

## DRAFT Descriptions of Project Alternatives

### 1.10.3 – Soils

#### Overview

Soils is a Threshold program area. 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 Regional Plan currently contains two Thresholds for soil conservation:

1. Soil Conservation Threshold for Impervious Cover  
Impervious cover shall comply with the *Land Capability Classification of the Lake Tahoe Basin, California and Nevada, A Guide for Planning* (Bailey 1974).
2. Soil Conservation Standard for Stream Environment Zones  
Preserve existing naturally functioning SEZ lands in their natural hydrologic condition, restore all disturbed SEZ lands in undeveloped, unsubdivided lands, and restore 25% of the SEZ lands that have been identified as disturbed, developed or subdivided, to attain a 5% total increase in the area of naturally functioning SEZ lands.

Soil disturbance and impervious land coverage contribute directly to the loss of soil quality and critical soil functions (e.g., infiltration). Water quality is compromised through increased runoff and pollutant loading to Lake Tahoe and its tributaries.

The purpose and need for the Soils Subelement is to establish policy to support soil conservation and help achieve the Soil and Water Quality Thresholds. TRPA's Soil Conservation Program strives to conserve soil resources and improve water quality through regulations that minimize soil disturbance and limit impervious land coverage.

#### Setting

Today in the Tahoe basin, there is heavy emphasis on achieving increased water quality and lake clarity. One of the impediments to this is the amount and location of impervious coverage that has resulted from development of all kinds. (Impervious coverage is any human-made or human-modified surface, such as roads, sidewalks, parking lots, driveways, buildings, dirt paths, or parking areas.) Land coverage generates runoff and is a primary source of TMDL pollutants. Development standards establish the area of a parcel that may be covered and are key management tools for achieving soil conservation and water quality goals.

The Soil Conservation Threshold is showing significant progress towards attainment. It may be best described as being in partial attainment. The Threshold is based on different percentages of allowable land coverage for each property set by the Bailey Land Classification System. All new projects built since adoption of the Regional Plan in 1987 are in attainment with the Bailey System. However, the majority of development in the Tahoe Basin occurred prior to the adoption of the Regional Plan, and some areas contain excess coverage as a legacy of pre-Regional Plan development.

In order to help bring the Soils Threshold into attainment, excess coverage is being removed through the Excess Coverage Mitigation

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Program (ECMP). This program allows property owners whose properties are over-covered to either physically remove coverage or pay in-lieu fees that support the area land banks in their coverage removal projects.

The Soils Threshold Standard for SEZs is also showing significant progress towards attainment. This progress is being made by public and private entities through the Environmental Improvement Program's (EIP) restoration efforts. New research is underway to answer key questions such as: "Where are the basin's SEZs and associated wetland types located?" and "What is their condition?" Answers to these questions will provide new information about Threshold status, regulatory effectiveness, and criteria that can be used to prioritize restoration efforts that achieve maximum environmental gain with the most efficient use of resources.

The reason for the proposed changes to the Soils Subelement is that there are new ideas aimed at accelerating coverage removal. There is also a need to create standardized evaluation criteria for determining the suitability of soil conditions for wet season grading and resource management operations such as hazardous fuels reduction projects. Corresponding monitoring protocols are also needed for determining the effects of these activities on soil and water quality. These the proposals are based on the latest science and best practices for conserving soil resources and accelerating overall environmental gain.

### Themes of the Alternatives

#### **Alternative 1**

Under Alternative 1, the "No Action" Alternative, the goals, policies, and implementation measures from the 1987 Regional Plan will remain in place. The existing Code requirements will be applied for

the permitting of projects, including those findings that must be made to determine that a project is consistent with the Soil Conservation Threshold.

#### **Alternative 2**

Alternative 2 is meant to enhance the effectiveness of existing efforts to attain the Soils Threshold. Alternative 2 represents use of the latest science and best practices for conservation of soil resources. Desired conditions for Soils are not included in this Alternative since agreement could not be reached on the desired conditions during the Pathway process.<sup>1</sup> The major Alternative 2 theme meant to improve the existing Regional Plan is the following:

1. Create predictable guidelines for granting grading season exceptions. *Today's procedure for allowing grading season exceptions is time consuming and inefficient. This can needlessly delay the start, or completion, of important public health and safety, environmental improvement, and other projects important to the vitality of the community and the health of the environment. The proposal would standardize criteria for determining the suitability of soil conditions for allowing grading outside of the normal*

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<sup>1</sup> The following Desired Conditions were developed as part of the Pathway process but not included in the final recommendations adopted by the Governing Board due to a lack of consensus by the Pathway Forum:  
 Desired Condition 1: Soil Health - Soils function at the level of native soils in their capacity to regulate water flow and infiltration, sustain plant and animal life, cycle nutrients and filter potential pollutants.  
 Desired Condition 2: Land Capability - Land development and land use are compatible with the type and level of use an area can tolerate without sustaining permanent damage to soil-vegetation and/or watershed functions. Land disturbance and land coverage do not cause deterioration of stream systems and/or water quality. Risks to life and property from geologic hazards are at acceptable levels.

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*grading season. This is particularly important for reducing the risk of catastrophic wildfire, given that some of the best times to perform fuel reduction projects fall outside of the grading season but would qualify for exemptions due to often-favorable soil conditions.*

### **Alternative 3**

There is no thematic difference between Alternative 1 and Alternative 3.

### **Alternative 4**

Although there are no major thematic differences between Alternatives 2 and 4, the extent to which the alternative would be implemented differs in that excess coverage retirement requirements would increase as part of project approvals and excess coverage in-lieu mitigation fees would increase.

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### Summary of Goals, Policies and Implementation Measures

<b>Pathway Vision Statement:</b> Soil resources are conserved for the betterment of the environment and public. Soils function naturally, and land-use activities are assigned to suitable soils and landscape settings. Risks to life and property from natural hazards are reduced to acceptable levels.					
<b>Pathway Desired Conditions:</b> None					
Ref#	Type	Alternative 1	Alternative 2	Alternative 3	Alternative 4
1	G	Minimize soil erosion and the loss of soil productivity.	Minimize soil disturbance, accelerated soil erosion, and associated adverse effects on soil and water quality.	Same as Alt. 1	Same as Alt. 2
1.1	P	S1.6 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.	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 and the vitality of the community.	Same as Alt. 1	Same as Alt. 2
1.1.1	IM	Existing Implementation Measures	Develop standardized evaluation criteria for determining the suitability of soil conditions for wet season grading, activity on	Same as Alt. 1	Same as Alt. 2

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			sensitive lands, and resource management operations. Develop corresponding monitoring protocols for determining the effects of these activities on soil and water quality.		
2	G	None	Ensure that soils' capacity to offset the impacts of land coverage is not exceeded and the impacts of land coverage are fully mitigated.	Same as Alt. 1	Same as Alt. 2
2.1	P	S1.5 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 for land coverage removal and transfer.	Same as Alt. 1	Same as Alt. 2
2.1.1	IM	Existing Implementation Measures			Amend Code to increase the amount of required excess land coverage mitigation.
2.1.2	IM	Existing Implementation Measures			Increase the excess coverage mitigation fee to facilitate required land coverage reductions and restoration by the land banks.
2.2	P	None	Ensure that land coverage removal and restoration projects achieve desired soil function.	Same as Alt. 1	Same as Alt. 2

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Ref#	Type	Alternative 1	Alternative 2	Alternative 3	Alternative 4
2.2.1	IM	Existing Implementation Measures	Develop soil quality performance standards to be used in measuring the success of land coverage removal projects and projects involving the remediation of temporary and long term soil disturbance.	Same as Alt. 1	Same as Alt. 2