/pedestrian trail plan.

7. Plans for wildlife and fish management indicator and sensitive species.
8. Update road and trail inventory, reconstruction, and maintenance plans.

*9. Fire Management Implementation Plan.

10. Future use determination for:
    - Round Hill Pines Resort - complete by 1990.
    - Recreation residences in the Echo Lakes, Echo Summit and Emerald Bay Areas: Echo Chalet Resort - complete by 1991.

*11. Ski area development plans for Ward Valley (Alpine Meadows Ski Area), North Star, and Homewood/Tahoe Ski Bowl.

12. Evaluate Emerald Bay, Osgood Bog, Freel Peak Cushion Plant Community, and Taylor Creek Wetlands for potential Special Interest Area designation and develop a management plan for the Tallac Historic Site SIA.

Technical Planning Needs

*1. Improve the resolution of the land capability system mapping where significant to project development.

*2. Complete instream flow studies.

"3. Refine information on consumptive water needs for national forest land on the Nevada side of the LTBMU.

*4. Establish a banking system (preferrably with the TRPA and other agencies) that accounts for credits received on mitigation of impacts.

5. Complete an Order III geologic resource inventory.

6. Improve vegetation inventory for evaluation of plant community and wildlife habitat diversity determinations. The inventory shall include sensitive plants.

7. Complete a snag and down log inventory.

8. Improve demand estimates for recreation activities.

9 Determine the natural role of fire in the Lake Tahoe Basin.

10. Improve information on status of all wildlife and fish MIS populations.

11. Inventory of national forest acreage of the LTBMU (to verify acres).

12. Inventory municipal water systems which utilize surface or groundwater sources on or potentially affecting national forest land.

13. Determine the most suitable methods for reducing dependency upon personal automobiles for reaching national forest recreation sites.

14. Write a cultural resource overview for the LTBMU. Complete inventory of cultural resources. Evaluate significance of archaeological and historical sites.

15. Develop and implement an effective employee car pooling plan.

16. Work with TRPA to develop Viewshed Corridor Plans for major highways and roads.

17. Develop soil interpretations (standards and guidelines) for fertilizer application rates on granitic soils that will not adversely affect water quality.

18. Develop standards and guidelines for the use of prescribed fire that will maintain long term soil productivity and minimize the potential of nutrient transport by water.

Research

1. Techniques and species mixes for revegetation of difficult sites.

2. Effectiveness of individual forest trees and shrubs nutrient uptake and storage to benefit water quality.

3. Effects of prescribed fire upon soil productivity and nutrient transport through water and air.

4. Benefit values of scenery, wildlife viewing, and the prevention of sediment and nutrient transport into Lake Tahoe.

5. Effects of smoke from forest management activities and from woodstove emissions upon visibility and achievement of visibility standards.

6. Determine the natural background levels for noise in the environment, especially the levels for wilderness and for habitat of wildlife management indicator species. Determine the level of change that can be tolerated by wildlife management indicator species.

7. Effects of fertilizer application rates upon water quality (ground and surface) with respects to granitic soils.

(End of Appendix A)

APPENDIX B

ADMINISTRATIVE SITES

Administrative Site	Size (acres)	Primary Use 1/	Number of Buildings				Condition 2/	
			Office	Shop/ Wrhse.	Resi- dence	Other	Buildings	Site
Angora Lookout'	1	Fire			1	2	2-G 1-F	P
Baldwin 3/	5	Housing			5	1	1-F	F
Estates*	300	Mixed	3	2	3	20	11-F 17-P	G
Fredericks*	2	Housing			1	1	2-F	F
Leased Office	1	Admin.	2				2-G	F
Leased Storage		Storage				3	3-G	G
Meeks Bay	25	Mixed		1	3		1-G 3-F	G
Meyers*	5	Mixed		2	3	2	G-F 1-P	G
Nevada Beach	1	Housing			1	1	2-F	F
Old Mill*	3	Housing				1	1-F 1-P	P
Spooner	2	Fire	1	1			1-F 1-P	P
Stateline Lookout*	1	Fire		1		1	1-G 1-F	P
Tahoe City	1	Housing			1		1-G	F
Upper Truckee*	2	Storage			1	1	2-P	P
William Kent	1	Mixed	1	1	1	1	1-G 3-F	F
Zephyr Lookout*	1	Fire				1	1-F	P

1/ Mixed is combination of office, shop, housing, and storage.

2/ Condition of buildings: G = Good state of repair-routine maintenance only.
F = Fair condition-some heavy maintenance needed.
P = Poor-major maintenance or reconstruction needed.

Condition of site: G = Complies with standards.
F = Some work required to comply with water. quality and visual standards.
P = Substantial work to comply with standards.

3/ Baldwin mobile home park includes 5 spaces for mobile homes, 1 spot for a seasonal travel trailer, and 1 small storage building. Plans call for providing an additional 7 mobile home spaces.

* Potential candidate for the National Register of Historic Places.

(End Appendix B)

APPENDIX C

TENTATIVE 10-YEAR TIMBER SALE ACTION PLAN and TIMBER TABLES AND GRAPHS

The timber management portion of the forest plan requires a timber management control system. This control system will monitor:

1. Volume of timber products sold.
2. Acres of regeneration harvest.

The timber sale program quantity is the total volume of wood products planned for sale during the first decade. It would include the "allowable sale quantity" if the plan included harvest of "chargeable" timber from lands designated as "suitable" for regulated timber management. Under this plan, no areas are designated as "suitable" and therefore all harvest will be nonchargeable. The allowable sale quantity is zero. The sale program quantity is 4.4 million board feet (MMBF). The volume sold each year may change, but the average annual volume sold by the end of the decade should approximate this figure. Regeneration harvest should average at least 40 acres per year. The majority of the harvest will occur in the mixed conifer forest type, but some regeneration cutting in true fir stands should also be included. Table C.1 summarizes the 10-year plan. This program is based on current conditions and available information. If these conditions change or new information becomes available, the timber sales program may be modified during the implementation of the forest plan.

Table C.1a. Ten Year Timber Sale Action Plan

	Area Location	Acres	Volume (MBF)	Road Construction Miles	Road Reconstruction Miles	Probable Harvest Method By Forest Type
FY 87	South Shore Tractor Fallen Leaf Management Area Sec 1, T 12N , R.17E Sec 36, T.13N ,R.17E.	625	4650	0	0	MC San/Sal,Sel, Gr Sel
FY 88	Waterhouse Peak Tahoe Valley Management Area Sec 15,16,21, 22, T 11N ,R 18E.	50	878	0	3	MC/RF San/Sal, Sel, Gr. Sel
	Camp Wasiu Meeks Management Area Sec 29, 30, 31 T14N ,R 17E.	110	*2000*	0	*2*	MC San/Sal, Gr Sel, Sel
	Public Fuelwood					
	Tahoe Valley Management Area Heavenly 3 Sec 1,2,11,12, T 12N ,R 18E	75	500	0	*0*	MC San/Sal,Sel
	Lower Truckee Management Area 64 Acres Sec 7, T 15N ,R16E	64	30	0	0	MC San/Sal, Sel
	Ward Management Area Ward 1 Sec 10,15,16, T 15N ,R 16E	50	550	0	0	MC San/Sal ,Sel
FY 89	Camp Wasiu 2 Meeks Management Area Sec 29, 30, 31 T 14N ,R.17E	110	1500	*0*	*2*	MC San/Sal, Gr Sel, Sel
	Watson Creek Watson Management Area Sec 8,9,16,17,21, T 16N ,R.17E	750	5000	0	0	MC/RF San/Sal, Sel, Gr. Sel
	Public Fuelwood					
	Tahoe Valley Management Area Heavenly 5 Sec 11,14,15, T 12N ,R.18E	90	700	0	0	MC San/Sal,Sel
	Heavenly 10 Sec 11,13,14, T 12N.,R 18E	60	400	0	0	Mc San/Sal,Sel
	Ward Management Area Ward 2 Sec 10,14,15, T.15N ,R.16E.	70	500	0	0	MC San/Sal Sel
FY 90	Camp Wasiu 3 Meeks Management Area Sec 29,30,31, T 14N , R.17E	110	*2000*	0	2	MC San/Sal, Gr. Sel, Sel
	Martis Peak Area Martis Management Area	180	*2200*	0	0	MC/RF San/Sal, Sel, Gr Sel
	Public Fuelwood					
	Tahoe Valley Management Area Heavenly 7 Sec 10,15, T 12N ,R 18E	40	200	0	0	MC San/Sal,Sel
	Heavenly 8 Sec 9,10, T 12N ,R 18E	50	300	0	0	MC San/Sal,sel
	Heavenly 9 Sec 15,22, T.12N ,R 18E	40	200	0	0	MC San/Sal,Sel
	Sierra Sec 3,10, T 12N ,R 18E	70	500	0	0	MC San/Sal,Sel

Table C.1b Ten Year Timber Sale Action Plan

	Area Location	Acres	Volume (MBF)	Road Construction Miles	Road Reconstruction Miles	Probable Harvest Method By Forest Type
FY 91	Camp Shelly Fallen Leaf Management Area Sec 35 & 36 T.13N., R.17E.	70	500	0	0	MC San/Sal, Gr Sel, Sel
	Saxon Dump Tahoe Valley Management Area Sec 21, T 12N., R.18E.	40	500	0	6	MC Commercial Thinning
	Watson Area Watson Management Area Sec 8,9,16,17,21, T 16N.,R.17E	125	1190	0	0	MC/RF Gr. Sel, Sel
	Spring Creek Fallen Leaf Management Aera	200	1000	0	0	MC San/Sal, Gr Sel, Sel
	Public Fuelwood					
	Tahoe Valley Management Area Angora 1 Sec 13,24, T 12N ,R 17E	75	500	0	0	MC San/Sal,Sel
	Angora 2 Sec 24,25, T.12N ,R 17E.	80	600	0	0	MC San/Sal,Sel
	Angora 3 Sec 25, T 12N ,R17E.	60	600	0	0	MC San/Sal,Sel
	Angora 4 Sec1 25,36, T 12N ,R 17E & Sec 31, T 12N ,R 18E	60	300	0	0	MC San/Sal,Sel
FY 92	Ward Canyon Ward Management Area Sec 10,16, & 21 T 15N.,R 16E	185	750	Bridge	5	MC/RF San/Sal, Sel, Gr Sel
	Baldwin Fallen Leaf Management Area Sec 26,35, T 13N ,R 17E	200	700	0	0	MC San/Sal, Sal, Gr. Sel
	South Shore Tractor Fallen Leaf Management Area Sec 5,36 T 13N.,R 17E & Sec 3, T.12N ,R 17E	600	1400	0	2	MC San/Sal, Sel Gr Sel
	Public Fuelwood					
	Genoa Peak Management Area Burke Sec 14,23, T 13N ,R 18E	50	200	0	0	MC San/Sal,Sel
	Ward Management Area Ward 3 Sec 14,15,23, T.15N.,R 16E	70	500	0	0	MC San/Sal,Sel
FY 93	Watson Area Watson Management Area Sec 8,9,16,17,21, T 16N ,R 17E	200	2300	d	0	MC/RF Gt Sel, Sel
	Public Fuelwood					
	Ward Management Area Ward 4 Sec 3,10,11, T 15N ,R 16E	70	500	0	0	MC San/Sal,Se
	Ward 5 Sec 14,15,16,21,22, T15N ,R 16E	100	700	0	0	MC San/Sal,Sel

Table C 1c. Ten Year Timber Sale Action Plan

	Area Location	Acres	Volume (MBF)	Road Construction Miles	Road Reconstruction Miles	Probable Harvest Method By Forest Type
FY 94	Martis Peak Area Martis Management Area Sec 36, T 17N ,R.17E	75	525	0	0	MC/RF Gr. Sel, Sel
	Public Fuelwood					
	Ward Management Area Ward 6 Sec 11,12,14, T 15N , R 16E	95	700	0	0	MC San/Sal,Sel
	Ward 7 Sec 21,22, T.15N., R 16E	80	500	0	0	MC San/Sal,Sel
FY 95	Saxon Area Tahoe Valley Management Area Sec 26,35, T 12N ,R 18E	200	1500	0	0	MC Sel, GCr Sel
	Public Fuelwood					
	Ward Management Area Ward 8 Sec 16,21, T 15N ,R 16E.	60	400	0	0	MC San/Sal,Sel
	Marlette Management Area Spooner Sec 1,2, T.14N ,R 18E	60	400	0	0	MC San/Sal,Sel
FY 96	Ward Canyon Ward Management Area Sec 10,11, T 15N ,R16E	165	1250	0	9	MC/RF Sel, Gr Sel
	Public Fuelwood					
	Fallen Leaf Management Area South Shore Public Sec 26,35,36, T.13N ,R 17E & Sec 2, T 12N.,R 17E	80	500	0	0	MC San/Sal,Sel
FY 97						
	Public Fuelwood					
	Marlette Management Area Bliss Sec 23,26, T.15N ,R 18E.	65	400	0	0	MC San/Sal,Sel
	Marlette Sec 11,14, T.15N.,R 18E	75	500	0	0	MC San/Sal,Sel

Note MC=Mixed Conifer, RP=Red Fir, Gr Sel= Group Selection, San/Sal= Sanitation Salvage, Sel=Individual Tree Selection
Small unplanned fuelwood sales would average 75MBF/year

TIMBER TABLES AND GRAPHS

Much of the following information is discussed in greater detail in the Environmental Impact Statement.

C.2 ALLOWABLE SALE QUANTITY AND LONG TERM SUSTAINED YIELD CAPACITY

By definition, allowable sale quantity (ASQ) and long term sustained yield (LTSY) apply only to chargeable volume from lands managed to produce regulated timber harvest. No lands within the LTBMU qualify as suitable for the production of regulated, chargeable products. The ASQ is zero. See the Environmental Impact Statement for additional discussion regarding LTBMU potential for Long Term Sustained Yields of timber products.

Table C.3 VEGETATION MANAGEMENT PRACTICES
(ANNUAL AVERAGE IN FIRST DECADE)
(ALL LTBMU HARVEST IS NONCHARGEABLE FROM UNSUITABLE LANDS)

Practice	Acres
Regeneration harvest:	
Clearcut	0
Shelterwood and seed tree	0
Group selection	40
Individual tree selection	260
Intermediate harvest:	
Commercial thinning & salvage/sanitation	100
Timber stand improvement	40
Reforestation (40 acres per year for wildlife)	40

Table C.4 Timber Productivity Classification

Potential Growth (cubic feet/acre/year)	Suitable Lands (acres)	Unsuitable Lands 1/ (acres)
Less than 20	0	56,630
20-49	0	10,062
50-84	0	32,894
85-119	0	35.455
120-164	0	31443
165+	0	216
Newly acquired lands for which data is not available		9,033
Total		147,733

1/ Productivity for lands where data are not available, such as wilderness, was estimated.

Table **C.5** PRESENT AND FUTURE FOREST CONDITIONS

	Unit of Measure	Suitable Land	Unsuitable Land
Present forest:			
Growing Stock	MMCF	0	331.00
	MMBF	0	2,107.76
Annual Growth	MMCF	0	5.00
	MMBF	0	31.82
Live Cull	MMCF	0	.12
	MMBF	0	.66
Salvable dead	MMCF	0	.80
	MMBF	0	5.54
Annual mortality	MMCF	0	.49
	MMBF	0	3.25
Standing snag volume	MMCF	0	16.656
	MMBF	0	113.343
Future forest (fifth decade):			
Growing stock	MMCF	0	NA 1/
Annual net growth	MMCF	0	NA
Rotation Age (Average approximately 90 years)			
Age class-distribution on suitable lands:		NA. No lands within the LTBMU are suitable.	

1/ Not calculated for unsuitable land.

Table C.6 Timber Land Classification

	Classification	Acres
1.	Non-Forest land (includes water)	21.076
2.	Forest land	126,657
3.	Forest land withdrawn from timber production (Desolation and Granite Chief Wilderness)	21,330
4.	Forest land not capable of producing crops of industrial wood.	29,787
5.	Forest land physically unsuitable:	0
	irreversible damage likely to occur:	0
	not restockable within 5 years.	0
6.	Forest land - inadequate information 1/	9,033
7.	Tentatively suitable forest land (Item 2 minus Items 3, 4, 5, and 6)	66,507
8.	Forest land not appropriate for timber production (not cost efficient in meeting plan objectives). 2/	66,507
9.	Unsuitable forest land (Items 3, 4, 5, 6, and 8)	126,657
10.	Total suitable forest land (Item 2 minus Item 9)	0
11.	Total national forest land	147,733

(End Appendix C)

1/ Lands for which current information is inadequate to project responses to timber management. Usually applies to low site and newly acquired lands.

2/ Lands identified as not appropriate for timber production due to: (a) assignment to other resource uses to meet forest plan objectives: (b) management requirements: and (c) not being cost efficient in meeting forest plan objectives over the planning horizon.

APPENDIX D

APPLICABLE SILVICULTURAL *SYSTEMS*

A. Background

Timber management emphasis under previous land management plans for the LTBMU was to protect the forest from insects and diseases. Harvesting removed insect brood trees to minimize the risk of attack on residual healthy trees.

Sanitation treatment will continue to be a key component of the timber management program. However, more emphasis will be placed upon the entire forest stand, including all age and size classes, and component species. Minimum management requirements (MMR) and TFiPA thresholds require vegetative diversity with all seral stages represented. Maintenance of habitats for wildlife is also required. Past practices have allowed a situation to develop where early seral stages are underrepresented. In an effort to correct this situation, forty acres of group selection harvest will occur each year. Harvests will be designed to create wildlife openings not to exceed 5 acres and reintroduce early seral stages of conifer habitats.

B. Management Direction

Forests will be managed using several silvicultural systems including sanitation/salvage, individual tree selection, and group selection.

Individual tree selection harvest will be used where the goal is to:

- maintain a continuous forest cover. (This is an important requirement for aesthetics and for watershed protection on steep slopes.)
- limit disturbance to soil and vegetation resulting from treatment operations.
- maintain conditions for old growth-dependent wildlife.

Group selection with openings typically from 1 to 2 acres in size will be used where the goal is to:

- create openings and early successional stage habitat for wildlife and vegetative diversity.
- provide greater efficiency of operation.

Sanitation salvage prescriptions will be used where the goal is to:

- utilize losses due to forest pests.
- remove hazards to people and property.
- reduce the number of beetle-susceptible potential brood trees.

Thinning will be used where the goal is to improve spacing of trees to improve or maintain stand growth.

Special cutting will be used where the goal is to:

- clear trees to open vistas, construct ski trails, permanently convert areas to meadows or wetlands, and for similar purposes.
- maintain tree vigor on environmentally sensitive land (high hazard areas).

The treatment methods outlined in the plan are predicated on maintaining the characteristics of natural stands including mixed size classes, the presence of old growth trees, and a relatively undisturbed appearance. Because of the increase of human activities, such as recreational use and urbanization, active management of the forest resource is necessary to develop and maintain these desirable stand attributes for the future as well as for vigorous, healthy, trees capable of resisting the impacts of human use and development.

The treatment methods proposed are goal-oriented; that is, they are designed to achieve desired conditions of forest structure or appearance. They are based on the following fundamental concepts:

1. In the long run, forests can best be protected from excessive insect and disease losses by creating favorable conditions for tree growth and health throughout the life and development of the stand.

2. The destructive effects of uncontrolled fire can be reduced through manipulation of stand structure, especially in younger size classes. Silvicultural treatments can also replicate to some degree the beneficial effects of periodic low intensity fires that were formerly part of the natural forest ecosystem. In addition, where conditions permit, low intensity fire may be reintroduced through the use of controlled burning.

3. Certain wildlife species depend on early seral stage vegetation for habitat. Regenerating small stands can maintain the habitats upon which these species depend.

4. Life in the forest is dynamic. Each currently existing old growth tree (and stand) will some day leave the forest. Management of younger stands can help ensure the future of the older components.

C. Elements of Desirable Stand Structure

The types and intensity of use that a particular area receives ultimately determines management objectives for the forest resource. Since there are a wide variety of uses ranging from large campgrounds, residential tracts, and ski resorts at one extreme to fairly remote areas visited only by hikers at the other, silvicultural treatments obviously will differ from area to area.

In spite of these differences, there are several basic elements of stand structure and composition that are appropriate to the Tahoe Basin. These elements describe conditions which are desirable in stands managed principally for recreational use, watershed protection, and wildlife habitat. These conditions need not be rigorously met in every area. Rather, they will serve as departure points when developing silvicultural prescriptions for specific areas based on an on-the-ground analysis of needs.

The five elements of forest structure which are important in meeting the goals established for the LTBMU are as follows:

1. Old Growth Trees Retained
2. Controlled Stocking Levels
3. Mixed Species Composition
4. Healthy, Vigorous Trees
5. Near Natural Appearance

D. Treatment Methods

Each of the five elements of forest structure are further described and explained in the charts on the following pages. A series of treatments is outlined for each element which will help individual stands toward the desired structure. The desired forest conditions and treatment recommendations form the basis for development of treatment plans for timber management areas, and for individual stand treatments, whether carried out by commercial timber sales, firewood removal, or by forest service employees. The treatments are not all-inclusive, but are examples of treatment methods which are appropriate for the basin. Not all treatment methods would be applied to every stand; only those deemed necessary as a result of stand structure analysis would be used.

E. Treatment Guidelines

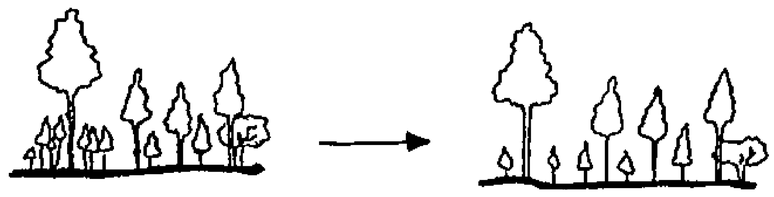
The five elements of stand structure previously described include examples of treatments to be used as necessary to move individual stands toward the objectives stated in the management direction column on the left side of each page. This section relates these objectives to the silvicultural principles inherent in the application of uneven-aged management and provides more specific guidelines for implementing recommended treatments.

Application of these prescriptions is based on control of three components of stand structure. These are:

1. Maximum tree size.
2. Reserve stocking levels, which can be expressed as basal area or number of trees per acre.
3. Size class distribution (the frequency and distribution of various size classes in the stand).

These components may be carefully regulated and controlled as is usually the case when maximizing wood production on a sustained yield basis. However in the LTBMU, where nontimber uses of the forest have priority, they may be less stringently controlled, or controlled only as required to

OLD GROWTH TREES RETAINED

MANAGEMENT DIRECTION	RATIONALE	TREATMENTS
Existing old growth trees will be retained in the stand as long as possible At the same time, younger age classes will be managed to provide replacements for old growth trees in the future The long range goal will be to develop a reasonable balance of size classes from small trees to large. In a recreation forest where no rotation age is set, a large proportion of the balanced size class distribution will be occupied by trees 150 to 300+ years old	1 Forest visitors have expressed a desire to see large, old trees when they come to the mountains This is partly based on expectations they have developed from previous visits, and partly because they consider them *more attractive and interesting than younger* trees Old growth trees, especially large, yellow barked ponderosa and Jeffrey pines have historically been an important component of the Tahoe Basin Not only are old growth trees attractive, but the strength and durability of centuries old trees represent stability in a culture where rapid change, transient values, and future shock have made it difficult to hold on to traditional values. 2 Because of their superior genetic characteristics, old growth trees have survived competition, drought, insects, and disease, therefore they should be retained as a source of genetically resistant offspring They are also resistant to fire because of their thick bark and lack of lower branches	Continue present policy of not setting a predetermined rotation age for old growth trees The need to remove old growth trees will be determined by a silvicultural prescription based on an analysis of stand structure and environmental *conditions influencing tree growth, rather than principally by insect* risk However sanitation-salvage treatment may be applied where insect problems develop Otherwise, removal of old growth trees will be based on likelihood of survival until the next treatment, as determined by overall health and vigor of individual trees. In some cases old growth trees will be left standing after they die to provide wildlife habitat Reduce competition around selected old growth trees to maintain health and longevity. 

CONTROLLED STOCKING LEVELS

MANAGEMENT DIRECTION

An acre of forest land has th0 capacity to support only a limited amount of trees and associated vegetation, based on available moisture and nutrient supplies Stocking will be adjusted to levels which are commensurate with the capacity of *the site to produce* and *maintain* healthy forest Overstocked stands will be reduced to lower levels Tree numbers in understocked stands will be increased when appropriate

However, in recreation stands, natural openings and in some cases understocked stands are desirable to provide variety and to allow room for visitor activities *and freedom of movement*

There will be instances where brush covered land capable of growing trees will not be reforested but left undisturbed to maintain wildlife habitat diversity, provide scenic variety, or demonstrate natural succession of vegetative types

RATIONALE

1 Healthy trees have optimum availability of soil moisture, soil nutrients, and sunlight The most critical element is soil moisture Health and vigor are reduced when there is excessive competition for limited water Trees weakened by excessive competition induced by overcrowding are more susceptible to insect and disease attacks

2 Tree size is a function of age, growing conditions, and stocking levels Trees in stands which are severely overcrowded tend to remain small and stunted for long periods of time Adjusting stocking can concentrate growth OR fewer trees, thus allowing them to reach th0 larger size classes more rapidly

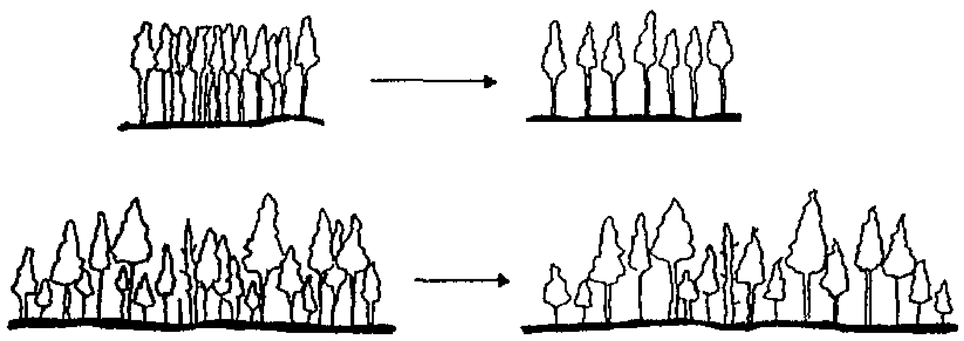
3 Wildfires have become an increasing threat in recent times because, in some areas, fire protection has helped create overstocked stand conditions with excessive fuel loads and a vertical fuel ladder which favors destructive crown fires In the past, under natural conditions of repeated low intensity burning, less damaging ground fires probably occurred

When fires do occur in stands where fire has been excluded for many years, they tend to be very destructive and difficult to control

Controlling stocking levels through thinning can moderate the destructive effects of wildfire in several ways When coupled with complete slash disposal, thinning can reduce fuel loads resulting in reduced fire intensity, This will tend to make fires less damaging to the residual stand as less heat will be generated Wider *spacing between* trees also *interrupts* fuel ladders, helping to keep fires on th0 ground rather than in the crowns

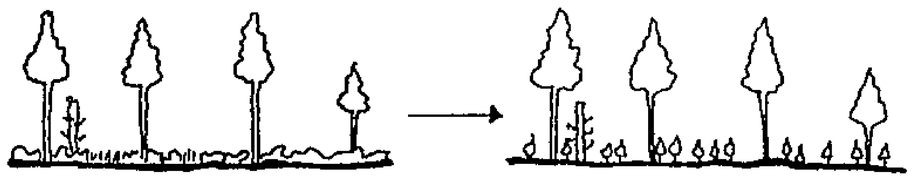
TREATMENTS

1 Thin overstocked stands to levels commensurate with moisture and nutrient availability



Thinning in both examples will b0 accomplished by hand or mechanical methods, or by low intensity burning

2 Increase stocking levels where necessary



Brush and Grass Understory

Remove competing vegetation using appropriate methods selected under IPM

3 Release

If brush regrowth becomes a problem in newly established plantations, planted trees are released from brush or grass competition through the use of techniques determined under IPM

MIXED SPECIES COMPOSITION

MANAGEMENT DIRECTION

Forested areas will contain as broad a mixture of naturally occurring species as is practical under site conditions "Monoculture" of a single species should be avoided over large areas This can be difficult on poor sites to which only a few species are adapted

Management efforts will be aimed toward maintaining variety where it occurs naturally rather than introducing it in locations unfavorable to species mixtures

RATIONALE

1 A mixture of species lends interest and variety to the forest Differences in tree shapes, needle length, and shades of color among conifers provide contrast in form and texture. Hardwoods create stronger contrasts in form, leaf and bark texture, and fall color

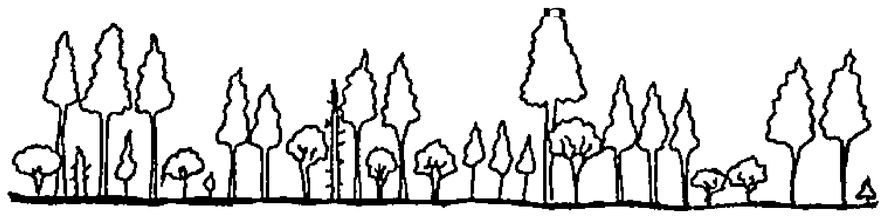
2 Mixed stands are usually more resistant to damage by insects and diseases than pure stands Biotic agents are selective in their attacks on differing species A mixture of species can help provide insurance against catastrophic losses

3 Differences in light tolerance among species allows more complete utilization of the site since all species do not require exposure to direct light Space below tho main canopy can be occupied by less light-demanding species creating a stratified stand of several levels, providing the total water needs of the stand can be met

4 Mixed stands, especially when they include scattered openings and hardwood species, support a more diverse wildlife population by offering an increased variety of food and cover.

TREATMENTS:

DESIRED COMPOSITION:



Mixtures of conifer species and hardwoods are encouraged

1. When thinning to reduce stocking levels, all conifer species will be considered desirable "Low value" species will not be discriminated against

2, Hardwoods will be retained when thinning to provide scenic variety and wildlife habitat.

3, When reforesting, mixtures of conifers, rather than a single species, will be planted where growing conditions permit

HEALTHY, VIGOROUS TREES

MANAGEMENT DIRECTION

The forest will be maintained in a condition where growth equals or exceeds natural and man-caused losses. Pest damage and losses will be reduced/maintained at acceptable levels, recognizing that it is not entirely possible, or desirable, to entirely eliminate harmful insects or diseases from thO forest

RATIONALE

1. The arrival of people in large numbers in the mountains has placed unusual stresses on the forests Road construction, mountain homes and subdivisions, utilities, campgrounds, air pollution, etc , have created unfavorable impacts on stands in many areas These pressures can cause trees of low vigor to become Increasingly susceptible to insect and disease mortality Healthy vigorous trees are better able to withstand the additional stresses that man's activities In the forest have placed on them

2 Forest renewal and development through damaging fire, disease, or extensive insect kills is unacceptable in a heavily used recreation forests Controlling regeneration, health, and species succession through silvicultural treatment is preferable to the erratic events that take place in an unmanaged forest

TREATMENTS

1 Remove unhealthy trees that are not expected to live until the next treatment opportunity Decision for removal will be based on condition of foliage and branches, growth rates, and evidence of insect or disease activity In some cases unhealthy trees may be left when they have significant recreational or wildlife value

2 Remove trees that pose a threat to surrounding stands

Example

Heavily mistletoe infected tree Inoculating young growth

3 Remove trees that pose a threat to human safety in or around recreation developments

NEAR NATURAL APPEARANCE

MANAGEMENT DIRECTION	RATIONALE	TREATMENTS
An attractive, near natural appearance will be maintained, unmarred by major disturbances to soil or vegetation. Good clean-up and rehabilitation measures are necessary following treatment by logging, firewood cutting, thinning, site preparation for reforestation, or other management activities Sufficient snags will be retained for wildlife habitat, as well as a limited amounts of dead material on the ground Clean-up measures will not be so intensive as to create unnatural park-like conditions	1 Recreationists prefer an attractive forest for use and enjoyment, and as a background for outdoor activities. Excessive amounts of exposed soil and damaged vegetation will detract from this experience 2 Good clean-up and rehabilitation measures will help gain public understanding and support of forest management practices 3 Snags and some kinds of other materials (windfalls or scattered cull logs left to decay) are a natural and desirable part of th0 forest scene Many forms of wildlife are dependent on both snags and dead material on the ground for shelter and the food sources they contain (insects, fungi) Without this source of food and shelter, these species would be much less numerous,	ThO following clean-up treatments represent some of the ways in which a near natural appeerence can be maintained 1 Dispose of residues resulting form treatment activities along forest roads by chipping, burying, piling and burning, or other methods. 2 Cut and remove small trees (less than 6 inches in diameter) which are damaged beyond recovery in silvicultural operations 3 Lop (cut up} and scatter limbs and tops trees which are felled 4 Smooth and/or install erosion control structures where soil Is disturbed, such as temporary roads, loading areas, or skid trails 5. Revegetate disturbed soil areas by seeding to grass or herbaceous plants, Additional clean-up or restoration practices will be used as needed. Sufficient snags and dead wood will be left on the ground to meet wildlife habitat needs

meet the needs of a particular area. In the following guidelines each of these components are related to the LTBMU management situation.

1. **Maximum** Tree Size - The presence of large trees is a desirable element of a recreation forest structure. Therefore, no maximum diameter limit is set. Large trees will be retained unless their removal is justified through stand analysis and a silvicultural prescription.

2. Reserve Stocking Levels - Adjusting stocking levels to maintain adequate growth rates is the key to maintaining tree vigor and health through the life of the stand. It can also help balance size class distribution as discussed later.

   Stocking can be expressed in a number of ways. Basal area per acre, volume per acre, and number of trees per acre are the most common. For the LTBMU, basal area and number of trees per acre will be used as the primary measure of stocking.

3. Size **Class** Distribution - To provide for continuity of forest appearance and maintain a complement of large trees in the future, it is necessary to give some consideration to controlling diameter distributions through the whole range of size classes. Therefore, in addition to a residual stocking goal, a diameter distribution goal is also needed. This can be expressed as (1) the desired number of trees, and (2) the basal area, to be retained in each diameter class.

4. Application of Residual Stand Structure Guidelines for Uneven-Aged Stands - Adjusting stocking levels should be the primary consideration when treating stands composed of mixed size classes. This is important because individual tree health and vigor depend more on freedom from excessive competition than any other factor.

   Balancing size classes by meeting the basal area levels shown for individual size classes is of secondary importance and is difficult to accomplish. Balancing size classes is a long process and will not be accomplished in this plan period. This will be a long range goal toward which there is an opportunity to make progress with each treatment cycle.

   The concept of balancing size classes should not be applied to small areas. Although distributions shown in the Silvicultural Handbook FSH 2470 are on a per-acre basis, this type of balanced structure is unlikely to be found or achieved on an area as small as a single acre. When treatments are planned for larger areas (such as watershed associations, or management areas) the average size class distribution should be evaluated. Treatment methods (such as directing thinning to size classes which have excess stocking levels, thinning in young, stagnated stands to move smaller trees into the larger size classes more rapidly, and introducing regeneration into stands composed only of larger trees) can then be planned.

   Again, the uses a particular area is subjected to will greatly influence the desired stand structure. In some cases balanced size

classes may not be important. A modified stand structure may be required to meet the needs of specialized wildlife habitat, recreational developments, fuelbreaks, etc. The residual stand structure goals are a guide, useful for the majority of stands, particularly those in areas of dispersed recreational use.

As discussed, no maximum tree size or "rotation age" is specified. Retaining old growth trees has two implicit effects on size class distribution.

- Proportionately more of the size class spectrum can be occupied by large trees compared to smaller ones. Fewer trees need be maintained in the small diameter classes because the rate of attrition at the opposite end of the distribution curve is low.

- Consequently, high regeneration levels are not necessary. The apparent low levels of reproduction in some areas may not be unreasonable. Scattered seedlings or clumps of regeneration are usually present and could be adequate to replace the limited numbers of old growth trees which will be removed under this plan.

5. Stocking Guides for Even-Aged Groups - Tahoe Basin forests are mostly even-aged, having resulted from extensive clearcutting during the Comstock mining period (1861-1898). Regeneration harvest in the future will transform these large even-aged stands into smaller clumps or groups within which the trees will still be even-aged. Since trees in these groups are basically of the same age, stocking guides based on existing yield table information for even-aged stands are applicable. In this case, recommended basal area stocking levels will vary by the age of individual groups.

Recommended reserve basal area guides for thinning in even-aged stands have been developed and are available for use in FSM 2471.32b. Separate guides are provided for the red fir and mixed conifer types.

The reader should not be misled by the last two paragraphs. This plan calls for timber harvest to utilize three silvicultural systems designed to produce an uneven aged forest; sanitation/salvage, single tree selection, and group selection.

(End Appendix D)

Appendix E

ENVIRONMENTAL THRESHOLD CARRYING CAPACITIES FOR THE LAKE TAHOE REGION

Adopted by the Governing Board of the Lake Tahoe Regional Planning Agency on August 26, 1982 by Resolution 82-11

WATER QUALITY

Pelagic Lake Tahoe

NUMERICAL STANDARD

Reduce dissolved inorganic nitrogen loading from all sources by 25 percent of the 1973-81 annual average. Achieve the following long term water quality standards:

- Annual mean phytoplankton primary productivity: 52 $gmC/m^2/yr.$
- Winter (December - March) mean Secchi disk transparency: 33.4m.

POLICY

This threshold is currently being exceeded and will likely continue to be exceeded until some time after full implementation of the loading reductions prescribed by the thresholds.

MANAGEMENT STANDARD

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

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

Littoral Lake Tahoe

NUMERICAL STANDARD

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

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

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

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

Tributaries

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

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

Surface Runoff

NUMERICAL STANDARD
Achieve a 90 percentile concentration value for dissolved inorganic nitrogen of 0.5 mg/l, for dissolved phosphorus of 0.1 mg/l, and for dissolved iron of 0.5 mg/l in surface runoff directly discharged to a surface water body in the basin.

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

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

Groundwater

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

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

Other *Lakes*

NUMERICAL STANDARD
Attain existing water quality standards.

SOIL CONSERVATION

Impervious Cover

MANAGEMENT STANDARD
Impervious cover shall comply with the Land-Capability Classification *of* 1974.

Stream Environment Zones

NUMERICAL STANDARD
Preserve existing naturally functioning SEZ lands in their natural hydrologic condition, restore all disturbed SEZ lands in undeveloped, unsubdivided lands, and restore 25 percent of the SEZ lands that have been identified as disturbed, developed or subdivided, to attain a 5 percent total increase in the area of naturally functioning SEZ lands.

AIR QUALITY

Carbon Monoxide

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

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

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

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

Regional Visibility

NUMERICAL STANDARD
Achieve 171 kilometers (103 miles) at least 50% of the year as measured by particulate concentrations.

Achieve 97 kilometers (58 miles) at least 90% of the year as measured by particulate concentrations.

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

Subregional Visibility

NUMERICAL STANDARD
Achieve 87 kilometers (54 miles) at least 50% of the year as measured by particulate matter.

Achieve 26 kilometers (16 miles) 90% of the year as measured by particulate matter.

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

Nitrate Deposition

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

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

Odor

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

VEGETATION PRESERVATION

Common Vegetation

MANAGEMENT STANDARD
Increase plant and structural diversity of forest communities through appropriate management practices as measured by diversity indices of species richness, relative abundance, and pattern.

- Maintain the existing species richness of the basin by providing for the perpetuation of the following plant associations:

  Yellow Pine Forest: Jeffrey pine, white fir, incense cedar, sugar pine.

  Red Fir Forest: Red fir, Jeffrey pine, lodgepole pine, Western white pine, mountain hemlock, Western juniper.

  Subalpine Forest: Whitebark pine, mountain hemlock, mountain mahogany.

  Shrub Association: Greenleaf and pinemat manzanita, tobacco brush, Sierra chinquapin, huckleberry *oak*, mountain whitethorn.

  Sagebrush Scrub Vegetation: Basin sagebrush, bitterbrush, Douglas chaenactis.

  Deciduous Riparian: Quaking aspen, mountain alder, black cottonwood, willow.

  Meadow Associations (wet and dry meadow): Mountain squirrel tail, alpine gentian, whorled penstemon, asters, fescues, mountain elephant heads, Tinker's penney, mountain timothy, sedges, rushes, buttercups.

  Wetland Associations (marsh vegetation): Pond lilies, buckbean, mare's tail, pondweed, common bladderwort, bottle sedge, common spikerush.

- Relative Abundance -- of the total amount *of* undisturbed vegetation in the Tahoe Basin:

  1. Maintain at least 4% meadow and wetland vegetation.

  2. Maintain at least 4% deciduous riparian vegetation.

3. Maintain no more than 25% dominant shrub association vegetation.

4. Maintain 15 to 25% of the yellow pine forest in seral stages other than mature.

5. Maintain 15-25% of the red fir forest in seral stages other than mature.

- Pattern -- Provide for the proper juxtaposition of vegetation communities and age classes by;

1. Limiting acreage size of new forest openings to no more than 8 acres.

2. Adjacent openings shall not be of the same relative age class or successional stage to avoid uniformity in stand composition and age.

A nondegradation standard to preserve plant communities shall apply to native deciduous trees, wetlands, and meadows while providing for opportunities to increase the acreage of such riparian associations to be consistent with the SEZ threshold.

Native vegetation shall be maintained at a maximum level to be consistent with the limits defined in the Land Capability Classification of the Lake Tahoe Basin, California-Nevada, A Guide For Planning, Bailey, 1974, for allowable impervious cover and permanent site disturbance.

POLICY STATEMENT
It shall be a policy of the TRPA Governing Board that a nondegradation standard shall permit appropriate management practices.

Uncommon Plant Communities

NUMERICAL STANDARD
Provide for the nondegradation of the natural qualities of any plant community that is uncommon to the basin or of exceptional scientific, ecological, or scenic value. This threshold shall apply but not be limited to (1) the deepwater plants of Lake Tahoe, (2) Grass Lake (sphagnum bog), (3) Osgood swamp, and (4) the Freel Peak Cushion Plant community.

Sensitive Plants

NUMERICAL STANDARD
Maintain a minimum number of population sites for each of five sensitive plant species.

Species	Number of Population Sites
Carex paucifructus	1
Lewisia pygmaea longipetala	2
Draba asterophora v. macrocarpa	2
Draba asterophora v. asterophora	5
Rorippa subumbellata	26

WILDLIFE

Special Interest Species

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

Species of Interest	Population Sites	Disturbance Zone	Influence Zone
Goshawk	12	0.50	3.50
Osprey	4	0.25	0.60
Bald eagle (Winter)	2	mapped areas	mapped areas
Bald eagle (Nesting)	1	0.50	variable
Golden eagle	4	0.25	9.0
Peregrine falcon	2	0.25	7.6
Waterfowl	18	mapped areas	mapped areas
Deer	--	meadows	mapped areas

Habitats of Special Significance

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

FISHERIES

Stream Habitat

NUMERICAL STANDARD
Maintain the 75 miles of excellent, 105 miles of good, and 38 miles of marginal stream habitat as indicated by the map on page 76 of the EIS for the environmental thresholds study.

Instream Flows

MANAGEMENT STANDARD
Until instream flow standards are established in the regional plan to protect fishery values, a nondegradation standard shall apply to instream flows.

POLICY STATEMENT
It shall be a policy of the TRPA Governing Board to seek transfers of existing points of water diversion from streams to the *lake.*

Lahontan Cutthroat Trout

POLICY STATEMENT
It shall be the policy of the TRPA Governing Board to support, in response to justifiable evidence, State and Federal efforts to reintroduce Lahontan cutthroat trout.

Lake Habitat

MANAGEMENT STANDARD
A nondegradation standard shall apply to fish habitat in Lake Tahoe. Achieve the equivalent of 5,948 total acres of excellent habitat.

NOISE

Single Noise Events

NUMERICAL STANDARD
The following maximum noise levels are allowed: (all values are in decibels)

Source	Overall	Threshold - dba: Less than 35 MPH	Threshold - dba: Greater than 35 MPH	Monitoring Distances
Aircraft	80[1]/	--	--	6,500 m - start of takeoff roll 2,000 m - runway threshold approach
	77.1[2]/	--	--	6,500 m - start of takeoff roll 2,000 m - runway threshold approach
Boats	82	--	--	50 ft. - engine at 3,000 rpm
Motor vehicles less than 6,000 GVW	--	76	82	50 ft.
greater than 6,000 GVW	--	82	86	50 ft.
Motorcycles	--	77	86	50 ft.
Off-highway vehicles	--	72	86	50 ft.
Snowmobiles	--	82	--	50 ft.

1/ Not to be effective until five years after adoption of Environmental Threshold Carrying Capacities, provided that incremental and phased improvements toward that standard shall be provided by the regional plan.
2/ Between the hours of 8:00 p.m. and 8:00 a.m.

Cumulative Noise Events

NUMERICAL STANDARD
Background noise levels shall not exceed existing levels, or the following levels, whichever is less:

Land use category	Average noise level or CNEL range (dBA)
High density residential areas	55
Low density residential areas	50
Hotel/motel facilities	55
Commercial areas	65
Urban outdoor recreation areas	55
Rural outdoor recreation areas	50
Wilderness and roadless areas	25
Critical wildlife habitat areas	25

RECREATION

POLICY STATEMENT
It shall be a policy of the TFPA Governing Body in development of the regional plan to preserve and enhance the high quality recreational experience, including preservation of high quality undeveloped shorezone and other natural areas. In developing the regional plan, the staff and Governing Body shall consider provisions for additional access, where lawful and feasible, to the shorezone and high quality undeveloped areas for low density recreational uses.

It shall be the policy of the TRPA Governing Body in development of the regional plan to establish and insure a "fair share" of the total basin capacity for outdoor recreation is available to the general public.

SCENIC RESOURCES

Roadway and Shoreline Units

NUMERICAL STANDARD
Maintain or improve the numerical rating assigned each unit, including the scenic quality rating of the individual resources within each unit, as recorded in the Scenic Resources Inventory and shown in Tables 13-3, 13-5, 13-8 and 13-9 of the draft study report.

Maintain the 1982 ratings for all roadway and shoreline units as shown in Tables 13-6 and 13-7 of the draft study report.

Restore scenic quality in roadway units rated 15 or below and shoreline units rated 7 or below.

Other Areas

MANAGEMENT STANDARD
Maintain or improve the visual quality of views from bike paths and outdoor recreation areas open to the general public. Upon completion of the 1982 Visual Quality Index, this standard shall become a numerical standard.

Built Environment

POLICY STATEMENT
It shall be the policy of the TRPA Governing Body in development of the regional plan, in cooperation with local jurisdictions, to insure the height, bulk, texture, form, materials, colors, lighting, signing and other design elements of new, remodeled and redeveloped buildings be compatible with the natural, scenic, and recreational values of the region.

(End Appendix E)

APPENDIX F

LAND CAPAEILITY CLASSIFICATION OF THE LAKE TAHOE BASIN

In the 1970's the Forest Service and the Tahoe Regional Planning Agency cooperated in a joint environmental land use planning study of the Lake Tahoe Basin. As part of this study, Dr. Robert Bailey, a Forest Service geomorphologist, developed criteria for classifying lands according to their inherent physical capability and tolerance for disturbing activities. The system was designed to provide an objective basis for planning, executing, and regulating development and other activities to protect soil and water resources and to meet other environmental goals for the area.

This is a summary of the information found in Land Capability Classification of the Lake Tahoe Basin. California - Nevada: A Guide for Planning, Bailey, 1974.

The procedure for establishing land capabilities involved a two-step system.

1. A hazard classification of land into homogeneous units for potential use consideration, and

2. An evaluation of the hazard classes on the basis of their ability to tolerate interference by humans.

The first step divides and ranks the basin into seven levels of land capability according to the frequency and magnitude of hazards that are encountered: i.e. floods, landslides, high water tables, poorly drained soils, fragile flora and fauna, and easily erodible soils. Class 1 represents areas that exhibit the greatest frequency or highest magnitude of hazardous conditions, or both. Class 7 represents areas where the extent of hazardous conditions is least. In order to map classes, a number of complex, interrelated influences were separately considered and evaluated. Data on soil type and land forms, which are major contributing factors, was compiled. The maps were then evaluated and combined to define units representing particular combinations of these influences.

In the second phase of the system, the type and intensity of use suitable for each unit were considered, and the units were grouped into larger patterns *so* that recommendations could be made which would lead to policy decisions. In the final evaluation, limits on land-surface modification for each unit were expressed as a percentage of each area that could be covered with impervious surfaces.

The evaluation of the hazard factors allowed establishment of classes of varying degrees of tolerance to land development. The potential impact of land use, and therefore the required protection, became a function of both the tolerance of an area and the characteristics of the proposed

development. Thus, the type and intensity of use and management that were suitable for land in each of the capability classes could be judged.

The following guides to use and management are recommended for each capability class. The range in the seven classes extends from land capable of tolerating a high degree of interference without permanent damage to water quality or land productivity (class 7) to land that should remain in its natural condition but may be suitable for wildlife enhancement measures, dispersed recreation, or protection of watersheds (class 1). The seven capability levels (see Table F.l) are further grouped into three broad categories according to the relative risk of land damage (disturbance hazard).

Table F.l. Land Capability Classification for Lake Tahoe Basin Lands

Capability levels	Tolerance for use	Slope percent	Relative erosion potential	Runoff potential	Disturbance hazards
7	Most	0 - 5	Slight	Low to moderately low	Low Hazard
6		0 - 16	Slight	Low to moderately low	
5		0 - 16	Slight	Moderately high to high	
4		9 - 30	Moderate	Low to moderately low	Moderate hazard lands
3		9 - 30	Moderate	Moderately high to high	
2		3 - 50	High	Low to moderately low	
1a		30+	High	Moderately high to high	High hazard lands
1b		Poor natural drainage			
1c	Least	Fragile flora and fauna (areas dominated by rocky and stony land)			

To transform the limitations on land-surface modification for each land capability class into a single numerical index that characterizes development capacity. each class is assigned a value representing the percentage of each area that can be used for impervious cover if environmental balance is to be maintained. Recommended land coverage by capability class is as follows:

Capability class	Allowable percentage of impervious cover
7	30
6	30
5	25
4	20
3	5
2	1
1	1

Summary of Conditions Associated with Each Land Capability Class

Land capability classes 1 and 2 are suited for open space, conservation areas, and low intensity dispersed recreation. About 76% of the basin is included in this category.

Subclass la land consists of extensive areas of steep mountainous land with very shallow soils. These areas are the principal sources of sediment that cause damage to streams, water storage facilities. and structures. Erosion control and reduction of runoff velocity are the problems here. A maximum of growth of vegetation should be established and maintained on these areas for soil stabilization.

Subclass 1b includes stream channels, marshes, flood plains, and meadows. These lands are naturally wet and poorly drained and are critical areas for management and protection of water resources. Policy for use of these lands should reflect their value as floodwater and sediment storage areas, wildlife habitat and fish spawning grounds.

Subclass 1c consists of extensive areas of mountainous uplands having little or no soil mantle. It includes the recently glaciated crests of the Sierras and other rocky areas with very shallow soils. Here the harsh climate and lack of soil severally limit plant growth and wildlife. Biotic communities exist in a delicate natural balance. The presence of vegetative cover should be protected from fire and undue disturbance. The chief value of this land is for watershed protection, wildlife habitat, and recreation.

Class 2 land is suited only for limited recreation, restricted grazing, and selective timber harvest because of erosion hazard or very steep slopes. Because the slope of the land is more than 30 percent, careful grazing and logging practices are necessary to avoid

loss of soil by water erosion. This type of land is limited in extent and lies in scattered areas at the base of steep mountain slopes and along entrenched stream valleys.

Land capability classes 3 and 4 are suited for forestry and low intensity use and minor improvements. About 10% of the basin is included in this category.

Class 3 land is fairly well suited for forestry and dispersed recreation. The slope of this land varies from 9 to 30 percent and has moderate erosion hazard. Development here must be carefully designed and carried out to keep the land permanently productive. These lands consist of limited areas of moderately steep mountain slopes scattered throughout the basin at lower elevations.

Class 4 land is well suited for forest management activities, dispersed recreation and low intensity recreation improvements. This land is moderately sloping and has moderate erosion hazard. Careful design and construction practices must be followed. These lands of limited extent occur as scattered areas of moderately steep mountain slopes.

Capability classes 5, 6, and 7 are suitable for forestry and developed recreation. About 14% of the total area of the basin is included in these three classes.

Class 5 land is moderately well suited for forest activities and intensive recreation use and development. This land is flat to moderately sloping and has little or no surface erosion problems. Some limitation of use is required by slope and runoff hazards, as improper use and management may cause severe gully erosion. Maintenance and improvement of drainage will be a continued need on much of this land. More intensive application of special conservation practices is needed than on class 6 land. This land is chiefly located in flat-lying areas around the margin of the lake.

Class 6 land is well suited for intensive recreation use and development and for forestry. It has some limitations such as minor slope or drainage problems, which influence the manner of development. Easily applied conservation practices are necessary for safe and maximum utilization of class 6 land.

Class 7 land is very well suited for intensive recreation use and development and forestry. The soil is deep and supports a dense forest cover. It is nearly level and has little or no erosion problem. Drainage is good and the soil has a good capacity for supplying moisture and nutrients for plant growth. Although class 7 land does not have any special problems or limitations for use. it does require good conservation practices to control runoff water and prevent soil loss. Only about 2% of the total area of the basin is in class 7. All of this land is in the South Lake Tahoe area.

(End Appendix F)

APPENDIX G

RECREATION FACILITIES

The forest plan projects the expansion of some existing facilities and the construction of new ones. Detailed discussion about specific sites are not included in the forest plan or FEIS. Project level planning will occur for each proposed recreation expansion and construction.

This appendix provides a detailed listing of recreation facilities that may be proposed to meet the goals of the forest plan. The tables include a list of all existing recreation facilities, their present overnight and day use capacity and the degree to which that capacity may change. The same information is shown for proposed sites. An estimate of the period in which the facility would be needed is indicated. These figures should be considered approximations, as demand by type of recreation use is difficult to predict decades in advance. The figures do identify the sites suitable for development and their approximate capacity.

Persons at one time (PAOT) is used as a estimate of the design capacity of developed recreation facilities. PAOT can be translated into numbers of parking spaces, restrooms, camping spurs, ski lifts, and other site improvements, depending on what recreation activities the site is designed to accommodate. While useful for long range planning, standards for determining capacity are supplemented by detailed resource and visitor data during the actual design of facilities.

The PAOT figures included in the forest plan are also an indication of the amount of developed recreation capacity that will be required to insure that future recreation visitors to the Lake Tahoe Basin will be accommodated. This total is referred to as the "fair share" of recreation capacity in both the forest plan and the TRPA regional plan. Though PAOT are distributed to individual sites and management areas, some adjustment may be made at the time of actual development. For more information about developed recreation facilities consult the facilities map and individual management area direction.

Much of the outdoor recreation occurring in the Lake Tahoe Basin takes place outside of developed recreation facilities, as dispersed recreation on roads and trails and in the forests. Facilities, mainly trailhead parking lots, are often required to enhance public access and to reduce the associated impacts. A summary of sites supporting dispersed recreation is also shown in the table; however, their capacity is not considered part of the developed recreation "fair share".

A requirement of the TRPA regional plan is the preparation of a five year list of both outdoor and urban recreation projects. Preparation of the list, updated annually, assists in integrating recreation programs important to quality of life and leisure at Lake Tahoe. Forest Service projects will be listed on the five year plan.

APPENDIX G

EXISTING RECREATION FACILITIES AND PROPOSED CHANGES

Site Name	Management Area	Type of Use	1987 PAOT Total	1987 PAOT Overnight	1987 PAOT Day	Proposed Additional PAOT 1st Decade Overnight	1st Decade Day	2d Decade Overnight	2d Decade Day
Downhill Ski Areas									
Heavenly Valley	Heavenly	Skiing	10000		10000		1500		3900
North Star	Watson	Skiing	0		0				1000
Ward Valley	Ward	Skiing	135		135		1150		3200
Homewood	McKinney	Skiing	0		0				650
Ski Incline	Mt Rose	Skiing	100		100				
Private Sector Resorts and Facilities									
Camp Richardson	Pallen Leaf	Resort/Beach/Camping	2025		350			770	
Meeks Bay	Meeks	Resort/Beach/Camping	500	2	300				
Zephyr Cove	Genoa Peak	Resort/Beach/Camping	2455	1175	1280	200	300		
Round Hill Pines	Genoa Peak	Resort/Beach	350		350				100
Angora Lakes	Fallen Leaf	Resort	40	40					
Echo Chalet	Echo	Resort	300	25	275				
Camp Rich. Corral	Fallen Leaf	Stable	50		50				
Organization Camps									
Berkley Camp	Echo	Org Camp	185	185					
Calf Alpine Club	Echo	Org Camp	20	20					
Camp Shelly	Fallen Leaf	Org Camp	100	100					
Camp Concord	Fallen Leaf	Org Camp	180	180					
Swimming Beaches									
Pope Beach	Fallen Leaf	Beach	1590		1590				
Baldwin Beach	Fallen Leaf	Beach	650		650				
Meeks Bay Beach	Meeks	Beach	260		260				
William Kent Beach	Ward	Beach	100		100				
Nevada Beach	Genoa Peak	Beach	1485		1485				
Campgrounds									
Bayview Campground	Emerald Bay	Camping	75	75					
Pine Flat CG	Emerald Bay	Camping	100	100					
Fallen Leaf CG	Fallen Leaf	Camping	1030	1030					
Meeks Bay CG	Meeks	Camping	200	200					
William Kent CG	Ward	Camping	475	475					
Kaspian CG	Blackwood	Camping	50	50				50	
Nevada Beach CG	Genoa Peak	Camping	270	270				500	
Day Use Sites									
Kiva Picnic Area	Fallen Leaf	Picnic/Beach	220		220				
Eagle Falls	Emerald Bay	Picnic/Trailhead	144		144				
Kaspian	Blackwood	Picnic/Beach	100		100				
Spooner Rest Area	Marlette	Picnic Area	55		55				
64 Acres	L Truckee	Visitor Ctr/Beach/Pic	140		140		245		
Sawmill Pond	Tahoe Valley	Picnic/Parking	15		15		40		15
Interpretive Sites									
Tallac Hist site	Fallen Leaf	Trails/Museum	295		295				
Visitor Center	Fallen Leaf	Trails/Exhibits	800		800				
Supvrs Office	Tahoe Valley	Information Center	20		20				
Inspiration Pt	Emerald Bay	Vista	50		50		25		
Stateline Lookout	Martis	Vista	55		55				
Logan Shoals	Genoa Peak	Vista	25		25				
Angora Lookout	Fallen Leaf	vista	10		10				

APPENDIX G

PROPOSED NEW RECREATION FACILITIES

Site Name	Management Area	Type of Use	1987 PAOT Total	1987 PAOT Overnight	1987 PAOT Day	Proposed Additional PAOT 1st Decade Overnight	1st Decade Day	Proposed Additional PAOT 2d Decade Overnight	2d Decade Day
Cedar Flat	Watson	CG/day use	0					300	125
Brockway	Martis	CG/day use	0					300	150
Kings Beach	Watson	CG/day use	0					300	350
Paige Meadow	Ward	CG/day use	0					100	180
Spooner Summit	Marlette	CG/day use	0					150	50
Trout Creek	Tahoe Valley	CG/day use	0					300	245
Zephyr Cove North	Roundhill	Picnic/Lake Access	0						130
Fallen Leaf Lake	Fallen Leaf	Boat launch/Day Use	7		7		50		
Fallen Leaf Lake	Fallen Leaf	Day	28		28				100
Washoe Cult Ctr.	Fallen Leaf	Day	0				115		
Organized Camps	Fallen Leaf	Org. Camps	0			180			
Ech4 Summit	Echo	Vista	0						50

RECREATION FACILITIES SUPPORTING DISPERSED RECREATION
(Not Subject to Recreation Fair Share PAOT Limitations)

site Name	Management Area	Type of Use	1987 PAOT Total	Proposed Additional PAOT 1st Decade	Proposed Additional PAOT 2-5 Decades
Watson Lake	Watson	Dispersed Camping	25		10
Brockway Trailhead	Martis	Parking	0		35
Kings Beach	Martis	Parking	0		75
Tahoe Meadows Trlhd	Mt Rose	Parking	0	100	
East Shore Trailheads	East Shore	Parking	1050	-200*	
Skunk Harbor	East Shore	Boat-in/Picnic	25		25
Spooner Junction	Marlette	Winter Parking	35		
Dagget Pass Trailhead	Heavenly	Parking	0	35	
Trout Creek	Tahoe Valley	Winter parking	12		16
Tahoe Paradise	Tahoe Valley	River Access	28		
Fountain Place Trlhd.	Freel	Parking	10	40	35
Mt Tallac Trailhead	Fallen Leaf	Parking	42	50	
Bayview Trailhead	Emerald Bay	Trailhead	80		
Angora Ridge	Fallen Leaf	Winter parking	25		
Rainbow Trailhead	Tahoe Valley	Parking	18		1
Echo Summit/Lake	Echo Lakes	Parking	260	40	30
Alpine Trailhead	Tahoe Valley	Parking	15		20
Big Meadow Trailhead	Tahoe Valley	Parking	50	25	
Luther Pass Trailhead	Tahoe Valley	Parking	105		
Glen Alpine Trailhead	Fallen Leaf	Parking	50		
Meeks Trailhead	Meeks	Parking	105		
Blackwood Day use	Blackwood	OHV Staging	100		25
Twin Peaks Trailhead	Ward	Parking	15		60
Page Meadow	Ward	Winter Parking	28	14	
Castle Rock	Genoa	Parking/Vista	10		25
Stanford Ridge Trlhd	Ward	Parking	0		35
Cathedral Mdw Trlhd	Fallen Leaf	Parking			
Cathedral Dock	Fallen Leaf	Boat Launch	1		

* Reduce 200 PAOT.

APPENDIX H

WATER QUALITY MANAGEMENT - BEST MANAGEMENT PRACTICES AND PROCESS

Introduction: Water quality management at Lake Tahoe has been controversial and divided. As a result, standards are not consistent throughout the area and numerous documents must be referenced. Two handbooks of Best Management Practices (BMP) apply to national forest land in the Lake Tahoe Basin.

In 1974, the Environmental Protection Agency (EPA) designated the Tahoe Regional Planning Agency (TRPA) as the agency to develop and ensure implementation of a water quality management plan for the Lake Tahoe Basin in compliance with Section 208 of the Federal Clean Water Act (PL 92-500, as amended). Completed in 1978, the 208 Plan was conditionally approved by the State of Nevada, but was rejected by California for failure to include control actions and enforcement commitments considered necessary to protect Lake Tahoe. The State of California withdrew from area wide water quality planning with Nevada at Lake Tahoe and adopted a more restrictive plan in 1980 for the portion of the basin within California.

Recognizing the desirability of a single bi-state 208 Plan for the Lake Tahoe Basin, the California State Water Resources Control Board recommended changes to the TRPA Water Quality Plan. Amendments were made to the TRPA Water Quality Plan with the understanding that further change would be made when the TRPA Regional Plan is revised. The amended plan was certified by California and Nevada and adopted by TRPA (Ordinance 81-4) in 1981.

With adoption of a revised TRPA Regional Plan in July 1987, work commenced, but has not been completed, on revising the water quality plans to reconcile differences between the two states and between agencies. Until reconciliation is completed, implementation of water quality management plans will remain confusing, requiring numerous documents to be referenced to determine appropriate standards and measures to be applied. Until then, the intent of the EPA to have a unified approach to water quality management will not have been achieved.

Implementation Process: For each individual project that is initiated to implement the forest plan, a separate site specific environmental analysis is conducted. The appropriate BMP necessary to protect or improve water quality and the methods and techniques of implementing the BMP are identified at the time of this on-site project specific analysis. In this manner the methods and techniques can be tailored to fit the specific physical-biological environment as well as the proposed project activities.

Protection and mitigation measures are then carried forward into project plans and implementation documents; e.g., contract language, design specifications, etc., to assure they are part of the project work accomplished. Implementation on the ground is assured by the Forest Service official responsible for on-site administration of the project. Quality control of BMP implementation is attained through review of environmental assessments and Contracts, field

reviews of projects, and monitoring the quality of the water in the project area when warranted.

The Best Management Practices: There are two handbooks of best management practices that apply to national forest land activities at Lake Tahoe. Both are incorporated into this plan by reference.

A handbook of Best Management Practices (Chapter II of the TRPA Water Quality Plan) has selected **measures** proven effective in erosion control and surface runoff management in the Lake Tahoe Basin. Most of the practices described in the handbook are designed for activities occurring in the more developed portion of the basin. Primary emphasis is on specific temporary and permanent erosion control measures which can be implemented during construction of or retrofitting of residential and commercial structures or roads and parking improvements.

Best management practices for all national forest land in California are presented in: Forest Service Handbook 2509.22, *The* Soil and Water Conservation Handbook, Chapter 10: Water Quality Management for National Forest System Lands in California, U.S. Forest Service, Pacific Southwest Region, 1987. The practices were certified by the State Water Resources Control Board and approved by EPA. (Through reference in the TRPA 208 Plan, these practices have been extended to the Nevada portion of the basin.) A 1981 Management Agreement resulted in formal designation of the Forest Service as the water quality management agency for the lands it administers in California. (Again, this designation was extended to national forest land in Nevada through the TRPA Plan.) The TRPA Best Management Practices Handbook is used as a reference in developing detailed site specific project plans on national forest land.

There are 98 practices identified, in eight different resource categories, in the Forest Service publication, Water Quality Management for National Forest System Lands in California. They are listed below noting where they are further supplemented in the TFiPA Water Quality Plan.

	Best Management Practices	Supplemented by TRPA Plan
TIMBER		
1.1	Timber Sale Planning Process	X
1.2	Timber Harvest Unit Design	
1.3	Use of Erosion Hazard Rating for Timber Harvest Unit Design	X
1.4	Use of Sale Area Maps for Designating Water Quality Protection Needs	
1.5	Limiting Operating Period of Timber Sale Activities	X
1.6	Protection of Unstable Areas	
1.7	Prescribing the Size and Shape of Clearcuts	X
1.8	Streamside Management Zone Designation	X
1.9	Determining Tractor Loggable Ground	
1.10	Tractor Skidding Design	
1.11	Suspended Log Yarding in Timber Harvesting	
1.12	Log Landing Location	
1.13	Erosion Prevention and Control Measures During Timber Sale Operations	X
1.14	Special Erosion Prevention Measures on Disturbed Land	

	1.15	Revegetation of Areas Disturbed by Harvest Activities	
	1.16	Log Landing Erosion Prevention and Control	
	1.17	Erosion Control on Skid Trails	X
	1.18	Meadow Protection During Timber Harvesting	
	1.19	Streamcourse Protection	X
	1.20	Erosion Control Structure Maintenance	
	1.21	Acceptance of Timber Sale Erosion Control Measures Before Sale Closure	
	1.22	Slash Treatment in Sensitive Areas	X
	1.23	Five-Year Reforestation Requirement	
	1.24	Non-recurring "C" Provision That Can Be Used For Water Quality Protection	
	1.25	Modification of the Timber Sale Contract	
	ROAD AND BUILDING SITE CONSTRUCTION		
	2.1	General Guidelines for the Location and Design of Roads	
	2.2	Erosion Control Plan	X
	2.3	Timing of Construction Activities	X
	2.4	Road Slope Stabilization (Preventative Practice)	X
	2.5	Road Slope Stabilization (Administrative Practice)	
	2.6	Dispersion of Subsurface Drainage from Cut and Fill Slopes	
	2.7	Control of Road Drainage	X
	2.8	Constraints Related to Pioneer Road Construction	
	2.9	Timely Erosion Control Measures on Incomplete Road and Stream crossing Projects	X
	2.10	Construction of Stable Embankments	X
*	2.11	Minimization of Sidecast Material	
	2.12	Servicing and Refueling Equipment	
	2.13	Control of Construction in Streamside Management Zones	X
	2.14	Controlling In-channel Excavation	X
	2.15	Diversion of Flows Around Construction Sites	X
	2.16	Stream crossings on Temporary Roads	X
	2.17	Bridge and Culvert Installation	X
	2.18	Regulation of Streamside Gravel Borrow Areas	X
	2.19	Disposal of Right-of-way and Roadside Debris	
	2.20	Specifying Riprap Composition	X
	2.21	Water Source Development Consistent with Water Quality Protection	
	2.22	Maintenance of Roads	X
	2.23	Road Surface Treatment to Prevent Loss of Materials	X
	2.24	Traffic Control During Wet Periods	X
	2.25	Snow Removal Controls to Avoid Resource Damage	X
	2.26	Closure or Obliteration of Temporary Roads	X
	2.27	Restoration of Borrow Pits and Quarries	
	2.28	Surface Erosion Control at Facility Sites	X
	MINING		
*	**3.1**	Administering Terms of U.S. Mining Laws	
	3.2	Administering Terms of BLM Issued Permits or Leases for Mineral Exploration and Extraction on National Forest System Lands	
	3.3	Administering Common Variety Mineral Removal Permits	X

RECREATION		
4.1	Sampling and Surveillance of Designated Swimming Sites	
4.2	On-site Multidisciplinary Sanitary Surveys will Be Conducted to Augment the Sampling of Swimming Waters	
4.3	Provide Safe Drinking Water Supplies	
4.4	Documentation of Water Quality Data	
4.5	Control of Sanitation Facilities	
4.6	Control of Refuse Disposal	
4.7	Assuring that Organizational Camps Have Proper Sanitation and Water Supply Facilities	
4.8	Water Quality Monitoring Off-Road Vehicle Use According to a Developed Plan	X
4.9	Sanitation at Hydrants and Faucets Within Developed Recreation Sites	
4.10	Protection of Water Quality Within Developed and Dispersed Recreation Areas	X
4.11	Location of Pack and Riding Stock Facilities in Wilderness, Primitive, and Wilderness Study Areas	
VEGETATIVE MANIPULATION		
5.1	Seed Drilling on the Contour	
5.2	Slope Limitations for Tractor Operation	X
5.3	Tractor Operation Excluded from Wetlands and Meadows	X
5.4	Revegetation of Surface Disturbed Areas	X
5.5	Tractor Windrowing on the Contour	
5.6	Soil Moisture Limitations for Tractor Operation	
5.7	Contour Disking	
5.8	Pesticide Use Planning Process	
5.9	Apply Pesticide According to Label and EPA Registration Directions	
5.10	Pesticide Application Monitoring and Evaluation	
5.11	Pesticide Spill Contingency Plan	
5.12	Cleaning and Disposal of Pesticide Containers and Equipment	
5.13	Streamside and Wet Area Protection Zone During Pesticide Spraying	
5.14	Controlling Pesticide Drift During Spray Application	
FIRE SUPPRESSION AND FUELS MANAGEMENT		
6.1	Fire and Fuel Management Activities	
6.2	Consideration of Water Quality in Formulating Fire Prescriptions	
6.3	Protection of Water Quality from Prescribed Burning Effects	X
6.4	Minimizing Watershed Damage from Fire Suppression Efforts	
6.5	Repair or Stabilization of Fire Suppression Related Watershed Damage	
6.6	Emergency Rehabilitation of Watersheds Following Wildfires	

WATERSHED MANAGEMENT		
7.1	Watershed Restoration	X
7.2	Conduct Floodplain Hazard Analysis and Evaluation	X
7.3	Protection of Wetlands	X
7.4	Oil and Hazardous Substance Spill Contingency Plan	
7.5	Control of Activities Under Special Use Permit	X
7.6	Water Quality Monitoring	
7.7	Management by Closure to Use (Seasonal, Temporary, and Permanent)	X
GRAZING		
8.1	Range Analysis, Allotment Management Plan, Grazing Permit System, and Permittee Operating Plan	
8.2	Controlling Livestock Numbers and Season of Use	
8.3	Controlling Livestock Distribution Within Allotments	
8.4	Rangeland Improvements	X

* These are the two practices that have not been recommended for certification and approval as BMP at this time.

(End Appendix H)