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**The following chapters are to be inserted under the Conservation tab of your RPUC Binder:**

- **New Conservation Element Introduction – dated 01/18/2012**
- **New Vegetation Subelement - dated 01/18/2012**
- **New Wildlife Subelement – dated 01/18/2012**
- **New Fisheries Subelement – dated 01/18/2012**
- **New Soils Subelement – dated 01/18/2012**
- **New Shorezone Subelement – dated 01/18/2012**
- **New Scenic Subelement – dated 01/18/2012**
- **New Open Space Subelement – dated 01/18/2012**
- **New SEZ Subelement – dated 01/18/2012**
- **New Cultural Subelement – dated 01/18/2012**
- **New Energy Subelement – dated 01/18/2012**

## *CHAPTER IV*

# *CONSERVATION ELEMENT*

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The purpose of this Element is to plan for the preservation, development, utilization, and management of the scenic and other natural resources within the ~~Basin~~ Region. To achieve this end and to minimize the threat that increasing urbanization has on the ecological values of the Region and the public opportunities for use of public lands, ten Subelements were selected to cover the full range of Lake Tahoe's natural and historical resources. For each Subelement, specific policies are outlined to help guide decision-making as it affects that particular resource.

## VEGETATION



Vegetation is integral to the many scenic, wildlife, and recreational amenities in the Lake Tahoe Basin. Vegetation also fulfills many functional roles related to water cleansing, soil stabilization, nutrient catchment and release, air purification, and noise control. The focus of vegetation preservation in the Basin is to protect and maintain these and other attributes. The Lake Tahoe Region's diverse and unique plant communities provide a variety of environmental and ecological functions and values including water quality, wildlife habitat, soil stabilization, and nutrient cycling. Plant communities also contribute to the Region's scenic quality, improve air quality, and facilitate noise control. The Vegetation Subelement guides the protection and management of the Region's vegetation resources.

Strategy direction for preservation of vegetation is guided by the following environmental thresholds:

### 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 brome, Corn lilies, Mountain bentgrass, Hairgrass, Marsh marigold, 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.*

Cushion Plant Association (Alpine Scrub): *Alpine phlox, Dwarf ragwort, Draba.*

- ◆ *Relative Abundance -- of the total amount of undisturbed vegetation in the Tahoe Basin;*
  1. *Maintain at least four percent meadow and wetland vegetation.*
  2. *Maintain at least four percent deciduous riparian vegetation.*
  3. *Maintain no more than 25 percent dominant shrub association vegetation.*

~~4.— Maintain 15-25 percent of the Yellow Pine Forest in seral stages other than mature.~~

~~5.— Maintain 15-25 percent 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 eight 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.~~

#### **Late Seral and Old Growth Forest Ecosystems**<sup>§</sup>

##### **NUMERICAL STANDARD**

~~Attain and maintain a minimum percentage of 55% by area of forested lands within the Tahoe Region in a late seral or old growth condition, and distributed across elevation zones. To achieve the 55%, the elevation zones shall contribute as follows:~~

- ~~• The Subalpine zone (greater than 8,500 feet elevation) will contribute 5% (7,600 acres) of the forested lands;~~
- ~~• The Upper Montane zone (between 7,000 and 8,500 feet elevation) will contribute 30% (45,900 acres) of forested lands;~~
- ~~• The Montane zone (lower than 7,000 feet elevation) will contribute 20% (30,600 acres) of forested lands.~~

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<sup>§</sup> - Amended 5/23/01

~~Forested lands within TRPA designated urban areas are excluded in the calculation for threshold attainment. Areas of the montane zone within 1,250 feet of urban areas may be included in the calculation for threshold attainment if the area is actively being managed for late seral and old growth conditions and has been mapped by TRPA. A maximum value of 40% of the lands within 1,250 feet of urban areas may be included in the calculation.~~

~~Because of these restrictions the following percentage of each elevation zone must be attained to achieve this threshold:~~

- ~~• 61% of the Subalpine zone must be in a late seral or old growth condition;~~
- ~~• 60% of the Upper Montane zone must be in a late seral or old growth condition;~~
- ~~• 48% of the Montane zone must be in a late seral or old growth condition;~~

### **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:~~

<u>Species</u>	<u>Number of Population sites</u>
<del>Carex paucifructus</del>	<del>1</del>
<del>Lewisia pygmaea longipetala</del>	<del>2</del>
<del>Draba asterophora v. macrocarpa</del>	<del>2</del>
<del>Draba asterophora v. asterophora</del>	<del>5</del>
<del>Rorippa subumbellata</del>	<del>26</del>

~~The environmental thresholds for vegetation, together with other environmental values and standards, were used to help distinguish the important issues pertaining to the preservation of vegetation in the Lake Tahoe Basin. As a consequence, three areas of general policy direction were developed to provide for the preservation, management, and protection of the Basin's plant resources. Implementation of the following goals and policies is expected to offer the immediate attainment of several thresholds. The attainment of thresholds for plant diversity is expected to be an ongoing program with no obvious improvement in plant diversity for at least ten years.~~

### **GOAL #VEG-1:**

#### **PROVIDE FOR A WIDE MIX AND INCREASED DIVERSITY OF PLANT COMMUNITIES IN THE TAHOE BASIN.**

The natural succession of vegetation in the Region~~Basin~~ has been stifled over the past 130~~100~~ years. Following clear cut activities in the late 1800s, the forest vegetation has been managed under fire exclusion policies. Lack of fires and other natural perturbations has created an

unfavorable situation with regard to forest health and diversity. Extensive and often dense stands of mature aged conifers now dominate the forest vegetation. Other plant communities that require openings in the forest canopy are relatively scarce. The resulting situation is one of low plant diversity, poor age class structure, ~~and~~ vulnerability to disease and pest organisms and increased risk of catastrophic wildfire. The preservation of the Region's vegetation and the achievement of environmental thresholds require programs that preserve or protect certain plant communities and species while permitting increased opportunities to manage the vegetation for diversity, fire prevention, and health. Attainment of ~~these~~ thresholds requires an on-going program involving harvest, revegetation, and vegetation manipulation.

## POLICIES

### **VEG-1.1 FOREST MANAGEMENT PRACTICES SHALL BE ALLOWED WHEN CONSISTENT WITH ACCEPTABLE STRATEGIES FOR THE MAINTENANCE OF FOREST HEALTH AND DIVERSITY, PREVENTION OF FIRE, PROTECTION OF WATER QUALITY, AND ENHANCEMENT OF WILDLIFE HABITATS.**

Forest management practices that may include both timber harvest and prescribed burning are acceptable strategies for restoring and maintaining the biological health of the forest ecosystem. This policy would also permit practices necessary to reduce the risk of wildfires.

### **VEG-1.2. OPPORTUNITIES TO IMPROVE THE AGE STRUCTURE OF THE PINE AND FIR PLANT COMMUNITIES SHALL BE ENCOURAGED WHEN CONSISTENT WITH OTHER ENVIRONMENTAL CONSIDERATIONS.**

The conifer forests of the Tahoe ~~Region~~ Basin are mostly even-aged. This has serious implications related to plant diversity and forest health. Opportunities to increase the ratio of young trees to mature trees should be encouraged.

### **VEG-1.3. FOREST PATTERN SHALL BE MANIPULATED WHENEVER APPROPRIATE AS GUIDED BY THE SIZE AND DISTRIBUTION OF FOREST OPENINGS.**

Extensive stands of even-aged timber predominate in the Tahoe ~~Region~~ Basin. Openings in these stands are uncommon. The forest pattern and resultant plant diversity can be improved through forest management practices that open-up the forest canopy to increase the proportion of shrub and meadow communities.

### **VEG-1.4. EDGE ZONES BETWEEN ADJACENT PLANT COMMUNITIES ~~SHALL~~ WILL BE MAXIMIZED AND TREATED FOR THEIR SPECIAL VALUE RELATIVE TO PLANT DIVERSITY AND WILDLIFE HABITAT.**

The mixing of two plant communities creates a zone of high plant diversity and provides an effective screen between adjacent land uses. Besides the benefit of increased plant diversity, edge zones provide critical habitats to many species of wildlife.

### **VEG-1.5. PERMANENT DISTURBANCE OR UNNECESSARY ALTERATION OF NATURAL VEGETATION ASSOCIATED WITH DEVELOPMENT ACTIVITIES SHALL NOT EXCEED THE APPROVED BOUNDARIES [OR FOOTPRINTS] OF THE BUILDING, DRIVEWAY, OR PARKING STRUCTURES, OR THAT WHICH IS NECESSARY TO REDUCE THE RISK OF FIRE OR EROSION.**

Protecting the existing vegetation around a construction site will aid in preventing soil compaction or disturbance due to equipment and human trampling. It will also reduce the need for revegetation and landscaping.

**VEG-1.6. THE MANAGEMENT OF VEGETATION IN URBAN AREAS SHALL BE IN ACCORDANCE WITH THE POLICIES OF THIS PLAN AND SHALL INCLUDE PROVISIONS THAT ALLOW FOR THE PERPETUATION OF THE NATURAL-APPEARING LANDSCAPE.**

The beauty of the Tahoe Region depends, in part, on the successful "blending" of the natural environment with the built environment. Vegetation in urban areas ~~shall~~ will be preserved to the maximum extent feasible so as to avoid sharp contrasts between the urban and non-urban portions of the RegionBasin. Conditions of project approval for all grading, harvesting, landscaping, and other project proposals ~~shall~~ will be required, as necessary, to implement the intent of this policy.

**VEG-1.7. MAINTAIN FOREST LITTER FOR ITS EROSION CONTROL AND NUTRIENT CYCLING FUNCTIONS IN NAUTRALLY-VEGETATED AREAS EXCEPT TO THE EXTENT IT POSES A FIRE HAZARD~~DISTURBANCE OR REMOVAL OF FOREST LITTER SHOULD BE AVOIDED TO PROMOTE THE NATURAL CATCHMENT OF NUTRIENTS.~~**

The fungi associated with decaying plant material act as nutrient "sinks" by picking up plant nutrients that would otherwise be lost to adjacent water bodies during spring runoff. ~~A public awareness program will be implemented to inform local landowners of the value of needle litter.~~

**VEG-1.8. PROMOTE USE OF NATIVE, WATER-EFFICIENT, NUTRIENT-EFFICIENT, FIRE-RESISTANT AND NON-INVASIVE VEGETATION IN URBAN AREAS AND DURING REVEGETATION OF DISTURBED SITES ~~SHALL REQUIRE THE USE OF SPECIES APPROVED BY THE AGENCY. TRPA SHALL PREPARE SPECIFIC POLICIES DESIGNED TO AVOID THE UNNECESSARY USE OF LANDSCAPING WHICH REQUIRES LONG-TERM IRRIGATION AND FERTILIZER USE.~~**

Native plants are adapted to the special altitude, climate, and soil characteristics of the RegionBasin. Use of non-native species often requires constant care and artificial amounts of water and fertilizer. Revegetation of disturbed sites will require the use of native plants whenever practical, but other approved species also may be appropriate. ~~A list of approved species will be prepared.~~

**VEG-1.9. ALL PROPOSED ACTIONS SHALL CONSIDER THE CUMULATIVE IMPACT OF VEGETATION REMOVAL WITH RESPECT TO PLANT DIVERSITY AND ABUNDANCE, WILDLIFE HABITAT AND MOVEMENT, SOIL PRODUCTIVITY AND STABILITY, AND WATER QUALITY AND QUANTITY.**

The piecemeal and incremental removal of vegetation may have significant cumulative impacts on the natural resource values of the RegionBasin. Project review should consider both the direct and indirect impacts of all development.

**VEG-1.10. WORK TO ERADICATE AND PREVENT THE SPREAD OF NON-NATIVE INVASIVE SPECIES.**

**GOAL #VEG-2**

**PROVIDE FOR THE MAINTENANCE AND RESTORATION OF SUCH UNIQUE ECO-SYSTEMS AS WETLANDS, MEADOWS, AND OTHER RIPARIAN VEGETATION.**

Riparian vegetation is a critical component of the Tahoe Region's natural vegetation. These communities serve a variety of useful functions especially related to water quality and quantity. Riparian plant communities also significantly contribute to plant and animal diversity, recreation, and scenic quality. Strategies to protect these qualities are developed within the framework of

adopted environmental thresholds for soils, vegetation, and wildlife.

## POLICIES

**VEG-2.1. RIPARIAN PLANT COMMUNITIES SHALL BE MANAGED FOR THE BENEFICIAL USES OF PASSIVE RECREATION, GROUNDWATER RECHARGE, AND NUTRIENT CATCHMENT, AND AS WILDLIFE HABITATS.**

The preservation of riparian zones in their natural states should be emphasized over more intensive uses. These plant communities serve a variety of natural functions that benefit the scenic, wildlife, and water resources of the Tahoe Basin.

**VEG-2.2. RIPARIAN PLANT COMMUNITIES SHALL BE RESTORED OR EXPANDED WHENEVER AND WHEREVER POSSIBLE.**

Riparian plant communities are the single most important habitat for wildlife in the Basin and provide the most cost-effective means of water cleansing. Existing riparian plant communities shall be maintained in undisturbed conditions to promote such beneficial functions. The schedule for restoration, as required by the thresholds, will correspond to the schedule for restoring stream environment zones outlined in the [Environmental Capital Improvement Program](#).

## **GOAL #VEG-3**

**CONSERVE THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES AND UNCOMMON PLANT COMMUNITIES OF THE LAKE TAHOE [REGION BASIN](#).**

A few examples of rare plants and uncommon plant communities can be found in the Lake Tahoe [Region Basin](#). These resources are a real part of the [Region's Basin's](#) natural endowment and need to be protected from indiscriminant loss or destruction. Otherwise, the danger of extinction can become a reality. Direction for preservation is provided by adopted environmental thresholds.

## POLICIES

**VEG-3.1. UNCOMMON PLANT COMMUNITIES SHALL BE IDENTIFIED AND PROTECTED FOR THEIR NATURAL VALUES.**

Rare examples of Lake Tahoe's natural vegetation should be preserved for their ecological and local significance. Indiscriminate loss of uncommon plant communities shall be avoided. This policy applies specifically to those plant communities for which thresholds were adopted, but also may be extended to other communities later identified as significant by TRPA ~~or local resource agencies~~. Attainment of the vegetation thresholds and implementation of this policy require close cooperation between this Agency and other agencies responsible for the protection and management of the [Region's Basin's](#) natural resources.

**VEG-3.2. THE POPULATION SITES AND CRITICAL HABITAT OF ALL SENSITIVE PLANT SPECIES IN THE LAKE TAHOE [REGION BASIN](#) SHALL BE IDENTIFIED AND PRESERVED.**

The Tahoe [Region Basin](#) provides a favorable habitat for a few species of exceptionally scarce plants. Without proper protection, these sensitive plants may become extinct. ~~Thresholds for vegetation specifically refer to five sensitive plant species~~. Monitoring and evaluation programs will be necessary, in cooperation with the USFS and other interested agencies and individuals, to implement this policy.



**VEG-3.3. THE CONSERVATION STRATEGY FOR TAHOE YELLOW CRESS IN THE LAKE TAHOE REGION~~BASIN~~ SHALL FOSTER STEWARDSHIP FOR THIS SPECIES.<sup>§</sup>**

- (1) Providing education to landowners;
- (2) Providing technical and planning assistance to landowners with Tahoe Yellow Cress to develop stewardship plans; and
- (3) Streamlining the Tahoe Yellow Cress project review process, while protecting the species and its habitat.

**GOAL #~~VEG-4~~<sup>§§</sup>**

**PROVIDE FOR AND INCREASE THE AMOUNT OF LATE SERAL/OLD GROWTH STANDS WITHIN THE LAKE TAHOE REGION~~BASIN~~.**

Late seral/old growth forest stands are rare in the Region~~basin~~, but provide high quality habitat for many wildlife and plant species. In the year 2000, it was estimated that less than 5% of the forest stands could be conservatively classified as late seral/old growth. The desired future condition for forested lands within the basin is that the forests should reflect the pre-settlement conditions to the degree possible. The best available estimate of the amount of late seral/old growth forest in pre-settlement times is 55% of the total forest. With the existing state of the basin's forest dominated by mature, even aged stands, active management is necessary to increase the amount of late seral/old growth forest.

**POLICIES**

**VEG-4.1. STANDS EXHIBITING LATE SERAL/OLD GROWTH CHARACTERISTICS SHALL BE MANAGED TO ALLOW THESE STANDS TO SUSTAIN THESE CONDITIONS.**

The existing forest stands that exhibit late seral/old growth characteristics are rare in the basin and should be protected. These stands act as a refuge for late seral/old growth species and will be critical for future restoration of additional late seral/old growth stands.

**VEG-4.2. STANDS NOT EXHIBITING LATE SERAL/OLD GROWTH CHARACTERISTICS SHALL BE MANAGED TO PROGRESS TOWARDS LATE SERAL/OLD GROWTH.**

Forest stands that do not currently exhibit late seral/old growth characteristics, and that can reasonably be expected to produce late seral/old growth characteristics, should be managed to move the stand towards increasing late seral/old growth characteristics. Active management is the primary vehicle for producing the desired future conditions. Management may entail thinning of smaller trees, alteration of the species composition, and other ecosystem manipulations.

**VEG-4.3. PRESCRIPTIONS FOR TREATING THESE STANDS WILL BE PREPARED ON A STAND-BY-STAND BASIS. EACH PRESCRIPTION WILL DEMONSTRATE/EXPLAIN HOW IT WILL PROMOTE LATE SERAL OR OLD GROWTH CHARACTERISTICS PRIOR TO APPLYING ANY MECHANICAL TREATMENT OR PRESCRIBED FIRE. STAND-SPECIFIC PRESCRIPTIONS WILL BE DEVELOPED USING THE BEST AVAILABLE FOREST AND ECOSYSTEM MANAGEMENT SCIENCE, STRATEGIES, STANDARDS AND GUIDELINES.**

Late seral/old growth forest management applies best available scientific information to

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~~§-Amended 9/25/02~~

~~§§-Amended 5/23/01~~

identify valued characteristics of late seral/old growth forests, and to manage for these characteristics. Site capabilities, habitat requirements of old growth-associated wildlife species, forest science including silviculture, and available information on general and site-specific pre-settlement forest structures and patterns provide guidance to site-specific management. The *Sierra Nevada Ecosystem Project Report* (2000), the *Lake Tahoe Watershed Assessment* (December 2000), and the Sierra Nevada Forest Plan Amendment (January 2001), ~~apply scientific and forest management literature to~~ identify important late seral/old growth forest characteristics. These documents also provide examples of management strategies, standards and guidelines for promoting these characteristics.

**VEG-4.4. RETAIN LARGE TREES AS A PRINCIPAL COMPONENT OF LATE SERAL/OLD GROWTH ECOSYSTEMS.**

Large trees are one of the defining components of late seral/old growth ecosystems. Without large trees present a forest stand cannot be classified as late seral/old growth. Many of the other components of late seral/old growth ecosystems are derived from large trees, including snags, down woody material, and soil conditions. The retention of large trees is a critical management strategy to achieve the late seral/old growth threshold.

**VEG-4.5. RETAIN TREES OF MEDIUM AND SMALL SIZE SUFFICIENT TO PROVIDE FOR LARGE TREE RECRUITMENT OVER TIME, AND TO PROVIDE STRUCTURAL DIVERSITY. PREFERABLY, THESE TREES WILL BE THE MOST VIGOROUS IN THE STAND USING ONE OF THE STANDARD TREE CLASSIFICATIONS. IN ADDITION, SPECIES COMPOSITION SHOULD BE KEY CONSIDERATION IN TREE RETENTION.**

The forests of the Lake Tahoe Region are largely even-aged as a result of forest regeneration after logging followed discovery of the Comstock Lode. The large trees of today have finite life spans, and must eventually be replaced. Additionally, appropriate diversity of small, medium and large trees provides vertical structural diversity for wildlife.

Tree species composition is an important characteristic of forests, affecting wildlife uses and forest health. Promoting and perpetuating late seral/old growth forest conditions requires the future provision for a desired species composition, now and in the future. Prior to settlement, natural events provided a well-adapted species mix. Today, forest planning for future conditions is needed because humans have changed the balance of forces ~~operating~~ in the forest that ~~would~~ produce the desired future conditions s ~~for the forest~~.

**VEG-4.6. USE OF PRESCRIBED FIRE IS PREFERRED TO REDUCE FIRE HAZARD AND PERPETUATE DESIRED NATURAL ECOLOGICAL PROCESSES. MANUAL AND MECHANICAL TREATMENT MAY BE USED TO REDUCE FOREST FUEL LEVELS AND TO IMPROVE LATE SERAL FOREST CONDITIONS IN ADDITION TO, OR IN LIEU OF, PRESCRIBED FIRE.**

Fire is an effective and efficient tool to reduce forest fuels and thus fire risk. Additionally, fire is a natural ecological process that historically shaped the distribution and structure of vegetation and wildlife communities in the Sierra Nevada and Lake Tahoe Region basin. Use of prescribed fire or mechanical treatment to control and reduce forest fuel buildup will benefit forested communities by reducing the potential for catastrophic stand replacing fire events.

## **GOAL #[VEG-5](#)**

**THE APPROPRIATE STOCKING LEVEL AND DISTRIBUTION OF SNAGS AND COARSE WOODY DEBRIS SHALL BE RETAINED IN THE REGION'S FORESTS TO PROVIDE HABITAT FOR ORGANISMS THAT DEPEND ON SUCH FEATURES AND TO PERPETUATE NATURAL ECOLOGICAL PROCESSES.**

Relatively large snags (standing dead trees) and large downed woody debris (decaying logs on the forest floor) provide essential habitat features for a wide diversity of forest dwelling organisms. Decaying snags and coarse woody debris provide soil amendments and recycle nutrients necessary to perpetuate improved forest health. Upland sources of dead wood contribute to slope stability and soil surface stability, which prevent soil erosion and control storm surface runoff. In stream environment zones, dead wood plays a major role in the development of streambed morphology and thus the creation and maintenance of required aquatic and riparian habitat.

### **POLICIES**

**[VEG-5.1.](#) ALLOW FOR A SUFFICIENT NUMBER AND AN APPROPRIATE DISTRIBUTION OF SNAGS THROUGHOUT THE REGION'S FORESTS TO PROVIDE AND MAINTAIN HABITAT FOR SPECIES DEPENDENT ON SUCH FEATURES.**

Tree mortality is a natural process in properly functioning forest ecosystems. This process is stochastic, can take several decades to occur in nature, and is not easily mimicked by humans. Retaining necessary habitat features that benefit a wide diversity of species is economically appropriate because it will circumvent the need for costly and intrusive habitat management programs, and will aid in achieving wildlife threshold goals.

**[VEG-5.2.](#) ALLOW FOR AN APPROPRIATE AMOUNT, LEVEL AND DISTRIBUTION OF COARSE WOODY DEBRIS (DOWNED WOODY MATERIAL) THROUGHOUT THE REGION'S FORESTS TO MAINTAIN BIOLOGICAL INTEGRITY, TO STABILIZE SOIL, AND TO AFFORD A REASONABLE LEVEL OF FIRE SAFETY.**

Large downed woody debris (fallen logs) in various stages of decay contribute to structural diversity of forest ecosystems, which is required by a wide variety of terrestrial, semi-terrestrial and aquatic species. Additionally, as logs decompose, organic matter is slowly incorporated into the soil, which replenishes the productive capability of the soil and perpetuates a functioning forest ecosystem.

## **GOAL VEG-6**

**TRPA SHALL WORK WITH FIRE PROTECTION AGENCIES IN THE REGION TO REDUCE THE RISK OF CATASTROPHIC WILDFIRE.**

The prevention of catastrophic wildfire requires active forest management and coordination with fire protection agencies in the Region.

**VEG 6.1. PROMOTE HAZARDOUS FUELS REDUCTION IN ORDER TO REDUCE THE INTENSITY OF NATURALLY OCCURRING WILDFIRE AND PREVENT CATASTROPHIC WILDFIRE.**

**VEG-6.2. PROMOTE CREATION OF DEFENSIBLE SPACE USING FOREST MANAGEMENT PRACTICES THAT ARE CONSISTENT WITH STATE DEFENSIBLE SPACE CODES AND COMMUNITY WILDFIRE PROTECTION PLANS.**

VEG-6 Implementation Measure

- Modify Code provisions which protect native vegetation to allow for the creation of defensible space. In cases where old growth trees are threatened during defensible space work, allow limbing as an alternative.

## WILDLIFE



The Tahoe ~~Region~~Basin provides a habitat for many different species of wildlife. However, the existing habitat mix is not generally favorable for supporting large numbers of many different species. This situation ~~has developed in recent years~~ due to urban expansion ~~and forest modification activities since the late 1800's~~and policies that prevent natural forest perturbations (e.g., fire). Considerable potential exists to improve, coincidentally, both wildlife habitat and forest health and diversity. Thresholds adopted by TRPA for wildlife are listed below:The Compact recognizes "The Region exhibits unique environmental and ecological values which are irreplaceable." The Wildlife Subelement seeks to minimize the effects of urbanization on wildlife resources by focusing on maintaining suitable habitats and habitat diversity.

### Special Interest Species

#### NUMERICAL STANDARD

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

<del>Species of interest</del>	<del>Population sites</del>	<del>Disturbance zone (mi.)</del>	<del>Influence zone (mi.)</del>
<del>Goshawk</del>	<del>12</del>	<del>0.50</del>	<del>3.50</del>
<del>Osprey</del>	<del>4</del>	<del>0.25</del>	<del>0.60</del>
<del>Bald Eagle (Winter)</del>	<del>2</del>	<del>Mapped areas</del>	<del>Mapped areas</del>
<del>Bald Eagle (Nesting)</del>	<del>1</del>	<del>0.50</del>	<del>Variable</del>
<del>Golden Eagle</del>	<del>4</del>	<del>0.25</del>	<del>9.0</del>
<del>Peregrine</del>	<del>2</del>	<del>0.25</del>	<del>7.6</del>
<del>Waterfowl</del>	<del>18</del>	<del>Mapped areas</del>	<del>Mapped areas</del>
<del>Deer</del>	<del>-</del>	<del>Meadows</del>	<del>Mapped areas</del>

### 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.~~

~~Goals and policies for the management of wildlife in the Basin were derived from the wildlife thresholds and from other issues of local concern. It is expected that the thresholds for special interest species will be attained immediately with implementation of the policies presented herein, but improvement and expansion of riparian plant associations is expected to be a long-term goal with achievement of the threshold not expected for up to 20 years.~~

## GOAL WL-#1

**MAINTAIN SUITABLE HABITATS FOR ALL INDIGENOUS SPECIES OF WILDLIFE WITHOUT PREFERENCE TO GAME OR NON-GAME SPECIES THROUGH MAINTENANCE AND IMPROVEMENT OF HABITAT DIVERSITY.**

~~It is difficult to monitor wildlife abundance and diversity. With only a few exceptions, wildlife trend data are not available for the Basin. The best indication of wildlife trends can be implied from changes in the habitat (size, location, quantity, quality). The Emphasis of wildlife management in the Region should Basin will be on maintaining and improving the functional and biological characteristics of the ecosystem to support the needs of wildlife maintenance of a diverse habitat base which meets environmental thresholds.~~

## POLICIES

### **WL-1.1. ALL PROPOSED ACTIONS SHALL CONSIDER IMPACTS TO WILDLIFE.**

The impacts of development to wildlife can often be easily mitigated when wildlife are considered early in the project review process. Considerations should be given to the movement, water, food, and cover needs of wildlife.

### **WL-1.2. RIPARIAN VEGETATION SHALL BE PROTECTED AND MANAGED FOR WILDLIFE.**

Riparian vegetation is the single most important habitat for wildlife in the [Region Basin](#). Riparian plant communities need to be preserved to help protect the wildlife resource and to attain environmental thresholds for vegetation, wildlife, and soils. This policy requires an on-going program of management and regulated use of riparian vegetation.

### **WL-1.3. NON-NATIVE WILDLIFE AND EXOTIC SPECIES SHALL BE CONTROLLED AND RELEASE OF SUCH ANIMALS INTO THE WILD ~~SHALL BE PROHIBITED~~ IS FORBIDDEN.**

Indigenous wildlife species have adapted to the special habitat characteristics of the [Region Basin](#). Non-native species can "invade" the niches of local wildlife and unfairly compete for scarce resources needed for survival. Introduction of disease and population control of exotic species are other issues of concern.

### **WL-1.4. DOMESTIC ANIMALS AND PETS SHALL BE CONTROLLED AND APPROPRIATELY CONTAINED.**

Domestic animals impact native wildlife species through harassment and physical harm. A combination of domestic animal control and a habitat maintenance program will provide for the long-term health of local wild life populations.

## **GOAL WL-#2**

### **PRESERVE, ENHANCE, AND, WHERE FEASIBLE, EXPAND HABITATS ESSENTIAL FOR THREATENED, ENDANGERED, RARE, OR SENSITIVE SPECIES FOUND IN THE [REGION BASIN](#).**

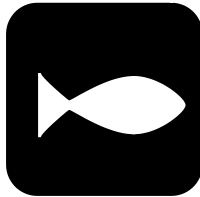
Animals that are particularly scarce or vulnerable to extirpation require special management emphasis. Management usually includes programs to protect or enhance critical habitats. Other strategies would include buffering critical habitats from conflicting land uses and activities. Strategies are developed within the framework of adopted environmental thresholds.

## POLICIES

### **WL-2.1. ENDANGERED, THREATENED, RARE, AND SPECIAL INTEREST SPECIES SHALL BE PROTECTED AND BUFFERED AGAINST CONFLICTING LAND USES.**

Species in the above categories need extra protection to ensure their longevity in the [Region Basin](#). Critical habitat sites of these animals need to be protected and buffered from disturbing land uses. This will be accomplished by regulating uses within the disturbance and influence zones of ~~seven~~ species for which thresholds have been adopted.

## **FISHERIES**



A popular recreational activity in the Tahoe ~~Region~~Basin is fishing. Some of the larger streams and lakes ~~on the California side~~ provide excellent opportunities to catch rainbow, brown, cutthroat, and brook trout. The lakes offer a wider choice of fishing opportunities. The entire fishery is highly sensitive to habitat disturbance. Maintenance of the fishery must focus on preserving prime fish habitats in the lakes and streams and ensuring access to spawning and feeding habitats. ~~The strategies for accomplishing these goals are built into the framework of environmental thresholds. The fishery thresholds are listed below:~~

### **Stream Habitat**

#### **NUMERICAL STANDARD**

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

### **Instream Flows**

#### **MANAGEMENT STANDARD**

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

### **POLICY STATEMENT**

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

### **Lahontan Cutthroat Trout**

#### **POLICY STATEMENT**

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

### **Lake Habitat**

#### **MANAGEMENT STANDARD**

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

~~Implementation of the goals and policies for the management of the Tahoe fishery will provide for the eventual achievement of the fishery thresholds. Thresholds for instream flows and Lahontan cutthroat trout are expected to be achieved within the first ten years of plan implementation. Attainment of the stream and Lake thresholds will be incrementally achieved over a 20-year period.~~



## **GOAL FI-#1**

### **IMPROVE AQUATIC HABITAT ESSENTIAL FOR THE GROWTH, REPRODUCTION, AND PERPETUATION OF EXISTING AND THREATENED FISH RESOURCES IN THE LAKE TAHOE REGIONBASIN.**

The fishery habitat in the Tahoe Region~~Basin~~ has experienced significant alteration and degradation since the late 1800's. Much like the wildlife resource, management emphasis should~~will~~ be on the maintenance of essential habitats. For lakes, management focus should~~will~~ be on nearshore substrate quality as it pertains to feeding, cover, and spawning habitats. Stream management should~~will~~ emphasize instream flow needs and maintenance of spawning habitat. Policies to achieve this goal are consistent with the adopted environmental thresholds.

#### **POLICIES**

##### **FI-1.1. DEVELOPMENT PROPOSALS AFFECTING STREAMS, LAKES AND ADJACENT LANDS SHALL EVALUATE IMPACTS TO THE FISHERY.**

The population potential of the Tahoe fishery largely depends on the availability and quantity of suitable spawning and feeding habitats. Past practices have significantly damaged the fishery resource through habitat modification or destruction. Future detrimental impacts can be avoided and the fishery improved if the resource is given due consideration in water related developments. All proposals that ~~potentially could~~ may impact the fishery shall~~will~~ be assessed pursuant to consultation with fishery biologists of the Nevada Department of Wildlife, California Department of Fish and Game, and or the U.S. Fish and Wildlife Service.

##### **FI-1.2. UNNATURAL BLOCKAGES AND OTHER IMPEDIMENTS TO FISH MOVEMENT SHALL~~WILL~~ BE PROHIBITED AND REMOVED WHEREVER APPROPRIATE.**

Many different species of fish spawn in the Region's ~~Basin's~~ tributaries. This often requires movement into the streams from the lakes. Unnatural blockages (e.g., bridge culverts, man-made dams, marinas) can prevent the upstream migration and thereby seriously impact the population potential of certain fishes. Remedial measures will be accomplished in tandem with conditions of project approval, voluntary cooperation, and ~~capital programming~~ restoration projects as part of remedial water quality programs.

##### **FI-1.3. AN INSTREAM MAINTENANCE PROGRAM SHOULD BE DEVELOPED AND IMPLEMENTED.**

A variety of problems can build up over time in stream channels. These problems require ~~that need~~ annual remedial attention before the situation becomes too burdensome to deal with in a timely and cost-efficient manner. Instream monitoring could include an inventory and removal program for undesirable debris build-up in the stream channel.

##### **FI-1.4. STANDARDS FOR BOATING ACTIVITY SHALL BE ESTABLISHED FOR THE SHALLOW ZONE OF LAKE TAHOE.**

There are numerous uses associated with the shorezone of Lake Tahoe. However, some of those activities do not depend on the exclusive use of the nearshore. Boating activity in the nearshore should be permitted only to the extent that it is compatible with shorezone-dependent uses such as swimming and fishing. To minimize impacts to these and other shorezone users, and to reduce the risk of accidents, excessive boat speeds and motor noise should be avoided in the nearshore. Strict enforcement of existing regulations for boat speed and noise close to shore (~~Cal. Harbors and Navigation Code~~



~~655.2 and Nevada Revised Statutes 488.245) and noise (TRPA noise thresholds)~~ will also benefit the fishery which can be affected by the noise and associated activities of boats. Operating standards for boating should be in accordance with U.S. Coast Guard regulations. Specific areas of habitat may require additional regulations to help prevent unacceptable disruption of critical life cycle activities such as spawning.

**FI-1.5. HABITAT IMPROVEMENT PROJECTS ARE ACCEPTABLE PRACTICES IN STREAMS AND LAKES.**

Considerable potential exists to improve or expand the fishery habitat of lakes and streams in the [RegionBasin](#). Any improvements are likely to solicit a corresponding improvement to the local fishery and should be encouraged.

**FI-1.6. INSTREAM FLOWS SHALL BE REGULATED, WHEN FEASIBLE, TO MAINTAIN FISHERY VALUES.**

The maintenance of a minimal level of water throughout the year in streams is necessary to protect instream fishery values. Diversions which artificially lower stream flows beyond a level capable of supporting fish or their food organisms is not desirable and should be avoided. This policy would only apply to those creeks with artificial diversions and be accomplished, in part, with implementation of Policy [FI-1.7](#).

**FI-1.7. EXISTING POINTS OF WATER DIVERSION FROM STREAMS SHALL BE TRANSFERRED TO ~~THE~~ LAKES, WHENEVER FEASIBLE, TO HELP PROTECT INSTREAM BENEFICIAL USES.**

Many of the [Region'sBasin](#) tributaries are subject to extreme low flows in late summer. Withdrawals from low flow streams aggravate the problem and may even dry out some creeks. A more constant and dependable supply of water would be available from ~~the~~ [Lakes](#) and such transfers should be encouraged through the use of incentives and cooperation with state agencies responsible for regulating water use.

**FI-1.8. SUPPORT, IN RESPONSE TO JUSTIFIABLE EVIDENCE, STATE AND FEDERAL EFFORTS TO REINTRODUCE LAHONTAN CUTTHROAT TROUT IN APPROPRIATE REMOTE LOCATIONS.**

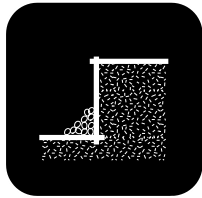
The Lahontan cutthroat trout is, in all probability, extinct in the [RegionBasin](#). Any efforts to reintroduce this particular strain of cutthroat should be encouraged. Reintroducing Lahontan Cutthroat Trout to Lake Tahoe, itself appears to be infeasible. However, it appears that it may be possible to reintroduce the Lahontan Cutthroat Trout to specific isolated lakes or streams.

**FI-1.9. THE WATER LEVEL IN LAKE TAHOE SHOULD BE CONTROLLED TO REFLECT CONDITIONS THAT MIGHT BE EXPECTED WITH SEASONAL WEATHER AND WATER RUNOFF PATTERNS.**

Vegetation, fish, wildlife, and other organisms are all affected by sporadic and quickly changing water levels. In addition, unnatural high levels during winter artificially create erosion problems along the shorezone. This policy ~~would~~ encourages [the](#) development of a planned program of water release out of Tahoe to minimize these and other environmental problems.

**FI-1.10 PROHIBIT THE RELEASE OF NON-NATIVE AQUATIC INVASIVE SPECIES IN THE REGION IN COOPERATION WITH PUBLIC AND PRIVATE ENTITIES. CONTROL OR ERADICATE EXISTING POLULATIONS OF THESE SPECIES AND TAKE MEASURES TO PREVENT ACCIDENTAL OR INTENTIONAL RELEASE OF SUCH SPECIES.**

## SOILS



~~The soil resource plays an important role related to all aspects of the physical and biological environment. Soil provides a growing medium to plants, which in turn helps bind and create new soils; the chain of events is complicated and extensive. The value of the soil resource in the Basin is measured by its ability to support vegetation and its contribution to the nutrient and sediment loads entering the streams and lakes. In addition to serving as a growth medium for plants, soil provides numerous chemical, physical, and biological functions that are critical to sustaining healthy ecosystems and maintaining environmental quality, including water quality. Accordingly, the Compact identifies the need to establish and adopt environmental standards for soil conservation. The Soils Subelement establishes Goals and Policies intended to maintain and enhance the soil resource environmental thresholds. Two environmental thresholds are the basis for developing strategies for protection of the soil resource:~~

### Impervious Cover

#### *MANAGEMENT STANDARD*

*Impervious cover shall comply with the Land Capability Classification of the Lake Tahoe Basin, California-Nevada, A Guide For Planning, Bailey, 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.*

~~The thresholds for soil share goals are common to the Water Quality and Vegetation Subelements. Attainment of the soil thresholds is expected to be accomplished in harmony with the goals and policies of those Subelements.~~

## GOAL #S-1

### **MINIMIZE SOIL EROSION AND THE LOSS OF SOIL PRODUCTIVITY.**

Protection of the Region's soil is important for maintaining soil productivity and vegetative cover and preventing excessive sediment and nutrient transport to the streams and lakes. Soil protection is especially critical in the Region Basin where the soils are characteristically shallow and highly susceptible to erosion. Strategies for soil conservation are consistent with thresholds established for soil, water, and vegetation.

### **POLICIES**

#### **S-1.1. ALLOWABLE IMPERVIOUS LAND COVERAGE SHALL BE CONSISTENT WITH THE THRESHOLD FOR IMPERVIOUS LAND COVERAGE.**

The Land Use Subelement (see Goal #4) establishes policies which limit impervious land coverage consistent with the impervious land coverage limits set forth in the "Land-Capability Classification of the Lake Tahoe Basin, California-Nevada, a Guide for Planning", Bailey, 1974.

**S-1.2. NO NEW LAND COVERAGE OR OTHER PERMANENT DISTURBANCE SHALL BE PERMITTED IN LAND CAPABILITY DISTRICTS 1-3 EXCEPT FOR THOSE USES AS NOTED IN A, B, AND C BELOW:**

- A. Single family dwellings may be permitted in land capability districts 1-3 when reviewed and approved pursuant to the individual parcel evaluation system (IPES). ~~(See Goal #1, Policy 2, Development and Implementation Subelement).~~
- B. Public outdoor recreation facilities may be permitted in land capability districts 1-3 if:
- (1) The project is a necessary part of a public agency's long range plans for public outdoor recreation;
  - (2) The project is consistent with the recreation element of the Regional Plan;
  - (3) The project, by its very nature must be sited in land capability districts 1-3;
  - (4) There is no feasible alternative which avoids or reduces the extent of encroachment in land capability districts 1-3;
  - (5) The impacts are fully mitigated; and
  - (6) Land capability districts 1-3 lands are restored in the amount of 1.5 times the area of land capability districts 1-3 which is disturbed or developed beyond that permitted by the Bailey coefficients.
- (7) Alternatively, because of their public and environmental benefits, special provisions for non-motorized public trails may be allowed and defined by ordinances.

To the fullest extent possible, recreation facilities must be sited outside of Land Capability Districts 1-3. However, the six-part test established by the policy allows encroachment of these lands where such encroachment is essential for public outdoor recreation, and precautions are taken to ensure that such lands are protected to the fullest extent possible. The restoration requirements of this policy can be accomplished on-site or off-site, and shall be in lieu of any coverage transfer or coverage mitigation provisions else-where in this Plan.

- C. Public service facilities are permissible uses in land capability districts 1-3 if:
- (1) The project is necessary for public health, safety or environmental protection;
  - (2) There is no reasonable alternative, which avoids or reduces the extent of encroachment in land capability districts 1-3;
  - (3) The impacts are fully mitigated; and
  - (4) Land capability districts 1-3 lands are restored in the amount of 1.5 times the area of land capability districts 1-3 which is disturbed or developed beyond that permitted by the Bailey co-efficients.
- (5) Alternatively, because of their public and environmental benefits, special provisions for non-motorized public trails may be allowed and defined by ordinances.

Development within Land Capability Districts 1-3 is not consistent with the goal to manage high hazard lands for their natural qualities and shall generally be prohibited except under extraordinary circumstances involving public works. Each circumstance shall be evaluated based on the above four-point test of this policy. The restoration requirements of this policy can be accomplished on-site or off-site, and shall be in lieu of any coverage transfer or coverage mitigation provisions elsewhere in this Plan.

**S-1.3. THE LAND CAPABILITY MAP MAY BE REVIEWED AND UPDATED.**

TRPA shall provide for a procedure to allow land capability challenges for reclassification of incorrectly mapped areas.

**S-1.4. TRPA SHALL DEVELOP SPECIFIC POLICIES TO LIMIT LAND DISTURBANCE AND REDUCE SOIL AND WATER QUALITY IMPACTS OF DISTURBED AREAS.**

Like impervious surfaces, disturbed and compacted areas result in increased soil loss and surface runoff. The Regional Plan sets policies designed to reduce existing surface disturbance and avoid new disturbance ~~(see Water Quality Subelement, Goal #1, Policies 2 and 3; Vegetation Subelement, Goal #1, Policy 5)~~. TRPA shall set guidelines defining "disturbance" and determine what types of disturbed and compacted areas should be counted as impervious surfaces for purposes of applying land coverage limits. Coverage limits shall not be applied so as to prevent application of best management practices to existing disturbed areas.

**S-1.5. ~~TRPA SHALL CONDUCT A SURVEY TO IDENTIFY AREAS WHERE EXISTING EXCESS COVERAGE IS CAUSING ENVIRONMENTAL DAMAGE~~ PRIORITIZE WATERSHEDS OR OTHER AREAS IMPAIRED BY EXCESS LAND COVERAGE AND INCENTIVIZE THE REMOVAL AND TRANSFER OF COVERAGE FROM APPROPRIATE LOCATIONS WITHIN PRIORITY WATERSHEDS.**

~~Over a five-year period,~~ TRPA shall survey the streams and watersheds in the ~~Region~~ Basin to identify areas that show empirical evidence of soil erosion or adverse changes in hydrological conditions as a result of excess coverage. The survey shall propose specific programs to address the problem of excess coverage and may include limits on new coverage, coverage removal, and remedial erosion and runoff control projects.

**S-1.6. MAINTAIN SEASONAL LIMITATIONS ON GROUND DISTURBING ACTIVITIES DURING THE WET SEASON (OCTOBER 15 TO MAY 1) AND IDENTIFY LIMITED EXCEPTIONS FOR ACTIVITIES THAT ARE NECESSARY TO PRESERVE PUBLIC HEALTH AND SAFETY OR FOR EROSION CONTROL ~~GRADING, FILLING, CLEARING OF VEGETATION (WHICH DISTURBS SOIL), OR OTHER DISTURBANCES OF THE SOIL ARE PROHIBITED DURING INCLEMENT WEATHER AND FOR THE RESULTING PERIOD OF TIME WHEN THE SITE IS COVERED WITH SNOW OR IS IN A SATURATED, MUDDY, OR UNSTABLE CONDITION. SPECIAL REGULATIONS AND CONSTRUCTION TECHNIQUES WILL APPLY TO ALL CONSTRUCTION ACTIVITIES OCCURRING BETWEEN OCTOBER 15 AND MAY 1.~~**

Impacts related to soil disturbance are highly exaggerated when the soil is wet. For precautionary reasons, all project sites must be adequately winterized by October 15 as a condition for continued work on the site. Exceptions to the grading prohibitions will be permitted in emergency situations where the grading is necessary for reasons of public safety or for erosion control.

**S-1.78. ALL EXISTING NATURAL FUNCTIONING STREAM ENVIRONMENT ZONES ~~SEZs~~ SHALL BE**

RETAINED AS SUCH AND DISTURBED STREAM ENVIRONMENT ZONES~~SEZs~~ SHALL BE RESTORED WHENEVER POSSIBLE.

Stream ~~environment~~Environment Zones (SEZs) shall be managed to perpetuate their various functional roles, especially pertaining to water cleansing and nutrient trapment. This requires enforcement of a non-degradation philosophy. This policy is common to the Water Quality, Vegetation, Stream Environment Zone, and Wildlife Subelements and ~~will~~shall be implemented through the Land Use Element and Environmental~~capital~~ improvements Program (EIP).

#### S-1 Implementation Measures

- Develop standardized evaluation criteria for determining the suitability of soil conditions for wet season grading, activity on sensitive lands, and resource management operations. Develop corresponding monitoring protocols for determining the effects of these activities on soil and water quality.

## SHOREZONE



The shorezone of Lake Tahoe is of both local and national significance. The scenic quality of the shoreline is enhanced by a diversity of views that range from sandy beaches to isolated coves, rocky shorelines, and steep cliffs. The competing demands for development of the shorezone need to be reconciled in light of the unique qualities that stand to be lost. The ~~existing~~ Shorezone Plan ~~for~~ of Lake Tahoe is the basis for developing guidelines for appropriate uses along the shorezones of Lake Tahoe, Fallen Leaf Lake, and Cascade

Lake.

### GOAL #SZ-1

**PROVIDE FOR THE APPROPRIATE SHOREZONE USES OF LAKE TAHOE, CASCADE LAKE, AND FALLEN LEAF LAKE WHILE PRESERVING THEIR NATURAL AND AESTHETIC QUALITIES.**

The shorezones of the ~~Region's~~ ~~Basin's~~ lakes are inherently suitable to different intensities of use depending on local shorezone characteristics. Both the physical and biological qualities of the shorezone are useful for assessing the development potential of a particular site. Visual quality should be an additional test of an area's capability to accommodate different types of land use. Policies are developed within the framework of TRPA's ~~existing~~ ~~s~~Shorezone ~~p~~Plan (which is incorporated into this Subelement) and adopted environmental thresholds.

### **POLICIES**

**SZ-1.1. ALL VEGETATION AT THE INTERFACE BETWEEN THE BACKSHORE AND FORESHORE ZONES SHALL REMAIN UNDISTURBED UNLESS ALLOWED BY PERMIT FOR USES OTHERWISE CONSISTENT WITH THE SHOREZONE POLICIES.**

Vegetation at the interface between the backshore and the foreshore is significant to buffering the impacts that occur in this zone. It is the last naturally occurring measure for stabilizing soils and absorbing nutrients in the runoff from the backshore. It prevents accelerated shoreline erosion from wave action and reduces the need for engineered structures. Vegetation is an important element of the wildlife and fish habitat that occurs in the zone. The vegetation also screens backshore development, thus preserving the natural appearance of the shoreline. Well established, native vegetation is adapted to the zone and provides a strong binding root system and a protective cover of foliage and branches. The interface is defined as the zone that includes backshore cliffs and other unstable lands influenced, in part or in total, by littoral or wave processes.

**SZ-1.2. CONSTRUCTION ACTIVITY SHOULD BE SET BACK TO ENSURE NO DISTURBANCE OF THE INTERFACE BETWEEN HIGH CAPABILITY BACKSHORE AND UNSTABLE CLIFF AREAS.**

Building setbacks from the edge of unstable or potentially unstable areas are necessary so as to minimize the risk of accelerated erosion, cliff collapse, or slumping. Retention of a natural buffer to minimize impacts of backshore development is preferred over engineering solutions to backshore instability.

**SZ-1.3. THE USE OF LAWNS OR ORNAMENTAL VEGETATION IN THE SHOREZONE SHALL BE DISCOURAGED.**

The land area adjacent to water bodies is susceptible to intensive erosion forces such as

undercutting. Deep root systems associated with trees and shrubs help stabilize the backshore by binding soil and rock material. Lawns are less effective for this purpose in unstable areas and fertilizer necessary for their maintenance may contribute nutrients directly to the lake. Plant species approved by the Agency (~~see Vegetation Subelement, Goal #1, Policy 8.~~) shall be selected when revegetating disturbed sites.

**SZ-1.4. CLASS 1 CAPABILITY SHOREZONES SHALL BE MANAGED CONSISTENT WITH THE GOALS AND POLICIES OF THE STREAM ENVIRONMENT ZONE SUBELEMENT.**

Class 1 shorezones (barrier beaches) are particularly vulnerable to both natural and unnatural perturbations. These areas typically support backshore wetlands and are usually linked hydrologically with the lake. As such, Class 1 shorezones typically exhibit the characteristics of stream environment zones. New development in Class 1 shorezones will be regulated to be consistent with Policies ~~5, 6, and 7~~ of the Stream Environment Zone Subelement. These policies generally prohibit new development except for unusual circumstances involving the siting of public outdoor recreation facilities and public works projects. Replacement of existing coverage in barrier shorezones may be permitted in accordance with the policy for replacement of existing coverage in the Stream Environment Zone Subelement (~~Policy 9~~).

**SZ-1.5. DISTURBANCE OF CLASS 2 AND CLASS 3 CAPABILITY SHOREZONES SHALL BE MINIMIZED TO AVOID ACCELERATED BACKSHORE EROSION OR CLIFF COLLAPSE.**

Class 2 and Class 3 shorezones are typically steep and have high erosion potential. No activity should be undertaken which is likely to accelerate or initiate backshore erosion.

**SZ-1.6. LOW TO MODERATE INTENSITY DWELLING AND RECREATIONAL USES SHOULD BE ALLOWED IN THE STABLE AND HIGH CAPABILITY BACKSHORE AREAS OF CLASS 4 AND 5 CAPABILITY SHOREZONES.**

The overall capability of Class 4 shorezones is severely limited by the unstable nature of the actual shoreline, beaches, and crumbling cliffs. Vegetation preservation and restricted development are the best means for protecting the unstable rock and soil materials. The erosion, mass movement potential, and rocky ground of Class 5 shorezones limit the construction potential of these sites. Low to moderate recreational development is the best use, where gradual slopes permit.

**SZ-1.7. WATER DEPENDENT RECREATIONAL FACILITIES AND RESIDENTIAL BUILDINGS ARE ACCEPTABLE USES IN CLASS 6, 7, AND 8 CAPABILITY SHOREZONES SO LONG AS SUCH USES (1) PROVIDE FOR THE NATURAL EQUILIBRIUM OF THE SHORELINE INTERFACE, (2) DO NOT ACCELERATE NEARSHORE SHELF EROSION, (3) MINIMIZE DISTURBANCE OF VEGETATION, (4) CONSIDER VISUAL AMENITIES, AND (5) COMPLY WITH OTHER RELEVANT POLICIES OF THIS SUBELEMENT.**

Class 8 shorezones offer the highest capability for development due to their relative resilience to perturbations. Class 6 and Class 7 shorezones are less capable of tolerating disturbances, but still provide suitable development potential when the uses allow for minimum site disturbance.

**SZ-1.8. STREAM CHANNEL ENTRANCES TO THE LAKE SHALL BE MAINTAINED TO ALLOW UNOBSTRUCTED ACCESS OF FISHES TO UPSTREAM SPAWNING SITES.**

Barriers to upstream migration of fish may arise either from actual physical barriers or from disturbances. Activities or structures that pose as upstream barriers are not permitted uses in stream mouths.



| **SZ-1.9. THE AGENCY SHALL REGULATE THE PLACEMENT OF NEW PIERS, BUOYS, AND OTHER STRUCTURES IN THE FORESHORE AND NEARSHORE TO AVOID DEGRADATION OF FISH HABITATS, CREATION OF NAVIGATION HAZARDS, INTERFERENCE WITH LITTORAL DRIFT, INTERFERENCE WITH THE ATTAINMENT OF SCENIC THRESHOLDS, AND OTHER RELEVANT CONCERNS.**

The Agency shall conduct studies, as necessary, to determine potential impacts to fish habitats and apply the results of those studies and previous studies on shoreline erosion and shorezone scenic quality in determining the number of, location of, and standards of construction for facilities in the nearshore and foreshore.

| **SZ-1.10. PROVISIONS SHOULD BE MADE TO ALLOW MULTIPLE-USE PIERS WHEN SUCH USES ARE INTENDED TO REDUCE THE NUMBER OF SINGLE-USE PIERS EXISTING ON ADJOINING PROPERTIES.**

Fish habitat in the nearshore can be improved if habitat modifications and disturbances are minimized. Centralized activity centers are preferred to numerous points of activity dispersed along the entire shoreline.

| **SZ-1.11. THE AGENCY SHALL REGULATE THE MAINTENANCE, REPAIR, AND MODIFICATION OF PIERS AND OTHER STRUCTURES IN THE NEARSHORE AND FORESHORE.**

Piers and other shoreline structures are particularly subject to damage and deterioration caused by the elements. Some fail to conform to the standards of the Agency. Maintenance, repair, and modification projects provide opportunities to remedy existing deficiencies. Ordinances shall set requirements, appropriate for the situation, to correct environmental and navigation problems.

| **SZ-1.12. CASCADE AND FALLEN LEAF LAKES SHOULD BE EVALUATED AND CONSIDERED FOR LOW INTENSITY USES TO INCLUDE RESTRICTIONS ON THE USE AND SIZE OF BOAT MOTORS.**

Both of these lakes are relatively small when compared to Lake Tahoe and are, themselves, located in small basins. Use of powerboats on these lakes impacts a greater portion of the shorezone users because of the small size of the lakes and the fact that the noise is accentuated due to the bowl-shaped topography. Restrictions on motor size and use is a strategy to provide for the best use of these lakes while preserving their many different recreational qualities. El Dorado County, in cooperation with the USFS, private land owners, and other agencies, should evaluate the best uses for each lake.

| **SZ-1.13. ALLOW PUBLIC ACCESS TO THE SHOREZONE WHERE LAWFUL AND FEASIBLE ON PUBLIC LANDS.**

There is considerable demand for public use of the Lake Tahoe shoreline. Increased opportunities to use the shoreline shall be provided when consistent with the tolerance levels of the shorezone. Improved access to the shorezone should be provided through public lands from expanded public ownership. Trails and support facilities in the backshore should be consistent with the goals and policies of the Recreation Element.

| **SZ-1.14. PRIVATE MARINAS SHALL BE ENCOURAGED TO PROVIDE PUBLIC BOAT LAUNCHING FACILITIES.**

Boating access to Lake Tahoe would be increased under this strategy by encouraging all marina facilities to provide public launching facilities, where practical, and by providing



incentives for those facilities which improve or provide such services.

| **SZ-1.15. TRPA MAY DESIGNATE SHOREZONES AS MAN-MODIFIED. THE ASSIGNMENT OF A MAN-MODIFIED STATUS REQUIRES THE FOLLOWING FINDINGS:**

- Further development will not exacerbate the problems caused by development in shorezones that the original capability rating was meant to avoid;
- The area no longer exhibits the characteristics of the original shorezone capability rating;
- Restoration is infeasible;
- Further development can be mitigated off-site; and
- Mitigation is provided to at least partially offset the losses which were caused by modification of the shorezone.

## SCENIC



Scenic quality is perhaps the most often identified natural resource of the Lake Tahoe ~~Basin~~Region. The ~~Basin~~Region affords views of a magnificent lake setting within a forested mountainous environment. The unique combination of visual elements provides for exceptionally high aesthetic values. ~~The maintenance of the Basin's scenic quality largely depends on careful regulation of the type, location, and intensity of land uses.~~The Compact declares "Maintenance of the social and economic health of the region depends on maintaining the significant scenic ... values provided by the Lake Tahoe Basin". The Scenic Subelement establishes Goals and Policies intended to preserve and enhance the Region's unique scenic resources by advancing the scenic threshold standards.

~~Environmental thresholds provide the basis for selecting appropriate strategies for maintaining scenic quality. Scenic resource thresholds are listed below:~~

### 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

#### NUMERICAL STANDARD

~~Maintain or improve the numerical rating assigned to each identified scenic resource, including individual subcomponent numerical ratings, for views from bike paths and other recreation areas open to the general public as recorded in the 1993 Lake Tahoe Basin Scenic Resource Evaluation.~~

~~The following goals and policies directly address the issue of maintaining or restoring the natural scenic quality of the Lake Tahoe Basin. Attainment of the scenic thresholds is expected to be a long-term goal and achieved incrementally over the next 20 years.~~

## GOAL #1SR-1

### **MAINTAIN AND RESTORE THE SCENIC QUALITIES OF THE NATURAL APPEARING LANDSCAPE.**

As with many of the Region's natural resources, the scenic qualities of the Region~~Basin~~ are vulnerable to change. Modifying the natural scenic features of the ~~Basin~~Region is a by-product of development, but such impacts can be minimized and mitigated~~need not be devastating~~. A coordinated effort that incorporates architectural design and location considerations in plan development and the project review process is a useful means for promoting scenic and aesthetic values. Policies to achieve this goal are consistent with the adopted environmental thresholds.

## POLICIES

**SR-1.1. ALL PROPOSED DEVELOPMENT SHALL EXAMINE IMPACTS TO THE IDENTIFIED LANDSCAPE VIEWS FROM ROADWAYS, BIKEPATHS, PUBLIC RECREATION AREAS, AND LAKE TAHOE.**

The impact of development on the landscape views and scenic qualities of the Tahoe Region should be considered as part of the project review process. Conditions should be placed on project approval in a manner capable of mitigating any likely impacts. Impacts shall be evaluated against specific management directions provided for each identified landscape view. ~~Management and remedial criteria for each roadway and shoreline unit shall be updated through appropriate studies so they are consistent with the format and detail of the 1983 scenic analysis of the recreation areas.~~ in the Lake Tahoe Basin Scenic Resource Evaluation, 1983, Wagstaff and Brady. In addition, the Scenic Quality Improvement Program (SQIP, adopted September, 1989) and Design Review Guidelines for Scenic Quality (September, 1989) are to provide direction for the design, review, and implementation of projects reviewed from identified roadways, bikepaths, public recreation areas, and Lake Tahoe.

**SR-1.2. ANY DEVELOPMENT PROPOSED IN AREAS TARGETED FOR SCENIC RESTORATION OR WITHIN A UNIT HIGHLY SENSITIVE TO CHANGE SHALL DEMONSTRATE THE EFFECT OF THE PROJECT ON THE 1982 TRAVEL ROUTE RATINGS OF THE SCENIC THRESHOLDS.**

Projects proposed in areas sensitive to scenic degradation shall be ~~closely scrutinized~~ analyzed to ensure that the scenic quality of the area is maintained or improved ~~or, at the very least, not further compromised by the action.~~

**SR-1.3. THE FACTORS OR CONDITIONS THAT CONTRIBUTE TO SCENIC DEGRADATION ~~IN IDENTIFIED AREAS,~~ AS SPECIFIED IN THE SCENIC QUALITY IMPROVEMENT PROGRAM (SQIP), NEED TO BE RECOGNIZED AND APPROPRIATELY CONSIDERED IN RESTORATION PROGRAMS, PLAN DEVELOPMENT, AND DURING PROJECT REVIEW TO IMPROVE SCENIC QUALITY.**

~~To the extent funding is available, the studies identified by Policy 1 above shall be completed. Areas in need of scenic restoration and appropriate remedial measures shall be identified within two years.~~

## **GOAL #2SR-2**

### **IMPROVE THE ACCESSIBILITY OF LAKE TAHOE FOR PUBLIC VIEWING.**

Lake Tahoe is the dominant landscape feature in the Region Basin. ~~Yet, opportunities and opportunities~~ to view the Lake from roadways ~~are often limited due to inadequate or unmarked pull-off facilities, traffic congestion, and manmade obstructions~~ should be improved.

## POLICIES

**SR-2.1. ENHANCE THE OPPORTUNITIES TO VIEW LAKE TAHOE BY DESIGNING VIEW CORRIDORS FROM HIGHWAYS.**

View corridors to the Lake should be incorporated into the design of urban areas as a strategy for preserving open space areas and improving ~~the role of the~~ views to the Lake as a visitor attraction.

**SR-2.2. SCENIC VIEWPOINTS FROM ROADWAYS SHOULD BE IDENTIFIED AND PULL-OFF FACILITIES PROVIDED ON PUBLIC PROPERTY, WHEREVER DESIRABLE.**

TRPA should work with Caltrans, Nevada Department of Transportation and Local Governments ~~This policy would to~~ increase ~~the~~ opportunities for motorists to park and view Lake Tahoe ~~and would~~ in order to limit the tendency or need to pull-off onto unimproved shoulders of roadways.

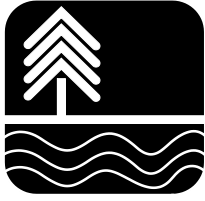
**SR-2.3. SIGNS SHOULD BE PLACED ALONG THE ROADWAYS, AS APPROPRIATE, TO IDENTIFY PHOTO SITES AND SCENIC TURNOUTS.**

Signing of photo sites and scenic viewpoints adequately notifies travelers of opportunities to view Lake Tahoe. This information will help visitors plan for stops and also will help reduce traffic congestion associated with slow moving vehicles.

**SR-2.4. TIME LIMITS FOR PARKING AT ROADSIDE TURNOUTS SHOULD BE ESTABLISHED.**

The length of stay at roadside turnouts should be limited depending upon the purpose of the turnout. For viewing and picture-taking purposes, parking should be short-term, as necessary, to minimize the number of parking spaces and provide for quick turnover.

## **OPEN SPACE**



Open space is not a separate land use district but is a descriptive term that distinguishes land areas void of development and reserved for their natural values. Stream zones and forested lands in public ownership often adopt the title of open space. Such distinction is important for identifying land areas necessary to protect a particular resource or to provide a public benefit. On private lands, open space is a generic term that describes the undeveloped portion of lots where impervious coverage is not permitted as determined through the policies of this Plan and its implementing ordinances. Important roles of open space in the Tahoe [Region Basin](#) include preservation of vegetation, maintenance of scenic qualities, and watershed protection. The Compact specifically requires open space to be included within the Agency's Conservation Plan.

### **GOAL #OS-1**

#### **MANAGE AREAS OF OPEN SPACE TO PROMOTE CONSERVATION OF VEGETATION AND PROTECTION OF WATERSHEDS.**

Achieving this goal requires that open space be managed for its appropriate resource value or function so that vegetation preservation and water quality thresholds can be met.

#### **POLICIES**

##### **OS-1.1. MANAGEMENT PRACTICES IN OPEN SPACE THAT PROVIDE FOR THE LONG TERM HEALTH AND PROTECTION OF THE RESOURCE(S) SHALL BE PERMITTED WHEN CONSISTENT WITH THE OTHER GOALS AND POLICIES OF THIS PLAN.**

Managing open space for its natural qualities and potential will generate numerous benefits related to such valuable resources as water, vegetation, wildlife, soil, and air. Management criteria are set forth by the other goals and policies of this Plan.

##### **OS-1.2. THE BENEFICIAL USES OF OPEN SPACE SHALL BE PROTECTED BY REGULATING USES AND RESTRICTING ACCESS AS NECESSARY TO MAINTAIN SOIL PRODUCTIVITY AND ACCEPTABLE VEGETATIVE COVER.**

This policy restricts vehicular access and other intensive uses to those areas of authorized use or existing impervious coverage. Barriers will be required as necessary to prevent additional disturbance to the soil and vegetation resources.

## **STREAM ENVIRONMENT ZONE**



Stream environment zones (SEZs) and related hydrologic zones consist of the natural marsh and meadowlands, watercourses and drainageways, and floodplains which provide surface water conveyance from upland areas into Lake Tahoe and its tributaries. Stream environment zones are determined by the presence of riparian vegetation, alluvial soil, minimum buffer strips, water influence areas, and floodplains. The plant associations of stream environment zones constitute only a small portion of the ~~Region's Basin's~~ total land area, but are perhaps the single most valuable plant communities in terms of their role in providing for wildlife habitat, purification of water, and scenic enjoyment. Protection and restoration of stream environment zones are essential for improving and maintaining the environmental amenities of the Lake Tahoe ~~Region Basin~~ and for achieving environmental thresholds for water quality, vegetation preservation, and soil conservation.

### **GOAL #SEZ-1**

#### **PROVIDE FOR THE LONG-TERM PRESERVATION AND RESTORATION OF STREAM ENVIRONMENT ZONES.**

The preservation of SEZs is a means for achieving numerous environmental thresholds. Policies that promote their maintenance, protection, and restoration are listed below.

#### **POLICIES**

##### **SEZ-1.1. RESTORE ALL DISTURBED STREAM ENVIRONMENT ZONE LANDS IN UNDEVELOPED, UNSUBDIVIDED LANDS, AND RESTORE 25 PERCENT OF THE SEZ LANDS THAT HAVE BEEN DISTURBED, DEVELOPED, OR SUBDIVIDED.**

Many acres of SEZ lands ~~have been~~ were modified or disturbed before adoption of the Regional Plan. Considerable progress has been to restore disturbed SEZ lands. TRPA shall continue to monitor the status of SEZ lands and identify restoration priorities and activities through actions and programs including the Environmental Improvement Program. ~~identify the number of acres to be restored and prepare a list of projects to achieve the environmental threshold carrying capacity for stream environment zones. TRPA shall develop an implementation program to restore the necessary acreage, and establish an annual tracking program. The implementation program shall provide for restoration over a twenty year period, with 90 percent of the acreage to be restored within the first fifteen years.~~

##### **SEZ-1.2. SEZ LANDS SHALL BE PROTECTED AND MANAGED FOR THEIR NATURAL VALUES.**

SEZ lands are scarce, as is ~~and~~ associated riparian vegetation when compared are scarce in the Basin relative to other plant communities. Because SEZs provide many beneficial functions (especially pertaining to water quality) only forest management practices, stream improvement programs, ~~and~~ habitat restoration projects and those special provisions provided for in Policy SEZ-1.5 below are permissible uses.

##### **SEZ-1.3. GROUNDWATER DEVELOPMENT IN SEZ LANDS SHALL BE DISCOURAGED WHEN SUCH DEVELOPMENT COULD POSSIBLY IMPACT ASSOCIATED PLANT COMMUNITIES OR INSTREAM FLOWS.**

Withdrawal of water from SEZ lands may lower surface and ground waters and, by so

doing, alter plant composition of the riparian vegetation and reduce instream flows. Groundwater proposals in SEZs and riparian plant communities will be evaluated against those concerns.

**SEZ-1.4. GOLF COURSES IN STREAM ENVIRONMENT ZONES SHALL BE ENCOURAGED TO RETROFIT COURSE DESIGN ~~IN-COMBINATION-WITH~~ AND IMPLEMENT FERTILIZER APPLICATION STANDARDS MANAGEMENT PLANS (SEE WATER QUALITY SUBELEMENT, ~~GOAL #1, POLICY 5~~) TO PREVENT RELEASE OF NUTRIENTS TO ADJOINING GROUND AND SURFACE WATERS.**

A combination of strategies to include fertilizer application standards and course redesign may be necessary to control off-site nutrient release from golf course fairways and greens.

**SEZ-1.5. NO NEW LAND COVERAGE OR OTHER PERMANENT LAND DISTURBANCE SHALL BE PERMITTED IN STREAM ENVIRONMENT ZONES EXCEPT FOR THOSE USES AS NOTED IN A, B, C, D, AND E BELOW:**

A. Public outdoor recreation facilities not specified in subsection F below are permissible uses in stream environment zones if:

- (1) The project is a necessary part of a public agency's long range plans for public outdoor recreation;
- (2) The project is consistent with the recreation element of the regional plan;
- (3) The project, by its very nature, must be sited in a stream environment zone;
- (4) There is no feasible alternative which would reduce the extent of encroachment in stream environment zones;
- (5) The impacts are fully mitigated;
- (6) Stream environment zone lands are restored in the amount of 1.5 times the area of stream environment zone which is disturbed or developed by the project.

To the fullest extent possible, recreation facilities must be sited outside of stream environment zones. Some recreation facilities, such as river access points or stream crossings for hiking trails, by their very nature require some encroachment of stream environment zones. However, the six-part test established by this policy allows encroachment ~~into~~ of SEZs where such encroachment is essential for public outdoor recreation and precautions are taken to ensure that stream environment zones are protected to the fullest extent possible. The restoration requirements of this policy can be accomplished on-site or off-site, and shall be in lieu of any coverage transfer or coverage mitigation provisions elsewhere in this Plan.

B. Public service facilities are permissible uses in stream environment zones if:

- (1) The project is necessary for public health, safety, or environmental protection;
- (2) There is no reasonable alternative, including spans, which avoids or reduces the extent of encroachment in stream environment zones;

- (3) The impacts are fully mitigated; and
- (4) Stream environment zone lands are restored in the amount of 1.5 times the area of stream environment zone which is disturbed or developed by the project.

Development within stream environment zones is not consistent with the goal of managing stream environment zones for their natural qualities and shall generally be prohibited except under extraordinary circumstances involving public works. Each circumstance shall be evaluated based on the conditions of this policy. The restoration requirements of this policy can be accomplished on-site or off-site, and shall be in lieu of any coverage transfer or coverage mitigation provisions elsewhere in this Plan.

- C. Projects which require access across stream environment zones to otherwise buildable sites are permissible in SEZs if:
- (1) There is no reasonable alternative, which avoids or reduces the extent of encroachment in the SEZ;
  - (2) The impacts are fully mitigated; and
  - (3) SEZ lands are restored in the amount of 1.5 times the area of stream environment zone which is disturbed or developed by the project.

The restoration requirements can be accomplished on-site or off-site, and shall be in lieu of any coverage transfer or coverage mitigation provisions elsewhere in this Plan.

- D. New development may be permitted in man-modified stream environment zones where:
- (1) The area no longer exhibits the characteristics of a stream environment zone;
  - (2) Further development will not exacerbate the problems caused by development in stream environment zones;
  - (3) Restoration is infeasible; and
  - (4) Mitigation is provided to at least partially offset the losses which were caused by modification of the stream environment zones.
- E. Stream environment zone restoration projects and erosion control projects.

[F. Non-Motorized Public trails are allowed in stream environment zones, subject to siting and design requirements that minimize and mitigate impacts, as specified in the Code of Ordinances.](#)

**SEZ-1.6. REPLACEMENT OF EXISTING COVERAGE IN STREAM ENVIRONMENT ZONES MAY BE PERMITTED WHERE THE PROJECT WILL REDUCE IMPACTS ON STREAM ENVIRONMENT ZONES AND WILL NOT IMPEDE RESTORATION EFFORTS.**

Existing structures in stream environment zones may be repaired or rebuilt. Minor reconstruction may be permitted so long as drainage improvements, protection of the stream environment zone from disturbances, or other measures are carried out which provide a net benefit to the area's capacity to serve as a naturally-functioning stream environment zone. Major reconstruction or replacement may also be permitted if there is



a net benefit to the stream environment zone and if the replacement or reconstruction is consistent with stream environment zone restoration programs ~~(see Policy 1).~~

7. ~~THE PROCEDURES FOR STREAM ENVIRONMENT ZONE IDENTIFICATION SHALL BE UPDATED.~~

~~The Handbook of Best Management Practices establishes a procedure for delineating stream environment and related hydrologic zones. This procedure shall be reviewed and revised pursuant to the recommendations of the Individual Parcel Evaluation technical team. These revisions shall become effective on January 1, 1989. This review and update of The Handbook of Best Management Practices shall include consideration of the procedures to be followed for artificial drainageways and man-modified stream environment zones.~~

SEZ-1.7. WHERE FEASIBLE, ENCOURAGE AND INCENTIVIZE THE REMOVAL OR RETROFITTING OF EXISTING FLOODPLAIN IMPEDIMENTS TO HELP REESTABLISH NATURAL FLOODPLAIN CONDITIONS AND ALLOW FOR THE EVOLUTION OF NATURAL FLUVIAL PROCESSES (SUCH AS STREAM MIGRATION) WITHIN SEZ LANDS.

SEZ-1.8 ENCOURAGE AND SUPPORT PUBLIC ACQUISITION OF SEZ LANDS BY LAND BANKS AND PUBLIC ENTITIES IN ORDER TO RESTORE, RETIRE COVERAGE ON, AND DEED RESTRICT SEZ LANDS FOR PROTECTION FROM FUTURE DEVELOPMENT AND DISTURBANCE.

## CULTURAL



The Tahoe ~~Region~~<sup>Basin</sup> has a rich historical background that began prior to the arrival of ~~white~~<sup>Caucasian</sup> settlers. Remnants of Tahoe's past exist in the form of ~~Indian~~<sup>Native American</sup> camps, ~~and~~ trails, way stations, mansions, and resorts ~~that were built by early settlers~~. These and other historical resources often come in conflict with competing interests that threaten their preservation. Tahoe's landmarks are valuable examples of its past and should be appropriately preserved.

### GOAL #C-1

#### **IDENTIFY AND PRESERVE SITES OF HISTORICAL, CULTURAL AND ARCHITECTURAL SIGNIFICANCE WITHIN THE REGION.**

The Tahoe Region has a heritage that should be recognized and appropriately protected. Due to the harsh weather conditions, changing development standards, and changing uses of the Region, many structures that had significant historical or architectural value have been destroyed or lost.

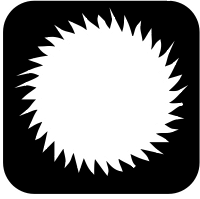
#### **POLICIES**

**C-1.1. HISTORICAL OR CULTURALLY SIGNIFICANT LANDMARKS IN THE ~~BASIN~~<sup>REGION</sup> SHALL BE IDENTIFIED AND PROTECTED FROM INDISCRIMINATE DAMAGE OR ALTERATION.**

In cooperation with property owners, ~~t~~he Agency will establish a list of significant historical, architectural, and archaeological sites within the Region. Special review criteria will be established to protect such designated sites in cooperation with local governments.

**C-1.2. SITES AND STRUCTURES DESIGNATED AS HISTORICALLY, CULTURALLY, OR ARCHAEOLOGICALLY SIGNIFICANT SHALL BE GIVEN SPECIAL INCENTIVES AND EXEMPTIONS TO PROMOTE THE PRESERVATION AND RESTORATION OF SUCH STRUCTURES AND SITES.**

## ENERGY



Conservation is important in order to decrease the consumption and cost of our non-renewable energy resources, such as fossil fuels. Development of alternative energy sources also represents a solution to the supply/cost dilemma. This Subelement promotes conservation programs and the feasibility of adjusting to alternative energy sources in the Region Basin need to be assessed.

### GOAL #E-1

#### **PROMOTE ENERGY CONSERVATION PROGRAMS AND DEVELOPMENT OF ALTERNATIVE ENERGY SOURCES TO LESSEN DEPENDENCE ON SCARCE AND HIGH-COST ENERGY SUPPLIES.**

There are a number of ways to address the energy issue. Acceptable strategies are those that promote energy conservation while maintaining the natural qualities of the Tahoe Region Basin.

#### **POLICIES**

**E-1.1. ALL NEW DEVELOPMENT SHALL COMPLY WITH STATE AND FEDERAL ENERGY EFFICIENCY STANDARDS.**

Incorporation of energy efficiency standards in building design is a conservation strategy for reducing energy consumption and costs. Innovative techniques of reducing home and business energy needs should be encouraged.

**E-1.2. ~~A COORDINATED PROGRAM TO ENCOURAGE RECYCLING OF WASTE PRODUCTS SHOULD BE DEVELOPED.~~**

Reusable waste products such as newspaper and aluminum cans should be targeted for recycling by providing a coordinated program of collection.

**E-1.3. DEVELOPMENT OF ALTERNATIVE ENERGY SOURCES SHOULD BE ENCOURAGED WHEN SUCH DEVELOPMENT IS BOTH TECHNOLOGICALLY AND ENVIRONMENTALLY FEASIBLE.**

A variety of techniques for providing alternative energy sources are both technologically and economically feasible. Environmentally acceptable techniques ~~should be allowed whenever desirable~~ are encouraged.

**E-1.4. ENVIRONMENTAL IMPACTS TO THE FISHERY, INSTREAM FLOWS, AND SCENIC QUALITY OF ALL PROPOSED HYDROELECTRIC PROJECT SITES SHALL BE CONSIDERED TOGETHER WITH OTHER ENVIRONMENTAL CONSIDERATIONS.**

Dams and other water diversion facilities ~~possibly pose the greatest single~~ often ~~impact to~~ the stream fishery. Project proposals must consider the impact on the resident and migratory fishery and adequately mitigate all significant adverse impacts.

**E-1.5. ~~INCORPORATE POLICIES 4 AND 5 OF GOAL #11, POLICIES 2, 3, 4, 7, and 8 OF GOAL #2, AND POLICIES 1, 5, 7, 8, AND 9 OF GOAL #4 OF~~ IMPLEMENT ENERGY SAVING MEASURES OF THE AIR QUALITY SUBELEMENT AS ENERGY SAVING MEASURES.**

These policies complement goals to improve the Region's Basin's air quality and to reduce local consumption of energy.